

Source: T1
Title: CR's to TS 34.123-3 v3.1.0 for approval
Agenda item: 5.1.3
Document for: Approval

This document contains 52 CRs to TS 34.123-3 v3.0.0. These CRs have been agreed by T1 and are put forward to TSG T for approval.

CR related to maintenance of R99:

Spec	CR	Rev	Rel.	Subject	Cat	Version Current	Version -New	Doc-2nd-Level
34.123-3	064	-	R99	CR for correction of generic test step in RLC ATS V3.1.0	F	3.1.0	3.2.0	T1-030654
34.123-3	065	-	R99	ASP Enhancement	F	3.1.0	3.2.0	T1-030665

CR related to new TTCN test cases for R99:

Spec	CR	Rev	Rel.	Subject	Cat	Version Current	Version -New	Doc-2nd-Level
34.123-3	016	-	R99	Test Case 7.1.1.2	F	3.1.0	3.2.0	T1-030397
34.123-3	017	-	R99	Test Case 7.1.1.8	F	3.1.0	3.2.0	T1-030399
34.123-3	018	-	R99	Test Case 8.1.1.2	F	3.1.0	3.2.0	T1-030401
34.123-3	019	-	R99	Test Case 8.1.1.3	F	3.1.0	3.2.0	T1-030403
34.123-3	020	-	R99	Test Case 8.1.1.8	F	3.1.0	3.2.0	T1-030411
34.123-3	021	-	R99	Test Case 8.2.1.8	F	3.1.0	3.2.0	T1-030413
34.123-3	022	-	R99	Test Case 8.2.1.10	F	3.1.0	3.2.0	T1-030415
34.123-3	023	-	R99	Test Case 8.1.5.1	F	3.1.0	3.2.0	T1-030425
34.123-3	024	-	R99	Test Case 8.1.5.4	F	3.1.0	3.2.0	T1-030427
34.123-3	025	-	R99	Test Case 8.2.3.7	F	3.1.0	3.2.0	T1-030429
34.123-3	026	-	R99	Addition of RLC test case 7.2.3.6 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030438
34.123-3	027	-	R99	Addition of RLC test case 7.2.3.25 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030440
34.123-3	028	-	R99	Addition of RLC test case 7.2.3.14 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030442
34.123-3	029	-	R99	Addition of RLC test case 7.2.3.15 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030444
34.123-3	030	-	R99	Addition of RLC test case 7.2.3.16 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030446
34.123-3	031	-	R99	Addition of RLC test case 7.2.3.33 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030448
34.123-3	032	-	R99	Addition of NAS test case 10.1.2.5.1 to NAS ATS V3.1.0	B	3.1.0	3.2.0	T1-030450
34.123-3	033	-	R99	7.1.1.1	B	3.1.0	3.2.0	T1-030452
34.123-3	034	-	R99	7.1.1.3	B	3.1.0	3.2.0	T1-030454
34.123-3	035	-	R99	7.1.1.4	B	3.1.0	3.2.0	T1-030456
34.123-3	036	-	R99	Introduction of Test Case 7.1.1.5	B	3.1.0	3.2.0	T1-030458
34.123-3	037	-	R99	Test Case 8.2.3.15	F	3.1.0	3.2.0	T1-030464
34.123-3	038	-	R99	Test Case 8.2.3.18	F	3.1.0	3.2.0	T1-030466
34.123-3	039	-	R99	Test Case 8.2.3.19	F	3.1.0	3.2.0	T1-030468
34.123-3	040	-	R99	Test Case 12.3.1.2	F	3.1.0	3.2.0	T1-030474
34.123-3	041	-	R99	Test Case 8.3.3.1	F	3.1.0	3.2.0	T1-030479

34.123-3	042	-	R99	Addition of RLC test case 7.2.3.13 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030484
34.123-3	043	-	R99	Addition of RLC test case 7.2.3.18 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030486
34.123-3	044	-	R99	Addition of RLC test case 7.2.2.5 to RLC ATS V3.0.0	B	3.1.0	3.2.0	T1-030490
34.123-3	045	-	R99	Addition of RLC test case 7.2.2.6 to RLC ATS V3.0.0	B	3.1.0	3.2.0	T1-030492
34.123-3	046	-	R99	Addition of RLC test case 7.2.3.17 to RLC ATS V3.0.0	B	3.1.0	3.2.0	T1-030495
34.123-3	047	-	R99	Addition of RLC test case 7.2.3.20 to RLC ATS V3.0.0	B	3.1.0	3.2.0	T1-030496
34.123-3	048	-	R99	Addition of RLC test case 7.2.3.34 to RLC ATS V3.0.0	B	3.1.0	3.2.0	T1-030498
34.123-3	049	-	R99	Addition of SM test case 11.1.1.1 to NAS ATS V3.1.0	B	3.1.0	3.2.0	T1-030500
34.123-3	050	-	R99	Addition of RLC test case 7.2.3.23 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030535
34.123-3	051	-	R99	Addition of RLC test case 7.2.3.24 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030537
34.123-3	052	-	R99	Addition of RLC test case 7.2.3.26 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030539
34.123-3	053	-	R99	Addition of RLC test case 7.2.3.27 to RLC ATS V3.1.0	B	3.1.0	3.2.0	T1-030541
34.123-3	054	-	R99	Addition of SM test case 11.3.1 to NAS ATS V3.1.0	B	3.1.0	3.2.0	T1-030576
34.123-3	055	-	R99	Addition of SM test case 11.3.2 to NAS ATS V3.1.0	B	3.1.0	3.2.0	T1-030577
34.123-3	056	-	R99	Addition of GMM test case 12.3.1.5 to NAS ATS V3.1.0	B	3.1.0	3.2.0	T1-030578
34.123-3	057	-	R99	Addition of GMM test case 12.7 to NAS ATS V3.1.0	B	3.1.0	3.2.0	T1-030580
34.123-3	058	-	R99	Test Case 8.2.1.9	F	3.1.0	3.2.0	T1-030594
34.123-3	059	-	R99	Test Case 8.2.3.8	F	3.1.0	3.2.0	T1-030596
34.123-3	060	-	R99	Test Case 12.3.1.1	F	3.1.0	3.2.0	T1-030614
34.123-3	061	-	R99	Test Case 12.9.1	F	3.1.0	3.2.0	T1-030624
34.123-3	062	-	R99	Test Case 12.9.2	F	3.1.0	3.2.0	T1-030626
34.123-3	063	-	R99	Addition of GMM test case 12.3.2.1 to NAS ATS V3.1.0	B	3.1.0	3.2.0	T1-030638
34.123-3	066	-	R99	Test Case 8.1.2.2	F	3.1.0	3.2.0	T1-030395
34.123-3	067	-	R99	Test Case 8.1.2.9	F	3.1.0	3.2.0	T1-030396

CHANGE REQUEST

⌘ **34.123-3 CR 066** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.1.2.2		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘	Date:	⌘ 14/02/2003
Category:	⌘ F	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.1.2.2 to RRCv300		
Summary of change:	⌘ - 0 table deleted from RRCv300, - 3 tables modified in RRCv300 : o cb_SIB1_Def o c_SIB1_8_1_1_1 o ts_SS_Rel - 28 tables added For more details see below.		
Consequences if not approved:	⌘ Test case 8.1.2.2 will not be added		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table> Other core specifications ⌘ Test specifications O&M Specifications	Y	N		X		X		X	⌘	
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Luton, UK

20/1/2003

Title	Changes to TC_8_1_2_2 required for approval
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to fix problems in the TTCN implementation of TC_8_1_2_2. With these changes applied the test case can be demonstrated to run on two independent UE implementations. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 clause 8.1.2.2.

2 Changes required for test-case 8.1.2.2

2.1 Tables deleted from RRCv300

None

2.2 Tables modified in RRCv300

2.2.1 SIB-1 value for N300 in cb_SIB1_Def

Reason for change: The change in the value of the test suite constraint N300 detailed in section 2.5.1 needs to be reflected in this SIB1 constraint.

Summary of Change: Change the value of N300 from 7 to tsc_N300.

Change constraint from:

Constraint Name	cb_SIB1_Def (p_CellInfo : CellInfoCfg)
ASN1 Type	SysInfoType1
Derivation Path	
Encoding Variation	
Comments	
	Constraint Value
	<pre> { cn_CommonGSM_MAP_NAS_SysInfo p_CellInfo.lac, cn_DomainSysInfoList {{cn_DomainIdentity ps_domain, cn_Type gsm_MAP: o_OctetstringConcat (p_CellInfo.rac, p_CellInfo.nmo), cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_PS_DRX_CycleLength }, {cn_DomainIdentity cs_domain, cn_Type gsm_MAP: o_OctetstringConcat (p_CellInfo.t3212, o_IntToOct (p_CellInfo.attFlag,1)), cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_CS_DRX_CycleLength } }, ue_ConnTimersAndConstants { t_301 OMIT, n_301 OMIT, t_302 OMIT, n_302 OMIT, t_304 OMIT, n_304 OMIT, t_305 OMIT, t_307 OMIT, t_308 OMIT, t_309 OMIT, t_310 OMIT, n_310 OMIT, t_311 OMIT, t_312 OMIT, n_312 OMIT, t_313 OMIT, n_313 OMIT, t_314 OMIT, t_315 OMIT, n_315 OMIT, t_316 OMIT, t_317 OMIT }, ue_IdleTimersAndConstants { t_300 ms4000, n_300 7, t_312 10, n_312 s1 }, v3a0NonCriticalExtensions OMIT } </pre>

To:

Constraint Name	cb_SIB1_Def (p_CellInfo : CellInfoCfg)
ASN1 Type	SysInfoType1
Derivation Path	
Encoding Variation	
Comments	
	Constraint Value
	<pre> { cn_CommonGSM_MAP_NAS_SysInfo p_CellInfo.lac, cn_DomainSysInfoList {{cn_DomainIdentity ps_domain, cn_Type gsm_MAP: o_OctetstringConcat (p_CellInfo.rac, p_CellInfo.nmo), cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_PS_DRX_CycleLength }, {cn_DomainIdentity cs_domain, cn_Type gsm_MAP: o_OctetstringConcat (p_CellInfo.t3212, o_IntToOct (p_CellInfo.attFlag,1)), cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_CS_DRX_CycleLength } }, ue_ConnTimersAndConstants { t_301 OMIT, n_301 OMIT, t_302 OMIT, n_302 OMIT, t_304 OMIT, n_304 OMIT, t_305 OMIT, t_307 OMIT, t_308 OMIT, t_309 OMIT, t_310 OMIT, n_310 OMIT, t_311 OMIT, t_312 OMIT, n_312 OMIT, t_313 OMIT, n_313 OMIT, t_314 OMIT, t_315 OMIT, n_315 OMIT, t_316 OMIT, t_317 OMIT }, ue_IdleTimersAndConstants { t_300 ms4000, n_300 isc_N300, t_312 10, n_312 s1 }, v3a0NonCriticalExtensions OMIT } </pre>

2.2.2 SIB-1 value for N300 in c_SIB1_8_1_1_1

Reason for change: The change in the value of the test suite constraint N300 detailed in section 2.5.1 needs to be reflected in this SIB1 constraint.

Summary of Change: Change the value of N300 from 7 to tsc_N300.

Change constraint from:

Constraint Name	c_SIB1_8_1_1_1 (p_CellInfo : CellInfoCfg)
ASN1 Type	SysInfoType1
Derivation Path	
Encoding Variation	
Comments	MCC= '234', MNC='001', T3212= '00'H, ATT is on, RAC TBD DrxCycle = 6, T300 = 4000, N300 = 3, T312 = 10, N312 = 200
Constraint Value	
<pre> { cn_CommonGSM_MAP_NAS_SysInfo p_CellInfo.lac, cn_DomainSysInfoList {{cn_DomainIdentity ps_domain, cn_Type gsm_MAP:o_OctetstringConcat (p_CellInfo.rac, p_CellInfo.nmo), cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_PS_DRX_CycleLength }, {cn_DomainIdentity cs_domain, cn_Type gsm_MAP: o_OctetstringConcat (p_CellInfo.t3212, o_IntToOct (p_CellInfo.attFlag,1)), cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_CS_DRX_CycleLength } }, ue_ConnTimersAndConstants { t_301 OMIT, n_301 OMIT, t_302 OMIT, n_302 OMIT, t_304 OMIT, n_304 OMIT, t_305 OMIT, t_307 OMIT, t_308 OMIT, t_309 OMIT, t_310 OMIT, n_310 OMIT, t_311 OMIT, t_312 OMIT, n_312 OMIT, t_313 OMIT, n_313 OMIT, t_314 OMIT, t_315 OMIT, n_315 OMIT, t_316 OMIT, t_317 OMIT }, ue_IdleTimersAndConstants { t_300 ms4000, n_300 7, t_312 10, n_312 s1 }, v3a0NonCriticalExtensions OMIT } </pre>	

To:

Constraint Name	c_SIB1_8_1_1_1 (p_CellInfo : CellInfoCfg)
ASN1 Type	SysInfoType1
Derivation Path	
Encoding Variation	
Comments	MCC= '234', MNC='001', T3212= '00'H, ATT is on, RAC TBD DrxCycle = 6, T300 = 4000, N300 = 3, T312 = 10, N312 = 200
	Constraint Value
	<pre> { cn_CommonGSM_MAP_NAS_SysInfo p_CellInfo.lac, cn_DomainSysInfoList {{cn_DomainIdentity ps_domain, cn_Type gsm_MAP:o_OctetstringConcat (p_CellInfo.rac, p_CellInfo.nmo), cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_PS_DRX_CycleLength }, {cn_DomainIdentity cs_domain, cn_Type gsm_MAP: o_OctetstringConcat (p_CellInfo.t3212, o_IntToOct (p_CellInfo.attFlag,1)), cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_CS_DRX_CycleLength } }, ue_ConnTimersAndConstants { t_301 OMIT, n_301 OMIT, t_302 OMIT, n_302 OMIT, t_304 OMIT, n_304 OMIT, t_305 OMIT, t_307 OMIT, t_308 OMIT, t_309 OMIT, t_310 OMIT, n_310 OMIT, t_311 OMIT, t_312 OMIT, n_312 OMIT, t_313 OMIT, n_313 OMIT, t_314 OMIT, t_315 OMIT, n_315 OMIT, t_316 OMIT, t_317 OMIT }, ue_IdleTimersAndConstants { t_300 ms4000, n_300 tsc: N300, t_312 10, n_312 s1 }, v3a0NonCriticalExtensions OMIT } </pre>

2.2.3 Duplicate line in ts_SS_Rel

Reason for change: The call to test step ts_CRLC_Rel to release RB_PCCH in line 52 is also present in the local routine lt_ReleaseCommonCh (line 172).

Summary of Change: Delete line 52, and adjust indentation of remaining lines for that case accordingly.

Change test step from:

Test Case Name		ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1				
2				
51		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			
52		+ ts_CRLC_Rel (p_CellId , tsc_RB_PCCH)			
53		+ lt_ReleaseCommonCh			
54		+ ts_CMAC_Rel (p_CellId , tsc_PRACH2)			
55		+ ts_CPHY_TrChRel (p_CellId , tsc_PRACH2)			
56		+ ts_SS_StopRL (p_CellId , tsc_PRACH2)			
57		+ ts_SS_StopRL (p_CellId , tsc_AICH2)			
58		+ lt_Release_BCCH			
59		+ ts_SetCellCfg (p_CellId , cell_NotConfigured)			

To:

Test Case Name		ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1				
2				
51		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			
52		+ lt_ReleaseCommonCh			
53		+ ts_CMAC_Rel (p_CellId , tsc_PRACH2)			
54		+ ts_CPHY_TrChRel (p_CellId , tsc_PRACH2)			
55		+ ts_SS_StopRL (p_CellId , tsc_PRACH2)			
56		+ ts_SS_StopRL (p_CellId , tsc_AICH2)			
57		+ lt_Release_BCCH			
58		+ ts_SetCellCfg (p_CellId , cell_NotConfigured)			

2.3 Tables added to RRCv300

2.3.1 Tables added from RRCv143

Item	Type	Path
ccs_FB_Th_Ed_Info	ASN.1 ASP Constraint Declaration	Constraints/Path/ASP/Constraint Declarations/ASN.1 ASP Constraint Declarations/ccs_FB_Th_Ed_Info/
ccs_FACH_1442_AuthFlow	ASN.1 ASP Constraint Declaration	Constraints/Path/ASP/Constraint Declarations/ASN.1 ASP Constraint Declarations/ccs_FACH_1442_AuthFlow/
ccs_FRC_CoreReqRACH_Use_CapabilityUpdate	ASN.1 PDU Constraint Declaration	Constraints/Path/PDU/Constraint Declarations/ASN.1 PDU Constraint Declarations/ccs_FRC_CoreReqRACH_Use_CapabilityUpdate/
ccs_FRC_CoreReqRACH_Est	ASN.1 PDU Constraint Declaration	Constraints/Path/PDU/Constraint Declarations/ASN.1 PDU Constraint Declarations/ccs_FRC_CoreReqRACH_Est/
ccs_FRC_PagingType_NotifyMMode	ASN.1 PDU Constraint Declaration	Constraints/Path/PDU/Constraint Declarations/ASN.1 PDU Constraint Declarations/ccs_FRC_PagingType_NotifyMMode/
ccs_FRC_Type	ASN.1 Type Constraint Declaration	Constraints/Path/Test Suite Type Constraint Declarations/ASN.1 Constraint Declarations/ccs_FRC_Type/
ccs_FRC_Type_NotifyMMode	ASN.1 Type Constraint Declaration	Constraints/Path/Test Suite Type Constraint Declarations/ASN.1 Constraint Declarations/ccs_FRC_Type_NotifyMMode/
ccs_SRS_Signature	ASN.1 Type Constraint Declaration	Constraints/Path/Test Suite Type Constraint Declarations/ASN.1 Constraint Declarations/ccs_SRS_Signature/
ccs_TCH_RACH2	ASN.1 Type Constraint Declaration	Constraints/Path/Test Suite Type Constraint Declarations/ASN.1 Constraint Declarations/ccs_TCH_RACH2/
ccs_TCH_RACH2_PagingType	ASN.1 Type Constraint Declaration	Constraints/Path/Test Suite Type Constraint Declarations/ASN.1 Constraint Declarations/ccs_TCH_RACH2_PagingType/
ccs_FRC_CoreReqRACH_Est	ASN.1 Type Constraint Declaration	Constraints/Path/Test Suite Type Constraint Declarations/ASN.1 Constraint Declarations/ccs_FRC_CoreReqRACH_Est/
ccs_FRC_CoreReqRACH_Est	Test Suite Constant Declaration	Declarations/Path/Test Suite Constant Declarations/ccs_FRC_CoreReqRACH_Est/
ccs_RACH2	Test Suite Constant Declaration	Declarations/Path/Test Suite Constant Declarations/ccs_RACH2/
ccs_RACH2_SignatureDM	Test Suite Constant Declaration	Declarations/Path/Test Suite Constant Declarations/ccs_RACH2_SignatureDM/
ccs_RACH2_Signature	Test Suite Constant Declaration	Declarations/Path/Test Suite Constant Declarations/ccs_RACH2_Signature/
ccs_RACH2	Test Suite Constant Declaration	Declarations/Path/Test Suite Constant Declarations/ccs_RACH2/
ccs_SFN_15	Test Suite Constant Declaration	Declarations/Path/Test Suite Constant Declarations/ccs_SFN_15/
ccs_UL_CDD4	Test Suite Constant Declaration	Declarations/Path/Test Suite Constant Declarations/ccs_UL_CDD4/
ccs_UL_1_2_2	Test Case Dynamic Behaviour	Dynamic/Path/Test Case/PPRC/PPRC_Configs/ccs_UL_1_2_2/
ccs_UL_1_2_2_CDD4	Test Step Dynamic Behaviour	Dynamic/Path/Test Step Library/Beam_SS_Configuration/Steps/ccs_UL_1_2_2_CDD4/
ccs_SS_CoreReqRACH_2_PACH	Test Step Dynamic Behaviour	Dynamic/Path/Test Step Library/Beam_SS_Configuration/Steps/ccs_SS_CoreReqRACH_2_PACH/
ccs_SS_PCH_PACH_CDD4_CDD4_BCH_DTDH_Op	Test Step Dynamic Behaviour	Dynamic/Path/Test Step Library/Beam_SS_Configuration/Steps/ccs_SS_PCH_PACH_CDD4_CDD4_BCH_DTDH_Op/
ccs_SS_PACH_CDD4_CDD4_DTDH_Op	Test Step Dynamic Behaviour	Dynamic/Path/Test Step Library/Beam_SS_Configuration/Steps/ccs_SS_PACH_CDD4_CDD4_DTDH_Op/
ccs_SS_RACH_PSL_Op	Test Step Dynamic Behaviour	Dynamic/Path/Test Step Library/Beam_SS_Configuration/Steps/ccs_SS_RACH_PSL_Op/
ccs_SS_RACH_PACH_Op	Test Step Dynamic Behaviour	Dynamic/Path/Test Step Library/Beam_SS_Configuration/Steps/ccs_SS_RACH_PACH_Op/
ccs_SecondRACH_CDD4_Op	Test Step Dynamic Behaviour	Dynamic/Path/Test Step Library/Beam_SS_Configuration/Steps/ccs_SecondRACH_CDD4_Op/
ccs_SwitchingToSRV_AndR_FRC	Test Step Dynamic Behaviour	Dynamic/Path/Test Step Library/Beam_SS_Configuration/Steps/Default/SwitchingToSRV_AndR_FRC/

2.4 New tables added

2.4.1 Invalid RRC Connection Setup message

Reason for change: Provision of a working invalid RRC Connection Setup message. This new table is referenced in section 2.5.2.

Summary of Change: Table added to suite.

Add PDU constraint definition:

Constraint Name	cds_RRC_InvalidConnSetupPCH_UE_CapabilityUpdate (p_InitUEId: InitialUE_Identity; p_RRC_Ti: RRC_TransactionIdentifier; p_PrmScrmCode: PrimaryScramblingCode; p_U_RNTI_New : U_RNTI; p_CRNTI_New : C_RNTI; p_UL_ScramblingCode : UL_ScramblingCode)
PDU Type	DL_CCCH_Message
Derivation Path	cbs_108_RRC_ConnSetupFACH.
Encoding Rule Name	
Encoding Variation	
Comments	
	Constraint Value
	<pre> REPLACE message.rrcConnectionSetup.r3.rrcConnectionSetup_r3.rrc_StateIndicator BY cell_PCH, REPLACE message.rrcConnectionSetup.r3.rrcConnectionSetup_r3.capabilityUpdateRequirement BY { ue_RadioCapabilityFDDUpdateRequirement TRUE, ue_RadioCapabilityTDDUpdateRequirement FALSE, systemSpecificCapUpdateReqList {gsm} } </pre>

2.5 Modifications to tables added from RRCv143

2.5.1 Value of N300

Reason for change: The combination of values given for T300 and N300 mean that it takes around 24 seconds to send all the RRC Connection Request messages. Other higher layer timers such as T3230 and T3240 cause the connection establishment procedure to be aborted by the higher layers after about 15 seconds.

Summary of Change: Change the value of N300 from 7 to 3. This change has implications on two existing constraints. Details of the modifications required are given in Sections 2.2.1 & 2.2.2.

Change declaration from:

Constant Name	tsc_N300
Type	INTEGER
Value	7
Comments	

To:

Constant Name	tsc_N300
Type	INTEGER
Value	3
Comments	

2.5.2 Invalid RRC Connection Setup message

Reason for change: The invalid message provided is correctly ignored by the UE, as it was sent on the DL CCCH with no IE identification and so no Protocol error is reported.

Summary of Change: A new invalid message has been added based on a valid RRC Connection Setup message, but with an invalid rrc_StateIndicator. The new constraint is described in section 2.4.1.

Change test case from:

Test Case Name		tc_8_1_2_2			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
2	
21		REPEAT It_Local1 UNTIL [tcv_K >= tsc_N300]			
22		UM!RLC_UM_DATA_REQ	cas_InvalidCCCH_MsgFirstDL_Msg (tsc_CellA, tsc_RB0, cs_InvalidRRC_ConnSetup (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		step 6

To:

Test Case Name		tc_8_1_2_2			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
2	
21		REPEAT It_Local1 UNTIL [tcv_K >= tsc_N300]			
22		UM!RLC_UM_DATA_REQ	cas_RRC_ConnSetup (tsc_CellA, tsc_RB0, cds_RRC_InvalidConnSetupPCH_UE_CapabilityUpdate (tcv_InitialUE_Id, tcv_RRC_Ti, tcv_CellInfoA.priScrmCode, tcv_CellInfoA.uRNTI, tcv_CellInfoA.cRNTI, tcv_CellInfoA.uL_ScramblingCode))		step 6

2.5.3 Valid RRC Connection Setup message

Reason for change: The valid message provided is ignored by the UE, and so no Connection Setup Complete message is generated. cRNTI was omitted in the RRC Connection Setup message, but is required for connection setup to cell FACH.

Summary of Change: Add the cRNTI to the RRC Connection Setup message.

Change test case from:

Test Case Name		tc_8_1_2_2			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
2			
23		+ lt_Local2			
24		UM!RLC_UM_DATA_REQ	cas_RRC_ConnSetup(tsc_CellA, tsc_RB0, cds_RRC_ConnSetupFACH_UE_CapabilityU pdate (tcv_InitialUE_Id, tcv_RRC_Ti, tcv_CellInfoA.priScrmCode, tcv_CellInfoA.uRNTI , OMIT , tcv_CellInfoA.uL_ScramblingCode))		step 6

To:

Test Case Name		tc_8_1_2_2			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
2			
23		+ lt_Local2			
24		UM!RLC_UM_DATA_REQ	cas_RRC_ConnSetup(tsc_CellA, tsc_RB0, cds_RRC_ConnSetupFACH_UE_CapabilityU pdate (tcv_InitialUE_Id, tcv_RRC_Ti, tcv_CellInfoA.priScrmCode, tcv_CellInfoA.uRNTI , tcv_CellInfoA.cRNTI , tcv_CellInfoA.uL_ScramblingCode))		step 6

CHANGE REQUEST

⌘ **34.123-3 CR 067** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.1.2.9		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘	Date:	⌘ 20/02/2003
Category:	⌘ F	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.1.2.9 to RRCv300		
Summary of change:	⌘ - 0 tables deleted from RRCv300, - 0 tables modified in RRCv300 : - 7 tables added For more details see below.		
Consequences if not approved:	⌘ Test case 8.1.2.9 will not be added		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> </table>	Y	N	⌘	X	⌘	X	⌘	X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
⌘	X										
⌘	X										
⌘	X										
Other comments:	⌘										

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- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Luton, UK

20/2/2003

Title Changes to TC_8_1_2_9 required for approval
Source Anritsu
Agenda Item N/A
Document for Approval
Contact Dan Fox (Anritsu) dan.fox@eu.anritsu.com
Tel: +44 1582 433357

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1 Overview

This document details the changes needed to fix problems in the TTCN implementation of TC_8_1_2_9. With these changes applied the test case can be demonstrated to run on two independent UE implementations. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 clause 8.1.2.2.

2 Changes required for test-case 8.1.2.9

2.1 Tables deleted from RRCv300

None

2.2 Tables modified in RRCv300

None

2.3 Tables added to RRCv300

2.3.1 Tables added from RRCv143

Name	Type	Path
tbl_RRC_ConfReqIE_1stPduCheck	ASN 1 PDU Constraint Declarations	Constants Part/PDU Constraint Declarations/ASN 1 PDU Constraint Declarations/tbl_RRC_ConfReqIE_1stPduCheck/
tbl_RRC_ConfSetupv1	ASN 1 PDU Constraint Declarations	Constants Part/PDU Constraint Declarations/ASN 1 PDU Constraint Declarations/tbl_RRC_ConfSetupv1/
tbl_RRC_ConfReqCh	ASN 1 PDU Constraint Declarations	Constants Part/PDU Constraint Declarations/ASN 1 PDU Constraint Declarations/tbl_RRC_ConfReqCh/
tbl_DL_DPDH_SoC_5	Test Suite Constant Declarations	Declarations Part/Test Suite Constant Declarations/tbl_DL_DPDH_SoC_5/
tbl_N300	Test Suite Constant Declarations	Declarations Part/Test Suite Constant Declarations/tbl_N300/
tbl_WaK5	Timer Declarations	Declarations Part/Timer Declarations/tbl_WaK5/
tc_8_1_2_9	Test Case (System Behaviour)	Dynamic Part/Test Cases/RRC/RRC_ConfMgmt_8_1_2_9/

2.4 New tables added

None.

2.5 Modifications to tables added from RRCv143

2.5.1 Correction to loop termination tests

Reason for change: Test procedure calls for RRC Connection Requests until V300 is greater than N300, but the TTCN checks for equality.

Summary of Change: Change the test condition from 'equals' to 'greater than'

Change test case from:

Test Case Name		tc_8_1_2_9			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1			
17		UM!RLC_UM_DATA_REQ	cas_RRC_ConnSetup (tsc_CellA, tsc_RB0, cds_RRC_ConnSetupInv1 (tcv_InitialUE_Id, tcv_RRC_Ti, tcv_CellInfoA.priScrmCode, tcv_CellInfoA.uRNTI , tcv_CellInfoA.uL_ScramblingCode))		Step 2b, K=1
18		REPEAT lt_Local1 UNTIL [tcv_K = tsc_N300]			Step 2b, Step 2, K>0 to Step 3
25		(tcv_K := tcv_K + 1)			Step 3d, K=1
26		REPEAT lt_Local2 UNTIL [tcv_K = tsc_N300]			Step 3c, K>0 to Step 4

To:

Test Case Name		tc_8_1_2_9			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1			
17		UM!RLC_UM_DATA_REQ	cas_RRC_ConnSetup (tsc_CellA, tsc_RB0, cds_RRC_ConnSetupInv1 (tcv_InitialUE_Id, tcv_RRC_Ti, tcv_CellInfoA.priScrmCode, tcv_CellInfoA.uRNTI , tcv_CellInfoA.uL_ScramblingCode))		Step 2b, K=1
18		REPEAT lt_Local1 UNTIL [tcv_K > tsc_N300]			Step 2b, Step 2, K>0 to Step 3
2			
25		(tcv_K := tcv_K + 1)			Step 3d, K=1
26		REPEAT lt_Local2 UNTIL [tcv_K > tsc_N300]			Step 3c, K>0 to Step 4

CHANGE REQUEST

⌘ **34.123-3 CR 016** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

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Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 7.1.1.2		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 9/04/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 7.1.1.2		
Summary of change:	⌘ - 0 table deleted from RRCv310, - 0 table modified in RRCv310, - several tables added from RRCv143 - 15 new tables created. For more details see below.		
Consequences if not approved:	⌘ Test case will not be added		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

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Seoul, Korea

12-15 May 2003

Title	Introducing test case 7.1.1.2
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce the test case to MACv310. Note that MACv310 does not currently exist therefore the approach that has been undertaken for this CR is to use RRCv310 as the baseline.

Only essential fixes to the TTCN are applied.

2 Changes required for test-case 7.1.1.2

2.1 Tables deleted from RRCv310

None.

2.2 Tables modified in RRCv310

None.

2.3 New Tables added to RRCv310

2.3.1 Tables from MACv143 — no changes necessary

CT_Field
RLC_Padding
TCTF
UE_Id
UE_IdType
px_NumOfSegInPagResOrServReqAllUE
tsc_SUFI_Ack
tsc_DC_AMDPDU
tsc_P_Poll
tsc_E_Data
tsc_E_LI_AndE_Bit
tsc_HE_LI_AndE_Bit
tsc_DefaultCellId
tsc_AM_SN_Size
tsc_LI7_Padding
tsc_UE_IdTypeU_RNTI
tsc_UE_IdTypeC_RNTI
tsc_CT_LoCh3
tsc_DCCH_OnRACH_FDD
tsc_DCCH_OnFACH_FDD
tsc_ExpectedPayloadSize
tsc_DummyDL_DirectTransferMsg_CS
tsc_DummyDL_DirectTransferMsg_PS
tsc_DummyDL_DirectTransferLen
tsc_WaitNextRLC_Segment
tsc_Reserved3_OnFACH_FDD
tsc_Reserved4_OnFACH_FDD
tsc_Reserved1_OnFACH_FDD
tsc_CTCH_OnFACH_FDD
tsc_Reserved2_OnFACH_FDD
tcv_StatusPDU
tcv_MAC_PDU
tcv_StatusMatchRes
tcv_DummyDL_DirectTransferMsg
tcv_MAC_Counter
PiggyBackedSTATUS_PDU
MAC_PDU
MAC_PDU_RCV_STATUS
TxMAC
RxMAC
c_LenInd7AndE_Bit

c_Lls2_7BitLls
 cs_Ack
 cs_SF_Ack
 cr_SUFI_Params
 c_TrLogMapping_PchFach1TransRB3
 car_DataIndHiPriNAS
 cas_DataReqHiPriNAS
 car_PRACH_Measurement_Report_IND
 c_MAC_PDU_TCTF
 cs_MAC_PDU_Def
 c_MAC_PDU_CT_DCH
 cr_RRC_Status_MAC_NoInteg
 cds_RRC_ConnSetupDCH_NoCapEnq
 cds_RRC_ConnSetupFACH_NoCapEnq
 ts_InitDummyDL_Transfer
 ts_SendDLDirectTransfer
 ts_MonitorUplinkSpecefiedTime
 ts_ReceiveRRC_RLC_StatusPDU_FACH
 MAC_Default

2.3.2 Other Tables

2.3.2.1 ts_MAC_GenericSetupProceduresToBGP6_2

This table is based on that issued in MACv143 but modified as follows:

Reason for change: U-RNTI is never used in uplink.

Summary of change: First parameter of c_UE_Info chnged from 'tcv_TmpCellInfo.uRNT' to 'OMIT'

From:

Test Step Name		ts_MAC_GenericSetupProceduresToBGP6_2			
Group		Preambles/			
Objective		Initialise the system simulator, and perform the RRC connection establishment procedure defined in 3G TS 34.108 clause 7.4.2.1 to bring the UE into state BGP6_2.			
Default		RRC_Def1			
Comments		.....		
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
17		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfo(tsc_DefaultCellId, tsc_PRACH1, c_UE_Info(tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI), cb_TrChInfoRACH1, c_TrLogMapping_Rach1TransRB3, 0)		8

To:

Test Step Name		ts_MAC_GenericSetupProceduresToBGP6_2			
Group		Preambles/			
Objective		Initialise the system simulator, and perform the RRC connection establishment			

		procedure defined in 3G TS 34.108 clause 7.4.2.1 to bring the UE into state BGP 6_2.			
Default		RRC_Def1			
Comments		.....		
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
17		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfo(tsc_DefaultCellId, tsc_PRACH1, c_UE_Info(OMIT , tcv_TmpCellInfo.cRNTI), cb_TrChInfoRACH1, c_TrLogMapping_Rach1TransRB3, 0)		8

2.3.2.2 ts_RRC_ConnEstForMAC_RecIniTDirecTrans

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

- i) TTCN MACv143 ts_RRC_ConnEstForMAC_RecIniTDirecTrans contains two local tree errors stopping the test procedure in this test step.
- ii) TTCN MACv143 ts_RRC_ConnEstForMAC_RecIniTDirecTrans contains two logical error inside loop "Next1" and inside loop "Next2"

Summary of change:

- i) Correction of the detected errors in Test Case Variable qualifiers in ts_RRC_ConnEstForMAC_RecIniTDirecTrans as shown below:
- ii) Detected errors in ts_RRC_ConnEstForMAC_RecIniTDirecTrans are corrected as shown below. Inside loop Next1 the order of the lines 33,34,35,36 is changed. Inside loop Next2 the order of lines 41,42,43,44 is changed.

i) Change:

Test Step Name		ts_RRC_ConnEstForMAC_RecIniTDirecTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		.....		
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReceiveRRC_ConnCmplAndPagRespOrServReq					
12		(tcv_MAC_Counter :=1)			
13		[(tcv_TmpCellInfo.cellConfig = cell_FACH_MAC_SRB_NoConn)]			
14	Rcv1	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti, *)	(P)	

21		[(tcv_TmpCellInfo.cellConfig = cell_DCH_MAC_SRB_NoConn)]			
22	Rcv2	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti, *))	(P)	

To:

Test Step Name		ts_RRC_ConnEstForMAC_ReclniTDirTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		.....		
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReceiveRRC_ConnCmplAndPagRespOrServReq					
12		(tcv_MAC_Counter :=1)			
13		[(tcv_TmpCellInfo.cellConfig = cell_FACH_MAC_SRB)]			
14	Rcv1	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti, *))	(P)	
21		[(tcv_TmpCellInfo.cellConfig = cell_DCH_MAC_SRB)]			
22	Rcv2	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti, *))	(P)	

ii) Change:

Test Step Name		ts_RRC_ConnEstForMAC_ReclniTDirTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		.....		
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReceiveSegments_FACH					
32	Next1	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_FACH_MAC, c_MAC_PDU_TCTF(tsc_DCCH_OnRACH_FDD, ?))		

33		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_FACH_MAC, cs_MAC_PDU_Send_STATUS_Def(cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter), 31)))		
34		START t_WaitMS (tsc_WaitNextRLC_Segment)			1
35		+It_Updatecounter			
36		GOTO Next1			
37		? TIMEOUT t_WaitMS			
38		[tcv_MAC_Counter = px_NumOfSegInPagResOrServReq]		(P)	
39		[TRUE]		(F)	
		It_ReceiveSegments_DCH			
40	Next2	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_DCH(tsc_CT_LoCh3, ?))		
41		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_RCV_STATUS_DC H(tsc_CT_LoCh3, cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter ,31)))		
42		START t_WaitMS (tsc_WaitNextRLC_Segment)			
43		+ It_Updatecounter			
44		GOTO Next2			

To:

Test Step Name		ts_RRC_ConnEstForMAC_ReclniTDirTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		.....		
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
28		GOTO Rcv2			
29	ERR	[TRUE]		I	error
		It_Updatecounter			
30		[tcv_MAC_Counter < px_NumOfSegInPagResOrServReq]			
31		(tcv_MAC_Counter := tcv_MAC_Counter+1)			
		It_ReceiveSegments_FACH			
32	Next1	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_FACH_MAC, c_MAC_PDU_TCTF(tsc_DCCH_OnRACH_FDD, ?))		

33		+lt_Updatecounter			
34		START t_WaitMS (tsc_WaitNextRLC_Segment)			
35		GOTO Next1			
36		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_FACH_MAC, cs_MAC_PDU_Send_STATUS_Def(cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter), 31)))		
37		? TIMEOUT t_WaitMS			
38		[tcv_MAC_Counter = px_NumOfSegInPagResOrServReq]		(P)	
39		[TRUE]		(F)	
		lt_ReceiveSegments_DCH			
40	Next2	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_DCH(tsc_CT_LoCh3, ?))		
41		+lt_Updatecounter			
42		START t_WaitMS (tsc_WaitNextRLC_Segment)			
43		GOTO Next2			
44		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_RCV_STATUS_DC H(tsc_CT_LoCh3, cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter ,31)))		
		...			

2.3.2.3 RLC_STATUS_PDU

Reason for change: This item is used as a PDU type.

Summary of change:

- i) The Structured Type Definition RLC_STATUS_PDU is removed.
- ii) The PDU Type Definition RLC_STATUS_PDU is added, with the definition details as before.

2.3.2.4 cs_MAC_PDU_Send_STATUS_Def

Reason for change: The constraint should use MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change: The following constraint is imposed on MAC_PDU rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	cs_MAC_PDU_Send_STATUS_Def(p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	

To:

Constraint Name	cs_MAC_PDU_Send_STATUS_Def(p_Data: RLC_STATUS_PDU)
-----------------	--

PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	

2.3.2.5 cr_MAC_PDU_RCV_STATUS_TCTF

Reason for change: The constraint should use MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change: The following constraint is imposed on MAC_PDU (with appropriate change to the parameter list) rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	cr_MAC_PDU_RCV_STATUS_TCTF(p_TCTF: TCTF; p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	

To:

Constraint Name	cr_MAC_PDU_RCV_STATUS_TCTF(p_TCTF: TCTF; p_Data: STATUS_PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	

2.3.2.6 c_MAC_PDU_CT_RCV_STATUS_DCH

Reason for change: This constraint should apply to PDUs of type MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change: The following constraint is imposed on PDU-type MAC_PDU (with appropriate change to the parameter list) rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	c_MAC_PDU_CT_RCV_STATUS_DCH(p_CT_Field: CT_Field; p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	

To:

Constraint Name	c_MAC_PDU_CT_RCV_STATUS_DCH(p_CT_Field: CT_Field; p_Data: PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	

2.3.2.7 cr_StatusAnyPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change: This item is used as a TTCN PDU Constraint Declaration.

Summary of change:

- i) The Structured Type constraint declaration `cr_StatusAnyPad` is removed.
- ii) TTCN PDU Constraint Declaration `cr_StatusAnyPad` is added, with the definition details as before except the used type, also the PDU-Type is changed to `STATUS_PDU`.
- iii) Field Name changes

From:

Constraint Name	cr_StatusAnyPad		
Structured Type	RLC_STATUS_PDU		
Derivation Path			
Encoding Variation			
Comments			
Element Name	Element Value	Element Encoding	Comments
dC_Field	tsc_DC_ControlPDU		
type	tsc_PDU_TypeStatus		
superFields	-		
superFieldsRec	?		4
padding	*		

To:

Constraint Name	cr_StatusAnyPad		
PDU Type	STATUS_PDU		
Derivation Path			
Encoding Rule Name			
Encoding Variation			
Comments			
Field Name	Field Value	Field Encoding	Comments
dC_Field	tsc_DC_ControlPDU		
type	tsc_PDU_TypeStatus		
superFieldsTx	-		
superFieldsAndPadRx	?		4
paddingTx	*		

2.3.2.8 cs_StatusAndPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change: This item is used as a TTCN PDU Constraint Declaration.

Summary of change:

- i) The Structured Type constraint declaration `cs_StatusAndPad` is removed.
- ii) TTCN PDU Constraint Declaration `cs_StatusAndPad` is added, with the definition details as before.

From:

Constraint Name	cs_StatusAndPad
Structured Type	RLC_STATUS_PDU
Derivation Path	
Encoding Variation	

Comment	
---------	--

To:

Constraint Name	cs_StatusAndPad
PDU Type	RLC_STATUS_PDU
Derivation Path	
Encoding Variation	
Comment	

2.3.2.9 ts_MM_SecurityOn

This table is based on that issued in MACv143 but modified as follows:

Reason for change: ts_RRC_Security has fewer parameters.

Summary of change: The number of parameters passed to ts_RRC_Security is now 6, was 7. ts_MM_SecurityOn, line 1, in Behaviour Description, remove parameter 2 (TRUE).

From:

Test Step Name	ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)
Group	BasicM_MM_GMM_Steps/
Objective	Start Cipherring if applicable
Default	NAS_OtherwiseFail
Comments	Cipherring is either generally applied or not. Starting takes effect only if cipherring is to be applied.
Description	

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_RRC_Security(p_CellId, TRUE, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

To:

Test Step Name	ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)
Group	BasicM_MM_GMM_Steps/
Objective	Start Cipherring if applicable
Default	NAS_OtherwiseFail
Comments	Cipherring is either generally applied or not. Starting takes effect only if cipherring is to be applied.
Description	

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey,			

		p_CN_domain)			
--	--	--------------	--	--	--

2.3.2.10 MAC_AMD_PDU

This table is based on that issued in MACv143 but modified as follows:

Reason for change: There is a conflict in the definitions of AMD_PDU between MAC and RLC suites – padding is of type Padding (HEXSTRING) in RLC suite and of type RLC_Padding (BITSTRING) in MAC suite.

Summary of change: The PDU from the MAC suite has been renamed from AMD_PDU to MAC_AMD_PDU.

From:

PDU Name	AMD_PDU
PCO Type	DSAP
Encoding Rule Name	
Encoding Variation	
Comments	Acknowledged mode RLC PDU with 7 bit length indicators. Ref 3G TS 25.322 clause 9.2.1.4

To:

PDU Name	MAC_AMD_PDU
PCO Type	DSAP
Encoding Rule Name	
Encoding Variation	
Comments	Acknowledged mode RLC PDU with 7 bit length indicators. Ref 3G TS 25.322 clause 9.2.1.4

2.3.2.11 cs_AMD_LisAndPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change: AMD_PDU has been renamed MAC_AMD_PDU for the MAC suite.

Summary of change: The PDU Type has changed from AMD_PDU to MAC_AMD_PDU.

From:

Constraint Name	cs_AMD_LisAndPad(p_SN: INTEGER;p_Poll: PollingBit; p_LIs: LenInds; p_Data:AM_Data;p_NumofBitsPadding: INTEGER)
PDU Type	AMD_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	

To:

Constraint Name	cs_AMD_LisAndPad(p_SN: INTEGER;p_Poll: PollingBit; p_LIs: LenInds; p_Data:AM_Data;p_NumofBitsPadding: INTEGER)
PDU Type	MAC_AMD_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	

Comments	
----------	--

2.3.2.12 tcv_TimerPoll

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The timer is too short. The original value is intended to be used where there is a real RLC implementation rather than an emulation in the TTCN, hence a greater value is required. N.B. It is not intended that this change be applied to all suites, e.g. it should not be applied to RRC.

Summary of change:

The value for tcv_TimerPoll has changed from tp200 to tp400.

2.3.2.13 c_UL_AM_RLC

This table is based on that issued in MACv143 but modified as follows:

Reason for change: The timer is too short.

Summary of change: The value for timerPoll has changed from tp200 to tp400.

From:

Constraint Name	c_UL_AM_RLC
ASN1 Type	UL_AM_RLC_Mode
Derivation Path	
Encoding Variation	
Comments	

Constraint Value

```
{
    transmissionRLC_Discard noDiscard : dat15,
    transmissionWindowSize tw128,
    timerRST tr500,
    max_RST rst1,
    pollingInfo {
        timerPollProhibit tpp200,
        timerPoll tp200,
        poll_PDU OMIT,
        poll_SDU sdu1,
        lastTransmissionPDU_Poll TRUE,
        lastRetransmissionPDU_Poll TRUE,
        pollWindow pw99,
        timerPollPeriodic OMIT
    }
}
```

To:

Constraint Name	c_UL_AM_RLC
ASN1 Type	UL_AM_RLC_Mode
Derivation Path	
Encoding Variation	
Comments	

Constraint Value

```
{
```

```

transmissionRLC_Discard noDiscard : dat15,
transmissionWindowSize tw128,
timerRST tr500,
max_RST rst1,
pollingInfo {
  timerPollProhibit tpp200,
  timerPoll tp400,
  poll_PDU OMIT,
  poll_SDU sdu1,
  lastTransmissionPDU_Poll TRUE,
  lastRetransmissionPDU_Poll TRUE,
  pollWindow pw99,
  timerPollPeriodic OMIT
}
}
    
```

2.3.2.14 cr_SUFI_Params

This table is taken from RLCv310 and is un-modified.

2.3.2.15 tc_7_1_1_2

This table is based on that issued in MACv143 but modified as follows:

Reason for change: The definition of SUFI_Params has changed and it is now preferred to use fully parameterised SUFI_Params (as defined in section 2.3.2.14)

Summary of change: Lines 9, 13, 17, 21, 25 of the table changes from using cr_SUFI_Params_Ack to cr_SUFI_Params, which is fully parameterised.

From:

Test Case Name	tc_7_1_1_2
Group	MAC/MappingBetweenLoChAndTrCh/
Purpose	1. To verify that the UE discards PDUs with reserved or incorrect values in the TCTF field 2. To verify that the TCTF field, C/T field, UE-Id type and UE-Id field are correctly applied when a DTCH or DCCH is mapped to the RACH/FACH
Configuration	
Default	MAC_Default
Comments	Reference(s) TS 25.321 clauses 9.2.1 and 9.2.1.1 b).
Selection Ref	AllUE
Description	DTCH or DCCH mapped to RACH/FACH / Invalid TCTF

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
		lt_TestBody			
				
9		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params_Ack (INT_TO_BIT (0,12) , INT_TO_BIT (0,12)))			6
				
13		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params_Ack (			5

		INT_TO_BIT (1,12) , INT_TO_BIT (1,12)))			
				
17		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params_Ack (INT_TO_BIT (2,12) , INT_TO_BIT (2,12)))			5
				
21		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params_Ack (INT_TO_BIT (3,12) , INT_TO_BIT (3,12)))			5
				
25		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params_Ack (INT_TO_BIT (4,12) , INT_TO_BIT (4,12)))			5
	TBE	(tcv_TestBody := FALSE)			

To:

Test Case Name	tc_7_1_1_2
Group	MAC/MappingBetweenLoChAndTrCh/
Purpose	1. To verify that the UE discards PDUs with reserved or incorrect values in the TCTF field 2. To verify that the TCTF field, C/T field, UE-Id type and UE-Id field are correctly applied when a DTCH or DCCH is mapped to the RACH/FACH
Configuration	
Default	MAC_Default
Comments	Reference(s) TS 25.321 clauses 9.2.1 and 9.2.1.1 b).
Selection Ref	AllUE
Description	DTCH or DCCH mapped to RACH/FACH / Invalid TCTF

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
		lt_TestBody			
				
9		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params (INT_TO_BIT (0,12), INT_TO_BIT (0,12), *, *, ?, ?, ?))			6
				
13		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params (INT_TO_BIT (1,12), INT_TO_BIT (1,12), *, *, ?, ?, ?))			5
				
17		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params (INT_TO_BIT (2,12), INT_TO_BIT (2,12), *, *, ?, ?, ?))			5
				
21		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params (INT_TO_BIT (3,12), INT_TO_BIT (3,12), *, *, ?, ?, ?))			5
				
25		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params (			5

		INT_TO_BIT (4,12), INT_TO_BIT (4,12), *, *, ?, ?, ?)			
	TBE	(tcv_TestBody := FALSE)			

CHANGE REQUEST

⌘ **34.123-3 CR 017** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 7.1.1.8		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 9/04/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 7.1.1.8		
Summary of change:	⌘ - 0 table deleted from RRCv310, - 1 table modified in RRCv310, - most tables added from RRCv143, - 13 new tables created. For more details see below.		
Consequences if not approved:	⌘ Test case will not be added		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Seoul, Korea

12-15 May 2003

Title	Introducing test case 7.1.1.8
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce the test case to MACv310. Note that MACv310 does not currently exist therefore the approach that has been undertaken for this CR is to use RRCv310 as the baseline.

Only essential fixes to the TTCN are applied.

2 Changes required for test-case

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 ts_SS_Rel

Reason for change:

The release of channels is also required in the case where DCH MAC Signalling Radio Bearers have been configured.

Summary of change:

- i) The condition in Behaviour Line 2 has an OR clause added to cover the possibility of DCH MAC SRB.

From:

Test Step Name		ts_SS_Rel (p_CellId : INTEGER)			
Group		BasicM_SS_Configuration_Steps/			
Objective		To release all channels that are configured in the SS.			
Default		SS_Def			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		[(tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB_NoConn) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_Speech) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_64kCS_RAB_SRB) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_57_6kCS_RAB_SRB) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_64kPS_RAB_SRB) OR (tcv_TmpCellInfo.cellConfig = cell_RLC_DCH_AM_RAB_15Lis) OR (tcv_TmpCellInfo.cellConfig = cell_RLC_DCH_AM_RAB_7Lis) OR (tcv_TmpCellInfo.cellConfig = cell_RLC_DCH_UM_RAB_15Lis) OR (tcv_TmpCellInfo.cellConfig = cell_RLC_DCH_UM_RAB_7Lis) OR			

		(tcv_TmpCellInfo.cellConfig = cell_PDCP_AM_RAB) OR (tcv_TmpCellInfo.cellConfig = cell_PDCP_UM_RAB) OR (tcv_TmpCellInfo.cellConfig = cell_PDCP_AM_UM_RAB) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_2AM_PS) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_2_PS_Call)]			
3		+ ts_SS_RelDPCH (p_CellId)			1.
			...		

To:

Test Step Name		ts_SS_Rel (p_CellId : INTEGER)			
Group		BasicM_SS_Configuration_Steps/			
Objective		To release all channels that are configured in the SS.			
Default		SS_Def			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		[(tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB_NoConn) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_Speech) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_64kCS_RAB_SRB) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_57_6kCS_RAB_SRB) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_64kPS_RAB_SRB) OR (tcv_TmpCellInfo.cellConfig = cell_RLC_DCH_AM_RAB_15Lis) OR (tcv_TmpCellInfo.cellConfig = cell_RLC_DCH_AM_RAB_7Lis) OR (tcv_TmpCellInfo.cellConfig = cell_RLC_DCH_UM_RAB_15Lis) OR (tcv_TmpCellInfo.cellConfig = cell_RLC_DCH_UM_RAB_7Lis) OR (tcv_TmpCellInfo.cellConfig = cell_PDCP_AM_RAB) OR (tcv_TmpCellInfo.cellConfig = cell_PDCP_UM_RAB) OR (tcv_TmpCellInfo.cellConfig = cell_PDCP_AM_UM_RAB) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_2AM_PS) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_2_PS_Call) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_MAC_SRB)]			
3		+ ts_SS_RelDPCH (p_CellId)			1.
			...		

2.3 New Tables added to RRCv310

2.3.1 Tables from RRCv143 — no changes necessary

AllUE
 car_DataIndHiPriNAS
 car_PRACH_Measurement_Report_IND
 cas_DataReqHiPriNAS
 cds_RRC_ConnSetupDCH_NoCapEnq
 cds_RRC_ConnSetupFACH_NoCapEnq
 cr_108_RRC_ConnRelCmpl
 cr_RRC_Status_MAC_NoInteg
 cr_SUFI_Params_Ack
 cs_Ack
 cs_MAC_PDU_Def
 cs_SF_Ack
 CT_Field
 c_LenInd7AndE_Bit
 c_LIs2_7BitLIs
 c_MAC_PDU_CT_DCH
 c_MAC_PDU_TCTF
 c_TrLogMappingDL_4DCCH_TransRB3
 c_TrLogMappingUL_4DCCH_TransRB3
 DirectEncoding
 MAC_Default
 MAC_PDU
 MAC_PDU_RCV_STATUS
 PiggyBackedSTATUS_PDU
 px_KeySeqDefxxxxx
 px_NumOfSegInPagResOrServReq
 RLC_Padding
 RxMAC
 TCTF
 tcv_DummyDL_DirectTransferMsg
 tcv_MAC_Counter
 tcv_MAC_PDU
 tcv_ReceiveSigConnRelInd
 tcv_StatusMatchRes
 tcv_StatusPDU
 tsc_AM_SN_Size
 tsc_CT_LoCh3
 tsc_CT_LoCh8
 tsc_CT_Reserved
 tsc_DCCH_OnFACH_FDD
 tsc_DCCH_OnRACH_FDD
 tsc_DC_AMDPDU
 tsc_DefaultCellId
 tsc_DummyDL_DirectTransferLen
 tsc_DummyDL_DirectTransferMsg_CS
 tsc_DummyDL_DirectTransferMsg_PS
 tsc_ExpectedPayloadSize
 tsc_E_Data
 tsc_E_LI_AndE_Bit
 tsc_HE_LI_AndE_Bit
 tsc_LI7_Padding
 tsc_P_Poll
 tsc_SUFI_Ack
 tsc_UE_IdTypeC_RNTI
 tsc_UE_IdTypeU_RNTI
 tsc_WaitNextRLC_Segment
 ts_GenericSetupProceduresToBGP6_1

ts_InitDummyDL_Transfer
 ts_MonitorUplinkSpecefiedTime
 ts_ReceiveRRC_RLC_StatusPDU_DCH
 ts_SendDLDirectTransfer
 TxMAC
 UE_Id
 UE_IdType

2.3.2 Other Tables

2.3.2.1 ts_RRC_ConnEstForMAC_ReclniTDirecTrans

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

- i) TTCN MACv143 ts_RRC_ConnEstForMAC_ReclniTDirecTrans contains two local tree errors stopping the test procedure in this test step.
- ii) TTCN MACv143 ts_RRC_ConnEstForMAC_ReclniTDirecTrans contains two logical error inside loop " Next1" and inside loop "Next2"

Summary of change:

- i) Correction of the detected errors in Test Case Variable qualifiers in ts_RRC_ConnEstForMAC_ReclniTDirecTrans as shown below:

Change:

Test Step Name		ts_RRC_ConnEstForMAC_ReclniTDirecTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReceiveRRC_ConnCmplAndPagRespOrServReq					
12		(tcv_MAC_Counter :=1)			
13		[(tcv_TmpCellInfo.cellConfig = cell_FACH_MAC_SRB_NoConn)]			
14	Rcv1	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti, *))	(P)	

...

21		[(tcv_TmpCellInfo.cellConfig = cell_DCH_MAC_SRB_NoConn)]			
----	--	--	--	--	--

22	Rcv2	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_R RC_Ti, *))	(P)	
----	------	----------------------	--	-----	--

To:

Test Step Name	ts_RRC_ConnEstForMAC_ReclniTDirecTrans(p_CellId: INTEGER)				
Group	RRC_Steps/				
Objective	To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message				
Default	RRC_Def1				
Comments	<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReceiveRRC_ConnCmplAndPagRespOrServReq					
12		(tcv_MAC_Counter :=1)			
13		[(tcv_TmpCellInfo.cellConfig = cell_FACH_MAC_SRB)]			
14	Rcv1	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti, *))	(P)	

...

21		[(tcv_TmpCellInfo.cellConfig = cell_DCH_MAC_SRB)]			
22	Rcv2	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti, *))	(P)	

Summary of changes:

- ii) Detected errors in ts_RRC_ConnEstForMAC_ReclniTDirecTrans are corrected as shown below. Inside loop Next1 the order of the lines 33,34,35,36 is changed. Inside loop Next2 the order of lines 41,42,43,44 is changed.

Change from:

Test Step Name	ts_RRC_ConnEstForMAC_ReclniTDirecTrans(p_CellId: INTEGER)				
Group	RRC_Steps/				
Objective	To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message				
Default	RRC_Def1				

Comments		This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).			
Description		The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

...

		It_ReceiveSegments_FACH			
32	Next 1	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_FACH_MAC, c_MAC_PDU_TCTF(tsc_DCCH_OnRACH_FDD, ?))		
33		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_FACH_MAC, cs_MAC_PDU_Send_STATUS_Def(cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter), 31)))		
34		START t_WaitMS (tsc_WaitNextRLC_Segment)			1
35		+It_Updatecounter			
36		GOTO Next1			
37		? TIMEOUT t_WaitMS			
38		[tcv_MAC_Counter = px_NumOfSegInPagResOrServReq]		(P)	
39		[TRUE]		(F)	
		It_ReceiveSegments_DCH			
40	Next 2	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_DCH(tsc_CT_LoCh3, ?))		
41		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_RCV_STATUS_DC H(tsc_CT_LoCh3, cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter ,31)))		
42		START t_WaitMS (tsc_WaitNextRLC_Segment)			
43		+ It_Updatecounter			
44		GOTO Next2			

To:

Test Step Name	ts_RRC_ConnEstForMAC_ReclniTDirecTrans(p_CellId: INTEGER)				
Group	RRC_Steps/				
Objective	To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message				
Default	RRC_Def1				
Comments	<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

...

28		GOTO Rcv2			
29	ERR	[TRUE]		I	error
		lt_Updatecounter			
30		[tcv_MAC_Counter < px_NumOfSegInPagResOrServReq]			
31		(tcv_MAC_Counter := tcv_MAC_Counter+1)			
		lt_ReceiveSegments_FACH			
32	Next 1	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_FACH_MAC, c_MAC_PDU_TCTF(tsc_DCCH_OnRACH_FDD, ?))		
33		+lt_Updatecounter			
34		START t_WaitMS (tsc_WaitNextRLC_Segment)			
35		GOTO Next1			
36		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_FACH_MAC, cs_MAC_PDU_Send_STATUS_Def(cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter), 31)))		
37		? TIMEOUT t_WaitMS			
38		[tcv_MAC_Counter = px_NumOfSegInPagResOrServReq]		(P)	
39		[TRUE]		(F)	
		lt_ReceiveSegments_DCH			
40	Next 2	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_DCH(tsc_CT_LoCh3, ?))		

41		+lt_Updatecounter			
42		START t_WaitMS (tsc_WaitNextRLC_Segment)			START t_WaitMS (tsc_Wait NextRLC_ Segment)
43		GOTO Next2			
44		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_RCV_STATUS_DC H(tsc_CT_LoCh3, cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter ,31)))		
		...			

2.3.2.2 RLC_STATUS_PDU

Reason for change:

This item is used as a PDU type.

Summary of change:

- i) The Structured Type Definition RLC_STATUS_PDU is removed.
- ii) The PDU Type Definition RLC_STATUS_PDU is added, with the definition details as before.

2.3.2.3 cs_MAC_PDU_Send_STATUS_Def

Reason for change:

The constraint should use MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:

The following constraint is imposed on MAC_PDU rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	cs_MAC_PDU_Send_STATUS_Def(p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to receive MAC PDU's on DCCH 3 mapped to RACH using the default field values. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving. Ref 3G TS 25.321 clause 9.1.2 Parameters

To:

Constraint Name	cs_MAC_PDU_Send_STATUS_Def(p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	

Encoding Variation	
Comment	This PDU is used to receive MAC PDU's on DCCH 3 mapped to RACH using the default field values. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving. Ref 3G TS 25.321 clause 9.1.2 Parameters

2.3.2.4 cr_MAC_PDU_RCV_STATUS_TCTF

Reason for change:

The constraint should use MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:

The following constraint is imposed on MAC_PDU (with appropriate change to the parameter list) rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	cr_MAC_PDU_RCV_STATUS_TCTF(p_TCTF: TCTF; p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send MAC PDU's with various values for the TCTF field. Ref 3G TS 25.321 clause 9.1.2 The same constraint can be used for uplink and downlink, since the appropriate TCTF field can be provided as a parameter, and all other fields are the same.

To:

Constraint Name	cr_MAC_PDU_RCV_STATUS_TCTF(p_TCTF: TCTF; p_Data: STATUS_PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send MAC PDU's with various values for the TCTF field. Ref 3G TS 25.321 clause 9.1.2 The same constraint can be used for uplink and downlink, since the appropriate TCTF field can be provided as a parameter, and all other fields are the same.

2.3.2.5 c_MAC_PDU_CT_RCV_STATUS_DCH

Reason for change:

This constraint should apply to PDUs of type MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:

The following constraint is imposed on PDU-type MAC_PDU (with appropriate change to the parameter list) rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	c_MAC_PDU_CT_RCV_STATUS_DCH(p_CT_Field: CT_Field; p_Data: RLC_STATUS_PDU)
-----------------	---

PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	<p>This PDU is used to send a MAC PDU on a DCCH mapped to FACH with the given value for the CT field. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving.</p> <p>Ref 3G TS 25.321 clause 9.1.2</p> <p>Parameters</p> <p>p_CT_Field The CT field value to be used in the transmitted MAC PDU.</p> <p>p_Data The MAC SDU to be used in the transmitted MAC PDU.</p> <p>NOTE: The user of this constraint is responsible for ensuring that the MAC header + data is the correct length to fit exactly in one transport block.</p>

To:

Constraint Name	c_MAC_PDU_CT_RCV_STATUS_DCH(p_CT_Field: CT_Field; p_Data: PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	<p>This PDU is used to send a MAC PDU on a DCCH mapped to FACH with the given value for the CT field. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving.</p> <p>Ref 3G TS 25.321 clause 9.1.2</p> <p>Parameters</p> <p>p_CT_Field The CT field value to be used in the transmitted MAC PDU.</p> <p>p_Data The MAC SDU to be used in the transmitted MAC PDU.</p> <p>NOTE: The user of this constraint is responsible for ensuring that the MAC header + data is the correct length to fit exactly in one transport block.</p>

2.3.2.6 cr_StatusAnyPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

This item is used as a TTCN PDU Constraint Declaration.

Summary of change:

- i) The Structured Type constraint declaration cr_StatusAnyPad is removed.
- ii) TTCN PDU Constraint Declaration cr_StatusAnyPad is added, with the definition details as before except the used type, also the PDU-Type is changed to STATUS_PDU.
- iii) Field Name changes

From:

Constraint Name	cr_StatusAnyPad		
Structured Type	RLC_STATUS_PDU		
Derivation Path			
Encoding Variation			
Comments	<p>This constraint is used to receive an AM STATUS PDU containing the given SUFI list. Any padding included is ignored.</p> <p>Parameters: p_SuperFields: The SUFI list to be received.</p>		
Element Name	Element Value	Element Encoding	Comments
dC_Field	tsc_DC_ControlPDU		
type	tsc_PDU_TypeStatus		
superFields	-		
superFieldsRec	?		4
padding	*		
Detailed Comments			

To:

Constraint Name	cr_StatusAnyPad		
PDU Type	STATUS_PDU		
Derivation Path			
Encoding Rule Name			
Encoding Variation			
Comments	<p>This constraint is used to receive an AM STATUS PDU containing the given SUFI list. Any padding included is ignored.</p> <p>Parameters: p_SuperFields: The SUFI list to be received.</p>		
Field Name	Field Value	Field Encoding	Comments
dC_Field	tsc_DC_ControlPDU		
type	tsc_PDU_TypeStatus		
superFieldsTx	-		
superFieldsAndPadRx	?		4
paddingTx	*		
Detailed Comments			

2.3.2.7 cs_StatusAndPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

This item is used as a TTCN PDU Constraint Declaration.

Summary of change:

- i) The Structured Type constraint declaration cs_StatusAndPad is removed.
- ii) TTCN PDU Constraint Declaration cs_StatusAndPad is added, with the definition details as before.

From:

Constraint Name	cs_StatusAndPad
Structured Type	RLC_STATUS_PDU
Derivation Path	
Encoding Variation	
Comment	<p>This constraint is used to send an AM STATUS PDU containing the given superfields.</p> <p>Parameters:</p> <p>p_SuperFields: The super-fields to be included in the STATUS PDU.</p> <p>p_PaddingSizeHalfOctets: The number of half octets to be added at the end of the PDU. In general, this parameter will contain the value (2 * tcv_PU_Size) - (p_SuperFields size + 1)</p> <p>NOTE: SUFI list size = p_Superfields size + 1 half octet (for D/C field and Type)</p>

To:

Constraint Name	cs_StatusAndPad
PDU Type	RLC_STATUS_PDU
Derivation Path	
Encoding Variation	
Comment	<p>This constraint is used to send an AM STATUS PDU containing the given superfields.</p> <p>Parameters:</p> <p>p_SuperFields: The super-fields to be included in the STATUS PDU.</p> <p>p_PaddingSizeHalfOctets: The number of half octets to be added at the end of the PDU. In general, this parameter will contain the value (2 * tcv_PU_Size) - (p_SuperFields size + 1)</p> <p>NOTE: SUFI list size = p_Superfields size + 1 half octet (for D/C field and Type).</p>

2.3.2.8 ts_MM_SecurityOn

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

ts_RRC_Security has fewer parameters.

Summary of change:

The number of parameters passed to ts_RRC_Security is now 6, was 7.

ts_MM_SecurityOn, line 1, in Behaviour Description, remove parameter 2 (TRUE).

From:

Test Step Name	ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)
Group	BasicM_MM_GMM_Steps/
Objective	Start Cipherring if applicable
Default	NAS_OtherwiseFail

Comments	Cipherring is either generally applied or not. Starting takes effect only if cipherring is to be applied.				
Description					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_RRC_Security(p_CellId, TRUE, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			
Detailed Comments					

To:

Test Step Name	ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)				
Group	BasicM_MM_GMM_Steps/				
Objective	Start Cipherring if applicable				
Default	NAS_OtherwiseFail				
Comments	Cipherring is either generally applied or not. Starting takes effect only if cipherring is to be applied.				
Description					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			
Detailed Comments					

2.3.2.9 AMD_PDU

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

There is a conflict in the definitions of AMD_PDU between MAC and RLC suites – padding is of type Padding (HEXSTRING) in RLC suite and of type RLC_Padding (BITSTRING) in MAC suite.

Summary of change:

The PDU from the MAC suite has been renamed from AMD_PDU to MAC_AMD_PDU.

From:

PDU Name	AMD_PDU
PCO Type	DSAP
Encoding Rule Name	
Encoding Variation	
Comments	Acknowledged mode RLC PDU with 7 bit length indicators. Ref 3G TS 25.322 clause 9.2.1.4

To:

PDU Name	MAC_AMD_PDU
PCO Type	DSAP
Encoding Rule Name	
Encoding Variation	
Comments	Acknowledged mode RLC PDU with 7 bit length indicators. Ref 3G TS 25.322 clause 9.2.1.4

2.3.2.10 cs_AMD_LisAndPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

AMD_PDU has been renamed MAC_AMD_PDU for the MAC suite.

Summary of change:

The PDU Type has changed from AMD_PDU to MAC_AMD_PDU.

From:

Constraint Name	cs_AMD_LisAndPad(p_SN: INTEGER;p_Poll: PollingBit; p_LIs: LenInds; p_Data:AM_Data;p_NumofBitsPadding: INTEGER)
PDU Type	AMD_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	<p>This constraint is used to send an AM PDU containing data and a length indicator group, and padding.</p> <p>Parameters:</p> <p>p_SN: An integer containing the next sequence number to be transmitted. This parameter is used in a call to INT_TO_BIT, so a value must be provided.</p> <p>p_Poll: The value of the Poll bit. This parameter must be one of the following values: tsc_P_Poll, tsc_P_NoPoll.</p> <p>p_LIs: The length indicator group to be used in the PDU. This field must contain at least one LI.</p> <p>p_Data: The data to be included in the PDU.</p> <p>p_NumHalfOctetsPadding: The number of half octets of padding to be included at the end of the PDU. It is the callers responsibility to ensure that the LI group size + the data size + the padding size is exactly equal to the current PU size.</p>

To:

Constraint Name	cs_AMD_LisAndPad(p_SN: INTEGER;p_Poll: PollingBit; p_LIs: LenInds;
-----------------	--

	p_Data:AM_Data;p_NumofBitsPadding: INTEGER)
PDU Type	MAC_AMD_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	<p>This constraint is used to send an AM PDU containing data and a length indicator group, and padding.</p> <p>Parameters:</p> <p>p_SN: An integer containing the next sequence number to be transmitted. This parameter is used in a call to INT_TO_BIT, so a value must be provided.</p> <p>p_Poll: The value of the Poll bit. This parameter must be one of the following values: tsc_P_Poll, tsc_P_NoPoll.</p> <p>p_LIs: The length indicator group to be used in the PDU. This field must contain at least one LI.</p> <p>p_Data: The data to be included in the PDU.</p> <p>p_NumHalfOctetsPadding: The number of half octets of padding to be included at the end of the PDU. It is the callers responsibility to ensure that the LI group size + the data size + the padding size is exactly equal to the current PU size.</p>

2.3.2.11 tcv_TimerPoll

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The timer is too short. The original value is intended to be used where there is a real RLC implementation rather than an emulation in the TTCN, hence a greater value is required. N.B. It is not intended that this change be applied to all suites, e.g. it should not be applied to RRC.

Summary of change:

The value for tcv_TimerPoll has changed from tp200 to tp400.

2.3.2.12 c_UL_AM_RLC

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The timer is too short.

Summary of change:

The value for timerPoll has changed from tp200 to tp400.

From:

Constraint Name	c_UL_AM_RLC
ASN1 Type	UL_AM_RLC_Mode

Derivation Path	
Encoding Variation	
Comments	
Constraint Value	
<pre>{ transmissionRLC_Discard noDiscard : dat15, transmissionWindowSize tw128, timerRST tr500, max_RST rst1, pollingInfo { timerPollProhibit tpp200, timerPoll tp200, poll_PDU OMIT, poll_SDU sdu1, lastTransmissionPDU_Poll TRUE, lastRetransmissionPDU_Poll TRUE, pollWindow pw99, timerPollPeriodic OMIT } }</pre>	
Detailed Comments	

To:

Constraint Name	c_UL_AM_RLC
ASN1 Type	UL_AM_RLC_Mode
Derivation Path	
Encoding Variation	
Comments	
Constraint Value	
<pre>{ transmissionRLC_Discard noDiscard : dat15, transmissionWindowSize tw128, timerRST tr500, max_RST rst1, pollingInfo { timerPollProhibit tpp200, timerPoll tp400, poll_PDU OMIT, poll_SDU sdu1, lastTransmissionPDU_Poll TRUE, lastRetransmissionPDU_Poll TRUE, pollWindow pw99, timerPollPeriodic OMIT } }</pre>	
Detailed Comments	

2.3.2.13 tc_7_1_1_8

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The definition of SUFI_Params has changed and it is now preferred to use fully parameterised SUFI_Params.

Summary of change:

Line 13 of the test case changes from using cr_SUFI_Params_Ack to cr_SUFI_Params, which is fully parameterised.

From:

Test Case Name	tc_7_1_1_8				
Group	MAC/MappingBetweenLoChAndTrCh/				
Purpose	<p>1. To verify that the UE discards PDUs with reserved or incorrect values in C/T field.</p> <p>2. To verify that the TCTF field, C/T field, UE-Id type and UE-Id field are correctly applied when a DTCH or DCCH is mapped to the RACH/FACH.</p>				
Configuration					
Default	MAC_Default				
Comments	Reference(s) TS 25.321 clauses 9.2.1 and 9.2.1.1 b).				
Selection Ref	AllUE				
Description	DTCH or DCCH mapped to DCH / Invalid C/T Field				
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
13		+ts_ReceiveRRC_RLC_StatusPDU_DCH (tsc_RB_DCCH_DCH_MAC, cr_SUFI_Params_Ack (INT_TO_BIT (1,12) , INT_TO_BIT (1,12)))			5

To:

Test Case Name	tc_7_1_1_8				
Group	MAC/MappingBetweenLoChAndTrCh/				
Purpose	<p>1. To verify that the UE discards PDUs with reserved or incorrect values in C/T field.</p> <p>2. To verify that the TCTF field, C/T field, UE-Id type and UE-Id field are correctly applied when a DTCH or DCCH is mapped to the RACH/FACH.</p>				
Configuration					
Default	MAC_Default				
Comments	Reference(s) TS 25.321 clauses 9.2.1 and 9.2.1.1 b).				
Selection Ref	AllUE				
Description	DTCH or DCCH mapped to DCH / Invalid C/T Field				
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
13		+ts_ReceiveRRC_RLC_StatusPDU_DCH (tsc_RB_DCCH_DCH_MAC, cr_SUFI_Params (INT_TO_BIT (1,12) , INT_TO_BIT (1,12)))			5

		* ? ?)			
--	--	--------------	--	--	--

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 018** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.1.1.2		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 6/05/2003
Category:	⌘ F	Release:	⌘ R99
Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)	

Reason for change:	⌘ To introduce test case 8.1.1.2 to RRCv310		
Summary of change:	⌘ - 0 table deleted from RRCv310, - 19 tables modified in RRCv310, - 5 tables added from RRCv143, - 5 new tables created. - cs_QoS_InteractiveMT_CellFACH_Iv has been renamed as cs_QoS_InteractiveOrBackgroundMT_CellFACH_Iv - cr_QoS_InteractiveMO_Iv has been renamed as cr_QoS_InteractiveOrBackgroundMT_Iv For more details see below.		
Consequences if not approved:	⌘ Test case 8.1.1.2 will not be added		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title	Introducing test case 8.1.1.2 to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce test case 8.1.1.2 to RRCv310. With these changes applied, the test case can be demonstrated to run on two independent UE implementations. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 clause 8.1.1.2.

2 Changes required for test-case 8.1.1.2

2.1 Tables deleted from RRCv310

None.

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change: The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section .

Summary of Change: Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 cr_QoS_InteractiveMO_CellFACH_Iv

Reason for change: There are a number of discrepancies between quality of service described in the receive constraint and the quality of service the UE is told to request .

Summary of Change: Rename the constraint to cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to check for the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'11111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv (p_trafficClass : B3 | p_dlyClass : B3)			
Structured Type	QualityOfService_lv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE			
	Element Name	Element Value	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	reliabilityClass	'100'B		Acknowledge Mode of RLC
	peakThroughput	'0100'B		64 kbps
	spare1	'0'B		
	precedenceClass	'000'B		Subscribed class
	spare2	'000'B		
	meanThroughput	'11111'B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	'01'B		With delivery order
	deliveryErrorSDU	'010'B		Erroneous SDUs are delivered
	maxSDUSize	'20'O		320 bits
	maxBitRateUplink	'40'O		64 kbps
	maxBitRateDnlink	'40'O		64 kbps
	residualBER	'1001'B		6x 10E (-8)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	?		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	?		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	?		This will be neglected by UE as the class is interactive

2.2.3 cr_QoS_InteractiveMO_Iv

Reason for change: There are a number of discrepancies between quality of service described in the receive constraint and the quality of service the UE is told to request.

Summary of Change: Rename the constraint to cr_QoS_InteractiveOrBackgroundMO_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to check for the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	
	peakThroughput	'0111'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	
	maxBitRateUplink	'40'O	64 kbps
	maxBitRateDnlink	'40'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'40'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'40'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_lv (p_trafficClass : B3 p_dlyClass : B3)		
Structured Type	QualityOfService_lv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	
	reliabilityClass	'100'B	
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	With delivery order
	deliveryErrorSDU	'010'B	Erroneous SDUs are delivered
	maxSDUSize	'20'O	
	maxBitRateUplink	'40'O	64 kbps
	maxBitRateDnlink	'40'O	64 kbps
	residualBER	'1001'B	6x 10E (-8)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	?	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	?	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	?	This will be neglected by UE as the class is interactive

2.2.4 cs_QoS_InteractiveMT_CellFACH_Iv

Reason for change: There are a number of discrepancies between quality of service described in the send constraint and the quality of service described in the test documentation.

Summary of Change: Rename the constraint to cs_QoS_InteractiveOrBackgroundMT_CellFACH_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to send the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_CellFACH_Iv (p_trafficClass : B3)			
Structured Type	QualityOfService_Iv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw			
	Element Name	Element Value	Element Encoding	Comments
	length	'0D'O		
	spare	'00'B		
	dlyClass	'100'B		Best effort
	reliabilityClass	'001'B		
	peakThroughput	'0110'B		64 kbps
	spare1	'0'B		
	precedenceClass	'100'B		Normal class
	spare2	'000'B		
	meanThroughput	'11111'B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	'01'B		
	deliveryErrorSDU	'010'B		
	maxSDUSize	'20'O		
	maxBitRateUplink	'20'O		64 kbps
	maxBitRateDnlink	'20'O		64 kbps
	residualBER	'1001'B		6 x 10E (-3)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O		This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_CellFACH_lv (p_trafficClass : B3 | p_dlyClass : B3)			
Structured Type	QualityOfService_lv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE			
	Element Name	Element Value	Element Encoding	Comments
	length	0B'0		
	spare	00'B		
	dlyClass	p_dlyClass		
	reliabilityClass	100'B		
	peakThroughput	0110'B		64 kbps
	spare1	0'B		
	precedenceClass	000'B		Subscribed class
	spare2	000'B		
	meanThroughput	11111'B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	01'B		
	deliveryErrorSDU	010'B		
	maxSDUSize	20'O		
	maxBitRateUplink	40'O		64 kbps
	maxBitRateDnlink	40'O		64 kbps
	residualBER	1001'B		6x 10E (-8)
	sduErrRatio	0011'B		1 X 10 E(-3)
	transDly	111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	00'O		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	00'O		This will be neglected by UE as the class is interactive

2.2.5 cr_ActPDP_ContextReqFACH_MO

Reason for change: To provide a means for selecting the requested Quality of Service.

Summary of Change: Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqFACH_MO		
Structured Type	ACTIVATEPDPCONTEXTREQUESTul		
Derivation Path			
Encoding Variation			
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1		
	Field Name	Field Value	Field Encoding
		
	requestedLLC_SAPI	cr_LLC_SAPI_v	
	requestedQoS	cr_QoS_InteractiveMO_CellFACH_iv (?)	
	pDP_Address	cr_PktDataProtoAddrMO_iv (px_PDP_IP_AddrInfoFACH)	
		
			Comments
			This has to be set to Not Assigned by UE in UMTS domain.
			The AT command interface will be used to set the QoS to this value.

To:

Constraint Name	cr_ActPDP_ContextReqFACH_MO(p_RequestedQoS : QualityOfService_iv)		
Structured Type	ACTIVATEPDPCONTEXTREQUESTul		
Derivation Path			
Encoding Variation			
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1		
	Field Name	Field Value	Field Encoding
		
	requestedLLC_SAPI	cr_LLC_SAPI_v	
	requestedQoS	p_RequestedQoS	
	pDP_Address	cr_PktDataProtoAddrMO_iv (px_PDP_IP_AddrInfoFACH)	
		
			Comments
			This has to be set to Not Assigned by UE in UMTS domain.
			The AT command interface will be used to set the QoS to this value.

2.2.6 cr_ActPDP_ContextReqMO

Reason for change: To provide a means for selecting the requested Quality of Service.

Summary of Change: Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqMO		
Structured Type	ACTIVATEPDPCONTEXTREQUESTul		
Derivation Path			
Encoding Variation			
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1		
	Field Name	Field Value	Field Encoding
		
	requestedLLC_SAPI	cr_LLC_SAPI_v	This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_iv (?)	The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_iv (px_PDP_IP_AddrInfoDCH)	
		

To:

Constraint Name	cr_ActPDP_ContextReqMO(p_RequestedQoS : QualityOfService_iv)		
Structured Type	ACTIVATEPDPCONTEXTREQUESTul		
Derivation Path			
Encoding Variation			
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1		
	Field Name	Field Value	Field Encoding
		
	requestedLLC_SAPI	cr_LLC_SAPI_v	This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS	The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_iv (px_PDP_IP_AddrInfoDCH)	
		

2.2.7 cr_AttachReq

Reason for change: The information element “oldPTMSI_Signature” is optional in an ATTACH REQUEST nas message. The constraint should reflect this fact.

Summary of Change: Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.8 cs_PhyChReconfCellPCH

Reason for change: A New C_RNTI and UTRAN DRX Cycle Length Coefficient need to be included in the Physical Channel Reconfiguration message.

Summary of Change: Add the new C_RNTI to the list of parameters passed to the constraint, and use this in the constraint. Set the UTRAN DRX Xyyle Length Coefficient to 7 instead of OMIT.

Change ASN.1 PDU Constraint Declaration from:

Constraint Name	cs_PhyChReconfCellPCH (p_IntegrityInfo: IntegrityCheckInfo; p_RRC_Ti: RRC_TransactionIdentifier; p_ActTime: ActivationTime)
ASN1 Type	DL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	Constraint for physical channel reconfiguration to 34.123-1 Annex A values for PS Service to cell_FACH from cell_FACH for Interactive or background / UL: 64Kbps DL: 64Kbps / PS RAB
	Constraint Value
	<pre> { integrityCheckInfo p_IntegrityInfo, message physicalChannelReconfiguration : r3:{ physicalChannelReconfiguration_r3 { --PhysicalChannelReconfiguration_r3_IEs rrc_TransactionIdentifier p_RRC_Ti, integrityProtectionModelInfo OMIT, cipheringModelInfo OMIT, activationTime p_ActTime, new_U_RNTI OMIT, new_C_RNTI OMIT, rrc_StateIndicator cell_PCH, utran_DRX_CycleLengthCoeff OMIT, cn_InformationInfo OMIT, ura_Identity OMIT, dl_CounterSynchronisationInfo OMIT, frequencyInfo OMIT, maxAllowedUL_TX_Power OMIT, ul_ChannelRequirement OMIT, modeSpecificInfo fdd: { dl_PDSCH_Information OMIT -- DL_PDSCH_Information }, dl_CommonInformation OMIT, -- DL_CommonInformation dl_InformationPerRL_List OMIT }, v3a0NonCriticalExtensions OMIT } } </pre>

To:

Constraint Name	cs_PhyChReconfCellPCH (p_IntegrityInfo: IntegrityCheckInfo ; p_RRC_Ti: RRC_TransactionIdentifier; p_ActTime: ActivationTime; p_CRNTI_New: C_RNTI)
ASN1 Type	DL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	
	Constraint Value
	<pre> { integrityCheckInfo p_IntegrityInfo, message physicalChannelReconfiguration : r3:{ physicalChannelReconfiguration_r3 { --PhysicalChannelReconfiguration_r3_IEs rrc_TransactionIdentifier p_RRC_Ti, integrityProtectionModelInfo OMIT, cipheringModelInfo OMIT, activationTime p_ActTime, new_U_RNTI OMIT, new_C_RNTI p_CRNTI_New, rrc_StateIndicator cel_PCH, utran_DRX_CycleLengthCoeff z, cn_InformationInfo OMIT, ura_Identity OMIT, dl_CounterSynchronisationInfo OMIT, frequencyInfo OMIT, maxAllowedUL_TX_Power OMIT, ul_ChannelRequirement OMIT, modeSpecificInfo fdd: { dl_PDSCH_Information OMIT -- DL_PDSCH_Information }, dl_CommonInformation OMIT, -- DL_CommonInformation dl_InformationPerRL_List OMIT }, v3a0NonCriticalExtensions OMIT } } </pre>

2.2.9 ts_GMM_Authentication

Reason for change: The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint c_AuthRspExtAny_tv. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called c_AuthCiphRspExtAny_tv has been added with the correct tag value and needs to be referenced instead.

Summary of Change: Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response paramters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response paramters match expected response.
				

2.2.10 ts_GMM_IdleUpdated

Reason for change: The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change: Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree lt_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate (p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+lt_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.11 ts_CRLC_UL_CipherCfg_RAB

Reason for change: The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change: Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		px_CipheringOnOff			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		NOT (px_CipheringOnOff)			

2.2.12 ts_AT_OrgPS_Call

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,..,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,..,<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,..,1,320, ""1E3"" ""6E8"" 1,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,..,1,320, ""1E3"" ""6E8"" 1,..,<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

2.2.13 ts_AT_SetQoS

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64,64,64,1,320,1E3,6E8,1,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64,64,64,64,1,320,1E3,6E8,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64,,1,320,""1E3""""6E8""",1,,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64,64,,1,320,""1E3""""6E8""",1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.14 ts_ActivatePDP_AcceptMO

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass to determine the values for QoS delay and traffic classes, and then pass these values into the Activate PDP Context Request message.

Change test step from:

Test Step Name		ts_ActivatePDP_AcceptMO (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI _Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO)		Receive PDP Context Activation Request, Store the recd NSAPI in tcv_recd_NSA PI
2		+ts_SetTI_Rsp(tcv_TI_R)			
...				

To:

Test Step Name		ts_ActivatePDP_AcceptMO (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_DetermineDlyClassAndTrafficClass			
2		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI _Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO (cr_QoS_InteractiveOrBackgroundMO_Iv (tcv_TrafficClass, tcv_DlyClass)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...				

2.2.15 ts_ActivatePDP_RequestCellFACH_MO

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass to determine the values for QoS delay and traffic classes, and then pass these values into the Activate PDP Context Request message.

Change test step from:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		
2		+ts_SetTI_Rsp(tcv_TI_R)			
...				

To:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_DetermineDlyClassAndTrafficClass			
2		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO (cr_QoS_InteractiveOrBackgroundMO_CellFACH_iv (tcv_TrafficClass , tcv_DlyClass)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...				

2.2.16 ts_ReceiveActivatePDP_Accept_FACH

Reason for change: To provide for differing Quality of Service delay and traffic classes. Since the Packet Data Protocol Address IE is present in the Activate PDP Context Request message, it must be omitted from the Activate PDP Context Accept message.

Summary of Change: Pass QoS delay and traffic class values into the Activate PDP Context Accept message. Omit the Packet Data Protocol Address from the Activate PDP Context Accept message.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH))		Send PDP Context Activation Accept, with LLC SAPI set as 3
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH))		Send PDP Context Activation Accept, with LLC SAPI set as 3
8	ERR1	[TRUE]		I	Parameter error
...				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 3
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 3
8	ERR1	[TRUE]		I	Parameter error
...				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

2.2.17 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass to determine the values for QoS delay and traffic classes, and then pass these values into the Activate PDP Context Request message.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
4		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO)		Step 5 Receive PDP Context Activation Request 1.
5		+ ts_SetTI_Rsp (tcv_TI_R)			
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACHMO)		
8		+ ts_SetTI_Rsp (tcv_TI_R)			

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
3		+ts_DetermineDlyClassAndTrafficClass			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
5		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO, cr_QoS_InteractiveOrBackgrounddMO_iv (tcv_TrafficClass, tcv_DlyClass))		Step 5 Receive PDP Context Activation Request 1.
6		+ ts_SetTI_Rsp (tcv_TI_R)			
7		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACHMO, cr_QoS_InteractiveOrBackgrounddMO_CellFACH_iv(tcv_TrafficClass, tcv_DlyClass))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

2.2.18 ts_RRC_NAS_SessionActPS_MT_P9_P10

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass to determine the values for QoS delay and traffic classes, and then pass these values into the Activate PDP Context Request message.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MT_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
2		..... +ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			Steps 3-4
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
...				
8		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoDCH, px_AccessPtNameDCH))		Step 5 Send Request PDP Context
9		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSA PI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO)		Step 6 Receive PDP Context Activation Request 1.
10		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
...				
15		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
16		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSA PI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO))		

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MT_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			Steps 3-4
3		+ts_DetermineDlyClassAndTrafficClass			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
				
9		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoDCH, px_AccessPtNameDCH))		Step 5 Send Request PDP Context
10		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSA PI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO (cr_QoS_InteractiveOrBackgroundMO_Iv (tcv_TrafficClass, tcv_DlyClass)))		Step 6 Receive PDP Context Activation Request 1.
11		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
				
16		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
17		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSA PI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO (cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv (tcv_TrafficClass, tcv_DlyClass)))		

2.2.19 ts_TransitToCellPCH_P15_P16

Reason for change: A value for New C_RNTI needs to be passed into the modified cs_PhyChReconfCellPCH constraint.

Summary of Change: Modify line 2 to pass the value of C_RNTI in the TmpCellInfo structure into the constraint.

Change test step from:

Test Step Name		ts_TransitToCellPCH_P15_P16 (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		AM! RLC_AM_DATA_REQ	cas_PhyChReconf (tsc_CellDedicated, tsc_RB2, cs_PhyChReconfCellPCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime))		step 1
3		+ ts_RRC_ReceivePhyChReconfCmpl (p_CellId, tcv_TmpCellInfo.cellConfig)			

To:

Test Step Name		ts_TransitToCellPCH_P15_P16 (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		AM! RLC_AM_DATA_REQ	cas_PhyChReconf (tsc_CellDedicated, tsc_RB2, cs_PhyChReconfCellPCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_TmpCellInfo.cRNTI))		step 1
3		+ ts_RRC_ReceivePhyChReconfCmpl (p_CellId, tcv_TmpCellInfo.cellConfig)			

2.3 Tables added to RRCv310**2.3.1 Tables added from RRCv143**

Type	Name
Test Suite Constant Declarations	tsc_CRNTI_1
	tsc_WaitForPagingRsp
ASN.1 ASP Constraint Declarations	car_UTRAN_MobilityInfoCnfInd
ASN.1 PDU Constraint Declarations	cr_UTRAN_MobilityInfoCnf
Test Cases	tc_8_1_1_2

2.4 New tables added

2.4.1 px_NMO

Reason for change: Provision of a means of selecting the Network Mode of Operation from the Pics/Pixit file.

Summary of Change: Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.4.2 tcv_DlyClass

Reason for change: Provision of a means of selecting the Delay Class for Quality of Service constraints.

Summary of Change: Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	Tcv_DlyClass
Type	B3
PICS/PIXIT Ref	
Comments	

2.4.3 tcv_TrafficClass

Reason for change: Provision of a means of selecting the Traffic Class for Quality of Service constraints.

Summary of Change: Table added to suite.

Add Test Case Variable Declaration:

Parameter Name	TrafficClass
Type	B3
PICS/PIXIT Ref	
Comments	

2.4.4 c_AuthCiphRspExtAny

Reason for change: The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem.

Summary of Change: Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny			
Structured Type	AuthRspExt			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	iei	'00101001'B		
	iel	?		
	rES	?		

2.4.5 ts_DetermineDlyClassAndTrafficClass

Reason for change: To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.

Summary of Change: Table added to suite.

Add test step:

Test Step Name		ts_DetermineDlyClassAndTrafficClass			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B)			
5		[TRUE]		I	

2.5 Modifications to tables added from RRCv143

None.

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 019** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.1.1.3		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 7/05/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.1.1.3 to RRCv310		
Summary of change:	⌘ - 0 table deleted from RRCv310, - 19 tables modified in RRCv310, - 6 tables added from RRCv143, - 5 new tables created. - cs_QoS_InteractiveMT_CellFACH_Iv has been renamed as cs_QoS_InteractiveOrBackgroundMT_CellFACH_Iv - cr_QoS_InteractiveMO_Iv has been renamed as cr_QoS_InteractiveOrBackgroundMT_Iv For more details see below.		
Consequences if not approved:	⌘ Test case 8.1.1.3 will not be added		

Clauses affected:	⌘ N/A						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Test specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> O&M Specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
Other comments:	⌘						

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- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title	Introducing test case 8.1.1.3 to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce test case 8.1.1.3 to RRCv310. With these changes applied the test case can be demonstrated to run on two independent UE implementations. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 clause 8.1.1.3.

2 Changes required for test-case 8.1.1.3

2.1 Tables deleted from RRCv310

None.

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change: The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section .

Summary of Change: Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 cr_QoS_InteractiveMO_CellFACH_Iv

Reason for change: There are a number of discrepancies between quality of service described in the receive constraint and the quality of service the UE is told to request .

Summary of Change: Rename the constraint to cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to check for the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'11111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv (p_trafficClass : B3 | p_dlyClass : B3)			
Structured Type	QualityOfService_lv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE			
	Element Name	Element Value	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	reliabilityClass	'100'B		Acknowledge Mode of RLC
	peakThroughput	'0100'B		64 kbps
	spare1	'0'B		
	precedenceClass	'000'B		Subscribed class
	spare2	'000'B		
	meanThroughput	'11111'B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	'01'B		With delivery order
	deliveryErrorSDU	'010'B		Erroneous SDUs are delivered
	maxSDUSize	'20'O		320 bits
	maxBitRateUplink	'40'O		64 kbps
	maxBitRateDnlink	'40'O		64 kbps
	residualBER	'1001'B		6x 10E (-8)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	?		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	?		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	?		This will be neglected by UE as the class is interactive

2.2.3 cr_QoS_InteractiveMO_Iv

Reason for change: There are a number of discrepancies between quality of service described in the receive constraint and the quality of service the UE is told to request.

Summary of Change: Rename the constraint to cr_QoS_InteractiveOrBackgroundMO_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to check for the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	
	peakThroughput	'0111'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	
	maxBitRateUplink	'40'O	64 kbps
	maxBitRateDnlink	'40'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'40'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'40'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_lv (p_trafficClass : B3 p_dlyClass : B3)		
Structured Type	QualityOfService_lv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	
	reliabilityClass	'100'B	
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	With delivery order
	deliveryErrorSDU	'010'B	Erroneous SDUs are delivered
	maxSDUSize	'20'O	
	maxBitRateUplink	'40'O	64 kbps
	maxBitRateDnlink	'40'O	64 kbps
	residualBER	'1001'B	$6 \times 10^E (-8)$
	sduErrRatio	'0011'B	$1 \times 10^E (-3)$
	transDly	?	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	?	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	?	This will be neglected by UE as the class is interactive

2.2.4 cs_QoS_InteractiveMT_CellFACH_Iv

Reason for change: There are a number of discrepancies between quality of service described in the send constraint and the quality of service described in the test documentation.

Summary of Change: Rename the constraint to cs_QoS_InteractiveOrBackgroundMT_CellFACH_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to send the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_CellFACH_Iv (p_trafficClass : B3)			
Structured Type	QualityOfService_Iv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw			
	Element Name	Element Value	Element Encoding	Comments
	length	'0D'O		
	spare	'00'B		
	dlyClass	'100'B		Best effort
	reliabilityClass	'001'B		
	peakThroughput	'0110'B		64 kbps
	spare1	'0'B		
	precedenceClass	'100'B		Normal class
	spare2	'000'B		
	meanThroughput	'11111'B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	'01'B		
	deliveryErrorSDU	'010'B		
	maxSDUSize	'20'O		
	maxBitRateUplink	'20'O		64 kbps
	maxBitRateDnlink	'20'O		64 kbps
	residualBER	'1001'B		6 x 10E (-3)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O		This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_CellFACH_lv (p_trafficClass : B3 | p_dlyClass : B3)			
Structured Type	QualityOfService_lv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE			
	Element Name	Element Value	Element Encoding	Comments
	length	0B'0		
	spare	00'B		
	dlyClass	p_dlyClass		
	reliabilityClass	100'B		
	peakThroughput	0110'B		64 kbps
	spare1	0'B		
	precedenceClass	000'B		Subscribed class
	spare2	000'B		
	meanThroughput	11111'B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	01'B		
	deliveryErrorSDU	010'B		
	maxSDUSize	20'O		
	maxBitRateUplink	40'O		64 kbps
	maxBitRateDnlink	40'O		64 kbps
	residualBER	1001'B		6x 10E (-8)
	sduErrRatio	0011'B		1 X 10 E(-3)
	transDly	111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	00'O		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	00'O		This will be neglected by UE as the class is interactive

2.2.5 cr_ActPDP_ContextReqFACH_MO

Reason for change: To provide a means for selecting the requested Quality of Service.

Summary of Change: Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqFACH_MO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_CellFACH_iv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_iv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqFACH_MO(p_RequestedQoS : QualityOfService_iv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_iv (px_PDP_IP_AddrInfoFACH)		
			

2.2.6 cr_ActPDP_ContextReqMO

Reason for change: To provide a means for selecting the requested Quality of Service.

Summary of Change: Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqMO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_iv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_iv (px_PDP_IP_AddrInfoDCH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqMO(p_RequestedQoS : QualityOfService_iv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_iv (px_PDP_IP_AddrInfoDCH)		
			

2.2.7 cr_AttachReq

Reason for change: The information element “oldPTMSI_Signature” is optional in an ATTACH REQUEST nas message. The constraint should reflect this fact.

Summary of Change: Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.8 cs_PhyChReconfURA_PCH

Reason for change: A New C_RNTI and UTRAN DRX Cycle Length Coefficient need to be included in the Physical Channel Reconfiguration message.

Summary of Change: Add the new C_RNTI to the list of parameters passed to the constraint, and use this in the constraint. Set the UTRAN DRX Cycle Length Coefficient to 7 instead of OMIT.

Change ASN.1 PDU Constraint Declaration from:

Constraint Name	cs_PhyChReconfURA_PCH (p_IntegrityInfo: IntegrityCheckInfo; p_RRC_Ti: RRC_TransactionIdentifier; p_ActTime: ActivationTime)
ASN1 Type	DL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	Constraint for physical channel reconfiguration to 34.123-1 Annex A values for PS Service to CELL_FACH from CELL_FACH for Interactive or background / UL: 64Kbps DL: 64Kbps / PS RAB
	Constraint Value
	<pre> { integrityCheckInfo p_IntegrityInfo, message physicalChannelReconfiguration : r3 :{ physicalChannelReconfiguration_r3 { --PhysicalChannelReconfiguration_r3_IEs rrc_TransactionIdentifier p_RRC_Ti, integrityProtectionModelInfo OMIT, cipheringModelInfo OMIT, activationTime p_ActTime, new_U_RNTI OMIT, new_C_RNTI OMIT, rrc_StateIndicator ura_PCH, utran_DRX_CycleLengthCoeff OMIT, cn_InformationInfo OMIT, ura_Identity OMIT, dl_CounterSynchronisationInfo OMIT, frequencyInfo OMIT, maxAllowedUL_TX_Power OMIT, ul_ChannelRequirement OMIT, modeSpecificInfo fdd: { dl_PDSCH_Information OMIT -- DL_PDSCH_Information }, dl_CommonInformation OMIT, -- DL_CommonInformation dl_InformationPerRL_List OMIT }, v3a0NonCriticalExtensions OMIT } } </pre>

To:

Constraint Name	cs_PhyChReconfURA_PCH (p_IntegrityInfo: IntegrityCheckInfo; p_RRC_Ti: RRC_TransactionIdentifier; p_ActTime: ActivationTime; p_CRNTI_New: C_RNTI)
ASN1 Type	DL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	Constraint for physical channel reconfiguration to 34.123-1 Annex A values for PS Service to CELL_FACH from CELL_FACH for Interactive or background / UL: 64Kbps DL: 64Kbps / PS RAB
	Constraint Value
	<pre> { integrityCheckInfo p_IntegrityInfo, message physicalChannelReconfiguration : r3 :{ physicalChannelReconfiguration_r3 { --PhysicalChannelReconfiguration_r3_IEs rrc_TransactionIdentifier p_RRC_Ti, integrityProtectionModelInfo OMIT, cipheringModelInfo OMIT, activationTime p_ActTime, new_U_RNTI OMIT, new_C_RNTI p_CRNTI_New, rrc_StateIndicator ura_PCH, utran_DRX_CycleLengthCoeff 7, cn_InformationInfo OMIT, ura_Identity 0000000000000001B, dl_CounterSynchronisationInfo OMIT, frequencyInfo OMIT, maxAllowedUL_TX_Power OMIT, ul_ChannelRequirement OMIT, modeSpecificInfo fdd: { dl_PDSCH_Information OMIT -- DL_PDSCH_Information }, dl_CommonInformation OMIT, -- DL_CommonInformation dl_InformationPerRL_List OMIT }, v3a0NonCriticalExtensions OMIT } } </pre>

2.2.9 ts_GMM_Authentication

Reason for change: The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint c_AuthRspExtAny_tv. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called c_AuthCiphRspExtAny_tv has been added with the correct tag value and needs to be referenced instead.

Summary of Change: Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response paramters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response paramters match expected response.
				

2.2.10 ts_GMM_IdleUpdated

Reason for change: The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change: Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree lt_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate (p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+lt_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.11 ts_TransitToURA_PCH_P17_P18

Reason for change: A value for New C_RNTI needs to be passed into the modified cs_PhyChReconfURA_PCH constraint.

Summary of Change: Modify line 2 to pass the value of C_RNTI in the TmpCellInfo structure into the constraint.

Change test step from:

Test Step Name		ts_TransitToURA_PCH_P17_P18 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		AM! RLC_AM_DATA_REQ	cas_PhyChReconf (tsc_CellDedicated, tsc_RB2, cs_PhyChReconfURA_PCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime))		step 1
3		+ ts_RRC_ReceivePhyChReconfCmpl (p_CellId, tcv_TmpCellInfo.cellConfig)			

To:

Test Step Name		ts_TransitToURA_PCH_P17_P18 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		AM! RLC_AM_DATA_REQ	cas_PhyChReconf (tsc_CellDedicated, tsc_RB2, cs_PhyChReconfURA_PCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_TmpCellInfo.cRNTI))		step 1
3		+ ts_RRC_ReceivePhyChReconfCmpl (p_CellId, tcv_TmpCellInfo.cellConfig)			

2.2.12 ts_CRLC_UL_CipherCfg_RAB

Reason for change: The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change: Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		px_CipheringOnOff			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		NOT (px_CipheringOnOff)			

2.2.13 ts_AT_OrgPS_Call

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,..,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,..,<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,..,1,320, 1E3", "6E8", 1, 3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,..,1,320, 1E3", "6E8", 1, 3<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

2.2.14 ts_AT_SetQoS

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64,,1,320,""1E3"" , ""6E8"" ,1,,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64,64,,1,320,""1E3"" , ""6E8"" ,1,,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.15 ts_ActivatePDP_AcceptMO

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass to determine the values for QoS delay and traffic classes, and then pass these values into the Activate PDP Context Request message.

Change test step from:

Test Step Name		ts_ActivatePDP_AcceptMO (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO)		Receive PDP Context Activation Request, Store the recd NSAPI in tcv_recd_NSAPI
2		+ts_SetTI_Rsp(tcv_TI_R)			
...				

To:

Test Step Name		ts_ActivatePDP_AcceptMO (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_DetermineDlyClassAndTrafficClass			
2		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO (cr_QoS_InteractiveOrBackgroundMO_Iv (tcv_TrafficClass, tcv_DlyClass)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...				

2.2.16 ts_ActivatePDP_RequestCellFACH_MO

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass to determine the values for QoS delay and traffic classes, and then pass these values into the Activate PDP Context Request message.

Change test step from:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		
2		+ts_SetTI_Rsp(tcv_TI_R)			
...				

To:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_DetermineDlyClassAndTrafficClass			
2		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO (cr_QoS_InteractiveOrBackgroundMO_CellFACH_IV (tcv_TrafficClass , tcv_DlyClass)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...				

2.2.17 ts_ReceiveActivatePDP_Accept_FACH

Reason for change: To provide for differing Quality of Service delay and traffic classes. Since the Packet Data Protocol Address IE is present in the Activate PDP Context Request message, it must be omitted from the Activate PDP Context Accept message.

Summary of Change: Pass QoS delay and traffic class values into the Activate PDP Context Accept message. Omit the Packet Data Protocol Address from the Activate PDP Context Accept message.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 3
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 3
8	ERR1	[TRUE]		I	Parameter error
...				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass, tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 3
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass, tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 3
8	ERR1	[TRUE]		I	Parameter error
...				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass, tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass, tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

2.2.18 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass to determine the values for QoS delay and traffic classes, and then pass these values into the Activate PDP Context Request message.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
4		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO)		Step 5 Receive PDP Context Activation Request 1.
5		+ ts_SetTI_Rsp (tcv_TI_R)			
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACHMO)		
8		+ ts_SetTI_Rsp (tcv_TI_R)			

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		+ts_DetermineDlyClassAndTrafficClass			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
5		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO, cr_QoS_InteractiveOrBackgrounddMO_Iv (tcv_TrafficClass, tcv_DlyClass))		Step 5 Receive PDP Context Activation Request 1.
6		+ ts_SetTI_Rsp (tcv_TI_R)			
7		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACHMO, cr_QoS_InteractiveOrBackgrounddMO_CellFACH_Iv(tcv_TrafficClass, tcv_DlyClass))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

2.2.19 ts_RRC_NAS_SessionActPS_MT_P9_P10

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass to determine the values for QoS delay and traffic classes, and then pass these values into the Activate PDP Context Request message.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MT_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
2		..... +ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			Steps 3-4
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
...				
8		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoDCH, px_AccessPtNameDCH))		Step 5 Send Request PDP Context
9		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSA PI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO)		Step 6 Receive PDP Context Activation Request 1.
10		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
...				
15		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
16		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSA PI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO))		

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MT_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			Steps 3-4
3		+ts_DetermineDlyClassAndTrafficClass			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
				
9		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoDCH, px_AccessPtNameDCH))		Step 5 Send Request PDP Context
10		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSA PI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO (cr_QoS_InteractiveOrBackgroundMO_Iv (tcv_TrafficClass, tcv_DlyClass)))		Step 6 Receive PDP Context Activation Request 1.
11		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
				
16		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
17		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSA PI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO (cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv (tcv_TrafficClass, tcv_DlyClass)))		

2.3 Tables added to RRCv310**2.3.1 Tables added from RRCv143**

Type	Name
Test Suite Constant Declarations	tsc_CRNTI_1
	tsc_WaitForPagingRsp
ASN.1 ASP Constraint Declarations	car_UTRAN_MobilityInfoCnfInd
ASN.1 PDU Constraint Declarations	cr_UTRAN_MobilityInfoCnf
Test Cases	tc_8_1_1_3
Test Steps	pr_GotoState6_11_MO

2.4 New tables added

2.4.1 px_NMO

Reason for change: Provision of a means of selecting the Network Mode of Operation from the Pics/Pixit file.

Summary of Change: Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.4.2 tcv_DlyClass

Reason for change: Provision of a means of selecting the Delay Class for Quality of Service constraints.

Summary of Change: Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	Tcv_DlyClass
Type	B3
PICS/PIXIT Ref	
Comments	

2.4.3 tcv_TrafficClass

Reason for change: Provision of a means of selecting the Traffic Class for Quality of Service constraints.

Summary of Change: Table added to suite.

Add Test Case Variable Declaration:

Parameter Name	TrafficClass
Type	B3
PICS/PIXIT Ref	
Comments	

2.4.4 c_AuthCiphRspExtAny

Reason for change: The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem.

Summary of Change: Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name		c_AuthCiphRspExtAny		
Structured Type		AuthRspExt		
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	lei	'00101001'B		
	lel	?		
	rES	?		

2.4.5 ts_DeterminedDlyClassAndTrafficClass

Reason for change: To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.

Summary of Change: Table added to suite.

Add test step:

Test Step Name		ts_DeterminedDlyClassAndTrafficClass			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B)			
5		[TRUE]		I	

2.5 Modifications to tables added from RRCv143

None.

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 020** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.1.1.8		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 25/03/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.1.1.8 to RRCv310
Summary of change:	⌘ - 0 table deleted from RRCv310, - 14 tables modified in RRCv310, - 3 tables added from RRCv143, - 6 new tables created. For more details see below.
Consequences if not approved:	⌘ Test case 8.1.1.8 will not be added

Clauses affected:	⌘ N/A						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Test specifications	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘			
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> O&M Specifications	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘			
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
Other comments:	⌘						

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Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Seoul, Korea

12-15 May 2003

Title	Introducing test case 8.1.1.8 to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce test case 8.1.1.8 to RRCv310. With these changes applied the test case can be demonstrated to run on two independent UE implementations. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 clause 8.1.1.8.

2 Changes required for test-case 8.1.1.8

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change: The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section 2.4.1.

Summary of Change: Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 cr_QoS_InteractiveMO_CellFACH_Iv

Reason for change: There are a number of discrepancies between quality of service described in the receive constraint and the quality of service the UE is told to request. Use of this revised constraint is detailed in sections 2.2.11, 2.2.13 & 2.2.14.

Summary of Change: Rename the constraint to cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to check for the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv (p_trafficClass : B3 | p_dlyClass : B3)		
Structured Type	QualityOfService_lv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	
	reliabilityClass	'100'B	Acknowledge Mode of RLC
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	With delivery order
	deliveryErrorSDU	'010'B	Erroneous SDUs are delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'40'O	64 kbps
	maxBitRateDnlink	'40'O	64 kbps
	residualBER	'1001'B	6x 10E (-8)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	?	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	?	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	?	This will be neglected by UE as the class is interactive

2.2.3 cs_QoS_InteractiveMT_CellFACH_Iv

Reason for change: There are a number of discrepancies between quality of service described in the send constraint and the quality of service described in the test documentation. Use of this revised constraint is detailed in section 2.2.12.

Summary of Change: Rename the constraint to cs_QoS_InteractiveOrBackgroundMO_CellFACH_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to send the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw		
	Element Name	Element Value	Comments
	length	'0D'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_CellFACH_lv (p_trafficClass : B3 | p_dlyClass : B3)			
Structured Type	QualityOfService_lv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE			
	Element Name	Element Value	Element Encoding	Comments
	length	0B		
	spare	00B		
	dlyClass	P_dlyClass		
	reliabilityClass	100B		
	peakThroughput	0110B		64 kbps
	spare1	0B		
	precedenceClass	000B		Subscribed class
	spare2	000B		
	meanThroughput	11111B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	01B		
	deliveryErrorSDU	010B		
	maxSDUSize	20O		
	maxBitRateUplink	40O		64 kbps
	maxBitRateDnlink	40O		64 kbps
	residualBER	1001B		6x 10E (-8)
	sduErrRatio	0011B		1 X 10 E(-3)
	transDly	111111B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	11B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	00O		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	00O		This will be neglected by UE as the class is interactive

2.2.4 cr_ActPDP_ContextReqFACH_MO

Reason for change: To provide a means for selecting the requested Quality of Service. Use of this revised constraint is detailed in sections 2.2.11, 2.2.13 & 2.2.14.

Summary of Change: Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqFACH_MO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_CellFACH_lv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqFACH_MO(p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

2.2.5 cr_AttachReq

Reason for change: The information element “oldPTMSI_Signature” is optional in an ATTACH REQUEST nas message. The constraint should reflect this fact.

Summary of Change: Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.6 ts_GMM_Authentication

Reason for change: The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint c_AuthRspExtAny_tv. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called c_AuthCiphRspExtAny_tv, detailed in section 2.4.4, has been added with the correct tag value and needs to be referenced instead.

Summary of Change: Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response paramters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response paramters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response paramters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response paramters match expected response.
				

2.2.7 ts_GMM_IdleUpdated

Reason for change: The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change: Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate (p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+It_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.8 ts_CRLC_UL_CipherCfg_RAB

Reason for change: The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change: Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		px_CipheringOnOff			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		NOT (px_CipheringOnOff)			

2.2.9 ts_AT_OrgPS_Call

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,..,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,..,<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,..,1,320,""1E3""""6E8""",1,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,..,1,320,""1E3""""6E8""",1,..,<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

2.2.10 ts_AT_SetQoS

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64,,1,320,""1E3""""6E8""",1,,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64,64,,1,320,""1E3""""6E8""",1,,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.11 ts_ActivatePDP_RequestCellFACH_MO

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass, detailed in section 2.4.6, to determine the values for QoS delay and traffic classes, and then to pass these values into the Activate PDP Context Request message using the revised constraints detailed in sections 2.2.2 & 2.2.4.

Change test step from:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		
2		+ts_SetTI_Rsp(tcv_TI_R)			
...				

To:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_DetermineDlyClassAndTrafficClass			
2		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO (cr_QoS_InteractiveOrBackgroundMO_CellFACH_iv (tcv_TrafficClass , tcv_DlyClass)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...				

2.2.12 ts_ReceiveActivatePDP_Accept_FACH

Reason for change: To provide for differing Quality of Service delay and traffic classes. Since the Packet Data Protocol Address IE is present in the Activate PDP Context Request message, it must be omitted from the Activate PDP Context Accept message.

Summary of Change: Pass QoS delay and traffic class values into the Activate PDP Context Accept message using the revised constraint detailed in section 2.2.3. Omit the Packet Data Protocol Address from the Activate PDP Context Accept message.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH))		Send PDP Context Activation Accept, with LLC SAPI set as 3
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH))		Send PDP Context Activation Accept, with LLC SAPI set as 3
8	ERR1	[TRUE]		I	Parameter error
...				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass, tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 3
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass, tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 3
8	ERR1	[TRUE]		I	Parameter error
...				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass, tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass, tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

2.2.13 ts_RRC_NAS_SessionActPS_MT_P9_P10

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass, detailed in section 2.4.6, to determine the values for QoS delay and traffic classes, and then to pass these values into the Activate PDP Context Request message using the revised constraints detailed in sections 2.2.2 & 2.2.4.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
15		..... Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
16		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH MO)		

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
15		..... Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
16		+ts_DetermineDlyClassAndTrafficClass			
17		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH MO(cr_QoS_InteractiveOrBackgrou ndMO_CellFACH_Iv(tcv_TrafficClass tcv_DlyClass)))		

2.2.14 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass, detailed in section 2.4.6, to determine the values for QoS delay and traffic classes, and then to pass these values into the Activate PDP Context Request message using the revised constraints detailed in sections 2.2.2 & 2.2.4.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		
8		+ ts_SetTI_Rsp (tcv_TI_R)			

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
6		+ts_DetermineDlyClassAndTrafficClass			
7		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_IV(tcv_TrafficClass, tcv_DlyClass)))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

2.3 Tables added to RRCv310**2.3.1 Tables added from RRCv143**

Type	Name
Test Cases	tc_8_1_1_8
Test Step Library	pr_GotoState6_11_MO
	ts_ChangeDomainCS_PS_Supported

2.4 New tables added

2.4.1 px_NMO

Reason for change: Provision of a means of selecting the Network Mode of Operation from the PICS/PIXIT file. Use of this new parameter declaration is detailed in section 2.2.1.

Summary of Change: Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.4.2 tcv_DlyClass

Reason for change: Provision of a means of selecting the Delay Class for Quality of Service constraints. Use of this new test case variable declaration is detailed in sections 2.2.11, 2.2.12, 2.2.13, 2.2.14 & 2.4.6.

Summary of Change: Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	Tcv_DlyClass
Type	B3
PICS/PIXIT Ref	
Comments	

2.4.3 tcv_TrafficClass

Reason for change: Provision of a means of selecting the Traffic Class for Quality of Service constraints. Use of this new test case variable declaration is detailed in sections 2.2.11, 2.2.12, 2.2.13, 2.2.14 & 2.4.6.

Summary of Change: Table added to suite.

Add Test Case Variable Declaration:

Parameter Name	TrafficClass
Type	B3
PICS/PIXIT Ref	
Comments	

2.4.4 c_AuthCiphRspExtAny

Reason for change: The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem. Use of this new constraint is detailed in section 2.2.6.

Summary of Change: Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny			
Structured Type	AuthRspExt			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	iei	'00101001'B		
	iel	?		
	rES	?		

2.4.5 cr_108_UplinkDirectTransfer

Reason for change: The test procedure calls for the reception of an uplink direct transfer. No such constraint was present in RRCv143, so a new constraint has been generated. Use of this new constraint is detailed in section 2.5.1.

Summary of Change: Table added to suite.

Add ASN.1 PDU Constraint Declaration:

Constraint Name	cr_108_UplinkDirectTransfer (p_CN_DomainId : CN_DomainIdentity; p_NAS_msg: NAS_Message)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	
	Constraint Value
	<pre> { integrityCheckInfo *, message uplinkDirectTransfer : { cn_DomainIdentity p_CN_DomainId, nas_Message p_NAS_msg, measuredResultsOnRACH *, nonCriticalExtensions * } } </pre>

2.4.6 ts_DetermineDlyClassAndTrafficClass

Reason for change: To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass. Use of this new test step is detailed in sections 2.2.11, 2.2.13 & 2.2.14.

Summary of Change: Table added to suite.

Add test step:

Test Step Name		ts_DetermineDlyClassAndTrafficClass			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B)			
5		[TRUE]		I	

2.5 Modifications to tables added from RRCv143

2.5.1 tc_8_1_1_8

Reason for change: The test procedure calls for the reception of an uplink direct transfer after a paging type 2 message is sent to the UE. The test case as implemented checks for an initial direct transfer.

Summary of Change: Change the test case behaviour line which checks for the initial direct transfer to one which checks for an uplink direct transfer. The constraint for the uplink direct transfer is detailed in section 2.4.5.

Change test case from:

Test Case Name		tc_8_1_1_8			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		.....	.....		.....
14		+ts_PTMSI_TMSI_Assignment			
15	TBP1	AM ? RLC_AM_DATA_IND	car_RRC_InitDirectTransfer (tsc_CellDedicated , tsc_RB3_DCCH_RRC, cr_108_InitDirectTransfer (tcv_CN_Domain, o_OctToBit (tcv_PTMSI_TMSI),*)	(P)	step 3 CN node set to GSM-MAP, routing basis set to IMSI (as for paging)
16		+ts_SS_RemoveConfigRRC_RB3 (tsc_CellA)			
...				

To:

Test Case Name		tc_8_1_1_8			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		.....	.....		.....
14		+ts_PTMSI_TMSI_Assignment			
15	TBP1	AM ? RLC_AM_DATA_IND	car_UL_DirectTransfer (tsc_CellDedicated , tsc_RB3_DCCH_RRC, cr_108_UplinkDirectTransfer (tcv_CN_Domain, *)	(P)	step 3 CN node set to GSM-MAP, routing basis set to IMSI (as for paging)
16		+ts_SS_RemoveConfigRRC_RB3 (tsc_CellA)			
...				

CHANGE REQUEST

⌘ **34.123-3 CR 021** ⌘ rev - ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.2.1.8		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 28/03/2003
Category:	⌘ F	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.2.1.8 to RRCv310		
Summary of change:	⌘ - ? table(s) deleted from RRCv310 ⌘ - ?? table(s) modified in RRCv310 ⌘ - ?? table(s) added from RRCv143 of which ⌘ - ? table(s) have been modified ⌘ - ? new table(s) added For more details see below.		
Consequences if not approved:	⌘ Test case 8.2.1.8 will not be added		

Clauses affected:	⌘ N/A						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table> Test specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table> O&M Specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
Other comments:	⌘						

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title	The introduction of test case 8.2.1.8 into RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce test case 8.2.1.8 in to RRCv310. With these changes applied the test case can be demonstrated to run on a single UE implementation. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 (V5.2.0) clause 8.2.1.8.

2 Changes required for test-case 8.2.1.8

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change

The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section 2.3.2.2.

Summary of Change

Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 c_RAB_InfoListDCH_OrFACH_ToFACH_ToDCH_PS

Reason for change

The RLC size list for the RACH is incorrect; it should indicate which of the available sizes should be used.

Summary of Change

Explicitly define which RLC size should be used.

Change ASN.1 Type Constraint Declaration from:

Constraint Name	c_RAB_InfoListDCH_OrFACH_ToFACH_ToDCH_PS (p_RAB_Id: BITSTRING ; p_Reestimer: Re_EstablishmentTimer)
ASP Type	RAB_InformationSetupList
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ... rb_MappingInfo {{ ul_LogicalChannelMappings oneLogicalChannel : { ul_TransportChannelType dch : tsc_UL_DCH1, logicalChannelIdentity OMIT, rlc_SizeList configured :NULL, mac_LogicalChannelPriority 8 }, dl_LogicalChannelMappingList {{ dl_TransportChannelType dch : tsc_DL_DCH1, logicalChannelIdentity OMIT }} }, { ul_LogicalChannelMappings oneLogicalChannel:{ ul_TransportChannelType rach: NULL, logicalChannelIdentity 7, rlc_SizeList configured :NULL, mac_LogicalChannelPriority 8 }, dl_LogicalChannelMappingList {{ dl_TransportChannelType fach: NULL, logicalChannelIdentity OMIT }} }} }</pre>	

To:

Constraint Name	c_RAB_InfoListDCH_OrFACH_ToFACH_ToDCH_PS (p_RAB_Id: BITSTRING ; p_Reestimer: Re_EstablishmentTimer)
ASP Type	RAB_InformationSetupList
Derivation Path	
Encoding Variation	

Comments	
	<pre>{ ... rb_MappingInfo {{ ul_LogicalChannelMappings oneLogicalChannel : { ul_TransportChannelType dch : tsc_UL_DCH1, logicalChannelIdentity OMIT, rlc_SizeList configured :NULL, mac_LogicalChannelPriority 8 }, dl_LogicalChannelMappingList {{ dl_TransportChannelType dch : tsc_DL_DCH1, logicalChannelIdentity OMIT }} }, { ul_LogicalChannelMappings oneLogicalChannel:{ ul_TransportChannelType rach: NULL, logicalChannelIdentity 7, rlc_SizeList explicitList {{ rlc_SizeIndex 2 }}, mac_LogicalChannelPriority 8 }, dl_LogicalChannelMappingList {{ dl_TransportChannelType fach: NULL, logicalChannelIdentity OMIT }} }} }} }</pre>

2.2.3 c_TrChInfoUL_336_148Reason for change

Transport channel ordering problem. Same problem as described in the approved CR T1S030234 for tc_8_2_1_1.

Summary of Change

Re-order the transport channel list as specified.

Change ASN.1 Type Constraint Declaration from:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }, { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }, { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

2.2.4 cr_ActPDP_ContextReqMO

Reason for change

To provide a means for specifying the expected Quality of Service (QoS) in an Activate PDP Context Request constraint.

Summary of Change

Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqMO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_lv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqMO(p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

2.2.5 cr_AttachReq

Reason for change

The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST message.

Summary of Change

Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.6 cr_LLC_SAPI_vReason for Change

The range of nSAPI values used in this constraint does not correlate to 3GPP TS 24.008; i.e. '0011'B duplicated, '0000'B omitted.

Summary of Change

Replace the first occurrence of '0011'B in the range of nSAPI values with '0000'B.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_LLC_SAPI_v			
Structured Type	LLC_SAPI_v			
Derivation Path				
Encoding Variation				
Comments	LLC SAPI value assigned as SPI 3 in order to ensure that there are no problems at the time of handover from UMTS to GSM			
	Element Name	Element Value	Element Encoding	Comments
	spare	'0000'B		
	nSAPI_Value	'0011'B, '0011'B, '0101'B, '1001'B, '1011'B)		

To:

Constraint Name	cr_LLC_SAPI_v			
Structured Type	LLC_SAPI_v			
Derivation Path				
Encoding Variation				
Comments	LLC SAPI value assigned as SPI 3 in order to ensure that there are no problems at the time of handover from UMTS to GSM			
	Element Name	Element Value	Element Encoding	Comments
	spare	'0000'B		
	nSAPI_Value	'0000'B, '0011'B, '0101'B, '1001'B, '1011'B)		

2.2.7 cr_QoS_InteractiveMO_Iv

Reason for change:

1. There are a number of discrepancies between quality of service described in the receive constraint and the quality of service specified in the AT commands sent to the upper tester (see 2.2.10 and 2.2.11).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. The traffic handling priority depends on the traffic class and traffic handling priority used in the AT command sent to the upper tester.
4. Some of the comments are wrong.

Summary of Change

1. Update cr_QoS_InteractiveMO_Iv to reflect the quality of service specified in the AT commands sent to the upper tester.
2. Allow dlyClass to be set by parameter.
3. Allow trafficHandPro to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0111'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'40'O	64 kbps
	maxBitRateDnlink	'40'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'40'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'40'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_Iv (p_trafficClass : B3 ; p_dlyClass : B3 ; p_trafficHandPro : B2)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The expected QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the SS by the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	Interactive=traffic class, Background=4
	reliabilityClass	'100'B	Unacknowledged GTP, LLC and RLC, protected data
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed precedence
	spare2	'000'B	

meanThroughput	'11111'B		best effort
trafficClass	p_trafficClass		Interactive='011'B, Background='100'B
deliveryOrder	'01'B		With delivery order
deliveryErrorSDU	'010'B		Erroneous SDUs are delivered
maxSDUSize	'20'O		320 bits
maxBitRateUplink	'40'O		64 kbps
maxBitRateDnlink	'40'O		64 kbps
residualBER	'1001'B		$6 \times 10^E (-8)$
sduErrRatio	'0011'B		$1 \times 10^E (-3)$
transDly	?		The transfer delay is ignored if interactive or background class.
trafficHandpro	p_trafficHandPro		Interactive=value set in AT command. Background=? (value is ignored)
bitRateUplink	?		The guaranteed bit is ignored if interactive or background class
bitRateDnlink	?		The guaranteed bit is ignored if interactive or background class

2.2.8 cs_QoS_InteractiveMT_CellFACH_Iv

Reason for change

1. There are a number of discrepancies between quality of service described in this constraint and the quality of service requested by the UE (see 2.2.6).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. Some of the comments are wrong.

Summary of Change

1. Update the cs_QoS_InteractiveMT_CellFACH_Iv constraint to send the a quality of service that matches the request .
2. Allow dlyClass to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_CellFACH_Iv (p_trafficClass : B3 ; p_dlyClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The negotiated QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the UE by the OS		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	Interactive=traffic class, Background=4
	reliabilityClass	'100'B	Unacknowledged GTP, LLC and RLC, protected data
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed precedence
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive='011'B, background='100'B
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	320 bits

	maxBitRateUplink	'40'0		64 kbps
	maxBitRateDnlink	'40'0		64 kbps
	residualBER	'1001'B		6x 10E (-8)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	'111111'B		The transfer delay is ignored if interactive or background class.
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'00'0		The guaranteed bit is ignored if interactive or background class.
	bitRateDnlink	'00'0		The guaranteed bit is ignored if interactive or background class.

2.2.9 ts_ActivatePDP_AcceptMO

Reason for change

To accommodate the modified receive Activate PDP Context Request constraint (see 2.2.4).

Summary of Change

Call a test step to determine the values for QoS delay and traffic classes, and then pass these values into the modified quality of service receive constraint.

Change test step from:

Test Step Name		ts_ActivatePDP_AcceptMO (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI _Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO)		
2		+ts_SetTI_Rsp(tcv_TI_R)			
...				

To:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_DetermineDlyClassAndTrafficClassAndTraffic HandPro			
2		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI _Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH MO (cr_QoS_InteractiveOrBackgroun dMO_lv (tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...				

2.2.10 ts_AT_OrgPS_Call

Reason for change:

The are a number of problems with the AT commands issued by this test step:-

1. The activate PDP context command (CGACT) uses a different context ID to that of the other AT commands used.
2. The minimum quality of service command (CGEQMIN) used has too many fields (TS 27.007).
3. The minimum quality of service command (CGEQMIN) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
4. The minimum quality of service command (CGEQMIN) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,...<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,...<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,,1,320,""1E3""""6E8""",1,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,,1,320,""1E3""""6E8""",1,<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

2.2.11 ts_AT_SetQoS

Reason for change

There are a number of problems with the AT commands issued by this test step:-

1. The quality of service command (CGEQREQ) used has too many fields (TS 27.007).
2. The quality of service command (CGEQREQ) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
3. The quality of service command (CGEQREQ) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64, 1,320,""1E3""""6E8""",1,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, , , 1, 320, ""1E3""""6E8""",1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.12 ts_CRLC_UL_CipherCfg_RABReason for change

The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change

Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[px_CipheringOnOff]			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		[NOT (px_CipheringOnOff)]			

2.2.13 ts_GMM_Authentication

Reason for change

The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint `c_AuthRspExtAny_tv`. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called `c_AuthCiphRspExtAny_tv`, detailed in section 2.3.2.1, has been added with the correct tag value and needs to be referenced instead.

Summary of Change

Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(			Verify that the

	tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))		received Authentication Response paramters match expected response.
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2.2.14 ts_GMM_IdleUpdated

Reason for change

The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change

Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate(p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+It_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.15 ts_ReceiveActivatePDP_Accept_FACH

Reason for change

1. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
2. To accommodate the modified interactive QoS constraint (refer 2.2.8).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcvt_T1_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcvt_T1_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcvt_T1_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcvt_T1_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3,		

			cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFA CH_Iv('011'B, '011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFA CH_Iv('100'B, '100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFA CH_Iv('011'B, '011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFA CH_Iv('100'B, '100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.16 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change

The delay class, traffic class and traffic handling priority IEs in the received Activate PDP context request depend on the AT command issued to the upper tester, which in turn is controlled by various test suite parameters.

Summary of Change

1. Call a test step to determine the appropriate delay class, traffic class and traffic handling priority.
2. Pass these values into the modified quality of service receive constraint.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
4		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TL_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO)		
5		+ ts_SetTL_Rsp (tcv_TL_R)			
				

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			
3		+ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
5		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TL_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO(cr_QoS_InteractiveOrBackgroundMO Iv(tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro))		
6		+ ts_SetTL_Rsp (tcv_TL_R)			
				

2.2.17 ts_RRC_NAS_SessionActPS_MT_P9_P10Reason for change

To accommodate the modified receive Activate PDP Context Request constraint (see 2.2.4).

Summary of Change

1. Call a test step to determine the appropriate values for the delay and traffic classes,.
2. Pass these values to the modified receive Activate PDP Context Request constraint.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
9		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoDCH, px_AccessPtNameDCH))		Step 5 Send Request PDP Context
10		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO)		
11		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
				

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			
3		+ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
10		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoDCH, px_AccessPtNameDCH))		Step 5 Send Request PDP Context
11		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO(cr_QoS_InteractiveOrBackgroundMO Iv(tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro)))		
12		[tcv_TmpCellInfo.cellConfig = cell_FACH]			

				
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2.2.18 ts_SetUpRAB_PS_DCH_ToFACHReason for change

RB20 and RB-3 are never configured. Common steps in the postamble expect them to be.

Summary of Change

In addition the the existing SS reconfiguration during the transition from cell DCH to cell FACH, configure RB20 and RB-3 as well.

Change test step from:

Test Step Name		ts_SetUpRAB_PS_DCH_ToFACH (p_CellId: INTEGER; p_SetUp :DL_DCCH_Message)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		+ts_SS_2_FACH_1_RACH_Modify(p_CellId , c_TrLogMappingRACH_DTCH, c_TrLogMappingPCH_FACH_PS)			

To:

Test Step Name		ts_SetUpRAB_PS_DCH_ToFACH (p_CellId: INTEGER; p_SetUp :DL_DCCH_Message)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		+ts_SS_2_FACH_1_RACH_Modify(p_CellId , c_TrLogMappingRACH_DTCH, c_TrLogMappingPCH_FACH_PS)			
4		+ts_SS_RB20_AM_PS_Cfg (320)			
5		+ts_SS_RB_BCCH_FACH_Cfg(p_CellId)			

2.3 Tables added to RRCv310**2.3.1 Tables added from RRCv143**

Type	Name
Test Suite Parameter Declarations	px_KeySeqDefxxxxx
Test Suite Constant Declaration	tsc_New_CRNTI
ASN.1 Type Constraint Declarations	c_RAB_InfoListDCH_OrFACH_ToFACH_ToDCH_PS
ASN.1 PDU Constraint Declarations	cbs_108_RB_SetUpDCH_ToFACH cr_108_RRC_ConnRelCmpl
Test Cases	tc_8_2_1_8

2.3.2 New tables added

2.3.2.1 c_AuthCiphRspExtAny

Reason for change

The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem.

Summary of Change

Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny		
Structured Type	AuthRspExt		
Derivation Path			
Encoding Variation			
Comments			
	Element Name	Element Value	Element Encoding
	iei	'00101001'B	
	iel	?	
	rES	?	

2.3.2.2 px_NMO

Reason for change

Provision of a means of selecting the Network Mode of Operation from the PICS/Pixit file. Use of this new parameter declaration is detailed in section 2.2.1.

Summary of Change

Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.3.2.3 tcv_DlyClass

Reason for change

The value of delay class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of delay class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_DlyClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.4 tcv_TrafficClassReason for change

The value of traffic class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.5 tcv_TrafficHandProReason for change

The value of traffic handling priority (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic handling priority is used in several locations a test step has been written (see 2.3.2.6) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficHandlingPriority
Type	B2
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.6 ts_DetermineDlyClassAndTrafficClassAndTrafficHandProReason for change

To provide a means of setting the new test case variables tcv_DlyClass, tcv_TrafficClass and tcv_TrafficHandPro.

Summary of Change

Table added to suite.

Add test step:

Test Step Name		ts_DetermineDlyClassAndTrafficClass			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B, tcv_TrafficHandPro := '??'B)			
5		[TRUE]		I	

2.4 Modifications to tables added from RRCv143

2.4.1 tc_8_2_1_8

Reason for change

At the time of this call to *ts_RRC_ReceiveRB_SetupCmpl* the current cell configuration is standalone SRB. This causes the test case to loop endlessly until it times out and fails.

Summary of Change

Force the test step to take the appropriate action.

Change test case from:

Test Case Name		tc_8_2_1_8			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		+ts_CMAC_NewU_RNTI_Reconf (tsc_CellA, tcv_CellInfoA.uRNTI, tsc_New_CRNTI)			
12		+ ts_RRC_ReceiveRB_SetupCmpl (tsc_CellA, tcv_CellInfoA.cellConfig)			Step 2
13		(tcv_CellInfoA.cellConfig := cell_FACH_PS)			
...

To:

Test Case Name		tc_8_2_1_8			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		+ts_CMAC_NewU_RNTI_Reconf (tsc_CellA, tcv_CellInfoA.uRNTI, tsc_New_CRNTI)			
12		+ ts_RRC_ReceiveRB_SetupCmpl (tsc_CellA, cell_FACH_PS)			Step 2
13		(tcv_CellInfoA.cellConfig := cell_FACH_PS)			
...

CHANGE REQUEST

⌘ **34.123-3 CR 022** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.2.1.10		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 24/03/2003
Category:	⌘ F	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.2.1.10 to RRCv310		
Summary of change:	⌘ - 0 table(s) deleted from RRCv310 - 15 table(s) modified in RRCv310 - 12 table(s) added from RRCv143 of which - 1 table(s) have been modified - 6 new table(s) added For more details see below.		
Consequences if not approved:	⌘ Test case 8.2.1.10 will not be added		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title	Introducing test case 8.2.1.10 required to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce TC 8.2.1.10 to RRCv310. With these changes applied the test case can be demonstrated to run on a single UE implementation. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 (V5.2.0) clause 8.2.1.10.

2 Changes required for test-case 8.2.1.10

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change

The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section 2.3.1.2.

Summary of Change

Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 c_TrChInfoUL_336_148Reason for change

Transport channel ordering problem. Same problem as described in the approved CR T1S030234 for tc_8_2_1_1.

Summary of Change

Re-order the transport channel list as specified.

Change ASN.1 Type Constraint Declaration from:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }, { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }}; ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }, { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }}; ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

2.2.3 cr_ActPDP_ContextReqFACH_MO

Reason for change

To provide a means for specifying the expected Quality of Service (QoS) in an Activate PDP Context Request constraint.

Summary of Change

Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqFACH_MO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_CellFACH_lv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqFACH_MO(p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

2.2.4 cr_AttachReq

Reason for change

The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST message.

Summary of Change

Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.5 cr_QoS_InteractiveMO_CellFACH_Iv

Reason for change:

1. There are a number of discrepancies between quality of service described in the receive constraint and the quality of service specified in the AT commands sent to the upper tester (see 2.2.8 and 2.2.9).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. The traffic handling priority depends on the traffic class and traffic handling priority used in the AT command sent to the upper tester.
4. Some of the comments are wrong.

Summary of Change

1. Update cr_QoS_InteractiveMO_CellFACH_Iv to reflect the quality of service specified in the AT commands sent to the upper tester.
2. Allow dlyClass to be set by parameter.
3. Allow trafficHandPro to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv (p_trafficClass : B3 ; p_dlyClass : B3 ; p_trafficHandPro : B2)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The expected QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the SS by the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	Interactive=traffic class, Background=4
	reliabilityClass	'100'B	Unacknowledged GTP, LLC and RLC, protected data
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed precedence
	spare2	'000'B	

meanThroughput	'11111'B		best effort
trafficClass	p_trafficClass		Interactive='011'B, Background='100'B
deliveryOrder	'01'B		With delivery order
deliveryErrorSDU	'010'B		Erroneous SDUs are delivered
maxSDUSize	'20'O		320 bits
maxBitRateUplink	'40'O		64 kbps
maxBitRateDnlink	'40'O		64 kbps
residualBER	'1001'B		6x 10E (-8)
sduErrRatio	'0011'B		1 X 10 E(-3)
transDly	?		The transfer delay is ignored if interactive or background class.
trafficHandpro	p_trafficHandPro		Interactive=value set in AT command. Background=? (value is ignored)
bitRateUplink	?		The guaranteed bit is ignored if interactive or background class
bitRateDnlink	?		The guaranteed bit is ignored if interactive or background class

2.2.6 cs_QoS_InteractiveMT_Iv

Reason for change

1. There are a number of discrepancies between quality of service described in this constraint and the quality of service requested by the UE (see 2.2.5).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. Some of the comments are wrong.

Summary of Change

1. Update the cs_QoS_InteractiveMT_CellFACH_Iv constraint to send the a quality of service that matches the request .
2. Allow dlyClass to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw		
	Element Name	Element Value	Comments
	length	'0D'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_Iv (p_trafficClass : B3 ; p_dlyClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The negotiated QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the UE by the OS		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	
	reliabilityClass	'100'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive='011'B, background='100'B
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'40'O	64 kbps

maxBitRateDnlink	400		64 kbps
residualBER	'1001'B		6×10^{-8}
sduErrRatio	'0011'B		1×10^{-3}
transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
bitRateUplink	000		The guaranteed bit rate is ignored if interactive or background class
bitRateDnlink	000		This will be neglected by UE as the class is interactive

2.2.7 ts_ActivatePDP_RequestCellFACH_MO

Reason for change

To accommodate the modified receive Activate PDP Context Request constraint (see 2.2.3).

Summary of Change

Call a test step to determine the values for QoS delay and traffic classes, and then to pass these values into the renamed quality of service receive constraint.

Change test step from:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		
2		+ts_SetTI_Rsp(tcv_TI_R)			
...				

To:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro			
2		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO (cr_QoS_InteractiveOrBackgroundMO_CellFACH_iv (tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...				

2.2.8 ts_AT_OrgPS_Call

Reason for change:

The are a number of problems with the AT commands issued by this test step:-

1. The activate PDP context command (CGACT) uses a different context ID to that of the other AT commands used.
2. The minimum quality of service command (CGEQMIN) used has too many fields (TS 27.007).
3. The minimum quality of service command (CGEQMIN) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
4. The minimum quality of service command (CGEQMIN) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,...<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,...<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1,1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,,1,320,""1E3""""6E8""",1,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,,1,320,""1E3""""6E8""",1,<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

2.2.9 ts_AT_SetQoS

Reason for change

There are a number of problems with the AT commands issued by this test step:-

1. The quality of service command (CGEQREQ) used has too many fields (TS 27.007).
2. The quality of service command (CGEQREQ) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
3. The quality of service command (CGEQREQ) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64, 1,320,""1E3"" , ""6E8"" ,1,,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, , , 1, 320, ""1E3"" , ""6E8"" ,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.10 ts_CRLC_UL_CipherCfg_RABReason for change

The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change

Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[px_CipheringOnOff]			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		[NOT (px_CipheringOnOff)]			

2.2.11 ts_GMM_Authentication

Reason for change

The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint `c_AuthRspExtAny_tv`. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called `c_AuthCiphRspExtAny_tv`, detailed in section 2.3.1.1, has been added with the correct tag value and needs to be referenced instead.

Summary of Change

Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(			Verify that the

	tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))		received Authentication Response paramters match expected response.
--	---	--	---

2.2.12 ts_GMM_IdleUpdated

Reason for change

The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change

Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate(p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+It_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.13 ts_ReceiveActivatePDP_Accept_DCH

Reason for change

1. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
2. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_DCH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3,		

			cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.14 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change

The delay class, traffic class and traffic handling priority IEs in the received Activate PDP context request depend on the AT command issued to the upper tester, which in turn is controlled by various test suite parameters.

Summary of Change

1. Call a test step to determine the appropriate delay class, traffic class and traffic handling priority.
2. Pass these values into the modified quality of service receive constraint.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		
8		+ ts_SetTI_Rsp (tcv_TI_R)			

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		+ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_IV(tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro)))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

2.2.15 ts_RRC_NAS_SessionActPS_MT_P9_P10Reason for change

To accommodate the modified receive Activate PDP Context Request constraint (see 2.2.3).

Summary of Change

1. Call a test step to determine the appropriate values for the delay and traffic classes,.
2. Pass these values to the modified receive Activate PDP Context Request constraint.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
15		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
16		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH MO)		

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
15		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
16		+ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro			
17		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_IV(tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro)))		

Tables added to RRCv310

2.3 Tables added from RRCv143

Type	Name
Test Suite Parameter Declarations	px_KeySeqDefxxxxx
Test Suite Constant Declaration	tsc_DPCCH_PowerOffset
Test Case Variable Declarations	tcv_KeySeq
ASN.1 Type Constraint Declarations	c_DCH_148_TFS c_DCH_148_TFS_UE c_DL_CommTrChInfoFACH_ToDCH c_RAB_InfoListDCH_OrFACH_ToFACH_ToDCH_PS c_UL_AddReconfTransChInfoListFACH_ToDCH
ASN.1 PDU Constraint Declarations	cr_108_RRC_ConnRelCmpl cbs_108_RB_SetUpFACH_ToDCH
Test Cases RRC_ConnRelease	tc_8_2_1_10
Test Steps BasicM_CC_SM_Steps	pr_GotoState6_6_Or6_8_MO

2.3.1 New tables added

2.3.1.1 c_AuthCiphRspExtAny

Reason for change

The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem.

Summary of Change

Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny		
Structured Type	AuthRspExt		
Derivation Path			
Encoding Variation			
Comments			
	Element Name	Element Value	Element Encoding
	iei	'00101001'B	
	iel	?	
	rES	?	

2.3.1.2 px_NMO

Reason for change

Provision of a means of selecting the Network Mode of Operation from the PICS/Pixit file. Use of this new parameter declaration is detailed in section 2.2.1.

Summary of Change

Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.3.1.3 tcv_DlyClass

Reason for change

The value of delay class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of delay class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_DlyClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.4 tcv_TrafficClassReason for change

The value of traffic class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.5 tcv_TrafficHandProReason for change

The value of traffic handling priority (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic handling priority is used in several locations a test step has been written (see 2.3.1.6) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficHandlingPriority
Type	B2
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.6 ts_DetermineDlyClassAndTrafficClassAndTrafficHandProReason for change

To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.

Summary of Change

Table added to suite.

Add test step:

Test Step Name		ts_DetermineDlyClassAndTrafficClass			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B, tcv_TrafficHandPro := '??'B)			
5		[TRUE]		!	

2.4 Modifications to tables added from RRCv143

2.4.1 tc_8_2_1_10

Reason for change

The test procedure causes the SS to send the Activate PDP Context Accept to the UE twice in quick succession. This message only needs to be sent once.

Summary of Change

Change the test case behaviour line such that the Activate PDP Context Accept is only sent once.

Change test case from:

Test Case Name		tc_8_2_1_10			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
12		(tcv_CellInfoA.cellConfig := cell_DCH_64kPS_RAB_SRB)			
13		+ts_ReceiveActivatePDP_Accept_FACH (tsc_CellA)			test step is called to complete the PDP context
14		Ut ? AT_CmdCnf	ca_AT_CmdCnf		Acknowledgement to the Initial AT comand
15		+ ts_NAS_ConnCompleteMO_CS_PS (tsc_CellA)			
17

To:

Test Case Name		tc_8_2_1_10			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
12		(tcv_CellInfoA.cellConfig := cell_DCH_64kPS_RAB_SRB)			
13		+ ts_NAS_ConnCompleteMO_CS_PS (tsc_CellA)			
15

CHANGE REQUEST

⌘ **34.123-3 CR 023** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.1.5.1		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 2/04/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.1.5.1 to RRCv310
Summary of change:	⌘ - 0 table deleted from RRCv310, - 2 table modified in RRCv310, - 7 tables added from RRCv143, - No new table created. For more details see below.
Consequences if not approved:	⌘ Test case 8.1.5.1 will not be added

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title	Introducing test case 8.1.5.1 to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce test case 8.1.5.1 to RRCv310. With these changes applied the test case can be demonstrated to run on one UE implementation. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 clause 8.1.5.1 .

2 Changes required for test-case 8.1.5.1

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_DCH_148_TFS_UE_DL

Reason for change: Rate Matching information in constraint c_DCH_148_TFS_DL is conflicting w.r.t RadioBearingSetup PDU.

Summary of Change: Rate matching attribute value changed from 192 to 170.

Change:

Constraint Name	c_DCH_148_TFS_UE_DL
PDU Type	DedicatedTransChTFS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	transport format set for signalling bearer on dedicated channel used in message sent to UE
	<pre>{ tti tti40 :{{ rlc_Size bitMode : sizeType2 : {part1 2, part2 OMIT}, numberOfTbSizeList { zero : NULL, one : NULL}, logicalChannelList allSizes : NULL }}, semistaticTF_Information { channelCodingType convolutional :third, rateMatchingAttribute 192, crc_Size crc16 } }</pre>

To:

Constraint Name	c_DCH_148_TFS_UE_DL
PDU Type	DedicatedTransChTFS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	transport format set for signalling bearer on dedicated channel used in message sent to UE
	<pre>{ tti tti40 :{{ rlc_Size bitMode : sizeType2 : {part1 2, part2 OMIT}, numberOfTbSizeList { zero : NULL, one : NULL}, logicalChannelList allSizes : NULL }}, semistaticTF_Information { channelCodingType convolutional :third, rateMatchingAttribute 170, crc_Size crc16 } }</pre>

2.2.2 cr_RRC_StatusCauValueNotCompr

Reason for change: The nonCriticalExtensions field must not be mandatory.

Summary of Change: nonCriticalExtensions field is changed from ? to *.

Change:

Constraint Name	cr_RRC_StatusCauValueNotCompr (p_RRC_Ti : RRC_TransactionIdentifier; p_recMessTyp: ReceivedMessageType)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	
	<pre> { integrityCheckInfo *, message rrcStatus : { protocolErrorInformation { diagnosticsType type1: ie_ValueNotComprehended : { rrc_TransactionIdentifier p_RRC_Ti , receivedMessageType p_recMessTyp } }, nonCriticalExtensions ? } } </pre>

To:

Constraint Name	cr_RRC_StatusCauValueNotCompr (p_RRC_Ti : RRC_TransactionIdentifier; p_recMessTyp: ReceivedMessageType)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	
	<pre> { integrityCheckInfo *, message rrcStatus : { protocolErrorInformation { diagnosticsType type1: ie_ValueNotComprehended : { rrc_TransactionIdentifier p_RRC_Ti , receivedMessageType p_recMessTyp } }, nonCriticalExtensions * } } </pre>

2.3 New Tables added to RRCv310

2.3.1 Tables added from RRCv143

- px_KeySeqDefxxxx
- tsc_CriticalExtension1
- cs_InvalidUE_CapabilityInfoCnf
- cs_RRC_InvalidUE_CapabilityEnqIntegrityCheck
- cs_RRC_UE_CapabilityEnqSystemSpecificCapUpdateReq_GSM
- cr_108_RRC_ConnRelCmpl
- tc_8_1_5_1

2.3.2 Other Tables

None.

CHANGE REQUEST

⌘ **34.123-3 CR 024** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.1.5.4		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 3/04/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.1.5.4 to RRCv310		
Summary of change:	⌘ - 0 table deleted from RRCv310, - 15 table modified in RRCv310, - 8 tables added from RRCv143, - 6 new table created. For more details see below.		
Consequences if not approved:	⌘ Test case 8.1.5.4 will not be added		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Seoul, Korea

12-15 May 2003

Title	Introducing test case 8.1.5.4 to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce test case 8.1.5.4 to RRCv310. With these changes applied the test case can be demonstrated to run on one UE implementation. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 clause 8.1.5.4 .

2 Changes required for test-case 8.1.5.4

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change: The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section 2.3.2.1.

Summary of Change: Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 cr_QoS_InteractiveMO_CellFACH_Iv

Reason for change: There are a number of discrepancies between quality of service described in the receive constraint and the quality of service the UE is told to request. Use of this revised constraint is detailed in sections 2.2.11, 2.2.13 & 2.2.14.

Summary of Change: Rename the constraint to cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to check for the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv (p_trafficClass : B3 | p_dlyClass : B3)			
Structured Type	QualityOfService_lv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE			
	Element Name	Element Value	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	reliabilityClass	'100'B		Acknowledge Mode of RLC
	peakThroughput	'0100'B		64 kbps
	spare1	'0'B		
	precedenceClass	'000'B		Subscribed class
	spare2	'000'B		
	meanThroughput	'11111'B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	'01'B		With delivery order
	deliveryErrorSDU	'010'B		Erroneous SDUs are delivered
	maxSDUSize	'20'O		320 bits
	maxBitRateUplink	'40'O		64 kbps
	maxBitRateDnlink	'40'O		64 kbps
	residualBER	'1001'B		6x 10E (-8)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	?		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	?		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	?		This will be neglected by UE as the class is interactive

2.2.3 cs_QoS_InteractiveMT_CellFACH_Iv

Reason for change: There are a number of discrepancies between quality of service described in the send constraint and the quality of service described in the test documentation. Use of this revised constraint is detailed in section 2.2.12.

Summary of Change: Rename the constraint to cs_QoS_InteractiveOrBackgroundMO_CellFACH_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to send the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_CellFACH_Iv (p_trafficClass : B3)			
Structured Type	QualityOfService_Iv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw			
	Element Name	Element Value	Element Encoding	Comments
	length	'0D'O		
	spare	'00'B		
	dlyClass	'100'B		Best effort
	reliabilityClass	'001'B		
	peakThroughput	'0110'B		64 kbps
	spare1	'0'B		
	precedenceClass	'100'B		Normal class
	spare2	'000'B		
	meanThroughput	'11111'B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	'01'B		
	deliveryErrorSDU	'010'B		
	maxSDUSize	'20'O		
	maxBitRateUplink	'20'O		64 kbps
	maxBitRateDnlink	'20'O		64 kbps
	residualBER	'1001'B		6 x 10E (-3)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O		This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_CellFACH_lv (p_trafficClass : B3 | p_dlyClass : B3)			
Structured Type	QualityOfService_lv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE			
	Element Name	Element Value	Element Encoding	Comments
	length	0B'0		
	spare	00'B		
	dlyClass	P_dlyClass		
	reliabilityClass	100'B		
	peakThroughput	0110'B		64 kbps
	spare1	0'B		
	precedenceClass	000'B		Subscribed class
	spare2	000'B		
	meanThroughput	11111'B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	01'B		
	deliveryErrorSDU	010'B		
	maxSDUSize	20'O		
	maxBitRateUplink	40'O		64 kbps
	maxBitRateDnlink	40'O		64 kbps
	residualBER	1001'B		6x 10E (-8)
	sduErrRatio	0011'B		1 X 10 E(-3)
	transDly	111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	00'O		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	00'O		This will be neglected by UE as the class is interactive

2.2.4 cr_ActPDP_ContextReqFACH_MO

Reason for change: To provide a means for selecting the requested Quality of Service. Use of this revised constraint is detailed in sections 2.2.11, 2.2.13 & 2.2.14.

Summary of Change: Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqFACH_MO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_CellFACH_lv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqFACH_MO(p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

2.2.5 cr_AttachReq

Reason for change: The information element “oldPTMSI_Signature” is optional in an ATTACH REQUEST nas message. The constraint should reflect this fact.

Summary of Change: Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.6 ts_GMM_Authentication

Reason for change: The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint c_AuthRspExtAny_tv. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called c_AuthCiphRspExtAny_tv, detailed in section 2.3.2.4, has been added with the correct tag value and needs to be referenced instead.

Summary of Change: Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK,			Verify that the received Authentication Response

		tcv_AuthRAND, TRUE))			paramters match expected response.
--	--	----------------------------------	--	--	---------------------------------------

2.2.7 ts_GMM_IdleUpdated

Reason for change: The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change: Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate (p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+It_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.8 ts_CRLC_UL_CipherCfg_RAB

Reason for change: The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change: Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		px_CipheringOnOff			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		NOT (px_CipheringOnOff)			

2.2.9 ts_AT_OrgPS_Call

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,..,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,..,<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,..,1,320,""1E3""""6E8""",1,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,..,1,320,""1E3""""6E8""",1,..,<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

2.2.10 ts_AT_SetQoS

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64,,1,320,""1E3""""6E8""",1,,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64,64,,1,320,""1E3""""6E8""",1,,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.11 ts_ActivatePDP_RequestCellFACH_MO

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass, detailed in section 2.3.2.6, to determine the values for QoS delay and traffic classes, and then to pass these values into the Activate PDP Context Request message using the revised constraints detailed in sections 2.2.2 & 2.2.4.

Change test step from:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		
2		+ts_SetTI_Rsp(tcv_TI_R)			
...				

To:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_DetermineDlyClassAndTrafficClass			
2		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO (cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv (tcv_TrafficClass , tcv_DlyClass)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...				

2.2.12 ts_ReceiveActivatePDP_Accept_FACH

Reason for change: To provide for differing Quality of Service delay and traffic classes. Since the Packet Data Protocol Address IE is present in the Activate PDP Context Request message, it must be omitted from the Activate PDP Context Accept message.

Summary of Change: Pass QoS delay and traffic class values into the Activate PDP Context Accept message using the revised constraint detailed in section 2.2.3. Omit the Packet Data Protocol Address from the Activate PDP Context Accept message.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH))		Send PDP Context Activation Accept, with LLC SAPI set as 3
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH))		Send PDP Context Activation Accept, with LLC SAPI set as 3
8	ERR1	[TRUE]		I	Parameter error
...				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 3
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 3
8	ERR1	[TRUE]		I	Parameter error
...				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPMT (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPMT (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

2.2.13 ts_RRC_NAS_SessionActPS_MT_P9_P10

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass, detailed in section 2.3.2.6, to determine the values for QoS delay and traffic classes, and then to pass these values into the Activate PDP Context Request message using the revised constraints detailed in sections 2.2.2 & 2.2.4.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
15		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
16		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH MO)		

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
15		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
16		+ts_DetermineDlyClassAndTrafficClass			
17		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH MO(cr_QoS_InteractiveOrBackgrou ndMO_CellFACH_iv(tcv_TrafficClass, tcv_DlyClass))		

2.2.14 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change: To provide for differing Quality of Service delay and traffic classes.

Summary of Change: Call the test step ts_DetermineDlyClassAndTrafficClass, detailed in section 2.3.2.6, to determine the values for QoS delay and traffic classes, and then to pass these values into the Activate PDP Context Request message using the revised constraints detailed in sections 2.2.2 & 2.2.4.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		
8		+ ts_SetTI_Rsp (tcv_TI_R)			

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		+ts_DetermineDlyClassAndTrafficClass			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv(tcv_TrafficClass, tcv_DlyClass)))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

2.2.15 cr_RRC_StatusCauValueNotCompr

Reason for change: The nonCriticalExtensions field must not be mandatory.

Summary of Change: nonCriticalExtensions field is changed from ? to *.

Change:

Constraint Name	cr_RRC_StatusCauValueNotCompr (p_RRC_Ti : RRC_TransactionIdentifier; p_recMessTyp: ReceivedMessageType)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	{ integrityCheckInfo *, message rrcStatus : { protocolErrorInformation { diagnosticsType type1: ie_ValueNotComprehended : { rrc_TransactionIdentifier p_RRC_Ti , receivedMessageType p_recMessTyp } } }

	<pre> }, nonCriticalExtensions ? } } </pre>
--	---

To:

Constraint Name	cr_RRC_StatusCauValueNotCompr (p_RRC_Ti : RRC_TransactionIdentifier; p_recMessTyp: ReceivedMessageType)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	
	<pre> { integrityCheckInfo *, message rrcStatus : { protocolErrorInformation { diagnosticsType type1: ie_ValueNotComprehended : { rrc_TransactionIdentifier p_RRC_Ti , receivedMessageType p_recMessTyp } }, nonCriticalExtensions * } } </pre>

2.3 New Tables added to RRCv310

2.3.1 Tables added from RRCv143

- px_KeySeqDefxxxx
- tsc_CriticalExtension1
- cs_InvalidUE_CapabilityInfoCnf
- cs_RRC_InvalidUE_CapabilityEnqIntegrityCheck
- cs_RRC_UE_CapabilityEnqSystemSpecificCapUpdateReq_GSM
- cr_108_RRC_ConnRelCmpl
- tc_8_1_5_4
- pr_GotoState6_11_MO

2.3.2 Other Tables

2.3.2.1 px_NMO

Reason for change: Provision of a means of selecting the Network Mode of Operation from the Pics/Pixit file. Use of this new parameter declaration is detailed in section 2.2.1.

Summary of Change: Following table has been added to the suite (under Test Suite Parameter Declaration):

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.3.2.2 tcv_DlyClass

Reason for change: Provision of a means of selecting the Delay Class for Quality of Service constraints. Use of this new test case variable declaration is detailed in sections 2.2.11, 2.2.12, 2.2.13, 2.2.14 & 2.3.2.6.

Summary of Change: Following table has been added to the suite (under Test Suite Parameter Declaration):

Parameter Name	Tcv_DlyClass
Type	B3
PICS/PIXIT Ref	
Comments	

2.3.2.3 tcv_TrafficClass

Reason for change: Provision of a means of selecting the Traffic Class for Quality of Service constraints. Use of this new test case variable declaration is detailed in sections 2.2.11, 2.2.12, 2.2.13, 2.2.14 & 2.3.2.6.

Summary of Change: Following table has been added to the suite (under Test Case Variable Declaration):

Parameter Name	TrafficClass
Type	B3
PICS/PIXIT Ref	
Comments	

2.3.2.4 c_AuthCiphRspExtAny

Reason for change: The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem. Use of this new constraint is detailed in section 2.2.6.

Summary of Change: Following table has been added to the suite (under Structured Type Constraint Declaration):

Constraint Name	c_AuthCiphRspExtAny			
Structured Type	AuthRspExt			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	iei	'00101001'B		
	iel	?		
	rES	?		

2.3.2.5 cr_108_UplinkDirectTransfer

Reason for change: The test procedure calls for the reception of an uplink direct transfer. No such constraint was present in RRCv143, so a new constraint has been generated. Use of this new constraint is detailed in section **Error! Reference source not found..**

Summary of Change: Following table has been added to the suite (under ASN.1 PDU Constraint Declaration):

Constraint Name	cr_108_UplinkDirectTransfer (p_CN_DomainId : CN_DomainIdentity; p_NAS_msg: NAS_Message)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	
	Constraint Value

```

{
  integrityCheckInfo * ,
  message uplinkDirectTransfer :
  {
    cn_DomainIdentity p_CN_DomainId,
    nas_Message p_NAS_msg,
    measuredResultsOnRACH * ,
    nonCriticalExtensions *
  }
}

```

2.3.2.6 ts_DetermineDlyClassAndTrafficClass

Reason for change: To provide a means of setting the new test case variables `tcv_DlyClass` and `tcv_TrafficClass`. Use of this new test step is detailed in sections 2.2.11, 2.2.13 & 2.2.14.

Summary of Change: Following table has been added to the suite:

Test Step Name		ts_DetermineDlyClassAndTrafficClass			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B)			
5		[TRUE]		I	

CHANGE REQUEST

¶ **34.123-3 CR 025** ¶ rev - ¶ Current version: **3.1.0** ¶

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ¶ symbols.

Proposed change affects: UICC apps¶ ME Radio Access Network Core Network

Title:	¶ Test Case 8.2.3.7		
Source:	¶ Anritsu Ltd		
Work item code:	¶ -	Date:	¶ 11/04/2003
Category:	¶ F	Release:	¶ R99
Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)	

Reason for change:	¶ To introduce test case 8.2.3.7 to RRCv310
Summary of change:	¶ - 0 table(s) deleted from RRCv310 - 17 table(s) modified in RRCv310 - 9 table(s) added from RRCv143 For more details see below.
Consequences if not approved:	¶ Test case 8.2.3.7 will not be added

Clauses affected:	¶ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="text-align: center; padding: 2px;">X</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="text-align: center; padding: 2px;">X</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="text-align: center; padding: 2px;">X</td> <td style="padding: 2px;"></td> </tr> </table>	Y	N	X		X		X		Other core specifications	¶
	Y	N									
	X										
X											
X											
		Test specifications	¶								
		O&M Specifications	¶								
Other comments:	¶										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ¶ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Seoul, Korea

12-15 May 2003

Title	Introducing test case 8.2.3.7 required to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce TC 8.2.1.10 to RRCv310. With these changes applied the test case can be demonstrated to run on a single UE implementation. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 (V5.2.0) clause 8.2.3.7.

2 Changes required for test-case 8.2.3.7

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change

The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section 2.3.2.2.

Summary of Change

Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 c_TrChInfoUL_336_148Reason for change

Transport channel ordering problem. Same problem as described in the approved CR T1S030234 for tc_8_2_1_1.

Summary of Change

Re-order the transport channel list as specified.

Change ASN.1 Type Constraint Declaration from:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }, { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }, { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

2.2.3 cr_AttachReq

Reason for change

The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST message.

Summary of Change

Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.4 cr_LLC_SAPI_vReason for Change

The range of nSAPI values used in this constraint does not correlate to 3GPP TS 24.008; i.e. '0011'B duplicated, '0000'B omitted.

Summary of Change

Replace the first occurrence of '0011'B in the range of nSAPI values with '0000'B.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_LLC_SAPI_v			
Structured Type	LLC_SAPI_v			
Derivation Path				
Encoding Variation				
Comments	LLC SAPI value assigned as SPI 3 in order to ensure that there are no problems at the time of handover from UMTS to GSM			
	Element Name	Element Value	Element Encoding	Comments
	spare	'0000'B		
	nSAPI_Value	'0011'B, '0011'B, '0101'B, '1001'B, '1011'B)		

To:

Constraint Name	cr_LLC_SAPI_v			
Structured Type	LLC_SAPI_v			
Derivation Path				
Encoding Variation				
Comments	LLC SAPI value assigned as SPI 3 in order to ensure that there are no problems at the time of handover from UMTS to GSM			
	Element Name	Element Value	Element Encoding	Comments
	spare	'0000'B		
	nSAPI_Value	'0000'B, '0011'B, '0101'B, '1001'B, '1011'B)		

2.2.5 cr_ActPDP_ContextReqMO

Reason for change

To provide a means for specifying the expected Quality of Service (QoS) in an Activate PDP Context Request constraint.

Summary of Change

Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqMO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_lv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqMO(p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

2.2.6 cs_QoS_InteractiveMT_CellFACH_Iv

Reason for change

1. There are a number of discrepancies between quality of service described in this constraint and the quality of service requested by the UE (see 2.2.5).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. Some of the comments are wrong.

Summary of Change

1. Update the cs_QoS_InteractiveMT_CellFACH_Iv constraint to send the a quality of service that matches the request .
2. Allow dlyClass to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw		
	Element Name	Element Value	Comments
	length	'0D'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_CellFACH_Iv (p_trafficClass : B3 ; p_dlyClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The negotiated QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the UE by the OS		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	Interactive=traffic class, Background=4
	reliabilityClass	'100'B	Unacknowledged GTP, LLC and RLC, protected data
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed precedence
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive='011'B, background='100'B
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	

	maxSDUSize	'20'O		320 bits
	maxBitRateUplink	'40'O		64 kbps
	maxBitRateDnlink	'40'O		64 kbps
	residualBER	'1001'B		6x 10E (-8)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	'111111'B		The transfer delay is ignored if interactive or background class.
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'00'O		The guaranteed bit is ignored if interactive or background class
	bitRateDnlink	'00'O		The guaranteed bit is ignored if interactive or background class

2.2.7 cr_QoS_InteractiveMO_Iv

Reason for change:

1. There are a number of discrepancies between quality of service described in the receive constraint and the quality of service specified in the AT commands sent to the upper tester (see 1.1.1 and 1.1.1).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. The traffic handling priority depends on the traffic class and traffic handling priority used in the AT command sent to the upper tester.
4. Some of the comments are wrong.

Summary of Change

1. Update cr_QoS_InteractiveMO_Iv to reflect the quality of service specified in the AT commands sent to the upper tester.
2. Allow dlyClass to be set by parameter.
3. Allow trafficHandPro to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0111'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'40'O	64 kbps
	maxBitRateDnlink	'40'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'40'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'40'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_Iv (p_trafficClass : B3 ; p_dlyClass : B3 ; p_trafficHandPro : B2)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The expected QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the SS by the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	Interactive=traffic class, Background=4
	reliabilityClass	'100'B	Unacknowledged GTP, LLC and RLC, protected data
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed precedence
	spare2	'000'B	

meanThroughput	'11111'B		best effort
trafficClass	p_trafficClass		Interactive='011'B, Background='100'B
deliveryOrder	'01'B		With delivery order
deliveryErrorSDU	'010'B		Erroneous SDUs are delivered
maxSDUSize	'20'O		320 bits
maxBitRateUplink	'40'O		64 kbps
maxBitRateDnlink	'40'O		64 kbps
residualBER	'1001'B		$6 \times 10^E (-8)$
sduErrRatio	'0011'B		$1 \times 10^E (-3)$
transDly	?		The transfer delay is ignored if interactive or background class.
trafficHandpro	p_trafficHandPro		Interactive=value set in AT command. Background=? (value is ignored)
bitRateUplink	?		The guaranteed bit is ignored if interactive or background class
bitRateDnlink	?		The guaranteed bit is ignored if interactive or background class

2.2.8 ts_ActivatePDP_AcceptMO

Reason for change

To accommodate the modified receive Activate PDP Context Request constraint (see 1.1.1).

Summary of Change

Call a test step to determine the values for QoS delay and traffic classes, and then pass these values into the modified quality of service receive constraint.

Change test step from:

Test Step Name		ts_ActivatePDP_AcceptMO (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI _Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO)		
2		+ts_SetTI_Rsp(tcv_TI_R)			
...				

To:

Test Step Name		ts_ActivatePDP_RequestCellFACH_MO (p_CellId : INTEGER ; p_RB_ConfigType : RB_ConfigType)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro			
2		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RecdNSAPI := tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI _Value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH MO (cr_QoS_InteractiveOrBackgroun dMO_lv (tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...				

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3.6E8,1,,,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3.6E8,1,,,<CR>"))			set up the Minimum QoS same as Required QoS

20	ERR1	[TRUE]		I	Parameter error
----	------	----------	--	---	-----------------

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1,1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,,1,320,""1E3""""6E8""",1,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,,1,320,""1E3""""6E8""",1,3<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

2.2.9 ts_AT_OrgPS_Call

Reason for change:

The are a number of problems with the AT commands issued by this test step:-

1. The activate PDP context command (CGACT) uses a different context ID to that of the other AT commands used.
2. The minimum quality of service command (CGEQMIN) used has too many fields (TS 27.007).
3. The minimum quality of service command (CGEQMIN) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
4. The minimum quality of service command (CGEQMIN) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,...<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,...<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,,1,320,""1E3""""6E8""",1,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,,1,320,""1E3""""6E8""",1,<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

2.2.10 ts_AT_SetQoS

Reason for change

There are a number of problems with the AT commands issued by this test step:-

1. The quality of service command (CGEQREQ) used has too many fields (TS 27.007).
2. The quality of service command (CGEQREQ) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
3. The quality of service command (CGEQREQ) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64, 1,320,""1E3"" , ""6E8"" ,1,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, , , 1, 320, ""1E3"" , ""6E8"" ,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.11 ts_CRLC_UL_CipherCfg_RAB

Reason for change

The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change

Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[px_CipheringOnOff]			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		[NOT (px_CipheringOnOff)]			

2.2.12 ts_GMM_Authentication

Reason for change

The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint `c_AuthRspExtAny_tv`. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called `c_AuthCiphRspExtAny_tv`, detailed in section 2.3.2.1, has been added with the correct tag value and needs to be referenced instead.

Summary of Change

Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(			Verify that the

	tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))		received Authentication Response paramters match expected response.
--	---	--	---

2.2.13 ts_GMM_IdleUpdated

Reason for change

The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change

Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate(p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+It_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.14 ts_ReceiveActivatePDP_Accept_DCHReason for change

1. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
2. To accommodate the modified interactive QoS constraint (refer 2.2.7).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_DCH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3,		

			cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.15 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change

The delay class, traffic class and traffic handling priority IEs in the received Activate PDP context request depend on the AT command issued to the upper tester, which in turn is controlled by various test suite parameters.

Summary of Change

1. Call a test step to determine the appropriate delay class, traffic class and traffic handling priority.
2. Pass these values into the modified quality of service receive constraint.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
4		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO))		
5		+ ts_SetTI_Rsp (tcv_TI_R)			
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		+ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO (cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv(tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		+ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
5		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO (cr_QoS_InteractiveOrBackgroundMO_Iv(tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro)))		
6		+ ts_SetTI_Rsp (tcv_TI_R)			

2.2.16 ts_RRC_NAS_SessionActPS_MT_P9_P10

Reason for change

To accommodate the modified receive Activate PDP Context Request constraint (see 1.1.1).

Summary of Change

1. Call a test step to determine the appropriate values for the delay and traffic classes,.
2. Pass these values to the modified receive Activate PDP Context Request constraint.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MT_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
8		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoDCH, px_AccessPtNameDCH))		
9		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMT))		
				
16		+ts_DetermineDlyClassAndTrafficClassAndTrafficH andPro			

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MT_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		+ts_DetermineDlyClassAndTrafficClassAndTrafficH andPro			
				
9		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoDCH, px_AccessPtNameDCH))		
10		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO(cr_QoS_InteractiveOrBackgrou ndMT_lv(tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro)))		

2.2.17 ts_SS_Rel

Reason for change

The test step contain in correct qualifier logic to release non-existent radio bearers RB20 & RB_BCCH_FACH. (i.e. RB20 & RB_BCCH_FACH has already been released prior to the entry of this test step)

Summary of Change

Change the test step behaviour line as follows:

Change test step from:

Test Step Name		Ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		[(tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH) OR (tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
12		+ts_CRLC_Rel (tsc_CellDedicated, tsc_RB20)			
13		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			
...

To:

Test Step Name		Ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		[(tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH)]			
12		+ts_CRLC_Rel (tsc_CellDedicated, tsc_RB20)			
13		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			
14		+ It_RelSRB1_4			
15		+It_ReleaseCommonCh			
16		+ It_Release_BCCH			
17		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			
18		[(tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
19		+ It_RelSRB1_4			
20		+It_ReleaseCommonCh			
21		+ It_Release_BCCH			
22		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			
...

2.3 Tables added to RRCv310

2.3.1 Tables added from RRCv143

Type	Name
Test Suite Parameter Declarations	px_KeySeqDefxxxxx
Test Suite Constant Declaration	tsc_DPCCH_PowerOffset tsc_New_CRNTI
Test Case Variable Declarations	tcv_KeySeq
ASN.1 Type Constraint Declarations	c_DCH_148_TFS c_DCH_148_TFS_UE
ASN.1 PDU Constraint Declarations	cr_108_RRC_ConnRelCmpl cbs_108_RB_RelDCH_ToFACH
Test Cases RRC_RB_Release	tc_8_2_3_7
Test Steps BasicM_CC_SM_Steps	ts_SS_ReleaseDCH_ToFACH_PS

2.3.2 New tables added

2.3.2.1 c_AuthCiphRspExtAny

Reason for change

The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem.

Summary of Change

Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny			
Structured Type	AuthRspExt			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	iei	'00101001'B		
	iel	?		
	rES	?		

2.3.2.2 px_NMO

Reason for change

Provision of a means of selecting the Network Mode of Operation from the PICS/Pixit file. Use of this new parameter declaration is detailed in section 2.2.1.

Summary of Change

Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.3.2.3 tcv_DlyClass

Reason for change

The value of delay class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of delay class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_DlyClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.4 tcv_TrafficClassReason for change

The value of traffic class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.5 tcv_TrafficHandProReason for change

The value of traffic handling priority (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic handling priority is used in several locations a test step has been written (see 2.3.2.6) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficHandlingPriority
Type	B2
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.6 ts_DetermineDlyClassAndTrafficClassAndTrafficHandProReason for change

To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.

Summary of Change

Table added to suite.

Add test step:

Test Step Name		ts_DetermineDlyClassAndTrafficClass			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B, tcv_TrafficHandPro := '??'B)			
5		[TRUE]		!	

CR-Form-v7

CHANGE REQUEST

34.123-3 CR 026 # rev - # Current version: 3.1.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Addition of RLC test case 7.2.3.6 to RLC ATS V3.1.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 22 Apr 2003
Category:	# B	Release:	# R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To add verified RLC test case 7.2.3.6 to the approved RLC ATS V3.1.0
Summary of change:	# This document lists all changes applied to test case 7.2.3.6 required for approval. See detailed change description for further information.
Consequences if not approved:	# Test case will not be added to ATS

Clauses affected:	# N/A								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;">X</td> </tr> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;">X</td> </tr> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;">X</td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N		X		X		X
Y	N								
	X								
	X								
	X								
Other comments:	#								

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.6 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.6 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one 3G UE (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_7_2_3_6
Test Group: RLC/AcknowledgedMode/Segmentation/LI7Bit/
ATS Version: V1.40 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE
Verification Status: PASS

4 Corrections required for test case 7.2.3.6

4.1 Introduction

This section describes the changes required to make test case 7.2.3.6 run correctly with a real UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

4.2 Changes already approved

The following changes have already been approved by T1/SIG for approval of test case 7.2.2.3. Please refer to CR [2] for further information.

WA #RLC 3000	WA #RLC 3008	WA #RLC 3015
WA #RLC 3002	WA #RLC 3009	WA #RLC 3016
WA #RLC 3003	WA #RLC 3011	WA #RLC 3022
WA #RLC 3004	WA #RLC 3012	WA #RLC 3024
WA #RLC 3005	WA #RLC 3013	WA #RLC 3025
WA #RLC 3006	WA #RLC 3014	

The following changes have also been approved by T1/SIG for approval of test case 7.2.3.4, see [3].

WA #RLC 3021		
--------------	--	--

4.3 Local area ID inconsistent with SIB1 (WA #RLC 3027)

Constraint name cb_SIB1_Def
Reason for change tsc_LAC_Def: cb_SIB1_Def and tsc_LAC_Def take inconsistent values so that paging with TMSI fails.
Summary of change tsc_LAC_Def: cb_SIB1_Def takes tsc_LAC_Def instead of '0080'O according to V143
Label WA #RLC 3027

ASN.1 Type Constraint Declaration	
Constraint Name:	cb_SIB1_Def (p_CellInfo : CellInfoCfg)
Group:	
Type Name:	SysInfoType1
Derivation Path:	
Encoding Variation:	
Comments:	MCC='234', MNC='001', T3212='001H, ATT is on WA #RLC 3027
Constraint Value	
<pre> { cn_CommonGSM_MAP_NAS_SysInfo tsc_LAC_Def, cn_DomainSysInfoList ((cn_DomainIdentity ps_domain, cn_Type gsm_MAP: '0000'0, cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cn_PS_DRX_CycleLength)), (cn_DomainIdentity cs_domain, cn_Type gsm_MAP: '1E01'0, cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cn_CS_DRX_CycleLength)) } </pre>	

4.4 Incorrect cell Id in Status PDU constraint definition (WA #RLC 3028)

Constraint name	car_StatusInd
Reason for change	Parameter cellId is initialised with test suite constant tsc_DefaultCellId instead of tsc_CellDedicated.
Summary of change	Replaced use tsc_DefaultCellId with tsc_CellDedicated
Label	WA #RLC 3028

ASP Constraint Declaration		
Constraint Name:	car_StatusInd(p_RB_Id: SS_RB_Identity)	
Group:		
ASP Name:	RLC_TR_TestDataInd	
Derivation Path:		
Comments:	<p>This constraint is used to receive a STATUS PDU with the given super fields, and using the given RB Id. Any padding octets present are ignored.</p> <p>Parameters:</p> <p>p_RB_Id: The identifier for the RB to be used for reception of data. This is expected to be one of the following values, depending on the RLC configuration being tested. tsc_RB_AM_7_RLC, tsc_RB_UM_7_RLC, tsc_RB_AM_15_RLC, tsc_RB_UM_15_RLC</p> <p>p_SuperFields: The super fields expected to be included in the STATUS PDU.</p>	
Parameter Name	Element Value	Comments
cellId	tsc_CellDedicated	WA #RLC 3028
rB_Id	p_RB_Id	
data	cr_StatusAny	

4.5 Removal of superfluous space characters in test suite constants (WA #RLC 3034)

Test suite constant name	tsc_DefaultRAB_Id
Reason for change	Test suite constant tsc_DefaultRAB_Id contains a space character between bit 4 and 5. This is not allowed in the value of a constant (see ISO/IEC 9646-3;A3 Line 745)
Summary of change	Space character was removed, i.e. '0000 0001'B was changed to '00000001'B
Label	WA #RLC 3034

tsc_DefaultRAB_Id	BITSTRING	'00000001'B	This constant is used as the default value for the GSM MAP RAB identity for RLC testing. WA #RLC 3034
-------------------	-----------	-------------	--

4.6 Missing information in Status PDU fields (WA #RLC 3036)

PDU name	STATUS PDU
Reason for change	STATUS PDU fields are lacking information about which fields are tx and rx. Decoding cannot properly distinguish Data and Padding.
Summary of change	STATUS PDU fields renamed to add information about which fields are tx and rx. Data and Padding reception merged. Affected constraint cr_StatusAny and line 14 in test body, It_RxNack2 updated to use the the new names.
Label	WA #RLC 3036

PDU Type Definition			
PDU Name:	STATUS_PDU		
Group:			
PCO Type:	DSAP		
Encoding Rule Name:			
Encoding Variation:			
Comments:	An AMD STATUS PDU. Ref 3G TS 25.322 clause 9.2.1.5 WA #RLC 3036		
Field Name	Field Type	Type Encoding	Comments
dC_Field	DC_Field		1
type	CtrIPDU_Type		2
superFieldsTx	SuperFields		3
superFieldsAndPadRx	HEXSTRING		4
paddingTx	Padding		5

PDU Constraint Declaration			
Constraint Name:	cr_StatusAny		
Group:			
PDU Name:	STATUS_PDU		
Derivation Path:			
Encoding Rule Name:			
Encoding Variation:			
Comments:	This constraint is used to receive an AM STATUS PDU containing the given SUFI list. Any padding included is ignored. WA #RLC 3036		
Field Name	Element Value	Type Encoding	Comments
dC_Field	tsc_DC_ControlPDU		
type	tsc_PDU_TypeStatus		
superFieldsTx	OMIT		
superFieldsAndPadRx	?		
paddingTx	OMIT		

It_RxNack2				
12		TM ? RxStatus (tcv_StatusPDU := RxStatus.data)	car_StatusInd(tsc_RB_AM_7_RLC)	5
13		(tcv_SUFI_Params.LB => INT_TO_BIT(0, tsc_AM_SN_Size), tcv_SUFI_Params.Nack1 => INT_TO_BIT(2, tsc_AM_SN_Size), tcv_SUFI_Params.UB => INT_TO_BIT(3, tsc_AM_SN_Size))		7
14		(tcv_ResAndSUFIs = o_SUFI_Handler(tcv_SUFI_Params, tcv_StatusPDU.superFieldsAndPadRx))		6 WA #RLC 3036

4.7 URNTI wrong in CMAC_Config_REQ (WA #RLC 3046)

Test step name	ts_SS_1DCH_DCCH_Cfg, line 8 ts_SS_BCH_SCH_CPICH_Cfg, line 13 ts_SS_PCH_FACH_CCCH_Cfg, line 9 ts_SS_RACH_CCCH_Cfg, line 9
Reason for change	CMAC Config REQ does not need URNTI

Summary of change URNTI omitted in CMAC Config REQ in the above test steps
 Label WA #RLC 3046

Test Step					
Test Step Id:	ts_SS_1DCH_DCCH_Cfg (p_CellId : INTEGER)				
Test Step Group Ref:	BasicM_SS_Configuration_Steps/				
Objective:	to configure physical channel DPCH1 and connect DCH5 to the physical channel, then map DCCH1-4 on to the DCH5 transport channel. Used for setting up stand-alone UL:13.6 DL:13.6 kbps SRBs				
Defaults:	SS_Def				
Comments:	The transport channel DCH5 carries only dedicated control channels. MAC-d is configured with cellId -1 (tsc_CellDedicated).				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		[px_RAT = fskd]			
3		(tcv_TGCFN = 0)			
4		CPHYCPHY_RL_Setup_REQ	ca_DL_DPCH_Info (p_CellId, tsc_DL_DPCH1, cb_DL_DPCH_SRB_StandAloneDPCH_Offset (tcv_TmpCellInfo.dl_DPCH_2ndScrCode))		1.
5		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_DL_DPCH1)		
6		CPHYCPHY_TrCH_Config_REQ	ca_DCH_148_TTI_10_DL_InfoActNow (p_CellId, tsc_DL_DPCH1)		2.
7		CPHY?CPHY_TrCH_Config_CNF	ca_TrChCfgCnf(p_CellId, tsc_DL_DPCH1)		
8		CMAC | CMAC_Config_REQ	ca_CMAC_CfgInfo (tsc_CellDedicated, tsc_DL_DPCH1, c_UE_Info (-,), c_TrChInfoDL_13_6_StandAlone, c_TrLogMappingDL_4DCCH)		3. WA #RLC 3046

Test Step					
Test Step Id:	ts_SS_PCH_FACH_CCCH_Cfg (p_CellId : INTEGER)				
Test Step Group Ref:	BasicM_SS_Configuration_Steps/				
Objective:	To configure a secondary CCPCH (tsc_S_CCPCH1), then connect PCH and FACH to the secondary CCPCH (34.108 cl. 4.2.1), finally to map PCCH to PCH and CCCH to FACH.				
Defaults:	SS_Def				
Comments:					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			
2		[px_RAT = fskd]			
3		CPHYCPHY_RL_Setup_REQ	ca_sCCPCH_Info (p_CellId, tsc_S_CCPCH1, tsc_S_CCPCH1_2ndScrCode, tsc_S_CCPCH1_ChC, tcv_TmpCellInfo.slotFormatsCCPCH1, (tcv_TmpCellInfo.powerCCPCH1), tcv_TmpCellInfo.timingsCCPCH1)		s-CCPCH1 WA #RLC 3002
4		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_S_CCPCH1)		WA #RLC 3002
5		CPHYCPHY_RL_Setup_REQ	ca_PICH_Info (p_CellId, c_PichInfo, (tcv_TmpCellInfo.powerPICH))		PICH WA #RLC 3002
6		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_PICH1)		WA #RLC 3002
7		CPHYCPHY_TrCH_Config_REQ	ca_PCH_2_FACH_InfoActNow (p_CellId, tsc_S_CCPCH1)		connect PCH and FACH to s-CCPCH1
8		CPHY ? CPHY_TrCH_Config_CNF	ca_TrChCfgCnf (p_CellId, tsc_S_CCPCH1)		
9		CMAC | CMAC_Config_REQ	ca_CMAC_CfgInfo (p_CellId, tsc_S_CCPCH1, c_UE_Info (-,), c_TrChInfoPCH_FACH, c_TrLogMappingPCH_FACH_CellDCH)		map PCCH to PCH WA #RLC 3046

Test Step					
Test Step Id:	ts_SS_BCH_SCH_CPICH_Cfg (p_CellId : INTEGER)				
Test Step Group Ref:	BasicM_SS_Configuration_Steps/				
Objective:	To configure P-CCPCH, P-SCH, S-SCH and P-CPICH physical channels. To map BCH to P-CCPCH, then to map logical channel BCCH to transport channel BCH.				
Defaults:	SS_Def				
Comments:	To configure P-CCPCH, P-SCH, S-SCH and P-CPICH physical channels and map BCH to P-CCPCH, then to map logical channel BCCH to transport channel BCH.				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			
2		[px_RAT = f%d]			
3		CPHY?CPHY_RL_Setup_REQ	ca_pCPICH_Info (p_CellId, (tcv_TmpCellInfo.powerpCPICH))		p-CPICH
4		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_P_CPICH)		
5		CPHY?CPHY_RL_Setup_REQ	ca_pSCH_Info (p_CellId, (tcv_TmpCellInfo.powerpSCH))		p-SCH
6		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_P_SCH)		
7		CPHY?CPHY_RL_Setup_REQ	ca_sSCH_Info (p_CellId, (tcv_TmpCellInfo.powerpSCH))		s-SCH
8		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_S_SCH)		
9		CPHY?CPHY_RL_Setup_REQ	ca_pCCPCH_Info (p_CellId, (tcv_TmpCellInfo.powerpCCPCH))		p-CCPCH
10		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_P_CCPCH)		
11		CPHY?CPHY_TrCH_Config_REQ	ca_BCH_InfoActNow (p_CellId)		BCH connected to p-CCPCH
12		CPHY?CPHY_TrCH_Config_CNF	ca_TrChCfgCnf (p_CellId, tsc_P_CCPCH)		
13		CMACCMAC_Config_REQ	ca_CMAC_CfgInfo (p_CellId, tsc_P_CCPCH, e_UE_Info (-), c_TrChInfoBCH)		mapping BCCH to BCH WA #RLC 3046

Test Step					
Test Step Id:	ts_SS_RACH_CCCH_Cfg (p_CellId : INTEGER)				
Test Step Group Ref:	BasicM_SS_Configuration_Steps/				
Objective:	To configure AICH and PRACH physical channels and connect RACH onto PRACH, then map one logical channel (CCCH) to RACH				
Defaults:	SS_Def				
Comments:					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			
2		[px_RAT = fdd]			
3		CPHY?CPHY_RL_Setup_REQ	ca_AichInfo(p_CellId, tsc_AICH1, c_AICH_Info, tcv_TmpCellInfo.powerAICH)		AICH
4		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf(p_CellId, tsc_AICH1)		
5		CPHY?CPHY_RL_Setup_REQ	ca_PRACH_Info(p_CellId, tsc_PRACH1, tsc_PRACH1_Signatures, tsc_PRACH1_ScrC, tcv_TmpCellInfo.puncLimit, tcv_TmpCellInfo.sf_PRACH, tcv_SubChNum)		PRACH
6		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf(p_CellId, tsc_PRACH1)		
7		CPHY?CPHY_TrCH_Config_REQ	ca_RACH_InfoActNow (p_CellId, tsc_PRACH1)		connectRACH to PRACH
8		CPHY?CPHY_TrCH_Config_CNF	ca_TrChCfgCnf(p_CellId, tsc_PRACH1)		
9		CMAC | CMAC_Config_REQ	ca_CMAC_CfgInfo(p_CellId, tsc_PRACH1, c_UE_Info(,), cb_TrChInfoRACH1, cb_TrLogMappingRACH2)		mapping CCCH to RACH WA#RLC 3046
10		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf(p_CellId, tsc_PRACH1)		
11	ERR1	[px_RAT = tdd]		I	
12	ERR2	[TRUE]		I	

5 Branches executed in test case 7.2.3.6

The test case implementation has only one main branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE

The Nokia 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_6-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030439**
HTML Execution log files, PICS/PIXIT file
Note that the TTCN MP file and PICS/PIXIT files are available in the original submission T1S030245
- [2] **T1S030115**
CR for approval of test case 7.2.2.3
- [3] **T1S030118**
CR for approval of test case 7.2.3.4

CR-Form-v7

CHANGE REQUEST

34.123-3 CR 027 # rev - # Current version: 3.1.0

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Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Addition of RLC test case 7.2.3.25 to RLC ATS V3.1.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 22 Apr 2003
Category:	# B	Release:	# R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To add verified RLC test case 7.2.3.25 to the approved RLC ATS V3.1.0		
Summary of change:	# This document lists all changes applied to test case 7.2.3.25 required for approval. See detailed change description for further information.		
Consequences if not approved:	# Test case will not be added to ATS		

Clauses affected:	# N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	#	X	#	X	#	X		
Y	N										
#	X										
#	X										
#	X										
Other comments:	#										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.25 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.25 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one 3G UE (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_7_2_3_25
Test Group: RLC/AcknowledgedMode/RxStatusTriggers/
ATS Version: V1.40 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 7.2.3.25

4.1 Introduction

This section describes the changes required to make test case 7.2.3.25 run correctly with a real UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

Note that all changes except one (WA #RLC 3019) are identical to the changes made in test case 7.2.3.6. Please see CR [2] for a detailed description of these changes.
--

4.2 Incorrect usage of poll bits (WA #RLC 3019)

Test case	7.2.3.25 main body
Reason for change	Incorrect usage of poll bits and erroneous parameter setting for SUFI check
Summary of change	Usage of poll bits corrected (Poll->NoPoll) in line 5, 7, 9, 12 and erroneous parameter setting for SUFI check (LB set to 0) in line 22 and 23 in the test case main body.
Label	WA #RLC 3019

Test Case	
Test Case Id:	tc_7_2_3_25
Test Group Reference:	RLC(AcknowledgedMode/RxStatusTriggers/
Purpose:	To verify that a status report is transmitted if there are one or more missing PDUs.
Configuration:	
Defaults:	RLC_Default
Comments:	References: TS 25.322 clause 9.7.2

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		START 1_Guard(300)			
2		+pr_GenericSetupProcedures			
3		+pr_RB_SetupAM7(cbs_DefaultRLC_InfoAM)			
4	TBS	(tcv_TestBody := TRUE)			
5		REPEAT ts_TxAM_7_PRBS(tsc_P_NoPoll, c_Lis1_7BIL(tcv_PayloadSize - 1), tcv_PayloadSize - 1) UNTIL [tcv_AM_VTS = 7]			1. WA #RLC 3019
6		+ts_IncrementAM_VTS			2.
7		+ts_TxAM_7_PRBS(tsc_P_NoPoll, c_Lis1_7BIL(tcv_PayloadSize - 1), tcv_PayloadSize - 1)			3. WA #RLC 3019
8		+It_RxStatusPDU7Missing			
9		REPEAT ts_TxAM_7_PRBS(tsc_P_NoPoll, c_Lis1_7BIL(tcv_PayloadSize - 1), tcv_PayloadSize - 1) UNTIL [tcv_AM_VTS = 13]			4. WA #RLC 3019
10		+ts_IncrementAM_VTS			5.
11		+ts_IncrementAM_VTS			6.
12		+ts_TxAM_7_PRBS(tsc_P_NoPoll, c_Lis1_7BIL(tcv_PayloadSize - 1),			7. WA #RLC 3019

It_RxStatusPDU7And13And14Missing					
21		TM ? RxStatus (tcv_StatusPDU := RxStatus.data)	car_StatusInd(tsc_RB_AM_7_RLC)		
22		(tcv_SUFI_Params.LB := INT_TO_BIT(0, tsc_AM_SN_Size), tcv_SUFI_Params.Nack1 := INT_TO_BIT(7, tsc_AM_SN_Size), tcv_SUFI_Params.Nack2 := INT_TO_BIT(13, tsc_AM_SN_Size), tcv_SUFI_Params.Nack3 := INT_TO_BIT(14, tsc_AM_SN_Size), tcv_SUFI_Params.UB := INT_TO_BIT(15, tsc_AM_SN_Size))			9 WA #RLC 3019
23		(tcv_ResAndSUFIs := o_SUFI_Handler(tcv_SUFI_Params, tcv_StatusPDU.superFieldsAndPduRx))			9 WA #RLC 3036
24	TBP2	[tcv_ResAndSUFIs.result = TRUE]		(P)	9
25	TBF2	[tcv_ResAndSUFIs.result = FALSE]		(F)	9

5 Branches executed in test case 7.2.3.25

The test case implementation has only one main branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_25-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030441**
HTML Execution log files
Note that the PICS/PIXIT file and TTCN MP file are available in the original submission T1S030247.
- [2] **T1S030244**
CR for approval of test case 7.2.3.6

CR-Form-v7

CHANGE REQUEST

34.123-3 CR 028 # rev **-** # Current version: **3.1.0**

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Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Addition of RLC test case 7.2.3.14 to RLC ATS V3.1.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 10 Apr 2003
Category:	# B	Release:	# R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To add verified RLC test case 7.2.3.14 to the approved RLC ATS V3.1.0		
Summary of change:	# This document lists all changes applied to test case 7.2.3.14 required for approval. See detailed change description for further information.		
Consequences if not approved:	# Test case will not be added to ATS		

Clauses affected:	# N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	#	X	#	X	#	X		
Y	N										
#	X										
#	X										
#	X										
Other comments:	#										

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Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.14 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.14 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_7_2_3_14
Test Group: RLC/AcknowledgedMode/Windowing/
ATS Version: V3.10d + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 7.2.3.14

4.1 Introduction

This section describes the changes required to make test case 7.2.3.14 run correctly with a 3G UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

The RLC ATS version used as basis was RLCv310d.mp provided by MCC 160. In a first step test case 7.2.3.14 was merged into this ATS. The test case and related TTCN objects were extracted from the RLC Module ATS version RLCv066.mp, as well provided by MCC 160. This anticipated the RLCv144 ATS to be provided by MCC 160. In subsequent steps the changes described hereafter were integrated into the ATS.

4.2 Incorrect transport format setting (WA #RLC 3115)

Constraint name	c_UL_CommTrChInfoDCCH_13_6k, cbs_108_RRC_ConnSetupDCH
Test step name	
Reason for change	c_UL_CommonTrChInfoDCCH_13_6k: TFs to be Complete instead of Add. Ad leaves the existing TFCS whereas Complete replaces the existing ones.
Summary of change	c_UL_CommonTrChInfoDCCH_13_6k: ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change	new change
Label	WA #RLC 3115

ASN.1 Type Constraint Declaration	
Constraint Name:	c_UL_CommTrChInfoDCCH_13_6k
Group:	
Type Name:	UL_CommonTransChInfo
Derivation Path:	
Encoding Variation:	
Comments:	WA #RLC 3115
Constraint Value	
<pre> { tfc_Subset OMIT, prach_TFCS OMIT, modeSpecificInfo fdd:{ ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k) } } </pre>	

4.3 Incomplete transport format setting in RAB release (WA #RLC 3116 and 3117)

Constraint name	cs_RB_RelRLC
Test step name	
Reason for change	c_UL_CommonTrChInfoDCCH_13_6k: TFs to be Complete instead of Add. Ad leaves the existing TFCS whereas Complete replaces the existing ones.
Summary of change	c_UL_CommonTrChInfoDCCH_13_6k: ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change	new change
Label	WA #RLC 3116 and WA #RLC 3117

ASN.1 PDU Constraint Declaration

Constraint Name:	cs_RB_ReIRLC (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_ActivationTime : ActivationTime; p_Freqnfo : FrequencyInfo; p_PrimaryScramblingCode : PrimaryScramblingCode; p_UL_ScramblingCode : UL_ScramblingCode; p_RB_InformationReleaseList : RB_InformationReleaseList)
Group:	
PDU Name:	DL_DCCH_Message
Derivation Path:	
Encoding Rule Name:	
Encoding Variation:	
Comments:	Defined in TS 34.123-1 annex A condition A.1 WA #RLC 3116 ul_CommonTransChInfo OMIT -> c_UL_CommTrChInfoDCCH_13_6k, dl_CommonTransChInfo OMIT -> c_DL_CommonTransChInfoSameAsUL WA #RLC 3117 ul_AddReconfTransChInfoList OMIT -> c_UL_AddReconfTransChInfoListDCCH_13_6k dl_AddReconfTransChInfoList OMIT -> c_DL_AddReconfTransChInfoListDCCH_SRB

```
dl_CounterSynchronisationInfo OMIT,
ul_CommonTransChInfo c_UL_CommTrChInfoDCCH_13_6k,
ul_deletedTransChInfoList c_UL_DeletedTransChInfo ( tsc_UL_DCH1 ),
ul_AddReconfTransChInfoList c_UL_AddReconfTransChInfoListDCCH_13_6k,
modeSpecificTransChInfo fdd : { cpch_SetID OMIT,
  addReconfTransChDRAC_Info OMIT
},
```

```
dl_CommonTransChInfo c_DL_CommonTransChInfoSameAsUL,
dl_DeletedTransChInfoList c_DL_DeletedTransChInfo_PS ( tsc_DL_DCH1),
dl_AddReconfTransChInfoList c_DL_AddReconfTransChInfoListDCCH_SRB,
frequencyInfo p_Freqnfo,
```

5 Branches executed in test case 7.2.3.14

The test case implementation has executed the CS branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE

The Nokia 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_14-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030443**
HTML Execution log files, PICS/PIXIT file, TTCN MP file

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 029** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of RLC test case 7.2.3.15 to RLC ATS V3.1.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ -	Date:	⌘ 10 Apr 2003
Category:	⌘ B	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified RLC test case 7.2.3.15 to the approved RLC ATS V3.1.0		
Summary of change:	⌘ This document lists all changes applied to test case 7.2.3.15 required for approval. See detailed change description for further information.		
Consequences if not approved:	⌘ Test case will not be added to ATS		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.15 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.15 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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7	References	5

3 Verification Test Summary

Test Case: TC_7_2_3_15
Test Group: RLC/AcknowledgedMode/Polling/
ATS Version: V3.10d + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE
Verification Status: PASS

4 Corrections required for test case 7.2.3.15

4.1 Introduction

This section describes the changes required to make test case 7.2.3.15 run correctly with a 3G UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

The RLC ATS version used as basis was RLCv310d.mp provided by MCC 160. In a first step test case 7.2.3.15 was merged into this ATS. The test case and related TTCN objects were extracted from the RLC Module ATS version RLCv066.mp, as well provided by MCC 160. This anticipated the RLCv144 ATS to be provided by MCC 160.

In subsequent steps the changes described hereafter were integrated into the ATS.

4.2 Incorrect transport format setting (WA #RLC 3115)

Constraint name	c_UL_CommTrChInfoDCCH_13_6k, cbs_108_RRC_ConnSetupDCH
Test step name	
Reason for change	c_UL_CommonTrChInfoDCCH_13_6k: TFs to be Complete instead of Add. Ad leaves the existing TFCS whereas Complete replaces the existing ones.
Summary of change	c_UL_CommonTrChInfoDCCH_13_6k: ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change	new change
Label	WA #RLC 3115

ASN.1 Type Constraint Declaration	
Constraint Name:	c_UL_CommTrChInfoDCCH_13_6k
Group:	
Type Name:	UL_CommonTransChInfo
Derivation Path:	
Encoding Variation:	
Comments:	WA #RLC 3115
Constraint Value	
<pre> { tfc_Subset OMIT, prach_TFCS OMIT, modeSpecificInfo fdd:{ ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k) } } </pre>	

4.3 Incomplete transport format setting in RAB release (WA #RLC 3116 and 3117)

Constraint name	cs_RB_ReIRLC
Test step name	
Reason for change	c_UL_CommonTrChInfoDCCH_13_6k: TFs to be Complete instead of Add. Add leaves the existing TFCS whereas Complete replaces the existing ones.
Summary of change	c_UL_CommonTrChInfoDCCH_13_6k: ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change	new change
Label	WA #RLC 3116 and WA #RLC 3117

ASN.1 PDU Constraint Declaration	
Constraint Name:	cs_RB_ReIRLC (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_ActivationTime : ActivationTime; p_Freqnfo : FrequencyInfo; p_PrimaryScramblingCode : PrimaryScramblingCode; p_UL_ScramblingCode : UL_ScramblingCode; p_RB_InformationReleaseList : RB_InformationReleaseList)
Group:	
PDU Name:	DL_DCCH_Message
Derivation Path:	
Encoding Rule Name:	
Encoding Variation:	
Comments:	Defined in TS 34.123-1 annex A condition A.1 WA #RLC 3116 ul_CommonTransChInfo OMIT -> c_UL_CommTrChInfoDCCH_13_6k, dl_CommonTransChInfo OMIT -> c_DL_CommonTransChInfoSameAsUL WA #RLC 3117 ul_AddReconfTransChInfoList OMIT -> c_UL_AddReconfTransChInfoListDCCH_13_6k dl_AddReconfTransChInfoList OMIT -> c_DL_AddReconfTransChInfoListDCCH_SRB

```

dl_CounterSynchronisationInfo OMIT,
ul_CommonTransChInfo c_UL_CommTrChInfoDCCH_13_6k,
ul_deletedTransChInfoList c_UL_DeletedTransChInfo ( tsc_UL_DCH1 ),
ul_AddReconfTransChInfoList c_UL_AddReconfTransChInfoListDCCH_13_6k,
modeSpecificTransChInfo fdd : { cpch_SetID OMIT,
  addReconfTransChDRAC_Info OMIT
},

dl_CommonTransChInfo c_DL_CommonTransChInfoSameAsUL,
dl_DeletedTransChInfoList c_DL_DeletedTransChInfo_PS ( tsc_DL_DCH1),
dl_AddReconfTransChInfoList c_DL_AddReconfTransChInfoListDCCH_SRB,
frequencyInfo p_Freqnfo,

```

5 Branches executed in test case 7.2.3.15

The test case implementation has executed the CS branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE

The Nokia 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_15-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030445**
HTML Execution log files, PICS/PIXIT file, TTCN MP file

CR-Form-v7

CHANGE REQUEST

34.123-3 CR 030 # rev **-** # Current version: **3.1.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Addition of RLC test case 7.2.3.16 to RLC ATS V3.1.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 10 Apr 2003
Category:	# B	Release:	# R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To add verified RLC test case 7.2.3.16 to the approved RLC ATS V3.1.0		
Summary of change:	# This document lists all changes applied to test case 7.2.3.16 required for approval. See detailed change description for further information.		
Consequences if not approved:	# Test case will not be added to ATS		

Clauses affected:	# N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	#	X	#	X	#	X	#	
Y	N										
#	X										
#	X										
#	X										
Other comments:	#										

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Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.16 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.16 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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6	Execution Log Files	5
6.1	Nokia 3G UE.....	5
7	References	5

3 Verification Test Summary

Test Case: TC_7_2_3_16
Test Group: RLC/AcknowledgedMode/Polling/
ATS Version: V3.10d + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE
Verification Status: PASS

4 Corrections required for test case 7.2.3.16

4.1 Introduction

This section describes the changes required to make test case 7.2.3.16 run correctly with a 3G UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

The RLC ATS version used as basis was RLCv310d.mp provided by MCC 160. In a first step test case 7.2.3.16 was merged into this ATS. The test case and related TTCN objects were extracted from the RLC Module ATS version RLCv066.mp, as well provided by MCC 160. This anticipated the RLCv144 ATS to be provided by MCC 160.

In subsequent steps the changes described hereafter were integrated into the ATS.

4.2 Incorrect transport format setting (WA #RLC 3115)

Constraint name	c_UL_CommTrChInfoDCCH_13_6k, cbs_108_RRC_ConnSetupDCH
Test step name	
Reason for change	c_UL_CommonTrChInfoDCCH_13_6k: TFs to be Complete instead of Add. Ad leaves the existing TFCS whereas Complete replaces the existing ones.
Summary of change	c_UL_CommonTrChInfoDCCH_13_6k: ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change	new change
Label	WA #RLC 3115

ASN.1 Type Constraint Declaration	
Constraint Name:	c_UL_CommTrChInfoDCCH_13_6k
Group:	
Type Name:	UL_CommonTransChInfo
Derivation Path:	
Encoding Variation:	
Comments:	WA #RLC 3115
Constraint Value	
<pre> { tfc_Subset OMIT, prach_TFCS OMIT, modeSpecificInfo fdd:{ ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k) } } </pre>	

4.3 Incomplete transport format setting in RAB release (WA #RLC 3116 and 3117)

Constraint name	cs_RB_ReIRLC
Test step name	
Reason for change	c_UL_CommonTrChInfoDCCH_13_6k: TFs to be Complete instead of Add. Add leaves the existing TFCS whereas Complete replaces the existing ones.
Summary of change	c_UL_CommonTrChInfoDCCH_13_6k: ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change	new change
Label	WA #RLC 3116 and WA #RLC 3117

ASN.1 PDU Constraint Declaration	
Constraint Name:	cs_RB_ReIRLC (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_ActivationTime : ActivationTime; p_Freqnfo : FrequencyInfo; p_PrimaryScramblingCode : PrimaryScramblingCode; p_UL_ScramblingCode : UL_ScramblingCode; p_RB_InformationReleaseList : RB_InformationReleaseList)
Group:	
PDU Name:	DL_DCCH_Message
Derivation Path:	
Encoding Rule Name:	
Encoding Variation:	
Comments:	Defined in TS 34.123-1 annex A condition A.1 WA #RLC 3116 ul_CommonTransChInfo OMIT -> c_UL_CommTrChInfoDCCH_13_6k, dl_CommonTransChInfo OMIT -> c_DL_CommonTransChInfoSameAsUL WA #RLC 3117 ul_AddReconfTransChInfoList OMIT -> c_UL_AddReconfTransChInfoListDCCH_13_6k dl_AddReconfTransChInfoList OMIT -> c_DL_AddReconfTransChInfoListDCCH_SRB

```

dl_CounterSynchronisationInfo OMIT,
ul_CommonTransChInfo c_UL_CommTrChInfoDCCH_13_6k,
ul_deletedTransChInfoList c_UL_DeletedTransChInfo ( tsc_UL_DCH1 ),
ul_AddReconfTransChInfoList c_UL_AddReconfTransChInfoListDCCH_13_6k,
modeSpecificTransChInfo fdd : { cpch_SetID OMIT,
  addReconfTransChDRAC_Info OMIT
},

dl_CommonTransChInfo c_DL_CommonTransChInfoSameAsUL,
dl_DeletedTransChInfoList c_DL_DeletedTransChInfo_PS ( tsc_DL_DCH1),
dl_AddReconfTransChInfoList c_DL_AddReconfTransChInfoListDCCH_SRB,
frequencyInfo p_Freqnfo,

```

5 Branches executed in test case 7.2.3.16

The test case implementation has executed the CS branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE

The Nokia 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_16-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030447**
HTML Execution log files, PICS/PIXIT file, TTCN MP file

CR-Form-v7

CHANGE REQUEST

34.123-3 CR 031 # rev **-** # Current version: **3.1.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Addition of RLC test case 7.2.3.33 to RLC ATS V3.1.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 10 Apr 2003
Category:	# B	Release:	# R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To add verified RLC test case 7.2.3.33 to the approved RLC ATS V3.1.0
Summary of change:	# This document lists all changes applied to test case 7.2.3.33 required for approval. See detailed change description for further information.
Consequences if not approved:	# Test case will not be added to ATS

Clauses affected:	# N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	#
Y	N										
	X										
	X										
	X										
Other comments:	#										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.33 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.33 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_7_2_3_33
Test Group: RLC/AcknowledgedMode/Reset/
ATS Version: V3.10d + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE
Verification Status: PASS

4 Corrections required for test case 7.2.3.33

4.1 Introduction

This section describes the changes required to make test case 7.2.3.33 run correctly with a 3G UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

The RLC ATS version used as basis was RLCv310d.mp provided by MCC 160. In a first step test case 7.2.3.33 was merged into this ATS. The test case and related TTCN objects were extracted from the RLC Module ATS version RLCv066.mp, as well provided by MCC 160. This anticipated the RLCv144 ATS to be provided by MCC 160.

In subsequent steps the changes described hereafter were integrated into the ATS.

4.2 Incorrect transport format setting (WA #RLC 3115)

Constraint name	c_UL_CommTrChInfoDCCH_13_6k, cbs_108_RRC_ConnSetupDCH
Test step name	
Reason for change	c_UL_CommonTrChInfoDCCH_13_6k: TFs to be Complete instead of Add. Ad leaves the existing TFCS whereas Complete replaces the existing ones.
Summary of change	c_UL_CommonTrChInfoDCCH_13_6k: ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change	new change
Label	WA #RLC 3115

ASN.1 Type Constraint Declaration	
Constraint Name:	c_UL_CommTrChInfoDCCH_13_6k
Group:	
Type Name:	UL_CommonTransChInfo
Derivation Path:	
Encoding Variation:	
Comments:	WA #RLC 3115
Constraint Value	
<pre>{ tfc_Subset OMIT, prach_TFCS OMIT, modeSpecificInfo fdd:{ ul_TFCS c_TFCS_CmplD_1_Tx(c_PowerOffsetInfoBelow64k) } }</pre>	

5 Branches executed in test case 7.2.3.33

The test case implementation has executed the CS branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE

The Nokia 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_33-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] T1-030449
HTML Execution log files, PICS/PIXIT file, TTCN MP file

CR-Form-v7

CHANGE REQUEST

34.123-3 CR 032 # rev **-** # Current version: **3.1.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Addition of NAS test case 10.1.2.5.1 to NAS ATS V3.1.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 10 Apr 2003
Category:	# B	Release:	# R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To add verified NAS test case 10.1.2.5.1 to the approved NAS ATS V3.1.0		
Summary of change:	# This document lists all changes applied to NAS test case 10.1.2.5.1 required for approval. See detailed change description for further information.		
Consequences if not approved:	# Test case will not be added to ATS		

Clauses affected:	# N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	#	X	#	X	#	X	#	
Y	N										
#	X										
#	X										
#	X										
Other comments:	#										

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- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 10.1.2.5.1 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document lists all the changes needed to correct problems in the TTCN implementation of test case 10.1.2.5.1 which is part of the NAS test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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6.1	Nokia 3G UE.....	4
7	References	4

3 Verification Test Summary

Test Case: TC_10_1_2_5_1
Test Group: NAS/CC/OutgoingCall/U4/
ATS Version: V3.10c + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE
Verification Status: PASS

4 Corrections required for test case 10.1.2.5.1

4.1 Introduction

This section describes the changes required to make test case 10.1.2.5.1 run correctly with a 3G UE. All changes are marked with label "WA #NAS <number>" in the TTCN comments column of the enclosed NAS ATS [1].

The NAS ATS version used as basis was NASv310c.mp provided by MCC 160. In a first step test case 10.1.2.5.1 was merged into this ATS. The test case and related TTCN objects were extracted from the NAS ATS version NASv143.mp, as well provided by MCC 160.

In subsequent steps the changes described hereafter were integrated into the ATS.

4.2 Incorrect transport format (WA #NAS 3032)

Constraint name	c_DCH_81_TFS and c_DCH_81_TFS_UE
Test step name	
Reason for change	c_DCH_81_TFS and c_DCH_81_TFS_UE were subject of discussion on the T1 SIG reflector
Summary of change	c_DCH_81_TFS and c_DCH_81_TFS_UE: PrG assumes error in TFSs (0,1x81-> 1x0, 1x81) as agreed.
Source of change	new change
Label	WA #NAS 3032

ASN.1 Type Constraint Declaration	
Constraint Name:	c_DCH_81_TFS_UE
Group:	
Type Name:	DedicatedTransChTFS
Derivation Path:	
Encoding Variation:	
Comments:	transport format set for RAB subflow#1 on dedicated channel used in message sent to UE, WA #NAS 3032

Constraint Value
<pre>{ tti tti20 : { { rlc_Size bitMode : sizeType1 : 0, numberOfTbSizeList { one : NULL }, logicalChannelList allSizes : NULL }, { rlc_Size bitMode : sizeType1 : 39, numberOfTbSizeList { one : NULL }, logicalChannelList allSizes : NULL }, { rlc_Size bitMode : sizeType1 : 81, numberOfTbSizeList { one : NULL }, logicalChannelList allSizes : NULL } } },</pre>

ASN.1 Type Constraint Declaration	
Constraint Name:	c_DCH_81_TFS
Group:	
Type Name:	CommonOrDedicatedTFS
Derivation Path:	
Encoding Variation:	
Comments:	transport format set for RAB subflow#1 on dedicated channel, WA #NAS 3032

Constraint Value
<pre>{ tti tti20 : { { tb_Size 0, numberOfTbSizeList { one : NULL }, logicalChannelList allSizes : NULL }, { tb_Size 39, numberOfTbSizeList { one : NULL }, logicalChannelList allSizes : NULL }, { tb_Size 81, numberOfTbSizeList { one : NULL }, logicalChannelList allSizes : NULL } } },</pre>

4.3 Syntax error in AT command (WA #NAS 3034)

Constraint name	ca_AT_CmdReq
Test step name	ts_AT_CheckAlertingStop
Reason for change	Wrong syntax for AT-Cmd.
Summary of change	Added "AT+" to the AT-Cmd (constraint: ca_AT_CmdReq ("AT+CLCC<CR>")

Source of change new change
 Label WA #NAS 3034

Test Step	
Test Step Id:	ts_AT_CheckAlertingStop
Test Step Group Ref:	UT_Steps/
Objective:	To check that the alerting indication is stopped.
Defaults:	UT_OtherwiseFail
Comments:	The alerting tone is generated only for speech calls. It is checked using the AT command '+CLCC' that the call is not in the 'alerting' state

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[(tcv_ActiveService = tsc_SrvTelephony) OR (tcv_ActiveService = tsc_SrvEmgCall)]			0.
2		Ut! AT_CmdReq	ca_AT_CmdReq ("AT+CLCC<CR>")		1. WA #NAS 3034
3		Ut ? AT_CmdCnf (tcv_AT_Cmd := AT_CmdCnf.resultString)	ca_AT_CmdCnf		

5 Branches executed in test case 10.1.2.5.1

The test case implementation has only one main branch which was completely executed. Integrity was enabled and ciphering was disabled.

6 Execution Log Files

6.1 Nokia 3G UE

The Nokia 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 10_1_2_5_1-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] T1-0300451
 HTML Execution log files, PICS/PIXIT file, TTCN MP file

CHANGE REQUEST

⌘ **34.123-3 CR 033** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ 7.1.1.1		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 22/04/2003
Category:	⌘ B	Release:	⌘ R99
<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)	

Reason for change:	⌘ Introduction of Test Case 7.1.1.1		
Summary of change:	⌘ - 0 table deleted, - 2 tables modified in RRCv310 - 69 tables added from MACv143 - 1 new table created. For full details see below.		
Consequences if not approved:	⌘ Test case 7.1.1.1 will not be added		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
Other comments:	⌘										

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

TSG-T WG 1 E-mail Approval

T1-030452

Seoul, Korea

12-15 May 2003

Title	Introduction of Test Case 7.1.1.1 to RRCv310	
Source	Anritsu	
Agenda Item	N/A	
Document for	APPROVAL	
Contact	Dan Fox (Anritsu)	dan.fox@eu.anritsu.com
	Tel: +44 1582 433357	

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1 Overview

This document describes the introduction of test case tc_7_1_1_1 to RRCV310.

2 Required changes

2.1 Tables deleted from RRCv310

None.

2.2 Tables modified in RRCv310

2.2.1 tsc_N300

Reason for change: This Test Suite Constant used inside **cb_SIB1_Def** is not set according to 34.108 V3.5.0. Due to this the number of re-transmissions required in TC 7.1.1.1 cannot be reached.

Summary of change: The value for **tsc_N300** is changed from **3** to **7** to match to 34.108 V3.5.0, section 6.1.0b.

2.2.2 ts_SS_Rel

Reason for change: The RB -18 is used to replace the default RB0 in this TC which is a common RB, due to this the release must be conform with the reconfiguration (see 2.3.9) and done using the cell specific cell ID. After the release of RB -18, RB0 is not configured and must not be released again.

Summary of changes:

- i) Replace the used cell ID **tsc_CellDedicated** with the cell ID of the current cell by using **p_CellId**.
- ii) Add and use a new local tree to release the common channels without the release of RB0.

Change test step from:

Test Step Name		ts_SS_Rel			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
34		+ ts_CRLC_Rel (tsc_CellDedicated , tsc_RB_CCCH_FACH_MAC)			
35		+It_ReleaseCommonCh			
36		+ It_Release_BCCH			
...				

To:

Test Step Name		ts_SS_Rel			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
34		+ ts_CRLC_Rel (p_CellId , tsc_RB_CCCH_FACH_MAC)			
35		+It_ReleaseCommonCh_NoRlcRelease			
36		+ It_Release_BCCH			
		It_ReleaseCommonCh_NoRlcRelease			

263		+ ts_CMAC_Rel (p_CellId, tsc_PRACH1)			
264		+ ts_CPHY_TrChRel (p_CellId, tsc_PRACH1)			
265		+ ts_SS_StopRL (p_CellId, tsc_AICH1)			
266		+ ts_SS_StopRL (p_CellId, tsc_PRACH1)			
267		+ ts_CRLC_Rel (p_CellId, tsc_RB_PCCH)			
268		+ ts_CMAC_Rel (p_CellId, tsc_S_CCPCH1)			
269		+ ts_CPHY_TrChRel (p_CellId, tsc_S_CCPCH1)			
270		+ ts_SS_StopRL (p_CellId, tsc_PICH1)			
271		+ ts_SS_StopRL (p_CellId, tsc_S_CCPCH1)			

2.3 New Tables added to RRCv310

2.3.1 Tables from MACv143 — no changes necessary

CT_Field
 RLC_Padding
 TCTF
 UE_Id
 UE_IdType
 ExtBit
 LenInd15
 LenInd7
 UM_SeqNum
 LenInd15AndE_Bit
 LenInd7AndE_Bit
 LenInds
 PRACH_MeasurementReport
 DirectEncoding
 px_KeySeqDefxxxxx
 AllUE
 tsc_E_Data
 tsc_E_LI_AndE_Bit
 tsc_DefaultCellId
 tsc_LI7_Padding
 tsc_UE_IdTypeU_RNTI
 tsc_CT_LoCh3
 tsc_Reserved2_OnRACH_FDD
 tsc_BCCH_OnFACH_FDD
 tsc_CCCH_OnFACH_FDD
 tsc_Reserved1_OnFACH_FDD
 tsc_CTCH_OnFACH_FDD
 tsc_Reserved2_OnFACH_FDD
 tsc_DCCH_OnFACH_FDD
 tsc_RRC_ConnecSetupMsg_PTMSI
 tsc_RRC_ConnecSetupMsg_TMSI
 tsc_RRC_ConnecSetupLen
 tsc_UM_SN_Size
 tsc_UM_CCCH_Payloadsize
 tcv_ReceiveSigConnRelInd
 tcv_MAC_PDU
 tcv_RRC_ConnecSetupSegmentNum
 tcv_RRC_ConnecSetupMsg
 RLC_TR_TestDataReq

CPHY_PRACH_Measurement_Report_IND
 MAC_PDU
 TxMAC
 c_LenInd7AndE_Bit
 c_LIs1_7BitLI
 c_LIs2_7BitLI
 cd_TrLogMapping_PchFach1TransRB0
 cs_IntegrityProtectModify
 cas_DataReqHiPriNAS
 car_InitDirectTransfer_MAC
 car_PRACH_Measurement_Report_IND
 cs_MAC_PDU_Def
 c_MAC_PDU_CCCH_TCTF
 cr_108_RRC_ConnRelCmpl
 ts_InitRRC_ConnecSetup
 ts_MAC_ReceiveRRC_ConnReqInDefaultCell
 ts_RRC_PagType1_DefMAC
 MAC_Default

2.3.2 ts_MM_SecurityOn

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

ts_RRC_Security has fewer parameters.

Summary of change:

The number of parameters passed to ts_RRC_Security is now 6, rather than 7.

ts_MM_SecurityOn, line 1, in Behaviour Description, remove the second parameter (TRUE).

From:

Test Step Name		ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)			
Group		BasicM_MM_GMM_Steps/			
Objective		Start Cipherng if applicable			
Default		NAS_OtherwiseFail			
Comments		Cipherng is either generally applied or not. Starting takes effect only if cipherng is to be applied.			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		ts_RRC_Security(p_CellId, TRUE, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

...

To:

Test Step Name		ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)			
Group		BasicM_MM_GMM_Steps/			
Objective		Start Cipherng if applicable			
Default		NAS_OtherwiseFail			
Comments		Cipherng is either generally applied or not. Starting takes effect only if cipherng is to be applied.			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

1		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			
---	--	---	--	--	--

...

2.3.3 UM_Data

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

There is a conflict in the definitions of UM_Data between MAC and RLC suites – this Simple Type is defined as OCTETSTRING[0..4095] in RLC suite and as BITSTRING[0..32767] in MAC suite.

Summary of change:

The Simple Type from the MAC suite has been renamed from UM_Data to MAC_UM_Data.

From:

Type Name	UM_Data
Type Definition	BITSTRING[0..32767]
Type Encoding	
Comments	Data content for a RLC UM PDU with 7 or 15 bit length indicators. Ref 3G TS 25.322 clause 9.2.2.9, Even though the UM Data will be octet bound this is defined as BitString so as to accomodate the Failure test cases, with non standard MAC header.

To:

Type Name	MAC_UM_Data
Type Definition	BITSTRING[0..32767]
Type Encoding	
Comments	Data content for a RLC UM PDU with 7 or 15 bit length indicators. Ref 3G TS 25.322 clause 9.2.2.9, Even though the UM Data will be octet bound this is defined as BitString so as to accomodate the Failure test cases, with non standard MAC header.

2.3.4 UMD_PDU

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

There is a conflict in the definitions of UMD_PDU between MAC and RLC suites – padding is of type Padding (HEXSTRING) in RLC suite and of type RLC_Padding (BITSTRING) in MAC suite.

Summary of change:

- i) The PDU from the MAC suite has been renamed from UMD_PDU to MAC_UMD_PDU.
- ii) Adapt the used type for IE data as a result of 2.3.3.

From:

PDU Name	UMD_PDU
----------	---------

PCO Type	DSAP		
Encoding Rule Name	DirectEncoding		
Encoding Variation			
Comment	Unacknowledged mode RLC PDU. Ref 3G TS 25.322 clause 9.2.1.3		
Field Name	Field Type	Type Encoding	Comments
seqNum	UM_SeqNum		1
eBit	ExtBit		2
lenInds	LenInds		3
data	UM_Data		4
padding	RLC_Padding		5
Detailed Comments			
....			
....			

To:

PDU Name	MAC_UMD_PDU		
PCO Type	DSAP		
Encoding Rule Name	DirectEncoding		
Encoding Variation			
Comment	Unacknowledged mode RLC PDU. Ref 3G TS 25.322 clause 9.2.1.3		
Field Name	Field Type	Type Encoding	Comments
seqNum	UM_SeqNum		1
eBit	ExtBit		2
lenInds	LenInds		3
data	MAC_UM_Data		4
padding	RLC_Padding		5
Detailed Comments			
....			
....			

2.3.5 tcv_RLC_UMD_PDU

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

UMD_PDU has been renamed MAC_UMD_PDU for the MAC suite.

Summary of change:

The PDU Type has changed from UMD_PDU to MAC_UMD_PDU.

From:

Variable Name	tcv_RLC_UM_PDU
Variable Type	UMD_PDU
Value	
Comments	This variable is used to store an RLC UM PDU to be transmitted. Generally this variable is initialised by using the test step ts_GetRRC_ConnectionSetupSegment.

To:

Variable Name	tcv_RLC_UM_PDU
Variable Type	MAC_UMD_PDU
Value	
Comments	This variable is used to store an RLC UM PDU to be transmitted. Generally this variable is initialised by using the test step ts_GetRRC_ConnectionSetupSegment.

of the segmentation require that this PIXIT value is set to 2, irrespective of the handset characteristics.

2.3.6 c_UMD

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

UMD_PDU has been renamed MAC_UMD_PDU for the MAC suite.

UM_Data has been renamed MAC_UM_Data for the MAC suite.

Summary of change:

The PDU Type has changed from UMD_PDU to MAC_UMD_PDU.

The type for paramter p_Data has changed from UM_Data to MAC_UM_Data.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	c_UMD(p_SN: INTEGER; p_Data: UMD_Data)		
PDU Type	UMD_PDU		
Derivation Path			
Encoding Rule Name			
Encoding Variation			
Comments			
	Field Name	Field Value	Field Encoding
		

To:

Constraint Name	c_UMD(p_SN: INTEGER; p_Data: MAC_UM_Data)		
PDU Type	MAC_UMD_PDU		
Derivation Path			
Encoding Rule Name			
Encoding Variation			
Comments			
	Field Name	Field Value	Field Encoding
		

2.3.7 c_UMD_LIs

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

UMD_PDU has been renamed MAC_UMD_PDU for the MAC suite.

UM_Data has been renamed MAC_UM_Data for the MAC suite.

Summary of change:

The PDU Type has changed from UMD_PDU to MAC_UMD_PDU.

The type for paramter p_Data has changed from UM_Data to MAC_UM_Data.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	c_UMD_LIs(p_SN: INTEGER; p_LIs: LenInds; p_Data: UMD_Data)		
PDU Type	UMD_PDU		
Derivation Path			
Encoding Rule Name			
Encoding Variation			
Comments			
	Field Name	Field Value	Field Encoding

....			
------	--	--	--

To:

Constraint Name	c_UMD_LIs(p_SN: INTEGER; p_LIs: LenInds; p_Data: MAC_UM_Data)		
PDU Type	MAC_UMD_PDU		
Derivation Path			
Encoding Rule Name			
Encoding Variation			
Comments			
	Field Name	Field Value	Field Encoding
		

2.3.8 c_UMD_LIsAndPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

UMD_PDU has been renamed MAC_UMD_PDU for the MAC suite.
UM_Data has been renamed MAC_UM_Data for the MAC suite.

Summary of change:

The PDU Type has changed from UMD_PDU to MAC_UMD_PDU.
The type for paramter p_Data has changed from UM_Data to MAC_UM_Data.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	c_UMD_LIsAndPad(p_SN: INTEGER; p_LIs: LenInds; p_Data:UM_Data;p_NumofBitsPadding: INTEGER)		
PDU Type	UMD_PDU		
Derivation Path			
Encoding Rule Name			
Encoding Variation			
Comments			
	Field Name	Field Value	Field Encoding
		

To:

Constraint Name	c_UMD_LIsAndPad(p_SN: INTEGER; p_LIs: LenInds; p_Data:MAC_UM_Data;p_NumofBitsPadding: INTEGER)		
PDU Type	MAC_UMD_PDU		
Derivation Path			
Encoding Rule Name			
Encoding Variation			
Comments			
	Field Name	Field Value	Field Encoding
		

2.3.9 ts_GenericSetupProceduresToldleUpdate_CCCH

Reason for change: The RB -18 is used to replace the default RB0 in this TC which is a common RB - due to this, the reconfiguration must be done using the cell specific cell ID. After the reconfiguration as RB -18 is completed, RB0 must not be reconfigured again.

Summary of change:

- i) Replace the used cell ID **tsc_CellDedicated** with the cell ID of the current cell by using **tsc_DefaultCellId** in line 15 and 16.
- ii) Remove lines 17 and 18.

Change test step from:

Test Step Name		ts_GenericSetupProceduresToldleUpdate_CCCH			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
15		CRLC ! CRLC_Config_REQ	ca_RB_TM_Info(tsc_CellDedicated ,tsc_RB_CCCH_FACH_MAC,168, { uLogicalChannelIdentity tsc_UL_CCCH5, dLogicalChannelIdentity tsc_DL_CCCH5 })		
16		CRLC ? CRLC_Config_CNF	ca_CRLC_CfgCnf(tsc_CellDedicated ,tsc_RB_CCCH_FACH_MAC)		
17		CRLC ! CRLC_Config_REQ	ca_RB_TM_UL_Info(tsc_DefaultCellId , tsc_RB0, 166, {uLogicalChannelIdentity tsc_UL_CCCH5})		
18		CRLC ? CRLC_Config_CNF	ca_CRLC_CfgCnf(tsc_DefaultCellId , tsc_RB0)		
19		+ts_SetCellCfg (tsc_DefaultCellId, cell_FACH_MAC_SRB0_NoConn)			

To:

Test Step Name		ts_GenericSetupProceduresToldleUpdate_CCCH			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
15		CRLC ! CRLC_Config_REQ	ca_RB_TM_Info(tsc_DefaultCellId ,tsc_RB_CCCH_FACH_MAC,168, { uLogicalChannelIdentity tsc_UL_CCCH5, dLogicalChannelIdentity tsc_DL_CCCH5 })		
16		CRLC ? CRLC_Config_CNF	ca_CRLC_CfgCnf(tsc_DefaultCellId ,tsc_RB_CCCH_FACH_MAC)		
17		+ts_SetCellCfg (tsc_DefaultCellId, cell_FACH_MAC_SRB0_NoConn)			

2.3.10 cdr_108_RRC_ConnReq_MAC

Reason for change: The used initial UE Identity must have the same value as given from the pixit file.

Summary of Changes: Replace hard coded values with the appropriate test suite paramter

Change constraint from:

Constraint Name	cdr_108_RRC_ConnReq_MAC (p_EstCause: EstablishmentCause)
PDU Type	UL_CCCH_Message
Derivation Path	cbr_108_RRC_ConnReq.
Encoding Rule Name	
Encoding Variation	
Comments	

Constraint Value	
REPLACE message.rrcConnectionRequest.initialUE_Identity BY	
(imsi : ?,	
tmsi_and_LAI :	
{	
tmsi '00010010001101000101011001111000'B, --Default '12345678'O	
lai	
{	
plmn_Identity	
{	
mcc {0,0,1},	
mnc {0,1}	
},	
lac '0000000000000001'B	
}	
},	
p_TMSI_and_RAI :	
{	
p_TMSI '00010010001101000101011001111000'B, --Default '12345678'O	
rai	
{	
lai	
{	
plmn_Identity	
{	
mcc {0,0,1},	
mnc {0,1}	
},	
lac '0000000000000001'B	
},	
rac '00000001'B	
}	
}	
))	

To.

Constraint Name	cdr_108_RRC_ConnReq_MAC (p_EstCause: EstablishmentCause)
PDU Type	UL_CCCH_Message
Derivation Path	cbr_108_RRC_ConnReq.
Encoding Rule Name	
Encoding Variation	
Comments	
	Constraint Value

```

REPLACE message.rrcConnectionRequest.initialUE_Identity BY
( imsi : ?,
  tmsi_and_LAI :
  {
    tmsi o_ConvertTMSI(px_TMSI_Def), --Default '12345678'O
    lai
    {
      plmn_Identity
      {
        mcc {0,0,1},
        mnc {0,1}
      },
      lac '0000000000000001'B
    }
  },

  p_TMSI_and_RAI :
  {
    p_TMSI o_ConvertTMSI(px_PTMSI_Def), --Default '12345678'O
    rai
    {
      lai
      {
        plmn_Identity
        {
          mcc {0,0,1},
          mnc {0,1}
        },
        lac '0000000000000001'B
      },
      rac '00000001'B
    }
  }
  )

```

2.3.11 ts_GetRRC_ConnecSetupSegment

Reason for change: To avoid padding with length of 0 which will crash the TC, the constraint without padding must be used if no padding is required.

Summary of change: Add qualifier to avoid padding of length 0.

Change test step from:

Test Step Name		ts_GetRRC_ConnecSetupSegment(p_SegmentNumber, p_SegmentLength, p_MacHeadLen: INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		.....	.....		.....
5		[p_SegmentNumber = 6]			
6		(tcv_RLC_UM_PDU := c_UMD_LIsAndPad(p_SegmentNumber - 1, c_LIs2_7BitLIs(17, tsc_LI7_Padding), o_BitstringXtract(o_OctToBit (tcv_RRC_ConnecSetupMsg), tsc_RRC_ConnecSetupLen, p_SegmentLength - 16, (((p_SegmentNumber - 1) * p_SegmentLength)-8)), (8 - p_MacHeadLen)))			
7	ERR1	[(p_SegmentNumber > 6) OR (p_SegmentNumber < 0)]			

To:

Test Step Name		ts_GetRRC_ConnecSetupSegment(p_SegmentNumber, p_SegmentLength, p_MacHeadLen: INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		.....	.....		.....
5		[p_SegmentNumber = 6]			
6		[(8 - p_MacHeadLen) <> 0]			
7		(tcv_RLC_UM_PDU := c_UMD_LIsAndPad(p_SegmentNumber - 1, c_LIs2_7BitLIs(17, tsc_LI7_Padding), o_BitstringXtract(o_OctToBit (tcv_RRC_ConnecSetupMsg), tsc_RRC_ConnecSetupLen, p_SegmentLength - 16, ((p_SegmentNumber - 1) * p_SegmentLength)-8)), (8 - p_MacHeadLen)))			
8		(tcv_RLC_UM_PDU := c_UMD_LIs(p_SegmentNumber - 1, c_LIs2_7BitLIs(17, tsc_LI7_Padding), o_BitstringXtract(o_OctToBit (tcv_RRC_ConnecSetupMsg), tsc_RRC_ConnecSetupLen, p_SegmentLength - 16, ((p_SegmentNumber - 1) * p_SegmentLength)-8)))			
9	ERR1	[(p_SegmentNumber > 6) OR (p_SegmentNumber < 0)]			

2.3.12 ts_SendRRC_ConnecSetup

Reason for change: The RB -18 must be used to send messages as a common RB, due to this the sending must be conformant with the reconfiguration (see 2.3.9) and be done using the cell-specific cell ID.

Summary of change:

Create new constraint cas_DataReqRb0 (see 2.3.14) to be used instead of cas_DataReqHiPriNAS in line 7.

Change test step from:

Test Step Name		ts_SendRRC_ConnecSetup			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
6		(tcv_MAC_PDU.data := tcv_RLC_UM_PDU)			
7		TM! TxMAC	cas_DataReqHiPriNAS(tsc _RB_CCCH_FACH_MAC, tcv_MAC_PDU)		
8		(tcv_RRC_ConnecSetupSegmen tNum:=			

...		tcv_RRC_ConnecSetupSegmen tNum + 1)			
...				

To:

Test Step Name		ts_SendRRC_ConnecSetup			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
6		(tcv_MAC_PDU.data := tcv_RLC_UM_PDU)			
7		TM! TxMAC	cas_DataReqRb0(tsc_RB _CCCH_FACH_MAC, tcv_MAC_PDU)		
8		(tcv_RRC_ConnecSetupSegmen tNum:= tcv_RRC_ConnecSetupSegmen tNum + 1)			
...				

2.3.13 tsc_RRC_ConnecSetupMsg_TMSI

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The test suite constant should contain a valid RRC_CONNECTION_SETUP matching the current configuration. content should be the same as generated by the test system during the registration.

Summary of change:

Replace the octetstring which represents the PDU.

From:

Constant Name	tsc_RRC_ConnecSetupMsg_TMSI
Constant Type	OCTETSTRING
Value Reference	'317930ECA86422001000010004000040005D81B513A8400150D410A10B49D4600124E8414 A24626D44EA503ED4B422292251B49D4E00229E8335A24C88006252BF0020048822A8460 577ECC1131406616A7329801900 00000000000000000000'0
Comments	

To:

Constant Name	tsc_RRC_ConnecSetupMsg_TMSI
Constant Type	OCTETSTRING
Value Reference	'31602224466880020100010004000000005D81B513A8400050D080844842CF4B236DD33E5 6273A8C00151D0829448C4CF4B236DD33E56273A9400252D084A44946CF4B236DD33E56 273A9C00353D086B44991000C4A57E004201104477ECC11312B00000000000000000000 00000000000000000000'0
Comments	

2.3.14 cas_DataReqRb0

This table is not based on one in any existing ATS.

Reason for change: This constraint is required as RB –18 is used to replace a common RB (RB0, see 2.3.12).

Summary of Change: The following table is added to the suite.

Constraint Name	cas_DataReqRb0(p_RB_Identity : SS_RB_Identity; p_PDU: PDU)			
ASP Name	RLC_TR_TestDataReq			
Derivation Path				
Comments	This constraint is used to send a data PDU using the default RAB for RLC testing. Parameters: p_PDU: The RLC data PDU to be transmitted.			
	Field Name	Field Value	Field Encoding	Comments
	cellId	tsc_DefaultCellId		
	rB_Id	p_RB_Identity		
	data	p_PDU		

2.4 Recommendation for PIXIT file

2.5.1 px_TMSI_Def

Reason for change:

In TC 7.1.1.1 the used RRC_Connection_Setup message must be hard-coded during the test procedure, due to this the used TMSI must also be fixed and defined inside the PIXIT file.

Summary of change:

The value of PIXIT item px_TMSI_Def shall be set to 11223344 (OCTETSTRING) within the PICS/PIXIT file.

CHANGE REQUEST

34.123-3 **CR 034** rev - Current version: 3.1.0

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	7.1.1.3		
Source:	Anritsu Ltd		
Work item code:	-	Date:	16/04/2003
Category:	B	Release:	R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	Introduction of Test Case 7.1.1.3		
Summary of change:	- 0 table deleted, - 2 tables modified in RRCv310 - 92 tables added from MACv143 For full details see below.		
Consequences if not approved:	Test case 7.1.1.3 will not be added		

Clauses affected:	N/A										
Other specs affected:	<table border="1" style="border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications Test specifications O&M Specifications	
Y	N										
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
Other comments:											

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked **⌘** contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

TSG-T WG 1 E-mail Approval

T1-030454

Seoul, Korea

12-15 May 2003

Title	Introduction of Test Case 7.1.1.3 to RRCv310	
Source	Anritsu	
Agenda Item	N/A	
Document for	APPROVAL	
Contact	Dan Fox (Anritsu)	dan.fox@eu.anritsu.com
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1 Overview

This document describes the introduction of test case tc_7_1_1_3 to RRCV310.

2 Required changes

2.1 Tables deleted from RRCv310

None.

2.2 Tables modified in RRCv310

2.2.1 tcv_TimerPoll

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The timer is too short. The original value is intended to be used where there is a real RLC implementation rather than an emulation in the TTCN, hence a greater value is required. N.B. It is not intended that this change be applied to all suites, e.g. it should not be applied to RRC.

Summary of change:

The value for tcv_TimerPoll has changed from tp200 to tp400.

2.2.2 c_UL_AM_RLC

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The timer is too short.

Summary of change:

The value for timerPoll has changed from tp200 to tp400.

From:

Constraint Name	c_UL_AM_RLC
ASN.1 Type	UL_AM_RLC_Mode
Derivation Path	
Encoding Variation	
Comment	
Constraint Value	<pre> { transmissionRLC_Discard noDiscard : dat15, transmissionWindowSize tw128, timerRST tr500, max_RST rst1, pollingInfo { timerPollProhibit tpp200, timerPoll tp200, poll_PDU OMIT, poll_SDU sdu1, lastTransmissionPDU_Poll TRUE, lastRetransmissionPDU_Poll TRUE, pollWindow pw99, timerPollPeriodic OMIT } } </pre>
Detailed Comments	

To:

Constraint Name	c_UL_AM_RLC
ASN.1 Type	UL_AM_RLC_Mode
Derivation Path	
Encoding Variation	
Comment	
Constraint Value	<pre> { transmissionRLC_Discard noDiscard : dat15, transmissionWindowSize tw128, timerRST tr500, max_RST rst1, pollingInfo { timerPollProhibit tpp200, timerPoll tp400, poll_PDU OMIT, poll_SDU sdu1, lastTransmissionPDU_Poll TRUE, lastRetransmissionPDU_Poll TRUE, pollWindow pw99, timerPollPeriodic OMIT } } </pre>
Detailed Comments	

2.3 New Tables added to RRCv310

2.3.1 Tables from MACv143 — no changes necessary

CT_Field
 RLC_Padding
 TCTF
 UE_Id
 UE_IdType
 AM_Data
 ExtBit
 HeaderExt
 LenInd15
 LenInd7
 PollingBit
 LenInd15AndE_Bit
 LenInd7AndE_Bit
 LenInds
 ResAndSUFIs
 PRACH_MeasurementReport
 DirectEncoding
 o_SUFI_Handler
 px_KeySeqDefxxxxx
 AllUE
 tsc_SUFI_Ack
 tsc_DC_AMDPDU
 tsc_P_Poll
 tsc_E_Data
 tsc_E_LI_AndE_Bit
 tsc_HE_LI_AndE_Bit
 tsc_DefaultCellId
 tsc_AM_SN_Size
 tsc_LI7_Padding
 tsc_UE_IdTypeU_RNTI
 tsc_UE_IdTypeC_RNTI


```

tsc_CT_LoCh3
tsc_CT_LoCh8
tsc_CT_Reserved
tsc_DCCH_OnRACH_FDD
tsc_DCCH_OnFACH_FDD
tsc_ExpectedPayloadSize
tsc_DummyDL_DirectTransferMsg_CS
tsc_DummyDL_DirectTransferMsg_PS
tsc_DummyDL_DirectTransferLen
tsc_WaitNextRLC_Segment
tcv_ReceiveSigConnRelInd
tcv_StatusPDU
tcv_MAC_PDU
tcv_StatusMatchRes
tcv_DummyDL_DirectTransferMsg
tcv_MAC_Counter
RLC_TR_TestDataReq
CPHY_PRACH_Measurement_Report_IND
AMD_PDU
PiggyBackedSTATUS_PDU
MAC_PDU
MAC_PDU_RCV_STATUS
TxMAC
RxMAC
c_LenInd7AndE_Bit
c_LIs2_7BitLIs
cs_Ack
cs_SF_Ack
c_TrLogMapping_Rach1TransRB3
c_TrLogMapping_PchFach1TransRB3
cs_IntegrityProtectModify
car_DataIndHiPriNAS
cas_DataReqHiPriNAS
car_PRACH_Measurement_Report_IND
c_MAC_PDU_TCTF
cs_MAC_PDU_CT
cs_MAC_PDU_Def
c_MAC_PDU_CT_DCH
cr_RRC_Status_MAC_NoInteg
cds_RRC_ConnSetupDCH_NoCapEnq
cds_RRC_ConnSetupFACH_NoCapEnq
cr_108_RRC_ConnRelCmpl
ts_InitDummyDL_Transfer
ts_ReceiveRRC_RLC_StatusPDU_FACH
ts_SendDLDirectTransfer
ts_MonitorUplinkSpecefiedTime
ts_RRC_PagType1_DefMAC
MAC_Default

```

2.3.2 ts_MM_SecurityOn

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

ts_RRC_Security has fewer parameters.

Summary of change:

The number of parameters passed to ts_RRC_Security is now 6, was 7.

ts_MM_SecurityOn, line 1, in Behaviour Description, remove the second parameter (TRUE).

From:

Test Step Name	ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)				
Group	BasicM_MM_GMM_Steps/				
Objective	Start Ciphering if applicable				
Default	NAS_OtherwiseFail				
Comments	Ciphering is either generally applied or not. Starting takes effect only if ciphering is to be applied.				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		ts_RRC_Security(p_CellId, TRUE , tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

...

To:

Test Step Name	ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)				
Group	BasicM_MM_GMM_Steps/				
Objective	Start Ciphering if applicable				
Default	NAS_OtherwiseFail				
Comments	Ciphering is either generally applied or not. Starting takes effect only if ciphering is to be applied.				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

...

2.3.3 ts_MAC_GenericSetupProceduresToBGP6_2

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The used settings for "UE_Info" should not differ from the original configuration.

Summary of changes:

Value for ASN.1 type " UE_Info" parameter inside Constraint Reference ca_CMACE_ReconfigInfo (line 17) is not correct. It is changed as shown below: from tcv_TmpCellInfo.uRNTI to OMIT.

From:

Test step Name	ts_MAC_GenericSetupProceduresToBGP6_2
Group	Preambles/
Objective	Initialise the system simulator, and perform the RRC connection establishment procedure defined in 3G TS 34.108 clause 7.4.2.1 to bring the UE into state BGP6_2.
Default	RRCDdef1

Comment		This preamble configures the system simulator for MAC testing, and then performs the Generic setup procedures as defined in 3G TS 34.108.			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReconfigureHiPriNAS_AsTransparent					
			
17		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfo(tsc_DefaultCellId, tsc_PRACH1, c_UE_Info(tcv_TmpCellInfo.uRNTI , tcv_TmpCellInfo.cRNTI), cb_TrChInfoRACH1, c_TrLogMapping_Rach1TransRB3, 0)		
			

To:

Test step Name	ts_MAC_GenericSetupProceduresToBGP6_2				
Group	Preambles/				
Objective	Initialise the system simulator, and perform the RRC connection establishment procedure defined in 3G TS 34.108 clause 7.4.2.1 to bring the UE into state BGP 6_2.				
Default	RRCDef1				
Comment	This preamble configures the system simulator for MAC testing, and then performs the Generic setup procedures as defined in 3G TS 34.108.				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReconfigureHiPriNAS_AsTransparent					
			
17		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfo(tsc_DefaultCellId, tsc_PRACH1, c_UE_Info(OMI , tcv_TmpCellInfo.cRNTI), cb_TrChInfoRACH1, c_TrLogMapping_Rach1TransRB3, 0)		
			

2.3.4 ts_RRC_ConnEstForMAC_ReIniTDireTrans

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

- i) TTCN MACv143 ts_RRC_ConnEstForMAC_ReIniTDireTrans contains two local tree errors stopping the test procedure in this test step.
- ii) TTCN MACv143 ts_RRC_ConnEstForMAC_ReIniTDireTrans contains two logical error inside loop "Next1" and inside loop "Next2"

Summary of change:

- i) Correction of the detected errors in Test Case Variable qualifiers in ts_RRC_ConnEstForMAC_ReIniTDireTrans as shown below:

Change:

Test Step Name		ts_RRC_ConnEstForMAC_ReclniTDirctTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReceiveRRC_ConnCmplAndPagRespOrServReq					
12		(tcv_MAC_Counter :=1)			
13		[(tcv_TmpCellInfo.cellConfig = cell_FACH_MAC_SRB_NoConn)]			
14	Rcv1	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti ,*))	(P)	

...

21		[(tcv_TmpCellInfo.cellConfig = cell_DCH_MAC_SRB_NoConn)]			
22	Rcv2	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti ,*))	(P)	

To:

Test Step Name		ts_RRC_ConnEstForMAC_ReclniTDirctTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReceiveRRC_ConnCmplAndPagRespOrServReq					
12		(tcv_MAC_Counter :=1)			
13		[(tcv_TmpCellInfo.cellConfig = cell_FACH_MAC_SRB)]			
14	Rcv1	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti ,*))	(P)	

...

21		[(tcv_TmpCellInfo.cellConfig = cell_DCH_MAC_SRB)]			
22	Rcv2	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti , *))	(P)	

Summary of changes:

- ii) Detected errors in ts_RRC_ConnEstForMAC_ReclniTDirecTrans are corrected as shown below. Inside loop Next1 the order of the lines 33,34,35,36 is changed. Inside loop Next2 the order of lines 41,42,43,44 is changed.

Change from:

Test Step Name	ts_RRC_ConnEstForMAC_ReclniTDirecTrans(p_CellId: INTEGER)				
Group	RRC_Steps/				
Objective	To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message				
Default	RRC_Def1				
Comments	This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers). The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

...

		It_ReceiveSegments_FACH			
32	Next1	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_FACH_MAC, c_MAC_PDU_TCTF(tsc_DCCH_OnRACH_FDD, ?))		
33		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_FACH_MAC, cs_MAC_PDU_Send_STATUS_Def(cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter), 31)))		
34		START t_WaitMS (tsc_WaitNextRLC_Segment)			1
35		+It_Updatecounter			
36		GOTO Next1			
37		? TIMEOUT t_WaitMS			
38		[tcv_MAC_Counter = px_NumOfSegInPagResOrServReq]		(P)	
39		[TRUE]		(F)	
		It_ReceiveSegments_DCH			
40	Next2	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_DCH(tsc_CT_LoCh3, ?))		
41		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_RCV_STATUS_DCH(tsc_CT_LoCh3, cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter),31)))		
42		START t_WaitMS (tsc_WaitNextRLC_Segment)			
43		+ It_Updatecounter			

44		GOTO Next2		
----	--	------------	--	--

To:

Test Step Name	ts_RRC_ConnEstForMAC_ReclniTDirTrans(p_CellId: INTEGER)				
Group	RRC_Steps/				
Objective	To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message				
Default	RRC_Def1				
Comments	<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

...

28		GOTO Rcv2			
29	ERR	TRUE		I	error
		!t_Updatecounter			
30		[tcv_MAC_Counter < px_NumOfSegInPagResOrServReq]			
31		(tcv_MAC_Counter := tcv_MAC_Counter+1)			
		!t_ReceiveSegments_FACH			
32	Next1	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_FACH_MAC, c_MAC_PDU_TCTF(tsc_DCCH_OnRACH_FDD, ?))		
33		+!t_Updatecounter			
34		START t_WaitMS (tsc_WaitNextRLC_Segment)			
35		GOTO Next1			
36		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_FACH_MAC, cs_MAC_PDU_Send_STATUS_Def(cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter), 31)))		
37		? TIMEOUT t_WaitMS			
38		[tcv_MAC_Counter = px_NumOfSegInPagResOrServReq]		(P)	
39		[TRUE]		(F)	
		!t_ReceiveSegments_DCH			
40	Next2	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_DCH(tsc_CT_LoCh3, ?))		
41		+!t_Updatecounter			
42		START t_WaitMS (tsc_WaitNextRLC_Segment)			START t_WaitMS (tsc_WaitN extRLC_Se gment)
43		GOTO Next2			
44		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_RCV_STATUS_DCH(tsc_CT_LoCh3, cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter),31)))		
		...			

2.3.5 RLC_STATUS_PDU

Reason for change:
This item is used as a PDU type.

Summary of change:

- i) The Structured Type Definition RLC_STATUS_PDU is removed.
- ii) The PDU Type Definition RLC_STATUS_PDU is added, with the definition details as before.

2.3.6 cs_MAC_PDU_Send_STATUS_Def

Reason for change:
The constraint should use MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:
The following constraint is imposed on MAC_PDU rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	cs_MAC_PDU_Send_STATUS_Def(p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to receive MAC PDU's on DCCH 3 mapped to RACH using the default field values. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving. Ref 3G TS 25.321 clause 9.1.2 Parameters

To:

Constraint Name	cs_MAC_PDU_Send_STATUS_Def(p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to receive MAC PDU's on DCCH 3 mapped to RACH using the default field values. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving. Ref 3G TS 25.321 clause 9.1.2 Parameters

2.3.7 cr_MAC_PDU_RCV_STATUS_TCTF

Reason for change:
The constraint should use MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:

The following constraint is imposed on MAC_PDU (with appropriate change to the parameter list) rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	cr_MAC_PDU_RCV_STATUS_TCTF(p_TCTF: TCTF; p_Data: RLC_STATUS_PDU)
-----------------	--

PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send MAC PDU's with various values for the TCTF field. Ref 3G TS 25.321 clause 9.1.2 The same constraint can be used for uplink and downlink, since the appropriate TCTF field can be provided as a parameter, and all other fields are the same.

To:

Constraint Name	cr_MAC_PDU_RCV_STATUS_TCTF(p_TCTF: TCTF; p_Data: STATUS_PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send MAC PDU's with various values for the TCTF field. Ref 3G TS 25.321 clause 9.1.2 The same constraint can be used for uplink and downlink, since the appropriate TCTF field can be provided as a parameter, and all other fields are the same.

2.3.8 c_MAC_PDU_CT_RCV_STATUS_DCH

Reason for change:

This constraint should apply to PDUs of type MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:

The following constraint is imposed on PDU-type MAC_PDU (with appropriate change to the parameter list) rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	c_MAC_PDU_CT_RCV_STATUS_DCH(p_CT_Field: CT_Field; p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send a MAC PDU on a DCCH mapped to FACH with the given value for the CT field. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving. Ref 3G TS 25.321 clause 9.1.2 Parameters p_CT_Field The CT field value to be used in the transmitted MAC PDU. p_Data The MAC SDU to be used in the transmitted MAC PDU. NOTE: The user of this constraint is responsible for ensuring that the MAC header + data is the correct length to fit exactly in one transport block.

To:

Constraint Name	c_MAC_PDU_CT_RCV_STATUS_DCH(p_CT_Field: CT_Field; p_Data: PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send a MAC PDU on a DCCH mapped to FACH with the given value for the CT field. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving.

	<p>Ref 3G TS 25.321 clause 9.1.2</p> <p>Parameters p_CT_Field The CT field value to be used in the transmitted MAC PDU.</p> <p>p_Data The MAC SDU to be used in the transmitted MAC PDU. NOTE: The user of this constraint is responsible for ensuring that the MAC header + data is the correct length to fit exactly in one transport block.</p>
--	--

2.3.9 cr_StatusAnyPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

This item is used as a TTCN PDU Constraint Declaration.

Summary of change:

- i) The Structured Type constraint declaration cr_StatusAnyPad is removed.
- ii) TTCN PDU Constraint Declaration cr_StatusAnyPad is added, with the definition details as before except the used type, also the PDU-Type is changed to STATUS_PDU.
- iii) Field Name changes

From:

Constraint Name	cr_StatusAnyPad		
Structured Type	RLC_STATUS_PDU		
Derivation Path			
Encoding Variation			
Comment	<p>This constraint is used to receive an AM STATUS PDU containing the given SUFI list. Any padding included is ignored.</p> <p>Parameters: p_SuperFields: The SUFI list to be received</p>		
Element Name	Element Value	Element Encoding	Comments
dC_Field	tsc_DC_ControlPDU		
type	tsc_PDU_TypeStatus		
superFields	-		
superFieldsRec	?		4
padding	*		
Detailed Comments			

To:

Constraint Name	cr_StatusAnyPad		
Structured Type	STATUS_PDU		
Derivation Path			
Encoding Variation			
Comment	<p>This constraint is used to receive an AM STATUS PDU containing the given SUFI list. Any padding included is ignored.</p> <p>Parameters: p_SuperFields: The SUFI list to be received</p>		
Element Name	Element Value	Element Encoding	Comments
dC_Field	tsc_DC_ControlPDU		
type	tsc_PDU_TypeStatus		
superFieldsTx	-		
superFieldsAndPadRx	?		4
paddingTx	*		
Detailed Comments			

2.3.10 cs_StatusAndPad

Reason for change:

This item is used as a TTCN PDU Constraint Declaration.

Summary of change:

- i) The Structured Type constraint declaration `cs_StatusAndPad` is removed.
- ii) TTCN PDU Constraint Declaration `cs_StatusAndPad` is added, with the definition details as before.

From:

Constraint Name	<code>cs_StatusAndPad</code>
Structured Type	<code>RLC_STATUS_PDU</code>
Derivation Path	
Encoding Variation	
Comment	<p>This constraint is used to send an AM STATUS PDU containing the given superfields.</p> <p>Parameters:</p> <p><code>p_SuperFields</code>: The super-fields to be included in the STATUS PDU.</p> <p><code>p_PaddingSizeHalfOctets</code>: The number of half octets to be added at the end of the PDU. In general, this parameter will contain the value $(2 * \text{tcv_PU_Size}) - (\text{p_SuperFields size} + 1)$</p> <p>NOTE: SUFI list size = <code>p_Superfields size</code> + 1 half octet (for D/C field and Type)</p>

To:

Constraint Name	<code>cs_StatusAndPad</code>
PDU Type	<code>RLC_STATUS_PDU</code>
Derivation Path	
Encoding Variation	
Comment	<p>This constraint is used to send an AM STATUS PDU containing the given superfields.</p> <p>Parameters:</p> <p><code>p_SuperFields</code>: The super-fields to be included in the STATUS PDU.</p> <p><code>p_PaddingSizeHalfOctets</code>: The number of half octets to be added at the end of the PDU. In general, this parameter will contain the value $(2 * \text{tcv_PU_Size}) - (\text{p_SuperFields size} + 1)$</p> <p>NOTE: SUFI list size = <code>p_Superfields size</code> + 1 half octet (for D/C field and Type).</p>

2.3.11 AMD_PDU

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

There is a conflict in the definitions of `AMD_PDU` between MAC and RLC suites – padding is of type `Padding (HEXSTRING)` in RLC suite and of type `RLC_Padding (BITSTRING)` in MAC suite.

Summary of change:

The PDU from the MAC suite has been renamed from `AMD_PDU` to `MAC_AMD_PDU`.

From:

PDU Name	<code>AMD_PDU</code>
PCO Type	DSAP
Encoding Rule Name	
Encoding Variation	
Comment	Acknowledged mode RLC PDU with 7 bit length indicators. Ref 3G TS 25.322 clause 9.2.1.4

To:

PDU Name	<code>MAC_AMD_PDU</code>
PCO Type	DSAP

Encoding Rule Name	
Encoding Variation	
Comment	Acknowledged mode RLC PDU with 7 bit length indicators. Ref 3G TS 25.322 clause 9.2.1.4

2.3.12 cs_AMD_LIsAndPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

AMD_PDU has been renamed MAC_AMD_PDU for the MAC suite.

Summary of change:

The PDU Type has changed from AMD_PDU to MAC_AMD_PDU.

From:

Constraint Name	cs_AMD_LIsAndPad(p_SN: INTEGER;p_Poll: PollingBit; p_LIs: LenInds; p_Data:AM_Data;p_NumofBitsPadding: INTEGER)
PDU Type	AMD_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	<p>This constraint is used to send an AM PDU containing data and a length indicator group, and padding.</p> <p>Parameters:</p> <p>p_SN: An integer containing the next sequence number to be transmitted. This parameter is used in a call to INT_TO_BIT, so a value must be provided.</p> <p>p_Poll: The value of the Poll bit. This parameter must be one of the following values: tsc_P_Poll, tsc_P_NoPoll.</p> <p>p_LIs: The length indicator group to be used in the PDU. This field must contain at least one LI.</p> <p>p_Data: The data to be included in the PDU.</p> <p>p_NumHalfOctetsPadding: The number of half octets of padding to be included at the end of the PDU. It is the callers responsibility to ensure that the LI group size + the data size + the padding size is exactly equal to the current PU size.</p>

To:

Constraint Name	cs_AMD_LIsAndPad(p_SN: INTEGER;p_Poll: PollingBit; p_LIs: LenInds; p_Data:AM_Data;p_NumofBitsPadding: INTEGER)
PDU Type	MAC_AMD_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	<p>This constraint is used to send an AM PDU containing data and a length indicator group, and padding.</p> <p>Parameters:</p> <p>p_SN:</p>

	<p>An integer containing the next sequence number to be transmitted. This parameter is used in a call to INT_TO_BIT, so a value must be provided.</p> <p>p_Poll: The value of the Poll bit. This parameter must be one of the following values: tsc_P_Poll, tsc_P_NoPoll.</p> <p>p_LIs: The length indicator group to be used in the PDU. This field must contain at least one LI.</p> <p>p_Data: The data to be included in the PDU.</p> <p>p_NumHalfOctetsPadding: The number of half octets of padding to be included at the end of the PDU. It is the callers responsibility to ensure that the LI group size + the data size + the padding size is exactly equal to the current PU size.</p>
--	---

2.3.13 SUFI_Params

This table is replaced by the object SUFI_Params taken from RLCv310 and is un-modified.

2.3.14 cr_SUFI_Params_Ack

This table is renamed to cr_SUFI_Params, the object cr_SUFI_Params is equal to the version inside RLCv310.

2.3.15 tc_7_1_1_3

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The definition of SUFI_Params has changed and it is now preferred to use fully parameterised SUFI_Params.

Summary of changes:

- i) Line 9 of the test case changes from using cr_SUFI_Params_Ack to cr_SUFI_Params, which is fully parameterised.
- ii) Line 13 of the test case changes from using cr_SUFI_Params_Ack to cr_SUFI_Params, which is fully parameterised.

From:

Test case Name	tc_7_1_1_3				
Group	MAC/MappingBetweenLoChAndTrCh/				
Purpose	<p>1. To verify that the UE discards PDUs with reserved or incorrect values in C/T field.</p> <p>2. To verify that the TCTF field, C/T field, UE-Id type and UE-Id field are correctly applied when a DTCH or DCCH is mapped to the RACH/FACH.</p>				
Configuration					
Default	MAC_Default				
Comment	Reference(s) TS 25.321 clauses 9.2.1 and 9.2.1.1 c).				
Selection Ref	AllUE				
Description	DTCH or DCCH mapped to RACH/FACH / Invalid C/T Field				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
...			...		

9		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFL_Params_Ack (INT_TO_BIT (0,12) , INT_TO_BIT (0,12)))			5
---	--	---	--	--	---

... ..

13		+ts_ReceiveRRC_RLC_StatusPDU_U_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFL_Params_Ack (INT_TO_BIT (1,12) , INT_TO_BIT (1,12)))			5
----	--	---	--	--	---

... ..

To:

Test case Name	tc_7_1_1_3				
Group	MAC/MappingBetweenLoChAndTrCh/				
Purpose	1. To verify that the UE discards PDUs with reserved or incorrect values in C/T field. 2. To verify that the TCTF field, C/T field, UE-Id type and UE-Id field are correctly applied when a DTCH or DCCH is mapped to the RACH/FACH.				
Configuration					
Default	MAC_Default				
Comment	Reference(s) TS 25.321 clauses 9.2.1 and 9.2.1.1 c).				
Selection Ref	AllUE				
Description	DTCH or DCCH mapped to RACH/FACH / Invalid C/T Field				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

... ..

9		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFL_Params (INT_TO_BIT (0,12) , INT_TO_BIT (0,12), **???))			5
---	--	--	--	--	---

... ..

13		+ts_ReceiveRRC_RLC_StatusPDU_U_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFL_Params (INT_TO_BIT (1,12) , INT_TO_BIT (1,12), **???))			5
----	--	--	--	--	---

... ..

2.3.16 px_NumOfSegInPagResOrServReq

Reason for change:

The conditions of the segmentation require that this PIXIT value is set to 2, irrespective of the handset characteristics.

Summary of change:

- i) The value of PIXIT item px_NumOfSegInPagResOrServReq shall be set to 2 within the PICS/PIXIT file.

CHANGE REQUEST

☼ **34.123-3 CR 035** ☼ rev **-** ☼ Current version: **3.1.0** ☼

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ☼ symbols.

Proposed change affects: UICC apps☼ ME Radio Access Network Core Network

Title:	☼ 7.1.1.4				
Source:	☼ Anritsu Ltd				
Work item code:	☼ -	Date:	☼ 16/04/2003		
Category:	☼ B	Release:	☼ R99		
Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)			

Reason for change:	☼ Introduction of Test Case 7.1.1.4				
Summary of change:	☼ - 0 table deleted, - 2 tables modified in RRCv310 - 91 tables added from MACv143 For full details see below.				
Consequences if not approved:	☼ Test case 7.1.1.4 will not be added				

Clauses affected:	☼ N/A				
Other specs affected:		Y	N		
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Other core specifications	☼
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test specifications	
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	O&M Specifications	
Other comments:	☼				

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☼ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

TSG-T WG 1 E-mail Approval

T1-030456

Seoul, Korea

12-15 May 2003

Title	Introduction of Test Case 7.1.1.4 to RRCv310	
Source	Anritsu	
Agenda Item	N/A	
Document for	APPROVAL	
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1 Overview

This document describes the introduction of test case tc_7_1_1_4 to RRCV310.

2 Required changes

2.1 Tables deleted from RRCv310

None.

2.2 Tables modified in RRCv310

2.2.1 tcv_TimerPoll

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The timer is too short. The original value is intended to be used where there is a real RLC implementation rather than an emulation in the TTCN, hence a greater value is required. N.B. It is not intended that this change be applied to all suites, e.g. it should not be applied to RRC.

Summary of change:

The value for tcv_TimerPoll has changed from tp200 to tp400.

2.2.2 c_UL_AM_RLC

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The timer is too short.

Summary of change:

The value for timerPoll has changed from tp200 to tp400.

From:

Constraint Name	c_UL_AM_RLC
ASN.1 Type	UL_AM_RLC_Mode
Derivation Path	
Encoding Variation	
Comment	
Constraint Value	<pre> { transmissionRLC_Discard noDiscard : dat15, transmissionWindowSize tw128, timerRST tr500, max_RST rst1, pollingInfo { timerPollProhibit tpp200, timerPoll tp200, poll_PDU OMIT, poll_SDU sdu1, lastTransmissionPDU_Poll TRUE, lastRetransmissionPDU_Poll TRUE, pollWindow pw99, timerPollPeriodic OMIT } } </pre>
Detailed Comments	

To:

Constraint Name	c_UL_AM_RLC
ASN.1 Type	UL_AM_RLC_Mode
Derivation Path	
Encoding Variation	
Comment	
Constraint Value	<pre> { transmissionRLC_Discard noDiscard : dat15, transmissionWindowSize tw128, timerRST tr500, max_RST rst1, pollingInfo { timerPollProhibit tpp200, timerPoll tp400, poll_PDU OMIT, poll_SDU sdu1, lastTransmissionPDU_Poll TRUE, lastRetransmissionPDU_Poll TRUE, pollWindow pw99, timerPollPeriodic OMIT } } </pre>
Detailed Comments	

2.3 New Tables added to RRCv310

2.3.1 Tables from MACv143 — no changes necessary

CT_Field
 RLC_Padding
 TCTF
 UE_Id
 UE_IdType
 AM_Data
 ExtBit
 HeaderExt
 LenInd15
 LenInd7
 PollingBit
 LenInd15AndE_Bit
 LenInd7AndE_Bit
 LenInds
 ResAndSUFIs
 PRACH_MeasurementReport
 DirectEncoding
 o_SUFI_Handler
 px_KeySeqDefxxxxx
 tsc_SUFI_Ack
 tsc_DC_AMDPDU
 tsc_P_Poll
 tsc_E_Data
 tsc_E_LI_AndE_Bit
 tsc_HE_LI_AndE_Bit
 tsc_DefaultCellId
 tsc_AM_SN_Size
 tsc_LI7_Padding
 tsc_UE_IdTypeU_RNTI
 tsc_UE_IdTypeC_RNTI
 tsc_UE_IdTypeReserved1

```

tsc_UE_IdTypeReserved2
tsc_CT_LoCh3
tsc_DCCH_OnRACH_FDD
tsc_DCCH_OnFACH_FDD
tsc_ExpectedPayloadSize
tsc_DummyDL_DirectTransferMsg_CS
tsc_DummyDL_DirectTransferMsg_PS
tsc_DummyDL_DirectTransferLen
tsc_WaitNextRLC_Segment
tcv_ReceiveSigConnRelInd
tcv_StatusPDU
tcv_MAC_PDU
tcv_StatusMatchRes
tcv_DummyDL_DirectTransferMsg
tcv_MAC_Counter
RLC_TR_TestDataReq
CPHY_PRACH_Measurement_Report_IND
AMD_PDU
PiggyBackedSTATUS_PDU
MAC_PDU
MAC_PDU_RCV_STATUS
TxMAC
RxMAC
c_LenInd7AndE_Bit
c_LIs2_7BitLIs
cs_Ack
cs_SF_Ack
c_TrLogMapping_Rach1TransRB3
c_TrLogMapping_PchFach1TransRB3
cs_IntegrityProtectModify
car_DataIndHiPrinAS
cas_DataReqHiPrinAS
car_PRACH_Measurement_Report_IND
c_MAC_PDU_TCTF
cs_MAC_PDU_UE_IdType
cs_MAC_PDU_Def
c_MAC_PDU_CT_DCH
cr_RRC_Status_MAC_NoInteg
cds_RRC_ConnSetupDCH_NoCapEnq
cds_RRC_ConnSetupFACH_NoCapEnq
cr_108_RRC_ConnRelCmpl
ts_InitDummyDL_Transfer
ts_ReceiveRRC_RLC_StatusPDU_FACH
ts_SendDLDirectTransfer
ts_MonitorUplinkSpecefiedTime
ts_RRC_PagType1_DefMAC
MAC_Default

```

2.3.2 ts_MM_SecurityOn

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

ts_RRC_Security has fewer parameters.

Summary of change:

The number of parameters passed to ts_RRC_Security is now 6, was 7.

ts_MM_SecurityOn, line 1, in Behaviour Description, remove the second parameter (TRUE).

From:

Test Step Name	ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)				
Group	BasicM_MM_GMM_Steps/				
Objective	Start Cipherring if applicable				
Default	NAS_OtherwiseFail				
Comments	Cipherring is either generally applied or not. Starting takes effect only if cipherring is to be applied.				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		ts_RRC_Security(p_CellId, TRUE, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

...

To:

Test Step Name	ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)				
Group	BasicM_MM_GMM_Steps/				
Objective	Start Cipherring if applicable				
Default	NAS_OtherwiseFail				
Comments	Cipherring is either generally applied or not. Starting takes effect only if cipherring is to be applied.				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

...

2.3.3 ts_MAC_GenericSetupProceduresToBGP6_2

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The used settings for "UE_Info" should not differ from the original configuration.

Summary of changes:

Value for ASN.1 type " UE_Info" parameter inside Constraint Reference ca_CMAC_ReconfigInfo (line 17) is not correct. It is changed as shown below: from tcv_TmpCellInfo.uRNTI to OMIT.

From:

Test step Name	ts_MAC_GenericSetupProceduresToBGP6_2
Group	Preambles/
Objective	Initialise the system simulator, and perform the RRC connection establishment procedure defined in 3G TS 34.108 clause 7.4.2.1 to bring the UE into state BGP6_2.
Default	RRCDdef1
Comment	This preamble configures the system simulator for MAC testing, and then performs the Generic setup procedures as defined in 3G TS 34.108.

Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReconfigureHiPriNAS_AsTransparent					
			
17		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfo(tsc_DefaultCellId, tsc_PRACH1, c_UE_Info(tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI), cb_TrChInfoRACH1, c_TrLogMapping_Rach1TransRB3, 0)		
			

To:

Test step Name	ts_MAC_GenericSetupProceduresToBGP6_2				
Group	Preambles/				
Objective	Initialise the system simulator, and perform the RRC connection establishment procedure defined in 3G TS 34.108 clause 7.4.2.1 to bring the UE into state BGP6_2.				
Default	RRCDdef1				
Comment	This preamble configures the system simulator for MAC testing, and then performs the Generic setup procedures as defined in 3G TS 34.108.				

Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReconfigureHiPriNAS_AsTransparent					
			
17		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfo(tsc_DefaultCellId, tsc_PRACH1, c_UE_Info(OMI, tcv_TmpCellInfo.cRNTI), cb_TrChInfoRACH1, c_TrLogMapping_Rach1TransRB3, 0)		
			

2.3.4 ts_RRC_ConnEstForMAC_ReclniTDirecTrans

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

- i) TTCN MACv143 ts_RRC_ConnEstForMAC_ReclniTDirecTrans contains two local tree errors stopping the test procedure in this test step.
- ii) TTCN MACv143 ts_RRC_ConnEstForMAC_ReclniTDirecTrans contains two logical error inside loop "Next1" and inside loop "Next2"

Summary of change:

- i) Correction of the detected errors in Test Case Variable qualifiers in ts_RRC_ConnEstForMAC_ReclniTDirecTrans as shown below:

Change:

Test Step Name	ts_RRC_ConnEstForMAC_ReclniTDirecTrans(p_CellId: INTEGER
----------------	--

)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReceiveRRC_ConnCmplAndPagRespOrServReq					
12		(tcv_MAC_Counter :=1)			
13		[(tcv_TmpCellInfo.cellConfig = cell_FACH_MAC_SRB_NoConn)]			
14	Rcv1	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti , *))	(P)	

...

21		[(tcv_TmpCellInfo.cellConfig = cell_DCH_MAC_SRB_NoConn)]			
22	Rcv2	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti , *))	(P)	

To:

Test Step Name		ts_RRC_ConnEstForMAC_ReclniTDirectTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReceiveRRC_ConnCmplAndPagRespOrServReq					
12		(tcv_MAC_Counter :=1)			
13		[(tcv_TmpCellInfo.cellConfig = cell_FACH_MAC_SRB)]			
14	Rcv1	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti , *))	(P)	

...

21		[(tcv_TmpCellInfo.cellConfig = cell_DCH_MAC_SRB)]			
----	--	---	--	--	--

22	Rcv2	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti, *))	(P)	
----	------	----------------------	--	-----	--

Summary of changes:

- ii) Detected errors in ts_RRC_ConnEstForMAC_ReInTDirecTrans are corrected as shown below. Inside loop Next1 the order of the lines 33,34,35,36 is changed. Inside loop Next2 the order of lines 41,42,43,44 is changed.

Change from:

Test Step Name		ts_RRC_ConnEstForMAC_ReInTDirecTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

...

		It_ReceiveSegments_FACH			
32	Next1	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_FACH_MAC, c_MAC_PDU_TCTF(tsc_DCCH_OnRACH_FDD, ?))		
33		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_FACH_MAC, cs_MAC_PDU_Send_STATUS_Def(cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter), 31)))		
34		START t_WaitMS (tsc_WaitNextRLC_Segment)			1
35		+It_Updatecounter			
36		GOTO Next1			
37		? TIMEOUT t_WaitMS			
38		[tcv_MAC_Counter = px_NumOfSegInPagResOrServReq]		(P)	
39		[TRUE]		(F)	
		It_ReceiveSegments_DCH			
40	Next2	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_DCH(tsc_CT_LoCh3, ?))		
41		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_RCV_STATUS_DCH(tsc_CT_LoCh3, cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter),31)))		
42		START t_WaitMS (tsc_WaitNextRLC_Segment)			
43		+ It_Updatecounter			
44		GOTO Next2			

To:

Test Step Name	ts_RRC_ConnEstForMAC_ReclniTDirctTrans(p_CellId: INTEGER)				
Group	RRC_Steps/				
Objective	To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message				
Default	RRC_Def1				
Comments	<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

...

28		GOTO Rcv2			
29	ERR	TRUE			error
		lt_Updatecounter			
30		[tcv_MAC_Counter < px_NumOfSegInPagResOrServReq]			
31		(tcv_MAC_Counter := tcv_MAC_Counter+1)			
		lt_ReceiveSegments_FACH			
32	Next1	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_FACH_MAC, c_MAC_PDU_TCTF(tsc_DCCH_OnRACH_FDD, ?))		
33		+lt_Updatecounter			
34		START t_WaitMS (tsc_WaitNextRLC_Segment)			
35		GOTO Next1			
36		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_FACH_MAC, cs_MAC_PDU_Send_STATUS_Def(cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter), 31)))		
37		? TIMEOUT t_WaitMS			
38		[tcv_MAC_Counter = px_NumOfSegInPagResOrServReq]		(P)	
39		[TRUE]		(F)	
		lt_ReceiveSegments_DCH			
40	Next2	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_DCH(tsc_CT_LoCh3, ?))		
41		+lt_Updatecounter			
42		START t_WaitMS (tsc_WaitNextRLC_Segment)			START t_WaitMS (tsc_WaitN extRLC_Se gment)
43		GOTO Next2			
44		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_RCV_STATUS_DCH(tsc_CT_LoCh3, cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter),31)))		
		...			

2.3.5 RLC_STATUS_PDU

Reason for change:
This item is used as a PDU type.

Summary of change:

- i) The Structured Type Definition RLC_STATUS_PDU is removed.
- ii) The PDU Type Definition RLC_STATUS_PDU is added, with the definition details as before.

2.3.6 cs_MAC_PDU_Send_STATUS_Def

Reason for change:
The constraint should use MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:
The following constraint is imposed on MAC_PDU rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	cs_MAC_PDU_Send_STATUS_Def(p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to receive MAC PDU's on DCCH 3 mapped to RACH using the default field values. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving. Ref 3G TS 25.321 clause 9.1.2 Parameters

To:

Constraint Name	cs_MAC_PDU_Send_STATUS_Def(p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to receive MAC PDU's on DCCH 3 mapped to RACH using the default field values. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving. Ref 3G TS 25.321 clause 9.1.2 Parameters

2.3.7 cr_MAC_PDU_RCV_STATUS_TCTF

Reason for change:
The constraint should use MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:

The following constraint is imposed on MAC_PDU (with appropriate change to the parameter list) rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	cr_MAC_PDU_RCV_STATUS_TCTF(p_TCTF: TCTF; p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	

Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send MAC PDU's with various values for the TCTF field. Ref 3G TS 25.321 clause 9.1.2 The same constraint can be used for uplink and downlink, since the appropriate TCTF field can be provided as a parameter, and all other fields are the same.

To:

Constraint Name	cr_MAC_PDU_RCV_STATUS_TCTF(p_TCTF: TCTF; p_Data: STATUS_PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send MAC PDU's with various values for the TCTF field. Ref 3G TS 25.321 clause 9.1.2 The same constraint can be used for uplink and downlink, since the appropriate TCTF field can be provided as a parameter, and all other fields are the same.

2.3.8 c_MAC_PDU_CT_RCV_STATUS_DCH

Reason for change:

This constraint should apply to PDUs of type MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:

The following constraint is imposed on PDU-type MAC_PDU (with appropriate change to the parameter list) rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	c_MAC_PDU_CT_RCV_STATUS_DCH(p_CT_Field: CT_Field; p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send a MAC PDU on a DCCH mapped to FACH with the given value for the CT field. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving. Ref 3G TS 25.321 clause 9.1.2 Parameters p_CT_Field The CT field value to be used in the transmitted MAC PDU. p_Data The MAC SDU to be used in the transmitted MAC PDU. NOTE: The user of this constraint is responsible for ensuring that the MAC header + data is the correct length to fit exactly in one transport block.

To:

Constraint Name	c_MAC_PDU_CT_RCV_STATUS_DCH(p_CT_Field: CT_Field; p_Data: PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send a MAC PDU on a DCCH mapped to FACH with the given value for the CT field. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving.

	Ref 3G TS 25.321 clause 9.1.2 Parameters p_CT_Field The CT field value to be used in the transmitted MAC PDU. p_Data The MAC SDU to be used in the transmitted MAC PDU. NOTE: The user of this constraint is responsible for ensuring that the MAC header + data is the correct length to fit exactly in one transport block.
--	---

2.3.9 cr_StatusAnyPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

This item is used as a TTCN PDU Constraint Declaration.

Summary of change:

- i) The Structured Type constraint declaration cr_StatusAnyPad is removed.
- ii) TTCN PDU Constraint Declaration cr_StatusAnyPad is added, with the definition details as before except the used type, also the PDU-Type is changed to STATUS_PDU.
- iii) Field Name changes

From:

Constraint Name	cr_StatusAnyPad		
Structured Type	RLC_STATUS_PDU		
Derivation Path			
Encoding Variation			
Comment	This constraint is used to receive an AM STATUS PDU containing the given SUFI list. Any padding included is ignored. Parameters: p_SuperFields: The SUFI list to be received		
Element Name	Element Value	Element Encoding	Comments
dC_Field	tsc_DC_ControlPDU		
type	tsc_PDU_TypeStatus		
superFields	-		
superFieldsRec	?		4
padding	*		
Detailed Comments			

To:

Constraint Name	cr_StatusAnyPad		
Structured Type	STATUS_PDU		
Derivation Path			
Encoding Variation			
Comment	This constraint is used to receive an AM STATUS PDU containing the given SUFI list. Any padding included is ignored. Parameters: p_SuperFields: The SUFI list to be received		
Element Name	Element Value	Element Encoding	Comments
dC_Field	tsc_DC_ControlPDU		
type	tsc_PDU_TypeStatus		
superFieldsTx	-		
superFieldsAndPadRx	?		4
paddingTx	*		
Detailed Comments			

2.3.10 cs_StatusAndPad

Reason for change:

This item is used as a TTCN PDU Constraint Declaration.

Summary of change:

- i) The Structured Type constraint declaration cs_StatusAndPad is removed.
- ii) TTCN PDU Constraint Declaration cs_StatusAndPad is added, with the definition details as before.

From:

Constraint Name	cs_StatusAndPad
Structured Type	RLC_STATUS_PDU
Derivation Path	
Encoding Variation	
Comment	<p>This constraint is used to send an AM STATUS PDU containing the given superfields.</p> <p>Parameters:</p> <p>p_SuperFields: The super-fields to be included in the STATUS PDU.</p> <p>p_PaddingSizeHalfOctets: The number of half octets to be added at the end of the PDU. In general, this parameter will contain the value (2 * tcv_PU_Size) - (p_SuperFields size + 1)</p> <p>NOTE: SUFI list size = p_Superfields size + 1 half octet (for D/C field and Type)</p>

To:

Constraint Name	cs_StatusAndPad
PDU Type	RLC_STATUS_PDU
Derivation Path	
Encoding Variation	
Comment	<p>This constraint is used to send an AM STATUS PDU containing the given superfields.</p> <p>Parameters:</p> <p>p_SuperFields: The super-fields to be included in the STATUS PDU.</p> <p>p_PaddingSizeHalfOctets: The number of half octets to be added at the end of the PDU. In general, this parameter will contain the value (2 * tcv_PU_Size) - (p_SuperFields size + 1)</p> <p>NOTE: SUFI list size = p_Superfields size + 1 half octet (for D/C field and Type).</p>

2.3.11 AMD_PDU

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

There is a conflict in the definitions of AMD_PDU between MAC and RLC suites – padding is of type Padding (HEXSTRING) in RLC suite and of type RLC_Padding (BITSTRING) in MAC suite.

Summary of change:

The PDU from the MAC suite has been renamed from AMD_PDU to MAC_AMD_PDU.

From:

PDU Name	AMD_PDU
PCO Type	DSAP
Encoding Rule Name	
Encoding Variation	
Comment	Acknowledged mode RLC PDU with 7 bit length indicators. Ref 3G TS 25.322 clause 9.2.1.4

To:

PDU Name	MAC_AMD_PDU
PCO Type	DSAP

Encoding Rule Name	
Encoding Variation	
Comment	Acknowledged mode RLC PDU with 7 bit length indicators. Ref 3G TS 25.322 clause 9.2.1.4

2.3.12 cs_AMD_LIsAndPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

AMD_PDU has been renamed MAC_AMD_PDU for the MAC suite.

Summary of change:

The PDU Type has changed from AMD_PDU to MAC_AMD_PDU.

From:

Constraint Name	cs_AMD_LIsAndPad(p_SN: INTEGER;p_Poll: PollingBit; p_LIs: LenInds; p_Data:AM_Data;p_NumofBitsPadding: INTEGER)
PDU Type	AMD_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	<p>This constraint is used to send an AM PDU containing data and a length indicator group, and padding.</p> <p>Parameters:</p> <p>p_SN: An integer containing the next sequence number to be transmitted. This parameter is used in a call to INT_TO_BIT, so a value must be provided.</p> <p>p_Poll: The value of the Poll bit. This parameter must be one of the following values: tsc_P_Poll, tsc_P_NoPoll.</p> <p>p_LIs: The length indicator group to be used in the PDU. This field must contain at least one LI.</p> <p>p_Data: The data to be included in the PDU.</p> <p>p_NumHalfOctetsPadding: The number of half octets of padding to be included at the end of the PDU. It is the callers responsibility to ensure that the LI group size + the data size + the padding size is exactly equal to the current PU size.</p>

To:

Constraint Name	cs_AMD_LIsAndPad(p_SN: INTEGER;p_Poll: PollingBit; p_LIs: LenInds; p_Data:AM_Data;p_NumofBitsPadding: INTEGER)
PDU Type	MAC_AMD_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	<p>This constraint is used to send an AM PDU containing data and a length indicator group, and padding.</p> <p>Parameters:</p> <p>p_SN:</p>

	<p>An integer containing the next sequence number to be transmitted. This parameter is used in a call to INT_TO_BIT, so a value must be provided.</p> <p>p_Poll: The value of the Poll bit. This parameter must be one of the following values: tsc_P_Poll, tsc_P_NoPoll.</p> <p>p_LIs: The length indicator group to be used in the PDU. This field must contain at least one LI.</p> <p>p_Data: The data to be included in the PDU.</p> <p>p_NumHalfOctetsPadding: The number of half octets of padding to be included at the end of the PDU. It is the callers responsibility to ensure that the LI group size + the data size + the padding size is exactly equal to the current PU size.</p>
--	---

2.3.13 SUFI_Params

This table is replaced by the object SUFI_Params taken from RLCv310 and is un-modified.

2.3.14 cr_SUFI_Params_Ack

This table is renamed to cr_SUFI_Params, the object cr_SUFI_Params is equal to the version inside RLCv310.

2.3.15 tc_7_1_1_4

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The definition of SUFI_Params has changed and it is now preferred to use fully parameterised SUFI_Params.

Summary of changes:

- i) Line 9 of the test case changes from using cr_SUFI_Params_Ack to cr_SUFI_Params, which is fully parameterised.
- ii) Line 13 of the test case changes from using cr_SUFI_Params_Ack to cr_SUFI_Params, which is fully parameterised.

From:

Test case Name	tc_7_1_1_4				
Group	MAC/MappingBetweenLoChAndTrCh/				
Purpose	<p>1. To verify that the UE discards PDUs with reserved or incorrect values in C/T field.</p> <p>2. To verify that the TCTF field, C/T field, UE-Id type and UE-Id field are correctly applied when a DTCH or DCCH is mapped to the RACH/FACH.</p>				
Configuration					
Default	MAC_Default				
Comment	Reference(s) TS 25.321 clauses 9.2.1 and 9.2.1.1 c).				
Selection Ref	AllUE				
Description	DTCH or DCCH mapped to RACH/FACH / Invalid C/T Field				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
...			...		

9		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFL_Params_Ack (INT_TO_BIT (0,12) , INT_TO_BIT (0,12)))			5
---	--	---	--	--	---

... ..

13		+ts_ReceiveRRC_RLC_StatusPDU_U_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFL_Params_Ack (INT_TO_BIT (1,12) , INT_TO_BIT (1,12)))			5
----	--	---	--	--	---

... ..

To:

Test case Name	tc_7_1_1_4				
Group	MAC/MappingBetweenLoChAndTrCh/				
Purpose	1. To verify that the UE discards PDUs with reserved or incorrect values in C/T field. 2. To verify that the TCTF field, C/T field, UE-Id type and UE-Id field are correctly applied when a DTCH or DCCH is mapped to the RACH/FACH.				
Configuration					
Default	MAC_Default				
Comment	Reference(s) TS 25.321 clauses 9.2.1 and 9.2.1.1 c).				
Selection Ref	AllUE				
Description	DTCH or DCCH mapped to RACH/FACH / Invalid C/T Field				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

... ..

9		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFL_Params (INT_TO_BIT (0,12) , INT_TO_BIT (0,12), *??.?))			5
---	--	---	--	--	---

... ..

13		+ts_ReceiveRRC_RLC_StatusPDU_U_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFL_Params (INT_TO_BIT (1,12) , INT_TO_BIT (1,12), *??.?))			5
----	--	---	--	--	---

... ..

2.3.16 px_NumOfSegInPagResOrServReq

Reason for change:

The conditions of the segmentation require that this PIXIT value is set to 2, irrespective of the handset characteristics.

Summary of change:

- The value of PIXIT item px_NumOfSegInPagResOrServReq shall be set to 2 within the PICS/PIXIT file.

CHANGE REQUEST

34.123-3 CR 036 rev - Current version: 3.1.0

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	Introduction of Test Case 7.1.1.5		
Source:	Anritsu Ltd		
Work item code:	-	Date:	06/02/2003
Category:	B	Release:	R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	Introduction of Test Case 7.1.1.5		
Summary of change:	- 0 table deleted from RRCv310, - 2 tables modified in RRCv310 - 91 tables added from RRCv143 - 0 tables created new For full details see below.		
Consequences if not approved:	Test case 7.1.1.5 will not be introduced to the ATS		

Clauses affected:	N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N		X		X		X		
Y	N										
	X										
	X										
	X										
Other comments:											

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

TSG-T WG 1 E-mail Approval

T1S030458

Seoul, Korea**12-15 May 2003**

Title	Introduction of Test Case 7.1.1.5 to RRCv310	
Source	Anritsu	
Agenda Item		
Document for		
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1 Overview

This document describes the introduction of test case tc_7_1_1_5 to RRCV310.

2 Required changes

2.1 Tables deleted from RRCv310

None.

2.2 Tables modified in RRCv310

2.2.1 tcv_TimerPoll

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The timer is too short. The original value is intended to be used where there is a real RLC implementation rather than an emulation in the TTCN, hence a greater value is required. N.B. It is not intended that this change be applied to all suites, e.g. it should not be applied to RRC.

Summary of change:

The value for tcv_TimerPoll has changed from tp200 to tp400.

2.2.2 c_UL_AM_RLC

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The timer is too short.

Summary of change:

The value for timerPoll has changed from tp200 to tp400.

From:

Constraint Name	c_UL_AM_RLC
ASN.1 Type	UL_AM_RLC_Mode
Derivation Path	
Encoding Variation	
Comment	
Constraint Value	<pre> { transmissionRLC_Discard noDiscard : dat15, transmissionWindowSize tw128, timerRST tr500, max_RST rst1, pollingInfo { timerPollProhibit tpp200, timerPoll tp200, poll_PDU OMIT, poll_SDU sdu1, lastTransmissionPDU_Poll TRUE, lastRetransmissionPDU_Poll TRUE, pollWindow pw99, timerPollPeriodic OMIT } } </pre>
Detailed Comments	

To:

Constraint Name	c_UL_AM_RLC
ASN.1 Type	UL_AM_RLC_Mode
Derivation Path	
Encoding Variation	
Comment	
Constraint Value	<pre> { transmissionRLC_Discard noDiscard : dat15, transmissionWindowSize tw128, timerRST tr500, max_RST rst1, pollingInfo { timerPollProhibit tpp200, timerPoll tp400, poll_PDU OMIT, poll_SDU sdu1, lastTransmissionPDU_Poll TRUE, lastRetransmissionPDU_Poll TRUE, pollWindow pw99, timerPollPeriodic OMIT } } </pre>
Detailed Comments	

2.3 New Tables added to RRCv310

2.3.1 Tables from MACv143 — no changes necessary

CT_Field
 RLC_Padding
 TCTF
 UE_Id
 UE_IdType
 AM_Data
 ExtBit
 HeaderExt
 LenInd15
 LenInd7
 PollingBit
 LenInd15AndE_Bit
 LenInd7AndE_Bit
 LenInds
 ResAndSUFIs
 PRACH_MeasurementReport
 DirectEncoding
 o_BitstringChange
 o_SUFI_Handler
 px_KeySeqDefxxxxx
 AllUE
 tsc_SUFI_Ack
 tsc_DC_AMDPDU

tsc_P_Poll
tsc_E_Data
tsc_E_LI_AndE_Bit
tsc_HE_LI_AndE_Bit
tsc_DefaultCellId
tsc_AM_SN_Size
tsc_LI7_Padding
tsc_UE_IdTypeU_RNTI
tsc_UE_IdTypeC_RNTI
tsc_CT_LoCh3
tsc_DCCH_OnRACH_FDD
tsc_DCCH_OnFACH_FDD
tsc_ExpectedPayloadSize
tsc_DummyDL_DirectTransferMsg_CS
tsc_DummyDL_DirectTransferMsg_PS
tsc_DummyDL_DirectTransferLen
tsc_WaitNextRLC_Segment
tcv_ReceiveSigConnRelInd
tcv_StatusPDU
tcv_MAC_PDU
tcv_StatusMatchRes
tcv_DummyDL_DirectTransferMsg
tcv_MAC_Counter
RLC_TR_TestDataReq
CPHY_PRACH_Measurement_Report_IND
AMD_PDU
PiggyBackedSTATUS_PDU
MAC_PDU
MAC_PDU_RCV_STATUS
TxMAC
RxMAC
c_LenInd7AndE_Bit
c_LIs2_7BitLIs
cs_Ack
cs_SF_Ack
c_TrLogMapping_Rach1TransRB3
c_TrLogMapping_PchFach1TransRB3
cs_IntegrityProtectModify
car_DataIndHiPriNAS
cas_DataReqHiPriNAS
car_PRACH_Measurement_Report_IND
c_MAC_PDU_TCTF
cs_MAC_PDU_UE_Id
cs_MAC_PDU_Def
c_MAC_PDU_CT_DCH
cr_RRC_Status_MAC_NoInteg
cds_RRC_ConnSetupDCH_NoCapEnq
cds_RRC_ConnSetupFACH_NoCapEnq
cr_108_RRC_ConnRelCmpl
ts_InitDummyDL_Transfer
ts_ReceiveRRC_RLC_StatusPDU_FACH
ts_SendDLDirectTransfer
ts_MonitorUplinkSpecefiedTime
ts_RRC_PagType1_DefMAC
MAC_Default

2.3.2 ts_MM_SecurityOn

This table is based on that issued in MACv143 but modified as follows:

Reason for change:
ts_RRC_Security has fewer parameters.

Summary of change:
The number of parameters passed to ts_RRC_Security is now 6, was 7.
ts_MM_SecurityOn, line 1, in Behaviour Description, remove the second parameter (TRUE).

From:

Test Step Name		ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)			
Group		BasicM_MM_GMM_Steps/			
Objective		Start Cipherring if applicable			
Default		NAS_OtherwiseFail			
Comments		Cipherring is either generally applied or not. Starting takes effect only if cipherring is to be applied.			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		ts_RRC_Security(p_CellId, TRUE , tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

...

To:

Test Step Name		ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)			
Group		BasicM_MM_GMM_Steps/			
Objective		Start Cipherring if applicable			
Default		NAS_OtherwiseFail			
Comments		Cipherring is either generally applied or not. Starting takes effect only if cipherring is to be applied.			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

...

2.3.3 ts_MAC_GenericSetupProceduresToBGP6_2

This table is based on that issued in MACv143 but modified as follows:

Reason for change:
The used settings for "UE_Info" should not differ from the original configuration.

Summary of change:

Value for ASN.1 type " UE_Info" parameter inside Constraint Reference ca_CMAC_ReconfigInfo (line 17) is not correct. It is changed as shown below: from tcv_TmpCellInfo.uRNTI to OMIT.

From:

Test step Name	ts_MAC_GenericSetupProceduresToBGP6_2				
Group	Preambles/				
Objective	Initialise the system simulator, and perform the RRC connection establishment procedure defined in 3G TS 34.108 clause 7.4.2.1 to bring the UE into state BGP 6_2.				
Default	RRCDef1				
Comment	This preamble configures the system simulator for MAC testing, and then performs the Generic setup procedures as defined in 3G TS 34.108.				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReconfigureHiPriNAS_AsTransparent					
			
17		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfo(tsc_DefaultCellId, tsc_PRACH1, c_UE_Info(tcv_TmpCellInfo.uRNTI , tcv_TmpCellInfo.cRNTI), cb_TrChInfoRACH1, c_TrLogMapping_Rach1TransRB3, 0)		
			

To:

Test step Name	ts_MAC_GenericSetupProceduresToBGP6_2				
Group	Preambles/				
Objective	Initialise the system simulator, and perform the RRC connection establishment procedure defined in 3G TS 34.108 clause 7.4.2.1 to bring the UE into state BGP 6_2.				
Default	RRCDef1				
Comment	This preamble configures the system simulator for MAC testing, and then performs the Generic setup procedures as defined in 3G TS 34.108.				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReconfigureHiPriNAS_AsTransparent					
			
17		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfo(tsc_DefaultCellId, tsc_PRACH1, c_UE_Info(OMIT , tcv_TmpCellInfo.cRNTI), cb_TrChInfoRACH1, c_TrLogMapping_Rach1TransRB3, 0)		
			

2.3.4 ts_RRC_ConnEstForMAC_RecliTDirecTrans

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

- i) TTCN MACv143 ts_RRC_ConnEstForMAC_ReclniTDirecTrans contains two local tree errors stopping the test procedure in this test step.
- ii) TTCN MACv143 ts_RRC_ConnEstForMAC_ReclniTDirecTrans contains two logical error inside loop "Next1" and inside loop "Next2"

Summary of change:

- i) Correction of the detected errors in Test Case Variable qualifiers in ts_RRC_ConnEstForMAC_ReclniTDirecTrans as shown below:

Change:

Test Step Name		ts_RRC_ConnEstForMAC_ReclniTDirecTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
It_ReceiveRRC_ConnCmplAndPagRespOrServReq					
12		(tcv_MAC_Counter :=1)			
13		[(tcv_TmpCellInfo.cellConfig = cell_FACH_MAC_SRB_NoConn)]			
14	Rcv1	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti ,*))	(P)	

...

21		[(tcv_TmpCellInfo.cellConfig = cell_DCH_MAC_SRB_NoConn)]			
22	Rcv2	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti ,*))	(P)	

To:

Test Step Name		ts_RRC_ConnEstForMAC_ReclniTDirecTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

It_ReceiveRRC_ConnCmplAndPagRespOrServReq					
12		(tcv_MAC_Counter :=1)			
13		[(tcv_TmpCellInfo.cellConfig = cell_FACH_MAC_SRB)]			
14	Rcv1	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti , *))	(P)	

...

21		[(tcv_TmpCellInfo.cellConfig = cell_DCH_MAC_SRB)]			
22	Rcv2	AM ? RLC_AM_DATA_IND	car_RRC_ConnSetupCmpl (tsc_CellDedicated, tsc_RB2, cr_108_RRC_ConnSetupCmpl(tcv_RRC_Ti , *))	(P)	

Summary of changes:

- ii) Detected errors in ts_RRC_ConnEstForMAC_ReclniTDirecTrans are corrected as shown below. Inside loop Next1 the order of the lines 33,34,35,36 is changed. Inside loop Next2 the order of lines 41,42,43,44 is changed.

Change from:

Test Step Name		ts_RRC_ConnEstForMAC_ReclniTDirecTrans(p_CellId: INTEGER)			
Group		RRC_Steps/			
Objective		To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message			
Default		RRC_Def1			
Comments		<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

...

		It_ReceiveSegments_FACH			
32	Next1	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_FACH_MAC, c_MAC_PDU_TCTF(tsc_DCCH_OnRACH_FDD, ?))		
33		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_FACH_MAC, cs_MAC_PDU_Send_STATUS_Def(cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter), 31)))		
34		START t_WaitMS (tsc_WaitNextRLC_Segment)			1
35		+It_Updatecounter			
36		GOTO Next1			
37		? TIMEOUT t_WaitMS			
38		[tcv_MAC_Counter = px_NumOfSegInPagResOrServReq]		(P)	
39		[TRUE]		(F)	
		It_ReceiveSegments_DCH			

40	Next2	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_DCH(tsc_CT_LoCh3, ?))		
41		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_RCV_STATUS_DCH(tsc_CT_LoCh3, cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter),31)))		
42		START t_WaitMS (tsc_WaitNextRLC_Segment)			
43		+ lt_Updatecounter			
44		GOTO Next2			

To:

Test Step Name	ts_RRC_ConnEstForMAC_ReclniTDirectTrans(p_CellId: INTEGER)				
Group	RRC_Steps/				
Objective	To execute the RRC connection establishment Procedure and to receive the Service request or Paging response NAS message				
Default	RRC_Def1				
Comments	<p>This test step is identical to the test step ts_RRC_ConnEst except that the RRC connection setup message has been modified to enable Timer_Status_Periodic for RB3. This timer is used for MAC testing such that the UE will provide STATUS reports regularly even if it has not received any RLC PDUs (because they have been discarded by the MAC layer due to invalid MAC headers).</p> <p>The generic Step to establish RRC Connection and bring UE to CELL_FACH or CELL_DCH state. In this Step , 4Signalling Radio Bearers with 3.4kbps DL & UL is setup (RB# 1, 2, 3,4)</p>				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

...

28		GOTO Rcv2			
29	ERR	TRUE		|	error
		lt_Updatecounter			
30		[tcv_MAC_Counter < px_NumOfSegInPagResOrServReq]			
31		(tcv_MAC_Counter := tcv_MAC_Counter+1)			
		lt_ReceiveSegments_FACH			
32	Next1	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_FACH_MAC, c_MAC_PDU_TCTF(tsc_DCCH_OnRACH_FDD, ?))		
33		+lt_Updatecounter			
34		START t_WaitMS (tsc_WaitNextRLC_Segment)			
35		GOTO Next1			
36		TM ! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_FACH_MAC, cs_MAC_PDU_Send_STATUS_Def(cs_StatusAndPad(cs_SF_Ack(tcv_MAC_Counter), 31)))		
37		? TIMEOUT t_WaitMS			
38		[tcv_MAC_Counter = px_NumOfSegInPagResOrServReq]			(P)
39		[TRUE]			(F)
		lt_ReceiveSegments_DCH			
40	Next2	TM ? RxMAC CANCEL t_WaitMS	car_DataIndHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_DCH(tsc_CT_LoCh3, ?))		
41		+lt_Updatecounter			

42		START t_WaitMS (tsc_WaitNextRLC_Segment)			START t_WaitMS (tsc_WaitN extRLC_Se gment)
43		GOTO Next2			
44		TM! TxMAC	cas_DataReqHiPriNAS(tsc_RB_DCCH_DCH_MAC, c_MAC_PDU_CT_RCV_STATUS_DCH(tsc_CT_LoCh3, cs_StatusAndPad(cs_SF_Ack(tcvc_MAC_Counter),31)))		
		...			

2.3.5 RLC_STATUS_PDU

Reason for change:
This item is used as a PDU type.

Summary of change:

- i) The Structured Type Definition RLC_STATUS_PDU is removed.
- ii) The PDU Type Definition RLC_STATUS_PDU is added, with the definition details as before.

2.3.6 cs_MAC_PDU_Send_STATUS_Def

Reason for change:
The constraint should use MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:
The following constraint is imposed on MAC_PDU rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	cs_MAC_PDU_Send_STATUS_Def(p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to receive MAC PDU's on DCCH 3 mapped to RACH using the default field values. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving. Ref 3G TS 25.321 clause 9.1.2 Parameters

To:

Constraint Name	cs_MAC_PDU_Send_STATUS_Def(p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to receive MAC PDU's on DCCH 3 mapped to RACH using the default field values. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving. Ref 3G TS 25.321 clause 9.1.2 Parameters

2.3.7 cr_MAC_PDU_RCV_STATUS_TCTF

Reason for change:

The constraint should use MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:

The following constraint is imposed on MAC_PDU (with appropriate change to the parameter list) rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	cr_MAC_PDU_RCV_STATUS_TCTF(p_TCTF: TCTF; p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send MAC PDU's with various values for the TCTF field. Ref 3G TS 25.321 clause 9.1.2 The same constraint can be used for uplink and downlink, since the appropriate TCTF field can be provided as a parameter, and all other fields are the same.

To:

Constraint Name	cr_MAC_PDU_RCV_STATUS_TCTF(p_TCTF: TCTF; p_Data: STATUS_PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	This PDU is used to send MAC PDU's with various values for the TCTF field. Ref 3G TS 25.321 clause 9.1.2 The same constraint can be used for uplink and downlink, since the appropriate TCTF field can be provided as a parameter, and all other fields are the same.

2.3.8 c_MAC_PDU_CT_RCV_STATUS_DCH

Reason for change:

This constraint should apply to PDUs of type MAC_PDU rather than MAC_PDU_RCV_STATUS.

Summary of change:

The following constraint is imposed on PDU-type MAC_PDU (with appropriate change to the parameter list) rather than MAC_PDU_RCV_STATUS :

From:

Constraint Name	c_MAC_PDU_CT_RCV_STATUS_DCH(p_CT_Field: CT_Field; p_Data: RLC_STATUS_PDU)
PDU Type	MAC_PDU_RCV_STATUS
Derivation Path	
Encoding Rule Name	
Encoding Variation	

Comment	<p>This PDU is used to send a MAC PDU on a DCCH mapped to FACH with the given value for the CT field. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving.</p> <p>Ref 3G TS 25.321 clause 9.1.2</p> <p>Parameters p_CT_Field The CT field value to be used in the transmitted MAC PDU.</p> <p>p_Data The MAC SDU to be used in the transmitted MAC PDU. NOTE: The user of this constraint is responsible for ensuring that the MAC header + data is the correct length to fit exactly in one transport block.</p>
---------	---

To:

Constraint Name	c_MAC_PDU_CT_RCV_STATUS_DCH(p_CT_Field: CT_Field; p_Data: PDU)
PDU Type	MAC_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	<p>This PDU is used to send a MAC PDU on a DCCH mapped to FACH with the given value for the CT field. Separate constraints are provided for uplink and downlink since the TCTF field value is different for sending and receiving.</p> <p>Ref 3G TS 25.321 clause 9.1.2</p> <p>Parameters p_CT_Field The CT field value to be used in the transmitted MAC PDU.</p> <p>p_Data The MAC SDU to be used in the transmitted MAC PDU. NOTE: The user of this constraint is responsible for ensuring that the MAC header + data is the correct length to fit exactly in one transport block.</p>

2.3.9 cr_StatusAnyPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

This item is used as a TTCN PDU Constraint Declaration.

Summary of change:

- i) The Structured Type constraint declaration cr_StatusAnyPad is removed.
- ii) TTCN PDU Constraint Declaration cr_StatusAnyPad is added, with the definition details as before except the used type, also the PDU-Type is changed to STATUS_PDU.
- iii) Field Name changes

From:

Constraint Name	cr_StatusAnyPad		
Structured Type	RLC_STATUS_PDU		
Derivation Path			
Encoding Variation			
Comment	<p>This constraint is used to receive an AM STATUS PDU containing the given SUFI list. Any padding included is ignored.</p> <p>Parameters: p_SuperFields: The SUFI list to be received</p>		
Element Name	Element Value	Element Encoding	Comments
dC_Field	tsc_DC_ControlPDU		
type	tsc_PDU_TypeStatus		
superFields	-		
superFieldsRec	?		4

padding	*		
Detailed Comments			

To:

Constraint Name	cr_StatusAnyPad		
Structured Type	STATUS_PDU		
Derivation Path			
Encoding Variation			
Comment	<p>This constraint is used to receive an AM STATUS PDU containing the given SUFI list. Any padding included is ignored.</p> <p>Parameters: p_SuperFields: The SUFI list to be received</p>		
Element Name	Element Value	Element Encoding	Comments
dC_Field	tsc_DC_ControlPDU		
type	tsc_PDU_TypeStatus		
superFieldsTx	-		
superFieldsAndPadRx	?		4
paddingTx	*		
Detailed Comments			

2.3.10 cs_StatusAndPad

Reason for change:

This item is used as a TTCN PDU Constraint Declaration.

Summary of change:

- i) The Structured Type constraint declaration cs_StatusAndPad is removed.
- ii) TTCN PDU Constraint Declaration cs_StatusAndPad is added, with the definition details as before.

From:

Constraint Name	cs_StatusAndPad		
Structured Type	RLC_STATUS_PDU		
Derivation Path			
Encoding Variation			
Comment	<p>This constraint is used to send an AM STATUS PDU containing the given superfields.</p> <p>Parameters: p_SuperFields: The super-fields to be included in the STATUS PDU.</p> <p>p_PaddingSizeHalfOctets: The number of half octets to be added at the end of the PDU. In general, this parameter will contain the value $(2 * tcv_PU_Size) - (p_SuperFields \text{ size} + 1)$</p> <p>NOTE: SUFI list size = p_Superfields size + 1 half octet (for D/C field and Type)</p>		

To:

Constraint Name	cs_StatusAndPad		
PDU Type	RLC_STATUS_PDU		
Derivation Path			
Encoding Variation			
Comment	<p>This constraint is used to send an AM STATUS PDU containing the given superfields.</p> <p>Parameters: p_SuperFields: The super-fields to be included in the STATUS PDU.</p> <p>p_PaddingSizeHalfOctets:</p>		

	The number of half octets to be added at the end of the PDU. In general, this parameter will contain the value (2 * tcv_PU_Size) - (p_SuperFields size + 1) NOTE: SUFI list size = p_Superfields size + 1 half octet (for D/C field and Type).
--	---

2.3.11 AMD_PDU

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

There is a conflict in the definitions of AMD_PDU between MAC and RLC suites – padding is of type Padding (HEXSTRING) in RLC suite and of type RLC_Padding (BITSTRING) in MAC suite.

Summary of change:

The PDU from the MAC suite has been renamed from AMD_PDU to MAC_AMD_PDU.

From:

PDU Name	AMD_PDU
PCO Type	DSAP
Encoding Rule Name	
Encoding Variation	
Comment	Acknowledged mode RLC PDU with 7 bit length indicators. Ref 3G TS 25.322 clause 9.2.1.4

To:

PDU Name	MAC_AMD_PDU
PCO Type	DSAP
Encoding Rule Name	
Encoding Variation	
Comment	Acknowledged mode RLC PDU with 7 bit length indicators. Ref 3G TS 25.322 clause 9.2.1.4

2.3.12 cs_AMD_LIsAndPad

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

AMD_PDU has been renamed MAC_AMD_PDU for the MAC suite.

Summary of change:

The PDU Type has changed from AMD_PDU to MAC_AMD_PDU.

From:

Constraint Name	cs_AMD_LIsAndPad(p_SN: INTEGER;p_Poll: PollingBit; p_LIs: LenInds; p_Data:AM_Data;p_NumofBitsPadding: INTEGER)
PDU Type	AMD_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	

Comment	<p>This constraint is used to send an AM PDU containing data and a length indicator group, and padding.</p> <p>Parameters:</p> <p>p_SN: An integer containing the next sequence number to be transmitted. This parameter is used in a call to INT_TO_BIT, so a value must be provided.</p> <p>p_Poll: The value of the Poll bit. This parameter must be one of the following values: tsc_P_Poll, tsc_P_NoPoll.</p> <p>p_LIs: The length indicator group to be used in the PDU. This field must contain at least one LI.</p> <p>p_Data: The data to be included in the PDU.</p> <p>p_NumHalfOctetsPadding: The number of half octets of padding to be included at the end of the PDU. It is the callers responsibility to ensure that the LI group size + the data size + the padding size is exactly equal to the current PU size.</p>
---------	--

To:

Constraint Name	cs_AMD_LIsAndPad(p_SN: INTEGER;p_Poll: PollingBit; p_LIs: LenInds; p_Data:AM_Data;p_NumofBitsPadding: INTEGER)
PDU Type	MAC_AMD_PDU
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	<p>This constraint is used to send an AM PDU containing data and a length indicator group, and padding.</p> <p>Parameters:</p> <p>p_SN: An integer containing the next sequence number to be transmitted. This parameter is used in a call to INT_TO_BIT, so a value must be provided.</p> <p>p_Poll: The value of the Poll bit. This parameter must be one of the following values: tsc_P_Poll, tsc_P_NoPoll.</p> <p>p_LIs: The length indicator group to be used in the PDU. This field must contain at least one LI.</p> <p>p_Data: The data to be included in the PDU.</p> <p>p_NumHalfOctetsPadding: The number of half octets of padding to be included at the end of the PDU. It is the callers responsibility to ensure that the LI group size + the data size + the padding size is exactly equal to the current PU size.</p>

2.3.13 SUFI_Params

This table is replaced by the object SUFI_Params taken from RLCv310 and is un-modified.

2.3.14 cr_SUFI_Params

This table is renamed to cr_SUFI_Params, the object cr_SUFI_Params is equal to the version inside RLCv310.

2.3.15 tc_7_1_1_5

This table is based on that issued in MACv143 but modified as follows:

Reason for change:

The definition of SUFI_Params has changed and it is now preferred to use fully parameterised SUFI_Params.

Summary of changes:

- i) Line 9 of the test case changes from using cr_SUFI_Params_Ack to cr_SUFI_Params, which is fully parameterised.

From:

Test case Name	tc_7_1_1_5				
Group	MAC/MappingBetweenLoChAndTrCh/				
Purpose	1. To verify that the UE discards PDUs with reserved or incorrect values in C/T field. 2. To verify that the TCTF field, C/T field, UE-Id type and UE-Id field are correctly applied when a DTCH or DCCH is mapped to the RACH/FACH.				
Configuration					
Default	MAC_Default				
Comment	Reference(s) TS 25.321 clauses 9.2.1 and 9.2.1.1 c).				
Selection Ref	AllUE				
Description	DTCH or DCCH mapped to RACH/FACH / Invalid C/T Field				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
...					
9		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params_Ack (INT_TO_BIT (0,12) , INT_TO_BIT (0,12)))			5

To:

Test case Name	tc_7_1_1_5				
Group	MAC/MappingBetweenLoChAndTrCh/				
Purpose	1. To verify that the UE discards PDUs with reserved or incorrect values in C/T field. 2. To verify that the TCTF field, C/T field, UE-Id type and UE-Id field are correctly applied when a DTCH or DCCH is mapped to the RACH/FACH.				
Configuration					
Default	MAC_Default				
Comment	Reference(s) TS 25.321 clauses 9.2.1 and 9.2.1.1 c).				
Selection Ref	AllUE				
Description	DTCH or DCCH mapped to RACH/FACH / Invalid C/T Field				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
...					
9		+ts_ReceiveRRC_RLC_StatusPDU_FACH (tsc_RB_DCCH_FACH_MAC, cr_SUFI_Params (INT_TO_BIT (0,12) , INT_TO_BIT (0,12), 2, 2))			5

2.3.16 px_NumOfSegInPagResOrServReq

Reason for change:

The conditions of the segmentation require that this PIXIT value is set to 2, irrespective of the handset characteristics.

Summary of change:

- i) The value of PIXIT item px_NumOfSegInPagResOrServReq shall be set to 2 within the PICS/PIXIT file.

CHANGE REQUEST

⌘ **34.123-3 CR 037** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.2.3.15		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 15/04/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.2.3.15 to RRCv310		
Summary of change:	⌘ - 0 table(s) deleted from RRCv310 - 15 table(s) modified in RRCv310 - 13 table(s) added from RRCv143 of which - 1 table(s) have been modified - 6 new table(s) added For more details see below.		
Consequences if not approved:	⌘ Test case 8.2.3.15 will not be added		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title	Introducing test case 8.2.3.15 required to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce TC 8.2.3.15 to RRCv310. With these changes applied the test case can be demonstrated to run on a single UE implementation. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 (V5.2.0) clause 8.2.3.15

2 Changes required for test-case 8.2.3.15

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change

The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section 2.4.1.2.

Summary of Change

Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 c_TrChInfoUL_336_148Reason for change

Transport channel ordering problem. Same problem as described in the approved CR T1S030234 for tc_8_2_1_1.

Summary of Change

Re-order the transport channel list as specified.

Change ASN.1 Type Constraint Declaration from:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }, { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }, { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

2.2.3 cr_ActPDP_ContextReqFACH_MO

Reason for change

To provide a means for specifying the expected Quality of Service (QoS) in an Activate PDP Context Request constraint.

Summary of Change

Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqFACH_MO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_CellFACH_lv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqFACH_MO(p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

2.2.4 cr_AttachReq

Reason for change

The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST message.

Summary of Change

Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.5 cr_QoS_InteractiveMO_CellFACH_Iv

Reason for change:

1. There are a number of discrepancies between quality of service described in the receive constraint and the quality of service specified in the AT commands sent to the upper tester (see 2.2.7 and 2.2.8).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. The traffic handling priority depends on the traffic class and traffic handling priority used in the AT command sent to the upper tester.
4. Some of the comments are wrong.

Summary of Change

1. Update cr_QoS_InteractiveMO_CellFACH_Iv to reflect the quality of service specified in the AT commands sent to the upper tester.
2. Allow dlyClass to be set by parameter.
3. Allow trafficHandPro to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv (p_trafficClass : B3 ; p_dlyClass : B3 ; p_trafficHandPro : B2)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The expected QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the SS by the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	Interactive=traffic class, Background=4
	reliabilityClass	'100'B	Unacknowledged GTP, LLC and RLC, protected data
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed precedence
	spare2	'000'B	

meanThroughput	'11111'B		best effort
trafficClass	p_trafficClass		Interactive='011'B, Background='100'B
deliveryOrder	'01'B		With delivery order
deliveryErrorSDU	'010'B		Erroneous SDUs are delivered
maxSDUSize	'20'O		320 bits
maxBitRateUplink	'40'O		64 kbps
maxBitRateDnlink	'40'O		64 kbps
residualBER	'1001'B		$6 \times 10^E (-8)$
sduErrRatio	'0011'B		$1 \times 10^E (-3)$
transDly	?		The transfer delay is ignored if interactive or background class.
trafficHandpro	p_trafficHandPro		Interactive=value set in AT command. Background=? (value is ignored)
bitRateUplink	?		The guaranteed bit is ignored if interactive or background class
bitRateDnlink	?		The guaranteed bit is ignored if interactive or background class

2.2.6 cs_QoS_InteractiveMT_Iv

Reason for change

1. There are a number of discrepancies between quality of service described in this constraint and the quality of service requested by the UE (see 2.2.5).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. Some of the comments are wrong.

Summary of Change

1. Update the cs_QoS_InteractiveMT_CellFACH_Iv constraint to send the a quality of service that matches the request .
2. Allow dlyClass to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw		
	Element Name	Element Value	Comments
	length	'0D'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_Iv (p_trafficClass : B3 ; p_dlyClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The negotiated QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the UE by the OS		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	
	reliabilityClass	'100'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive='011'B, background='100'B
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'40'O	64 kbps

maxBitRateDnlink	400		64 kbps
residualBER	'1001'B		6×10^{-8}
sduErrRatio	'0011'B		1×10^{-3}
transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
bitRateUplink	000		The guaranteed bit rate is ignored if interactive or background class
bitRateDnlink	000		This will be neglected by UE as the class is interactive

2.2.7 ts_AT_OrgPS_Call

Reason for change:

The are a number of problems with the AT commands issued by this test step:-

1. The activate PDP context command (CGACT) uses a different context ID to that of the other AT commands used.
2. The minimum quality of service command (CGEQMIN) used has too many fields (TS 27.007).
3. The minimum quality of service command (CGEQMIN) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
4. The minimum quality of service command (CGEQMIN) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,,1,320,""1E3""""6E8""",1,,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,,1,320,""1E3""""6E8""",1,,<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

2.2.8 ts_AT_SetQoS

Reason for change

There are a number of problems with the AT commands issued by this test step:-

1. The quality of service command (CGEQREQ) used has too many fields (TS 27.007).
2. The quality of service command (CGEQREQ) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
3. The quality of service command (CGEQREQ) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64, 1,320,""1E3""""6E8""",1,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, , , 1, 320, ""1E3""""6E8""",1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.9 ts_CRLC_UL_CipherCfg_RAB

Reason for change

The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change

Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[px_CipheringOnOff]			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		[NOT (px_CipheringOnOff)]			

2.2.10 ts_GMM_Authentication

Reason for change

The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint `c_AuthRspExtAny_tv`. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called `c_AuthCiphRspExtAny_tv`, detailed in section 2.4.1.1, has been added with the correct tag value and needs to be referenced instead.

Summary of Change

Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(			Verify that the

		tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			received Authentication Response paramters match expected response.
--	--	---	--	--	---

2.2.11 ts_GMM_IdleUpdated

Reason for change

The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change

Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate(p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+It_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.12 ts_ReceiveActivatePDP_Accept_DCH

Reason for change

1. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
2. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Reason for change

3. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
4. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_DCH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_DCH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('011'B, '011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('100'B, '100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('011'B, '011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('100'B, '100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.13 ts_ReceiveActivatePDP_Accept_FACH

Reason for change

5. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
6. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3,		

			cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.14 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change

The delay class, traffic class and traffic handling priority IEs in the received Activate PDP context request depend on the AT command issued to the upper tester, which in turn is controlled by various test suite parameters.

Summary of Change

1. Call a test step to determine the appropriate delay class, traffic class and traffic handling priority.
2. Pass these values into the modified quality of service receive constraint.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
4		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO))		
5		+ ts_SetTI_Rsp (tcv_TI_R)			
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		+ts_DetermineDlyClassAndTrafficClassAndTrafficH andPro			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		+ts_DetermineDlyClassAndTrafficClassAndTrafficH andPro			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
5		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO(cr_QoS_InteractiveOrBackgroundMO_Iv(tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro)))		
6		+ ts_SetTI_Rsp (tcv_TI_R)			
7		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv(tcv_TrafficClass, tcv_DlyClass,		

		Value), 8))	tcv_TrafficHandPro))		

2.2.15 ts_SS_Rel

Reason for change

The test step contain in correct qualifier logic to release non-existent radio bearers RB20 & RB_BCCH_FACH. (i.e. RB20 & RB_BCCH_FACH has already been released prior to the entry of this test step)

Summary of Change

Change the test step behaviour line as follows:

Change test step from:

Test Step Name		Ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		[(tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH) OR (tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
12		+ts_CRLC_Rel (tsc_CellDedicated, tsc_RB20)			
13		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			
...

To:

Test Step Name		Ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		[(tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH)]			
12		+ts_CRLC_Rel (tsc_CellDedicated, tsc_RB20)			
13		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			
14		+ It_RelSRB1_4			
15		+It_ReleaseCommonCh			
16		+ It_Release_BCCH			
17		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			
18		[(tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
19		+ It_RelSRB1_4			
20		+It_ReleaseCommonCh			
21		+ It_Release_BCCH			
22		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			
...

2.3 Tables added to RRCv310

None

2.4 Tables added from RRCv143

Type	Name
Test Suite Parameter Declarations	px_KeySeqDefxxxx
Test Suite Constant Declaration	tsc_DPCCH_PowerOffset tsc_DL_DPCH1_PrimScrC_150
Test Case Variable Declarations	tcv_KeySeq
ASN.1 Type Constraint Declarations	c_DCH_148_TFS c_DCH_148_TFS_UE c_RB_InfoReconfigList20
ASN.1 PDU Constraint Declarations	cr_108_RRC_ConnRelCmpl cs_RRC_RAB_ReconfigFACH_PS cr_108_RB_ReconfigFail
ASN.1 ASP Constraint Declarations	car_RB_ReconfFail
Test Cases RRC_ConnRelease	tc_8_2_3_15
Test Steps RRC_Preambles	pr_GotoState6_11_MO

2.4.1 New tables added

2.4.1.1 c_AuthCiphRspExtAny

Reason for change

The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem.

Summary of Change

Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny			
Structured Type	AuthRspExt			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	iei	'00101001'B		
	iel	?		
	rES	?		

2.4.1.2 px_NMO

Reason for change

Provision of a means of selecting the Network Mode of Operation from the PICS/Pixit file. Use of this new parameter declaration is detailed in section 2.2.1.

Summary of Change

Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.4.1.3 tcv_DlyClass

Reason for change

The value of delay class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of delay class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_DlyClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.4.1.4 tcv_TrafficClassReason for change

The value of traffic class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.4.1.5 tcv_TrafficHandProReason for change

The value of traffic handling priority (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic handling priority is used in several locations a test step has been written (see 2.4.1.6) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficHandlingPriority
Type	B2
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.4.1.6 ts_DetermineDlyClassAndTrafficClassAndTrafficHandProReason for change

To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.

Summary of Change

Table added to suite.

Add test step:

Test Step Name		ts_DetermineDlyClassAndTrafficClass			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B, tcv_TrafficHandPro := '??'B)			
5		[TRUE]		!	

2.5 Modifications to tables added from RRCv143

2.5.1 tc_8_2_3_15

Reason for change

The test case contains missing mandatory information element which cause the test case to fail

Summary of Change

Change the test case behaviour as follows:

Change test case from:

Test Case Name		tc_8_2_3_15			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
13		+ ts_SetCellCfg (tsc_CellA, cell_FACH)			
14		AM ! RLC_AM_DATA_REQ	as_RB_Reconfigure(tsc_CellDedicated, tsc_RB2, cs_RRC_RAB_ReconfigureFACH_PS (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_CellInfoA.frequencyInfo, tcv_CellInfoA.priSrmCode, '00000101'B, tcv_CN_Domain, OMIT))		
15		AM ? RLC_AM_DATA_IND	car_RB_ReconfigureFail(tsc_CellDedicated, rB_Identity :tsc_RB2, cr_108_RB_ReconfigureFail (tcv_RRC_Ti, invalidConfiguration : NULL)		
16		+ ts_C2_CheckCellFACH (tsc_CellA)			
17

To:

Test Case Name		tc_8_2_3_15			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
13		+ ts_SetCellCfg (tsc_CellA, cell_FACH)			
14		AM ! RLC_AM_DATA_REQ	as_RB_Reconfigure(tsc_CellDedicated, tsc_RB2, cs_RRC_RAB_ReconfigureFACH_PS (tcv_CellIndInfo.dl_IntegrityCheckInfo,		

			tcv_RRC_Ti, tcv_CellInfoA.freq uencyInfo, tcv_CellInfoA.priS crmCode, '00000101'B, tcv_CN_Domain, 0000'B))		
15		AM ? RLC_AM_DATA_IND	car_RB_ReconfF ail(tsc_CellDedicat ed, rB_Identity :tsc_RB2, cr_108_RB_Reco nfigFail (tcv_RRC_Ti, invalidConfigurati on : NULL)		
16		+ ts_C2_CheckCellFACH (tsc_CellA)			
17	....	....	....	....	....

CHANGE REQUEST

⌘ **34.123-3 CR 038** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.2.3.18		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 17/04/2003
Category:	⌘ F	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.2.3.18 to RRCv310		
Summary of change:	⌘ - 0 table(s) deleted from RRCv310 - 15 table(s) modified in RRCv310 - 5 table(s) added from RRCv143 - 6 new table(s) added For more details see below.		
Consequences if not approved:	⌘ Test case 8.2.3.18 will not be added		

Clauses affected:	⌘ N/A										
Other specs Affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px; text-align: center;">X</td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px; text-align: center;">X</td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px; text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Seoul, Korea

12-15 May 2003

Title	Introducing test case 8.2.3.18 required to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed introduce test case 8.2.3.18 to RRCv310 by using RRCv143 as the primary source of the new tables and applying only essential fixes to the TTCN.

2 Changes required for test-case 8.2.3.18

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change

The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section 2.3.2.2.

Summary of Change

Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 c_TrChInfoUL_336_148Reason for change

Transport channel ordering problem. Same problem as described in the approved CR T1S030234 for tc_8_2_1_1.

Summary of Change

Re-order the transport channel list as specified.

Change ASN.1 Type Constraint Declaration from:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }, { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }, { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

2.2.3 cr_ActPDP_ContextReqFACH_MO

Reason for change

To provide a means for specifying the expected Quality of Service (QoS) in an Activate PDP Context Request constraint.

Summary of Change

Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqFACH_MO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_CellFACH_lv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqFACH_MO(p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

2.2.4 cr_AttachReq

Reason for change

The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST message.

Summary of Change

Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.5 cr_QoS_InteractiveMO_CellFACH_Iv

Reason for change:

1. There are a number of discrepancies between quality of service described in the receive constraint and the quality of service specified in the AT commands sent to the upper tester (see 1.1.1 and 1.1.1).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. The traffic handling priority depends on the traffic class and traffic handling priority used in the AT command sent to the upper tester.
4. Some of the comments are wrong.

Summary of Change

1. Update cr_QoS_InteractiveMO_CellFACH_Iv to reflect the quality of service specified in the AT commands sent to the upper tester.
2. Allow dlyClass to be set by parameter.
3. Allow trafficHandPro to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv (p_trafficClass : B3 ; p_dlyClass : B3 ; p_trafficHandPro : B2)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The expected QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the SS by the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	Interactive=traffic class, Background=4
	reliabilityClass	'100'B	Unacknowledged GTP, LLC and RLC, protected data
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed precedence
	spare2	'000'B	

meanThroughput	'11111'B		best effort
trafficClass	p_trafficClass		Interactive='011'B, Background='100'B
deliveryOrder	'01'B		With delivery order
deliveryErrorSDU	'010'B		Erroneous SDUs are delivered
maxSDUSize	'20'O		320 bits
maxBitRateUplink	'40'O		64 kbps
maxBitRateDnlink	'40'O		64 kbps
residualBER	'1001'B		$6 \times 10^E (-8)$
sduErrRatio	'0011'B		$1 \times 10^E (-3)$
transDly	?		The transfer delay is ignored if interactive or background class.
trafficHandpro	p_trafficHandPro		Interactive=value set in AT command. Background=? (value is ignored)
bitRateUplink	?		The guaranteed bit is ignored if interactive or background class
bitRateDnlink	?		The guaranteed bit is ignored if interactive or background class

2.2.6 cs_QoS_InteractiveMT_Iv

Reason for change

1. There are a number of discrepancies between quality of service described in this constraint and the quality of service requested by the UE (see 2.2.5).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. Some of the comments are wrong.

Summary of Change

1. Update the cs_QoS_InteractiveMT_CellFACH_Iv constraint to send the a quality of service that matches the request .
2. Allow dlyClass to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw		
	Element Name	Element Value	Comments
	length	'0D'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_Iv (p_trafficClass : B3 ; p_dlyClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The negotiated QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the UE by the OS		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	
	reliabilityClass	'100'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive='011'B, background='100'B
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'40'O	64 kbps

maxBitRateDnlink	400		64 kbps
residualBER	'1001'B		6×10^{-8}
sduErrRatio	'0011'B		1×10^{-3}
transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
bitRateUplink	000		The guaranteed bit rate is ignored if interactive or background class
bitRateDnlink	000		This will be neglected by UE as the class is interactive

2.2.7 ts_AT_OrgPS_Call

Reason for change:

The are a number of problems with the AT commands issued by this test step:-

1. The activate PDP context command (CGACT) uses a different context ID to that of the other AT commands used.
2. The minimum quality of service command (CGEQMIN) used has too many fields (TS 27.007).
3. The minimum quality of service command (CGEQMIN) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
4. The minimum quality of service command (CGEQMIN) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1,1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,,,1,320,""1E3""""6E8""",1,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,,,1,320,""1E3""""6E8""",1,3<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

2.2.8 ts_AT_SetQoS

Reason for change

There are a number of problems with the AT commands issued by this test step:-

1. The quality of service command (CGEQREQ) used has too many fields (TS 27.007).
2. The quality of service command (CGEQREQ) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
3. The quality of service command (CGEQREQ) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64, 1,320,""1E3""""6E8""",1,,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, , , 1, 320, ""1E3""""6E8""",1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.9 ts_CRLC_UL_CipherCfg_RAB

Reason for change

The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change

Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[px_CipheringOnOff]			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		[NOT (px_CipheringOnOff)]			

2.2.10 ts_GMM_Authentication

Reason for change

The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint `c_AuthRspExtAny_tv`. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called `c_AuthCiphRspExtAny_tv`, detailed in section 2.3.2.1, has been added with the correct tag value and needs to be referenced instead.

Summary of Change

Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(			Verify that the

		tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			received Authentication Response paramters match expected response.
--	--	---	--	--	---

2.2.11 ts_GMM_IdleUpdated

Reason for change

The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change

Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate(p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+It_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.12 ts_ReceiveActivatePDP_Accept_DCH

Reason for change

1. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
2. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Reason for change

3. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
4. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_DCH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_DCH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('011'B, '011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('100'B, '100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('011'B, '011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('100'B, '100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.13 ts_ReceiveActivatePDP_Accept_FACH

Reason for change

5. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
6. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3,		

			cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.14 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change

The delay class, traffic class and traffic handling priority IEs in the received Activate PDP context request depend on the AT command issued to the upper tester, which in turn is controlled by various test suite parameters.

Summary of Change

1. Call a test step to determine the appropriate delay class, traffic class and traffic handling priority.
2. Pass these values into the modified quality of service receive constraint.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
4		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO))		
5		+ ts_SetTI_Rsp (tcv_TI_R)			
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		+ts_DetermineDlyClassAndTrafficClassAndTrafficH andPro			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		+ts_DetermineDlyClassAndTrafficClassAndTrafficH andPro			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
5		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO(cr_QoS_InteractiveOrBackgroundMO_Iv(tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro)))		
6		+ ts_SetTI_Rsp (tcv_TI_R)			
7		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv(tcv_TrafficClass, tcv_DlyClass,		

		Value), 8))	tcv_TrafficHandPro))		

2.2.15 ts_SS_Rel

Reason for change

The test step contain in correct qualifier logic to release non-existent radio bearers RB20 & RB_BCCH_FACH. (i.e. RB20 & RB_BCCH_FACH has already been released prior to the entry of this test step)

Summary of Change

Change the test step behaviour line as follows:

Change test step from:

Test Step Name		Ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		[(tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH) OR (tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
12		+ts_CRLC_Rel (tsc_CellDedicated, tsc_RB20)			
13		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			
...

To:

Test Step Name		Ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		[(tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH)]			
12		+ts_CRLC_Rel (tsc_CellDedicated, tsc_RB20)			
13		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			
14		+ It_RelSRB1_4			
15		+It_ReleaseCommonCh			
16		+ It_Release_BCCH			
17		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			
18		[(tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
19		+ It_RelSRB1_4			
20		+It_ReleaseCommonCh			
21		+ It_Release_BCCH			
22		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			
...

2.3 Tables added to RRCv310

2.3.1 Tables added from RRCv143 – No changes necessary

Type	Name
Test Suite Parameter Declarations	px_KeySeqDefxxxx
Test Suite Constant Declaration	tsc_DPCCH_PowerOffset
Test Case Variable Declarations	tcv_KeySeq
ASN.1 Type Constraint Declarations	
ASN.1 PDU Constraint Declarations	
ASN.1 ASP Constraint Declarations	
Test Cases	
RRC_RB_Release	tc_8_2_3_18
Test Steps	
RRCM_GenericAnnexC	ts_C4_CheckCellPCH

2.3.2 Other tables added

2.3.2.1 c_AuthCiphRspExtAny

This table is not based on one in any existing ATS.

Reason for change

The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem.

Summary of Change

Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny		
Structured Type	AuthRspExt		
Derivation Path			
Encoding Variation			
Comments			
	Element Name	Element Value	Element Encoding
	iei	'00101001'B	
	iel	?	
	RES	?	

2.3.2.2 px_NMO

This table is not based on one in any existing ATS.

Reason for change

Provision of a means of selecting the Network Mode of Operation from the PICS/Pixit file. Use of this new parameter declaration is detailed in section 2.2.1.

Summary of Change

Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.3.2.3 tcv_DlyClass

This table is not based on one in any existing ATS.

Reason for change

The value of delay class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of delay class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_DlyClass
Type	B3

Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.4 tcv_TrafficClass

This table is not based on one in any existing ATS.

Reason for change

The value of traffic class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.5 tcv_TrafficHandPro

This table is not based on one in any existing ATS.

Reason for change

The value of traffic handling priority (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic handling priority is used in several locations a test step has been written (see 2.3.2.6) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficHandlingPriority
Type	B2
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.6 ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro

This table is not based on one in any existing ATS.

Reason for change

To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.

Summary of Change

Table added to suite.

Add test step:

Test Step Name		ts_DetermineDlyClassAndTrafficClass			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B,			

		tcv_TrafficHandPro := '??'B)			
5		[TRUE]		1	

CHANGE REQUEST

⌘ **34.123-3 CR 039** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.2.3.19		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 22/04/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.2.3.19 to RRCv310
Summary of change:	⌘ - 0 table(s) deleted from RRCv310 - 17 table(s) modified in RRCv310 - 5 table(s) added from RRCv143 - 6 new table(s) added For more details see below.
Consequences if not approved:	⌘ Test case 8.2.3.19 will not be added

Clauses affected:	⌘ N/A										
Other specs Affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N		X		X		X		
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Seoul, Korea

12-15 May 2003

Title	Introducing test case 8.2.3.19 required to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed introduce test case 8.2.3.19 to RRCv310 by using RRCv143 as the primary source of the new tables and applying only essential fixes to the TTCN.

2 Changes required for test-case 8.2.3.19

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change

The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section 2.3.2.2.

Summary of Change

Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 c_TrChInfoUL_336_148Reason for change

Transport channel ordering problem. Same problem as described in the approved CR T1S030234 for tc_8_2_1_1.

Summary of Change

Re-order the transport channel list as specified.

Change ASN.1 Type Constraint Declaration from:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }, { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }, { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

2.2.3 cr_ActPDP_ContextReqFACH_MO

Reason for change

To provide a means for specifying the expected Quality of Service (QoS) in an Activate PDP Context Request constraint.

Summary of Change

Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqFACH_MO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_CellFACH_lv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqFACH_MO(p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

2.2.4 cr_AttachReq

Reason for change

The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST message.

Summary of Change

Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.5 cr_QoS_InteractiveMO_CellFACH_Iv

Reason for change:

1. There are a number of discrepancies between quality of service described in the receive constraint and the quality of service specified in the AT commands sent to the upper tester (see 0 and 2.2.9).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. The traffic handling priority depends on the traffic class and traffic handling priority used in the AT command sent to the upper tester.
4. Some of the comments are wrong.

Summary of Change

1. Update cr_QoS_InteractiveMO_CellFACH_Iv to reflect the quality of service specified in the AT commands sent to the upper tester.
2. Allow dlyClass to be set by parameter.
3. Allow trafficHandPro to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv (p_trafficClass : B3 ; p_dlyClass : B3 ; p_trafficHandPro : B2)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The expected QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the SS by the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	Interactive=traffic class, Background=4
	reliabilityClass	'100'B	Unacknowledged GTP, LLC and RLC, protected data
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed precedence
	spare2	'000'B	

meanThroughput	'11111'B		best effort
trafficClass	p_trafficClass		Interactive='011'B, Background='100'B
deliveryOrder	'01'B		With delivery order
deliveryErrorSDU	'010'B		Erroneous SDUs are delivered
maxSDUSize	'20'O		320 bits
maxBitRateUplink	'40'O		64 kbps
maxBitRateDnlink	'40'O		64 kbps
residualBER	'1001'B		$6 \times 10^E (-8)$
sduErrRatio	'0011'B		$1 \times 10^E (-3)$
transDly	?		The transfer delay is ignored if interactive or background class.
trafficHandpro	p_trafficHandPro		Interactive=value set in AT command. Background=? (value is ignored)
bitRateUplink	?		The guaranteed bit is ignored if interactive or background class
bitRateDnlink	?		The guaranteed bit is ignored if interactive or background class

2.2.6 cs_QoS_InteractiveMT_Iv

Reason for change

1. There are a number of discrepancies between quality of service described in this constraint and the quality of service requested by the UE (see 2.2.5).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. Some of the comments are wrong.

Summary of Change

1. Update the cs_QoS_InteractiveMT_CellFACH_Iv constraint to send the a quality of service that matches the request .
2. Allow dlyClass to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_Iv (p_trafficClass : B3)			
Structured Type	QualityOfService_Iv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw			
	Element Name	Element Value	Element Encoding	Comments
	length	'0D'O		
	spare	'00'B		
	dlyClass	'100'B		Best effort
	reliabilityClass	'001'B		
	peakThroughput	'0110'B		64 kbps
	spare1	'0'B		
	precedenceClass	'100'B		Normal class
	spare2	'000'B		
	meanThroughput	'11111'B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	'01'B		
	deliveryErrorSDU	'010'B		
	maxSDUSize	'20'O		
	maxBitRateUplink	'20'O		64 kbps
	maxBitRateDnlink	'20'O		64 kbps
	residualBER	'1001'B		6 x 10E (-3)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O		This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_Iv (p_trafficClass : B3 ; p_dlyClass : B3)			
Structured Type	QualityOfService_Iv			
Derivation Path				
Encoding Variation				
Comments	The negotiated QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the UE by the OS			
	Element Name	Element Value	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	reliabilityClass	'100'B		
	peakThroughput	'0110'B		64 kbps
	spare1	'0'B		
	precedenceClass	'000'B		
	spare2	'000'B		
	meanThroughput	'11111'B		best effort
	trafficClass	p_trafficClass		Interactive='011'B, background='100'B
	deliveryOrder	'01'B		
	deliveryErrorSDU	'010'B		
	maxSDUSize	'20'O		320 bits
	maxBitRateUplink	'40'O		64 kbps

maxBitRateDnlink	400		64 kbps
residualBER	'1001'B		6×10^{-8}
sduErrRatio	'0011'B		1×10^{-3}
transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
bitRateUplink	000		The guaranteed bit rate is ignored if interactive or background class
bitRateDnlink	000		This will be neglected by UE as the class is interactive

2.2.7 cs_RRC_PagingType1_ModifySIReason for change

Paging Type 1 contains Incorrect bcch_ModificationTime value (i.e. zero implies SFN=0 therefore UE shall not reply until SFN is zero) .

Summary of Change

Change value zero to OMIT as follows:

Change the PDU constrain from:

Constraint Name	cs_RRC_PagingType1_ModifySI(p_mib_valuetag: MIB_ValueTag)
PDU Type	PCCH_Message
Derivation Path	
Encoding Variation	
Comments	
<pre>{ message pagingType1: { --PagingType1 pagingRecordList OMIT, bcch_ModificationInfo { mib_ValueTag p_mib_valuetag, bcch_ModificationTime 0 }, nonCriticalExtensions OMIT } }</pre>	

To:

Constraint Name	cs_RRC_PagingType1_ModifySI(p_mib_valuetag: MIB_ValueTag)
PDU Type	PCCH_Message
Derivation Path	
Encoding Variation	
Comments	
<pre>{ message pagingType1: { --PagingType1 pagingRecordList OMIT, bcch_ModificationInfo { mib_ValueTag p_mib_valuetag, bcch_ModificationTime OMIT }, nonCriticalExtensions OMIT } }</pre>	

2.2.8 ts_AT_OrgPS_Call

Reason for change:

The are a number of problems with the AT commands issued by this test step:-

1. The activate PDP context command (CGACT) uses a different context ID to that of the other AT commands used.
2. The minimum quality of service command (CGEQMIN) used has too many fields (TS 27.007).
3. The minimum quality of service command (CGEQMIN) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
4. The minimum quality of service command (CGEQMIN) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1,1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,,1,320,""1E3""""6E8""",1,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,,1,320,""1E3""""6E8""",1,<CR>"))			set up the Minimum QoS same as Required QoS

20	ERR1	[TRUE]		I	Parameter error
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2.2.9 ts_AT_SetQoS

Reason for change

There are a number of problems with the AT commands issued by this test step:-

1. The quality of service command (CGEQREQ) used has too many fields (TS 27.007).
2. The quality of service command (CGEQREQ) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
3. The quality of service command (CGEQREQ) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64, 1,320,""1E3"" , ""6E8"" ,1,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, , , 1, 320, ""1E3"" , ""6E8"" ,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.10 ts_CRLC_UL_CipherCfg_RABReason for change

The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change

Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[px_CipheringOnOff]			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		[NOT (px_CipheringOnOff)]			

2.2.11 ts_C5_CheckURA_PCHReason for change

URA Update ASP constrain contains an incorrect parameters (.ie. protocolErrorIndicator is a mandatory IE therefore can not be omitted)

Summary of Change

Modify the test step as follows:

Change test step from:

Test Step Name		ts_C5_CheckURA_PCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
5		START t_Dly (5000)			step 2 Wait 5s
6	TSP	TM ? RLC_TR_DATA_IND CANCEL t_Dly	car_URA_Update (p_CellId, tsc_RB0, cr_108_URA_Update (tcv_TmpCellInfo.uRNTI, changeOfURA, OMIT))		step 3

To:

Test Step Name		ts_C5_CheckURA_PCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
5		START t_Dly (5000)			step 2 Wait 5s
6	TSP	TM ? RLC_TR_DATA_IND CANCEL t_Dly	car_URA_Update (p_CellId, tsc_RB0, cr_108_URA_Update (tcv_TmpCellInfo.uRNTI, changeOfURA, noError.NULL))		step 3

2.2.12 ts_GMM_Authentication

Reason for change

The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint c_AuthRspExtAny_tv. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called c_AuthCiphRspExtAny_tv, detailed in section 2.3.2.1, has been added with the correct tag value and needs to be referenced instead.

Summary of Change

Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(			Verify that the

	tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))		received Authentication Response paramters match expected response.
--	---	--	---

2.2.13 ts_GMM_IdleUpdated

Reason for change

The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change

Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate(p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+It_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.14 ts_ReceiveActivatePDP_Accept_DCH

Reason for change

1. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
2. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Reason for change

3. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
4. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_DCH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcqMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcqMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcqMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcqMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_DCH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('011'B, '011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('100'B, '100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('011'B, '011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('100'B, '100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.15 ts_ReceiveActivatePDP_Accept_FACH

Reason for change

5. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
6. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3,		

			cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.16 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change

The delay class, traffic class and traffic handling priority IEs in the received Activate PDP context request depend on the AT command issued to the upper tester, which in turn is controlled by various test suite parameters.

Summary of Change

1. Call a test step to determine the appropriate delay class, traffic class and traffic handling priority.
2. Pass these values into the modified quality of service receive constraint.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
4		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO))		
5		+ ts_SetTI_Rsp (tcv_TI_R)			
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		+ts_DetermineDlyClassAndTrafficClassAndTrafficH andPro			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		+ts_DetermineDlyClassAndTrafficClassAndTrafficH andPro			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
5		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO(cr_QoS_InteractiveOrBackgroundMO_Iv(tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro)))		
6		+ ts_SetTI_Rsp (tcv_TI_R)			
7		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv(tcv_TrafficClass, tcv_DlyClass,		

		Value), 8))	tcv_TrafficHandPro))		

2.2.17 ts_SS_Rel

Reason for change

The test step contain in correct qualifier logic to release non-existent radio bearers RB20 & RB_BCCH_FACH. (i.e. RB20 & RB_BCCH_FACH has already been released prior to the entry of this test step)

Summary of Change

Change the test step behaviour line as follows:

Change test step from:

Test Step Name		Ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		[(tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH) OR (tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
12		+ts_CRLC_Rel (tsc_CellDedicated, tsc_RB20)			
13		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			

To:

Test Step Name		Ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		[(tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH)]			
12		+ts_CRLC_Rel (tsc_CellDedicated, tsc_RB20)			
13		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			
14		+ It_RelSRB1_4			
15		+It_ReleaseCommonCh			
16		+ It_Release_BCCH			
17		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			
18		[(tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
19		+ It_RelSRB1_4			
20		+It_ReleaseCommonCh			
21		+ It_Release_BCCH			
22		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			

2.3 Tables added to RRCv310

2.3.1 Tables added from RRCv143– No changes necessary

Type	Name
Test Suite Parameter Declarations	px_KeySeqDefxxxx
Test Suite Constant Declaration	tsc_DPCCH_PowerOffset
Test Case Variable Declarations	tcv_KeySeq
ASN.1 Type Constraint Declarations	
ASN.1 PDU Constraint Declarations	cs_RB_ReIDCH_ToFACH_URA
ASN.1 ASP Constraint Declarations	
Test Cases RRC_RB_Release	tc_8_2_3_19
Test Steps RRCM_GenericAnnexC	

2.3.2 Other tables added

2.3.2.1 c_AuthCiphRspExtAny

This table is not based on one in any existing ATS.

Reason for change

The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem.

Summary of Change

Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny		
Structured Type	AuthRspExt		
Derivation Path			
Encoding Variation			
Comments			
	Element Name	Element Value	Element Encoding
	iei	'00101001'B	
	iei	?	
	RES	?	

2.3.2.2 px_NMO

This table is not based on one in any existing ATS

Reason for change

Provision of a means of selecting the Network Mode of Operation from the PICS/Pixit file. Use of this new parameter declaration is detailed in section 2.2.1.

Summary of Change

Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.3.2.3 tcv_DlyClass

This table is not based on one in any existing ATS

Reason for change

The value of delay class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of delay class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_DlyClass
---------------	--------------

Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.4 tcv_TrafficClass

This table is not based on one in any existing ATS

Reason for change

The value of traffic class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.5 tcv_TrafficHandPro

This table is not based on one in any existing ATS

Reason for change

The value of traffic handling priority (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic handling priority is used in several locations a test step has been written (see 2.3.2.6) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficHandlingPriority
Type	B2
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.6 ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro

This table is not based on one in any existing ATS

Reason for change

To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.

Summary of Change

Table added to suite.

Add test step:

Test Step Name		ts_DetermineDlyClassAndTrafficClass			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B,			

		tcv_TrafficHandPro := '??'B)			
5		[TRUE]		1	

CHANGE REQUEST

34.123-3 CR 040 # rev - # Current version: **3.1.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Test Case 12.3.1.2		
Source:	# Anritsu Ltd		
Work item code:	# -	Date:	# 22/04/2003
Category:	# F	Release:	# R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To introduce test case 12.3.1.2 to NASv310
Summary of change:	# - 0 table deleted from NASv310, - 5 tables modified in NASv310, - 15 tables added from NASv143, - 4 new tables created. For more details see below.
Consequences if not approved:	# Test case 12_3_1_2 will not be added

Clauses affected:	# N/A								
Other specs affected:	<table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px; text-align: center;">Y</td> <td style="border: 1px solid black; padding: 2px; text-align: center;">N</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px; text-align: center;">#</td> <td style="border: 1px solid black; padding: 2px; text-align: center;">X</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px; text-align: center;">#</td> <td style="border: 1px solid black; padding: 2px; text-align: center;">X</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px; text-align: center;">#</td> <td style="border: 1px solid black; padding: 2px; text-align: center;">X</td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	#	X	#	X	#	X
Y	N								
#	X								
#	X								
#	X								
Other comments:	#								

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title	The introduction of test case 12.3.1.2 into NASv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed introduce test case 12.3.1.2 to RRCv310 by using NASv143 as the primary source of the new tables and applying only essential fixes to the TTCN.

2 Changes required for test-case 12.3.1.2

2.1 Tables deleted from NASv310

None

2.2 Tables modified in NASv310

2.2.1 c_CellInfoDef

Reason for change: For consistency with CR 030417 for 11.1.1.1.

Summary of Change: Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I (this has no effect on 12.3.1.2 as the use of network mode of operation II is hard coded).

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	Ura_Identity	p_URA_Id		
			

2.2.2 c_IMSI_DetachInd

Reason for change: The existing constraint checks that the UE is using IMSI as its Mobile ID for CS whereas it should be using TMSI in the situation where this constraint is used.

Summary of Change: Replace c_MobileIdIMSI_Iv with c_MobileIdTMSI_Iv.

Change the PDU Type Constraint Declaration from:

Constraint Name	c_IMSI_DetachInd		
PDU Type	IMSIDETACHINDICATION		
Derivation Path			
Encoding Variation			
Comments			
	Element Name	Element Value	Element Encoding
		
	mSClsmk1	tsc_AttOn	
	nmo	c_MS_Clsmk1_Def	
	mobileId	c_MobileIdIMSI_Iv	

To:

Constraint Name	c_IMSI_DetachInd		
PDU Type	IMSIDETACHINDICATION		
Derivation Path			
Encoding Variation			
Comments			
	Element Name	Element Value	Element Encoding
		
	mSClsmk1	tsc_AttOn	
	nmo	c_MS_Clsmk1_Def	
	mobileId	c_MobileIdTMSI_Iv	

2.2.3 cr_AttachReq

Reason for change: The information element “oldPTMSI_Signature” is optional in an ATTACH REQUEST nas message. The constraint should reflect this fact.

Summary of Change: Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.4 ts_GMM_Authentication

Reason for change: The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint `c_AuthRspExtAny_tv`. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called `c_AuthCiphRspExtAny_tv`, detailed in section 2.3.2.2, has been added with the correct tag value and needs to be referenced instead.

Summary of Change: Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response paramters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response paramters match expected response.
				

2.2.5 ts_GMM_IdleUpdated

Reason for change:

1. The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.
2. When the ATTACH REQUEST is received the UE operation mode is determined according to whether a PS only or combined attach is received and the type of the ATTACH ACCEPT is chosen according to the UE operation mode. This can only work for Network Mode of Operation I as for Network Mode of Operation II the combined attach cannot be used.

Summary of Change:

1. Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.
2. Modify the conditional expressions so that this procedure is only applied if NMO I is in use. For NMO II no change is made to the variable indicating UE operation mode and a PS only ATTACH ACCEPT is sent.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
4		..... [(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate (p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
17		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
18		[tcv_TmpB3 = '011'B]			Set global variable according to the type of attach requested by UE
19		(tcv_UE_OpMode := opModeA)			
20		[TRUE]			
21		(tcv_UE_OpMode := opModeC)			
		It_SecurityMode			
		It_AttachAccept			
23		[tcv_UE_OpMode = opModeC]			
24		(tcv_AssignedPTMSI := px_PTMSI_Def, tcv_Assigned_PTMSI_Sig := px_PTMSI_SigDef)			Use default values
25		Dc ! RRC_DataReq	.....	
26		Dc ? RRC_DataInd	.....	
27		[tcv_UE_OpMode = opModeA]			
28		(tcv_AssignedTMSI :=px_TMSI_Def, tcv_AssignedPTMSI :=px_PTMSI_Def, tcv_Assigned_PTMSI_Sig := px_PTMSI_SigDef)			Use default values
		...			

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+lt_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
18		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
19		! (tcv_TmpB3 = '011'B) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)			Set global variable according to the type of attach requested by UE
20		(tcv_UE_OpMode := opModeA)			
21		tcv_TmpCellInfo.nmo = tsc_NMO_II			
22		(tcv_UE_OpMode := opModeC)			
23		TRUE			
		lt_SecurityMode			
		lt_AttachAccept			
25		[(tcv_UE_OpMode = opModeC) OR (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			
26		(tcv_AssignedPTMSI := px_PTMSI_Def, tcv_Assigned_PTMSI_Sig := px_PTMSI_SigDef)			Use default values
27		Dc ! RRC_DataReq	....	
28		Dc ? RRC_DataInd	....	
29		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			
30		(tcv_AssignedTMSI :=px_TMSI_Def, tcv_AssignedPTMSI :=px_PTMSI_Def, tcv_Assigned_PTMSI_Sig := px_PTMSI_SigDef)			Use default values
				

2.3 Tables added to NASv310

2.3.1 Tables from NASv143 – no changes necessary

pc_SupportOpModeA
px_SupportOpModeC
c_GMM_AttachResultPS_Only
c_MobileIdPTMSI_Iv_Def
c_MobileIdTMSILoc
cs_LocUpdAcpTMSI_2
ts_GMM_Config_CellA
ts_MMI_SetOpModeA
ts_MMI_SetOpModeC
ts_VerifyNoAccess
ts_RegistrationOnCS_IfOpModeA

2.3.2 Other Tables

2.3.2.1 px_NMO

This table is not based on one in any existing ATS.

Reason for change: For consistency with CR 030417 for 11.1.1.1.

Summary of Change: Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.3.2.2 c_AuthCiphRspExtAny

This table is not based on one in any existing ATS.

Reason for change: The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem. Use of this new constraint is detailed in section 2.2.4.

Summary of Change: Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny			
Structured Type	AuthRspExt			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	lei	'00101001'B		
	lel	?		
	rES	?		

2.3.2.3 ts_GMM_DetachOnSwitchOffPreamble

This table is based on ts_GMM_DetachOnSwitchOff issued in RRCv310 but modified as follows:

Reason for change: The existing test step ts_GMM_DetachOnSwitchOff did not allow for the possibility that for UE operation mode A and Network Mode of Operation II the CS IMSI detach and PS detach may occur in either order. The behaviour has therefore been modified to allow for this situation – this has been done in a new test step because the existing test step is used in the test body of other test cases.

Summary of Change: Table added to suite.

Add test step:

Test Step Name		ts_GMM_DetachOnSwitchOffPreamble (p_CellId : INTEGER)			
Group		BasicM_MM_GMM_Steps/			
Objective		Turn off UE and execute GMM Detach procedure for properly detach PS or combined PS/CS services on the cell referenced by p_CellId. Additionally, if Attach Flag is set, and the UE is in Operation Mode A, then IMSI DETACH INDICATION shall be send by the UE.			
Default		NAS_OtherwiseFail			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_SwitchOnOff]			UE can actually be switched off
2		+ts_MMI_UE_SwitchOff			
3		+ts_SetTmpCellInfo (p_CellId)			Get CellInfo to be used later
4		+ts_RRC_ConnEst(p_CellId, est_MO, detach)			
5		+lt_Detach		I	
6		+ts_RRC_ConnRel(p_CellId, cell_Dch)			
7		[TRUE]			UE power supply must be removed
8		+ts_MMI_UE_PwrOff			
		lt_Detach			
9		[((tcv_TmpCellInfo.attFlag = tsc_AttOn) AND (tcv_UE_OpMode = opModeA)]			
10		+lt_GMM_and_IMSI_Detach			
11		[TRUE]			
12		+lt_GMM_Detach			
		lt_GMM_Detach			
13		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_DetachReq (c_DetachType('1'B, '0?'1'B), c_MobileIdPTMSI (tcv_AssignedPTMSI), c_PTMSI_Signature_tlv (tcv_Assigned_PTMSI_Sig)))	(P)	DETACH REQUEST - Detach type 'power switched off, GPRS detach' or 'power switched off, GPRS/IMSI detach'
14		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
		lt_GMM_and_IMSI_Detach			
15		+lt_GMM_Detach			
16		Dc ? RRC_DataInd	car_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, c_IMSI_DetachInd)	(P)	IMSI DETACH INDICATION
16		Dc ? RRC_DataInd	car_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, c_IMSI_DetachInd	(P)	IMSI DETACH INDICATION

		+lt_GMM_Detach)		
--	--	----------------	---	--	--

2.3.2.4 ts_MMI_UE_TriggerGMM_Attach_IfNotAutomatic

This table is not based on one in any existing ATS.

Reason for change: In the case of a UE supporting both PS and CS, not automatically attaching on switch on for PS, it is necessary to allow for the UE performing a location update for CS before the AT command for the PS attach is acknowledged. This test step is used in tc_12_3_1_2 as modified to cause the PS Attach to be initiated after the CS location update has been performed if necessary.

Summary of Change: Table added to suite.

Add test step:

Test Step Name		ts_MMI_UE_TriggerGMM_Attach_IfNotAutomatic			
Group		BasicM_UT_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_AutomaticAttachSwitchON]			If UE supports automatic Attach at switch ON, do nothing.
2		[NOT pc_AutomaticAttachSwitchON]			If not, then trigger UE via AT command to start PS attach procedure.
3		+ts_NAS_Delay(tsc_TWaitSysInfo)			
4		+ts_AT_TriggerGMM_Attach			trigger UE to initiate GMM Attach after allowing the UE to decode Sys Infos

2.3.2.5 c_GMM_AttachTypePS_Only

This table is based on that issued in NASv143 but modified as follows:

Reason for change: It was assumed that the UE would not include a follow on request, however it may be legitimate for it to do so and it is irrelevant to the test.

Summary of Change: The Follow On Request field is changed to AnyValue.

Change the Structured Type Constraint Declaration from:

Constraint Name		c_GMM_AttachTypePS_Only		
Structured Type		AttachType		
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	for	'0'B		No follow on request
	type	'001'B		GPRS attach

To:

Constraint Name		c_GMM_AttachTypePS_Only		
Structured Type		AttachType		
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments

	for	2		
	type	'001'B		GPRS attach

2.3.2.6 tc_12_3_1_2

This table is based on that issued in NASv143 but modified as follows:

Reason for change:

1. The new test step `ts_GMM_DetachOnSwitchOffPreamble` described in section 2.4.3 should be used.
2. The existing test case would hang if `px_SupportOpModeC` is True and `pc_SupportOpModeA` is False.
3. In the case of a UE supporting both PS and CS, not automatically attaching on switch on for PS, it is necessary to allow for the UE performing a location update for CS before the AT command for the PS attach is acknowledged
4. The AT command to attach was used to trigger the detach at the end of the test
5. The ATTACH REQUESTs received in the test body should not contain P-TMSI signature as this would have been deleted at the previous detach.
6. The prose indicates that authentication should be performed during the attach in the test body
7. In the detach procedure, where authentication is not performed, integrity was started with parameters that would have been applicable only if authentication had been performed.
8. The Cell ID is passed to `ts_SS_SecurityDownloadStart` instead of the CN domain
9. The cause expected in the RRC Connection Request before the detach was Registration whereas it should be Detach.

Summary of Change:

1. Use `ts_GMM_DetachOnSwitchOffPreamble` described in section 2.4.3 instead of `ts_GMM_DetachOnSwitchOff`.
2. Provide an alternative to the condition `[pc_SupportOpModeA]` in the branch for `[px_SupportOpModeC]`.
3. The AT command triggering PS attach has been split from the MMI command to switch the UE on and moved after the CS location update procedure where applicable.
4. The correct test step is called
5. The parameters to the constraint are changed so P-TMSI signature is not expected.
6. The authentication procedure has been added and corresponding changes made to the handling of start values and key sequence numbers.
7. `ts_RRC_Security` with appropriate parameters is used instead of `ts_GMM_StartIntegrityProtection`
8. The parameters to `ts_SS_SecurityDownloadStart` are corrected
9. The cause has been corrected.

Change test case from:

Test Case Name		tc_11_3_1_2			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
5		+ts_IdleUpdated(tsc_CellA)			Turn on UE and assign a valid P-TMSI-1, P-TMSI-1 signature and RAI-1.
6		+ts_GMM_DetachOnSwitchOff(tsc_CellA)			Turn off and detach
7		[px_SupportOpModeC]			If operation mode C supported
11		[pc_SupportOpModeA]			
12		+ts_MMI_SetOpModeA			
13		+lt_TestBody			Step 12. Repeat test body in operation mode A (if supported)

14		+po_ConnectionAndSS_Rels			
15		[(NOT px_SupportOpModeC) AND pc_SupportOpModeA]			If operation mode C is not supported but operation mode A is supported
		lt_TestBody			
19		(tcv_TestBody := TRUE)			
20		+ts_MMI_UE_SwitchOnTrigge rGMM_Attach			
21		+ts_RegistrationOnCS_IfOpM odeA(tsc_CellA, px_TMSI_Def)			
22		+lt_Attach			Steps 3 to 5
28		+lt_Attach			Steps 12 to 13
29		+ts_AT_TriggerGMM_Attach			Step 14
30		+lt_Detach			Steps 15 and 16
		lt_Attach			
31		+ts_RRC_ConnEst(tsc_CellA, est_Reg, registration)			
32		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachTypePS_Only, c_MobileIdPTMSI_lv_Def, c_RAI_Def_v, c_PTMSI_SignatureDef, tcv_PS_KeySeq))		Step 3. ATTACH REQUEST - Attach type is 'PS attach' - MobileId P-TMSI-1 - RAI-1 - PTMSI-1 signature
33		+ts_SS_SecurityDownloadStar t (tsc_CellA, tcv_Start)			
34		+ts_GMM_StartIntegrity Protec tion (tsc_CellA)			
35		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_AttachAcc(c_GMM_AttachResultPS_Only , c_RAI_Def_v, -, -))		Step 4. ATTACH ACCEPT - Attach result 'PS only' - RAI-1 - no new Mobile Id assigned - no new P-TMSI signature
36		+ts_RRC_ConnRel(tsc_CellA, cell_Dch)			
		lt_Detach			
37		+ts_RRC_ConnEst(tsc_CellA, est_Reg, registration)			
38		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_DetachReq (c_DetachType('0'B, '001'B), c_MobileIdPTMSI (tcv_AssignedPTMSI), c_PTMSI_Signature_tlv(tcv_A ssigned_PTMSI_Sig)))		Step 7. DETACH REQUEST - Detach type is 'normal, PS detach' - P-TMSI as assigned during Attach procedure
39		+ ts_SS_SecurityDownloadStart (tsc_CellA, tcv_Start)			
40		+ts_GMM_StartIntegrity Protec tion (tsc_CellA)			Step 7a.
41		+ts_RRC_ConnRel(tsc_CellA, cell_Dch)			

To:

Test Case Name		tc_12_3_1_2			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	
5		+ts_IdleUpdated(tsc_CellA)			Turn on UE and assign a valid P-TMSI-1, P-TMSI-1 signature and RAI-1.
6		+ts_GMM_DetachOnSwitchOffPreamble(tsc_CellA)			Turn off and detach
7		[px_SupportOpModeC]			If operation mode C supported
11		[pc_SupportOpModeA]			
12		+ts_MMI_SetOpModeA			
13		+lt_TestBody			Step 12. Repeat test body in operation mode A (if supported)
14		+po_ConnectionAndSS_Rels			
15		[NOT pc_SupportOpModeA]			
16		[(NOT px_SupportOpModeC) AND pc_SupportOpModeA]			If operation mode C is not supported but operation mode A is supported
20		lt_TestBody (tcv_TestBody := TRUE)			
21		+ ts_MMI_UE_SwitchOn			
22		+ts_RegistrationOnCS_IfOpModeA(tsc_CellA, px_TMSI_Def)			
23		+ts_MMI_UE_TriggerGMM_Attach_IfNotAutomatic			
24		+lt_Attach			Steps 3 to 5
30		+lt_Attach			Steps 12 to 13
31		+ts_AT_TriggerGMM_Detach			Step 14
32		+lt_Detach			Steps 15 and 16
33		lt_Attach +ts_RRC_ConnEst(tsc_CellA, est_Reg, registration)			
		Dc ? RRC_DataInd (tcv_Start := 00000000000000000000'B)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachTypePS_Only, c_MobileIdPTMSI_Iv_Def, c_RAI_Def_v, 2))		Step 3. ATTACH REQUEST - Attach type is 'PS attach' - MobileId P-TMSI-1 - RAI-1
		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
		+ts_GMM_AuthenticateAndStartIntegrityProtection(tsc_CellA)			
		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_AttachAcc(c_GMM_AttachResultPS_Only, c_RAI_Def_v, -, -, -))		Step 4. ATTACH ACCEPT - Attach result 'PS only' - RAI-1 - no new Mobile Id assigned - no new P-TMSI signature

		+ts_RRC_ConnRel(tsc_CellA, cell_Dch)			
		It_Detach			
		+ts_RRC_ConnEst(tsc_CellA, est_MO, detach)			
		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_DetachReq (c_DetachType('0'B, '001'B), c_MobileIdPTMSI (tcv_AssignedPTMSI), ;))		Step 7. DETACH REQUEST - Detach type is 'normal, PS detach' - P-TMSI as assigned during Attach procedure
		+ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
		+ ts_RRC_Security (tsc_CellA, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, FALSE, ps_domain)			Step 7a.
		+ts_RRC_ConnRel(tsc_CellA, cell_Dch)			

2.3.2.7 ts_RegistrationOnCS

This table is based on that issued in NASv143 but modified as follows:

Reason for change:

1. As authentication is carried out the start value should be reset
2. To provide compatibility between test step ts_GMM_DetachMO added from v143 suite and existing test steps ts_SS_SecurityDownloadStart and ts_RRC_Security already present in v310 suite.
3. To provide compatibility with the constraints car_InitDirectTransfer , cs_LocUpdAcpTMSI_2 and car_UplinkDirectTransfer.

Summary of Change:

1. Set tcv_start to zero and call ts_RRC_Security directly.
2. Adjust the parameters to the two called test steps as detailed.
3. Adjust the parameters to the three constraints as detailed.

Change test step from:

Test Step Name		ts_GMM_DetachMO (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			Fetch SS_Cell_Info table corresponding
2		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
3		Dc?RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_InitDirectTransfer(p_CellId, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
4		+ ts_SS_SecurityDownloadStart (p_CellId, tcv_Start)			
5		+ts_MM_Authentication(p_CellId)			AUTHENTICATION REQUEST AUTHENTICATION RESPONSE
6		+ ts_MM_SecurityOn (p_CellId, px_CipheringOnOff, FALSE, cs_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
7		Dc!RRC_DataReq (tcv_AssignedTMSI := p_TMSI)	ca_DataReq(p_CellId, tsc_RB3, cs_LocUpdAcpTMSI_2(tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.lac, p_TMSI))		LOCATION UPDATING ACCEPT
8		Dc?RRC_DataInd	car_UplinkDirectTransfer(p_CellId, tsc_RB3, c_TMSI_ReallocCmpl)		TMSI REALLOCATION COMPLETE
9		+ts_RRC_ConnRel(p_CellId, cell_Dch)			

to:

Test Step Name		ts_GMM_DetachMO (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			Fetch SS_Cell_Info table correpoding
2		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
3		Dc?RRC_DataInd (tcv_Start := 00000000000000000000'B)	car_InitDirectTransfer(isc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
4		+ ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			
5		+ts_MM_Authentication(p_Cel lId)			AUTHENTICATION REQUEST AUTHENTICATION RESPONSE
6		+ts_RRC_Security p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, FALSE, cs_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
7		Dc!RRC_DataReq (tcv_AssignedTMSI := p_TMSI)	ca_DataReq(p_CellId, tsc_RB3, cs_LocUpdAcpTMSI_2(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac, p_TMSI))		LOCATION UPDATING ACCEPT
8		Dc?RRC_DataInd	car_UplinkDirectTransfer(isc_CellDedicated, tsc_RB3, c_TMSI_ReallocCmpl)		TMSI REALLOCATION COMPLETE
9		+ts_RRC_ConnRel(p_CellId, cell_Dch)			

2.3.2.8 ts_GMM_AuthenticateAndStartIntegrityProtection

This table is based on that issued in NASv143 but modified as follows:

Reason for change: To provide compatibility between test step ts_GMM_AuthenticateAndStartIntegrityProtection added from v143 suite and existing test step ts_RRC_Security already present in v310 suite.

Summary of Change: Adjust the parameters to the called test step as detailed.

Change test case from:

Test Step Name		ts_GMM_AuthenticateAndStartIntegrityProtection (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_GMM_Authentication (p_CellId)			
2		+ ts_RRC_Security (p_CellId, TRUE, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)	.....		.....

to:

Test Step Name		ts_GMM_AuthenticateAndStartIntegrityProtection (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_GMM_Authentication (p_CellId)			
2		+ ts_RRC_Security (p_CellId, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)	.....		.....

CHANGE REQUEST

⌘ **34.123-3 CR 041** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.3.3.1		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 15/04/2003
Category:	⌘ F	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.3.3.1 to RRCv310		
Summary of change:	⌘ - 0 table(s) deleted from RRCv310 - 15 table(s) modified in RRCv310 - 7 table(s) added from RRCv143 - 1 table(s) added from RRCv144 - 6 new table(s) added For more details see below.		
Consequences if not approved:	⌘ Test case 8.3.3.1 will not be added		

Clauses affected:	⌘ N/A						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Test specifications	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> O&M Specifications	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
Other comments:	⌘						

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Seoul, Korea

12-15 May 2003

Title	Introducing test case 8.3.3.1 required to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce TC 8.3.3.1 to RRCv310. With these changes applied the test case can be demonstrated to run on a single UE implementation. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 (V5.2.0) clause 8.3.3.1

2 Changes required for test-case 8.3.3.1

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change

The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section 2.5.1.2.

Summary of Change

Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 c_TrChInfoUL_336_148Reason for change

Transport channel ordering problem. Same problem as described in the approved CR T1S030234 for tc_8_2_1_1.

Summary of Change

Re-order the transport channel list as specified.

Change ASN.1 Type Constraint Declaration from:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }, { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ulconnectedTrCHList { { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }, { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS }</pre>	

2.2.3 cr_ActPDP_ContextReqFACH_MO

Reason for change

To provide a means for specifying the expected Quality of Service (QoS) in an Activate PDP Context Request constraint.

Summary of Change

Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqFACH_MO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_CellFACH_lv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqFACH_MO(p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

2.2.4 cr_AttachReq

Reason for change

The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST message.

Summary of Change

Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.5 cr_QoS_InteractiveMO_CellFACH_Iv

Reason for change:

1. There are a number of discrepancies between quality of service described in the receive constraint and the quality of service specified in the AT commands sent to the upper tester (see 2.2.7 and 2.2.8).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. The traffic handling priority depends on the traffic class and traffic handling priority used in the AT command sent to the upper tester.
4. Some of the comments are wrong.

Summary of Change

1. Update cr_QoS_InteractiveMO_CellFACH_Iv to reflect the quality of service specified in the AT commands sent to the upper tester.
2. Allow dlyClass to be set by parameter.
3. Allow trafficHandPro to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv (p_trafficClass : B3 ; p_dlyClass : B3 ; p_trafficHandPro : B2)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The expected QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the SS by the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	Interactive=traffic class, Background=4
	reliabilityClass	'100'B	Unacknowledged GTP, LLC and RLC, protected data
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed precedence
	spare2	'000'B	

meanThroughput	'11111'B		best effort
trafficClass	p_trafficClass		Interactive='011'B, Background='100'B
deliveryOrder	'01'B		With delivery order
deliveryErrorSDU	'010'B		Erroneous SDUs are delivered
maxSDUSize	'20'O		320 bits
maxBitRateUplink	'40'O		64 kbps
maxBitRateDnlink	'40'O		64 kbps
residualBER	'1001'B		$6 \times 10^E (-8)$
sduErrRatio	'0011'B		$1 \times 10^E (-3)$
transDly	?		The transfer delay is ignored if interactive or background class.
trafficHandpro	p_trafficHandPro		Interactive=value set in AT command. Background=? (value is ignored)
bitRateUplink	?		The guaranteed bit is ignored if interactive or background class
bitRateDnlink	?		The guaranteed bit is ignored if interactive or background class

2.2.6 cs_QoS_InteractiveMT_Iv

Reason for change

1. There are a number of discrepancies between quality of service described in this constraint and the quality of service requested by the UE (see 2.2.5).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. Some of the comments are wrong.

Summary of Change

1. Update the cs_QoS_InteractiveMT_CellFACH_Iv constraint to send the a quality of service that matches the request .
2. Allow dlyClass to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_Iv (p_trafficClass : B3)			
Structured Type	QualityOfService_Iv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw			
	Element Name	Element Value	Element Encoding	Comments
	length	'0D'O		
	spare	'00'B		
	dlyClass	'100'B		Best effort
	reliabilityClass	'001'B		
	peakThroughput	'0110'B		64 kbps
	spare1	'0'B		
	precedenceClass	'100'B		Normal class
	spare2	'000'B		
	meanThroughput	'11111'B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	'01'B		
	deliveryErrorSDU	'010'B		
	maxSDUSize	'20'O		
	maxBitRateUplink	'20'O		64 kbps
	maxBitRateDnlink	'20'O		64 kbps
	residualBER	'1001'B		6 x 10E (-3)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O		This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_Iv (p_trafficClass : B3 ; p_dlyClass : B3)			
Structured Type	QualityOfService_Iv			
Derivation Path				
Encoding Variation				
Comments	The negotiated QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the UE by the OS			
	Element Name	Element Value	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	reliabilityClass	'100'B		
	peakThroughput	'0110'B		64 kbps
	spare1	'0'B		
	precedenceClass	'000'B		
	spare2	'000'B		
	meanThroughput	'11111'B		best effort
	trafficClass	p_trafficClass		Interactive='011'B, background='100'B
	deliveryOrder	'01'B		
	deliveryErrorSDU	'010'B		
	maxSDUSize	'20'O		320 bits
	maxBitRateUplink	'40'O		64 kbps

maxBitRateDnlink	400		64 kbps
residualBER	'1001'B		6×10^{-8}
sduErrRatio	'0011'B		1×10^{-3}
transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
bitRateUplink	000		The guaranteed bit rate is ignored if interactive or background class
bitRateDnlink	000		This will be neglected by UE as the class is interactive

2.2.7 ts_AT_OrgPS_Call

Reason for change:

The are a number of problems with the AT commands issued by this test step:-

1. The activate PDP context command (CGACT) uses a different context ID to that of the other AT commands used.
2. The minimum quality of service command (CGEQMIN) used has too many fields (TS 27.007).
3. The minimum quality of service command (CGEQMIN) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
4. The minimum quality of service command (CGEQMIN) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1,0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,64,64,1,320,1E3,6E8,1,,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,64,64,1,320,1E3,6E8,1,,<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1,1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,,1,320,""1E3""""6E8""",1,,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,,1,320,""1E3""""6E8""",1,,<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

2.2.8 ts_AT_SetQoS

Reason for change

There are a number of problems with the AT commands issued by this test step:-

1. The quality of service command (CGEQREQ) used has too many fields (TS 27.007).
2. The quality of service command (CGEQREQ) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
3. The quality of service command (CGEQREQ) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64, 1,320,""1E3"" , ""6E8"" ,1,,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, , , 1, 320, ""1E3"" , ""6E8"" ,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.9 ts_CRLC_UL_CipherCfg_RAB

Reason for change

The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change

Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[px_CipheringOnOff]			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		[NOT (px_CipheringOnOff)]			

2.2.10 ts_GMM_Authentication

Reason for change

The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint `c_AuthRspExtAny_tv`. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called `c_AuthCiphRspExtAny_tv`, detailed in section 2.5.1.1, has been added with the correct tag value and needs to be referenced instead.

Summary of Change

Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(			Verify that the

		tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			received Authentication Response paramters match expected response.
--	--	---	--	--	---

2.2.11 ts_GMM_IdleUpdated

Reason for change

The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change

Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate(p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+It_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.12 ts_ReceiveActivatePDP_Accept_DCH

Reason for change

1. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
2. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Reason for change

3. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
4. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_DCH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcqMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcqMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcqMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcqMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_DCH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('011'B, '011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('100'B, '100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('011'B, '011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('100'B, '100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.13 ts_ReceiveActivatePDP_Accept_FACH

Reason for change

5. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
6. To accommodate the modified interactive QoS constraint (refer 2.2.6).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tc_v_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tc_v_LenBit, px_PDP_IP_AddrInfoDCH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3,		

			cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('011 B,'011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('100 B,'100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.14 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change

The delay class, traffic class and traffic handling priority IEs in the received Activate PDP context request depend on the AT command issued to the upper tester, which in turn is controlled by various test suite parameters.

Summary of Change

1. Call a test step to determine the appropriate delay class, traffic class and traffic handling priority.
2. Pass these values into the modified quality of service receive constraint.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
4		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO))		
5		+ ts_SetTI_Rsp (tcv_TI_R)			
6		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
7		+ts_DetermineDlyClassAndTrafficClassAndTrafficH andPro			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		+ts_DetermineDlyClassAndTrafficClassAndTrafficH andPro			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
5		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO(cr_QoS_InteractiveOrBackgroundMO_Iv(tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro)))		
6		+ ts_SetTI_Rsp (tcv_TI_R)			
7		[tcv_TmpCellInfo.cellConfig = cell_FACH]			
8		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv(tcv_TrafficClass, tcv_DlyClass,		

		Value), 8)	tcv_TrafficHandPro))		
)			

2.2.15 ts_SS_Rel

Reason for change

The test step contain in correct qualifier logic to release non-existent radio bearers RB20 & RB_BCCH_FACH. (i.e. RB20 & RB_BCCH_FACH has already been released prior to the entry of this test step)

Summary of Change

Change the test step behaviour line as follows:

Change test step from:

Test Step Name		Ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		[(tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH) OR (tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
12		+ts_CRLC_Rel (tsc_CellDedicated, tsc_RB20)			
13		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			
...

To:

Test Step Name		Ts_SS_Rel (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1
11		[(tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH)]			
12		+ts_CRLC_Rel (tsc_CellDedicated, tsc_RB20)			
13		+ ts_CRLC_Rel (p_CellId , tsc_RB_BCCH_FACH)			
14		+ It_RelSRB1_4			
15		+It_ReleaseCommonCh			
16		+ It_Release_BCCH			
17		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			
18		[(tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
19		+ It_RelSRB1_4			
20		+It_ReleaseCommonCh			
21		+ It_Release_BCCH			
22		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			
...

2.3 Tables added to RRCv310

None

2.4 Tables added from RRCv143

Type	Name
Test Suite Parameter Declarations	px_KeySeqDefxxxx
Test Suite Constant Declaration	tsc_DPCCH_PowerOffset
Test Case Variable Declarations	tcv_KeySeq
ASN.1 Type Constraint Declarations	c_DCH_148_TFS c_DCH_148_TFS_UE
ASN.1 PDU Constraint Declarations	cr_108_RRC_ConnRelCmpl
Test Steps RRC_Preambles	pr_GotoState6_11_MO

2.5 Tables added from RRCv144

Type	Name
Test Cases RRC_RNTI_ReAlloc	tc_8_3_3_1

2.5.1 New tables added

2.5.1.1 c_AuthCiphRspExtAny

Reason for change

The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem.

Summary of Change

Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny			
Structured Type	AuthRspExt			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	iei	'00101001'B		
	iel	?		
	rES	?		

2.5.1.2 px_NMO

Reason for change

Provision of a means of selecting the Network Mode of Operation from the PICS/Pixit file. Use of this new parameter declaration is detailed in section 2.2.1.

Summary of Change

Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.5.1.3 tcv_DlyClass

Reason for change

The value of delay class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of delay class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_DlyClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.5.1.4 tcv_TrafficClassReason for change

The value of traffic class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.5.1.5 tcv_TrafficHandProReason for change

The value of traffic handling priority (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic handling priority is used in several locations a test step has been written (see 2.5.1.6) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficHandlingPriority
Type	B2
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.5.1.6 ts_DetermineDlyClassAndTrafficClassAndTrafficHandProReason for change

To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.

Summary of Change

Table added to suite.

Add test step:

Test Step Name		ts_DetermineDlyClassAndTrafficClass			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B, tcv_TrafficHandPro := '??'B)			
5		[TRUE]		!	

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 042** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of RLC test case 7.2.3.13 to RLC ATS V3.1.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ -	Date:	⌘ 23 Apr 2003
Category:	⌘ B	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified RLC test case 7.2.3.13 to the approved RLC ATS V3.1.0		
Summary of change:	⌘ This document lists all changes applied to test case 7.2.3.13 required for approval. See detailed change description for further information.		
Consequences if not approved:	⌘ Test case will not be added to ATS		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.13 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.13 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_7_2_3_13
Test Group: RLC/AcknowledgedMode/Windowing/
ATS Version: V3.10d + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 7.2.3.13

4.1 Introduction

This section describes the changes required to make test case 7.2.3.13 run correctly with a 3G UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

The RLC ATS version used as basis was RLCv310d.mp provided by MCC 160. In a first step test case 7.2.3.13 was merged into this ATS. The test case and related TTCN objects were extracted from the RLC Module ATS version RLCv066.mp, as well provided by MCC 160. This anticipated the RLCv144 ATS to be provided by MCC 160.

In subsequent steps the changes described hereafter were integrated into the ATS.

4.2 Incorrect transport format setting (WA #RLC 3115)

Constraint name	c_UL_CommTrChInfoDCCH_13_6k, cbs_108_RRC_ConnSetupDCH
Test step name	
Reason for change	c_UL_CommonTrChInfoDCCH_13_6k: TFs to be Complete instead of Add. Ad leaves the existing TFCS whereas Complete replaces the existing ones.
Summary of change	c_UL_CommonTrChInfoDCCH_13_6k: ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change	new change
Label	WA #RLC 3115

ASN.1 Type Constraint Declaration	
Constraint Name:	c_UL_CommTrChInfoDCCH_13_6k
Group:	
Type Name:	UL_CommonTransChInfo
Derivation Path:	
Encoding Variation:	
Comments:	WA #RLC 3115
Constraint Value	
<pre> { tfc_Subset OMIT, prach_TFCS OMIT, modeSpecificInfo fdd:{ ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k) } } </pre>	

4.3 Incomplete transport format setting in RAB release (WA #RLC 3116 and 3117)

Constraint name	cs_RB_ReIRLC
Test step name	
Reason for change	c_UL_CommonTrChInfoDCCH_13_6k: TFs to be Complete instead of Add. Ad leaves the existing TFCS whereas Complete replaces the existing ones.
Summary of change	c_UL_CommonTrChInfoDCCH_13_6k: ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change	new change
Label	WA #RLC 3116 and WA #RLC 3117

ASN.1 PDU Constraint Declaration

Constraint Name:	cs_RB_ReRLC (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_ActivationTime : ActivationTime; p_Freqnfo : FrequencyInfo; p_PrimaryScramblingCode : PrimaryScramblingCode; p_UL_ScramblingCode : UL_ScramblingCode; p_RB_InformationReleaseList : RB_InformationReleaseList)
Group:	
PDU Name:	DL_DCCH_Message
Derivation Path:	
Encoding Rule Name:	
Encoding Variation:	
Comments:	Defined in TS 34.123-1 annex A condition A.1 WA #RLC 3116 ul_CommonTransChInfo OMIT -> c_UL_CommTrChInfoDCCH_13_6k, dl_CommonTransChInfo OMIT -> c_DL_CommonTransChInfoSameAsUL WA #RLC 3117 ul_AddReconfTransChInfoList OMIT -> c_UL_AddReconfTransChInfoListDCCH_13_6k dl_AddReconfTransChInfoList OMIT -> c_DL_AddReconfTransChInfoListDCCH_SRB

```

dl_CounterSynchronisationInfo OMIT,
ul_CommonTransChInfo c_UL_CommTrChInfoDCCH_13_6k,
ul_deletedTransChInfoList c_UL_DeletedTransChInfo ( tsc_UL_DCH1 ),
ul_AddReconfTransChInfoList c_UL_AddReconfTransChInfoListDCCH_13_6k,
modeSpecificTransChInfo fdd : { cpch_SetID OMIT,
  addReconfTransChDRAC_Info OMIT
},

dl_CommonTransChInfo c_DL_CommonTransChInfoSameAsUL,
dl_DeletedTransChInfoList c_DL_DeletedTransChInfo_PS ( tsc_DL_DCH1),
dl_AddReconfTransChInfoList c_DL_AddReconfTransChInfoListDCCH_SRB,
frequencyInfo p_Freqnfo,

```

4.4 Error in window size change trigger (WA #RLC 3119)

Constraint name	main test case body,
Test step name	local test step lt_TxAndRx, line number 28 and 30
Reason for change	<p>This test case tests the “window full” condition. When the SS has transmitted $2 * p_W$ PDUs, the UE transmit window has been filled. 2 more UEs are then transmitted by the SS. The UE is expected not to transmit any PDUs until timer t_NoUE_Tx times out (line 26). In case the UE sends a Status PDU while t_NoUE_Tx is running, the SS continues sending PDUs. As a consequence, the number of PDUs sent is greater than $(2 * p_W + 2)$ when timer t_NoUE_Tx runs out.</p> <p>Hence, the condition in line 28 checking that $(tcv_NumPDUsTx = 2 * p_W + 2)$ is not correct.</p> <p>The condition checked should allow for Status PDUs and therefore read as $(tcv_NumPDUsTx < 2 * p_W + 2)$ in line 28, and $(tcv_NumPDUsTx >= 2 * p_W + 2)$ in line 30, respectively.</p>
Summary of change	<p>Line 28 changed from $(tcv_NumPDUsTx <> 2 * p_W + 2)$ to $(tcv_NumPDUsTx < 2 * p_W + 2)$</p> <p>Line 30 changed from $(tcv_NumPDUsTx = 2 * p_W + 2)$ to $(tcv_NumPDUsTx >= 2 * p_W + 2)$</p>

Source of change

new change; this bug is still present in the V1.44 RLC ATS delivered by MCC160

Label

WA #RLC 3119

R_TxAndRx(p_W: INTEGER)				
21		TM 1 RoAMD (txv_AMD_PDU => RoAMD.data)	cat_DatAnd; txv_RB_AM_7_RLC, txv_AMD_U_Data' (List_7BULK txv_PayloadSize - 1), txv_AM_RxData.data)	9
22		=R_UpdateVarsAndCheckTWWinFull(p_W)		10
23	TRF1	TM 1 RoAMD (txv_AMD_PDU => RoAMD.data)	cat_DatAnd; txv_RB_AM_7_RLC, (r_AMD_AW)	(F) 11
24		=R_UpdateVarsAndCheckTWWinFull(p_W)		12
25		TM 1 RxStatus	cat_StatusAnd; txv_RB_AM_7_RLC)	12
26		? TIMEOUT_L_WUE_Tx		13
27		(txv_LE_TxWinFull = FALSE)		13
28		(txv_NumPDUsTx = 2 * p_W + 2)		13
29		TM 1 TxStatus	cat_StatusReq; txv_RB_AM_7_RLC, cs_SF_Ack(txv_AM_VRR), (2 * (txv_PayloadSize + 2)) - 5)	13 WA#RLC 3119
30		(txv_NumPDUsTx == 2 * p_W + 2)		13 WA#RLC 3119
31		TM 1 TxStatus	cat_StatusReq; txv_RB_AM_7_RLC, cs_SF_Ack(txv_AM_VRR), (2 * (txv_PayloadSize + 2)) - 5)	13.1
32		TM 1 TxStatus	cat_StatusReq; txv_RB_AM_7_RLC, cs_SF_WinSizeAndNoMorep_ PDU), (2 * (txv_PayloadSize + 2)) - 6)	13.1
33		? TIMEOUT_L_TTI		3
34		(txv_NumPDUsTx = 3 * p_W + 4)		14
35		=txv_ToAMLT_PRBS(txv_P_P0L c_List_7BULK txv_PayloadSize - 1), txv_PayloadSize - 1)		15
36		(txv_NumPDUsTx => txv_NumPDUsTx + 1)		15
37		START_L_TTI		3
38		TRUE)		14

5 Branches executed in test case 7.2.3.13

The test case implementation executed the CS branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE 6650

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_13-Logs\Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030485**
HTML Execution log files, PICS/PIXIT file, TTCN MP file

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 043** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of RLC test case 7.2.3.18 to RLC ATS V3.1.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ -	Date:	⌘ 23 Apr 2003
Category:	⌘ B	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified RLC test case 7.2.3.18 to the approved RLC ATS V3.1.0		
Summary of change:	⌘ This document lists all changes applied to test case 7.2.3.18 required for approval. See detailed change description for further information.		
Consequences if not approved:	⌘ Test case will not be added to ATS		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.18 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.18 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_7_2_3_18
Test Group: RLC/AcknowledgedMode/Polling/
ATS Version: V3.10d + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 7.2.3.18

4.1 Introduction

This section describes the changes required to make test case 7.2.3.18 run correctly with a 3G UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

The RLC ATS version used as basis was RLCv310d.mp provided by MCC 160. In a first step test case 7.2.3.18 was merged into this ATS. The test case and related TTCN objects were extracted from the RLC Module ATS version RLCv066.mp, as well provided by MCC 160. This anticipated the RLCv144 ATS to be provided by MCC 160.

In subsequent steps the changes described hereafter were integrated into the ATS.

4.2 Incorrect transport format setting (WA #RLC 3115)

Constraint name	c_UL_CommTrChInfoDCCH_13_6k, cbs_108_RRC_ConnSetupDCH
Test step name	
Reason for change	c_UL_CommonTrChInfoDCCH_13_6k: TFs to be Complete instead of Add. Ad leaves the existing TFCS whereas Complete replaces the existing ones.
Summary of change	c_UL_CommonTrChInfoDCCH_13_6k: ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change	new change
Label	WA #RLC 3115

ASN.1 Type Constraint Declaration	
Constraint Name:	c_UL_CommTrChInfoDCCH_13_6k
Group:	
Type Name:	UL_CommonTransChInfo
Derivation Path:	
Encoding Variation:	
Comments:	WA #RLC 3115
Constraint Value	
<pre> { tfc_Subset OMIT, prach_TFCS OMIT, modeSpecificInfo fdd:{ ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k) } } </pre>	

4.3 Incomplete transport format setting in RAB release (WA #RLC 3116 and 3117)

Constraint name	cs_RB_ReIRLC
Test step name	
Reason for change	c_UL_CommonTrChInfoDCCH_13_6k: TFs to be Complete instead of Add. Ad leaves the existing TFCS whereas Complete replaces the existing ones.
Summary of change	c_UL_CommonTrChInfoDCCH_13_6k: ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change	new change
Label	WA #RLC 3116 and WA #RLC 3117

ASN.1 PDU Constraint Declaration

Constraint Name:	cs_RB_ReIRLC (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_ActivationTime : ActivationTime; p_Freqnfo : FrequencyInfo; p_PrimaryScramblingCode : PrimaryScramblingCode; p_UL_ScramblingCode : UL_ScramblingCode; p_RB_InformationReleaseList : RB_InformationReleaseList)
Group:	
PDU Name:	DL_DCCH_Message
Derivation Path:	
Encoding Rule Name:	
Encoding Variation:	
Comments:	Defined in TS 34.123-1 annex A condition A.1 WA #RLC 3116 ul_CommonTransChInfo OMIT -> c_UL_CommTrChInfoDCCH_13_6k, dl_CommonTransChInfo OMIT -> c_DL_CommonTransChInfoSameAsUL WA #RLC 3117 ul_AddReconfTransChInfoList OMIT -> c_UL_AddReconfTransChInfoListDCCH_13_6k dl_AddReconfTransChInfoList OMIT -> c_DL_AddReconfTransChInfoListDCCH_SRB

```

dl_CounterSynchronisationInfo OMIT,
ul_CommonTransChInfo c_UL_CommTrChInfoDCCH_13_6k,
ul_deletedTransChInfoList c_UL_DeletedTransChInfo ( tsc_UL_DCH1 ),
ul_AddReconfTransChInfoList c_UL_AddReconfTransChInfoListDCCH_13_6k,
modeSpecificTransChInfo fdd : { cpch_SetID OMIT,
  addReconfTransChDRAC_Info OMIT
},

dl_CommonTransChInfo c_DL_CommonTransChInfoSameAsUL,
dl_DeletedTransChInfoList c_DL_DeletedTransChInfo_PS ( tsc_DL_DCH1),
dl_AddReconfTransChInfoList c_DL_AddReconfTransChInfoListDCCH_SRB,
frequencyInfo p_Freqnfo,

```

4.4 Incorrect value for Poll SDU (WA #RLC 3118)

Constraint name	cds_RLC_InfoAM_7_2_3_18_Run2
Test step name	
Reason for change	The value for the Poll SDU is incorrectly set to 64; it should be set to 16.
Summary of change	Poll SDU set to sdu16
Source of change	new change; this bug is still present in the V1.44 RLC ATS delivered by MCC160
Label	WA #RLC 3118

ASN.1 Type Constraint Declaration	
Constraint Name:	cbs_RLC_InfoAM_7_2_3_18_Run2
Group:	
Type Name:	RLC_Info
Derivation Path:	cbs_DefaultRLC_InfoAM
Encoding Variation:	
Comments:	This derived constraint is used to replace the default values in clause 7.2.3.1 with specific parameters as required for the second execution of test case 7.2.3.18 WA#RLC 3118 sdu64->sdu16
Constraint Value	
REPLACE ul_RLC_Mode ul_AM_RLC_Mode.transmissionWindowSize BY 3k256, REPLACE ul_RLC_Mode ul_AM_RLC_Mode.pollingInfo.poll_SDU BY sdu16, REPLACE ul_RLC_Mode ul_AM_RLC_Mode.pollingInfo.lastTransmissionPDU_Poll BY FALSE	

5 Branches executed in test case 7.2.3.18

The test case implementation executed the CS branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE 6650

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_18-Logs\Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030487**
HTML Execution log files, PICS/PIXIT file, TTCN MP file

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 044** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of RLC test case 7.2.2.5 to RLC ATS V3.0.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ -	Date:	⌘ 24 Feb 2003
Category:	⌘ B	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified RLC test case 7.2.2.5 to the approved RLC ATS V3.0.0		
Summary of change:	⌘ This document lists all changes applied to test case 7.2.2.5 required for approval. See detailed change description for further information.		
Consequences if not approved:	⌘ Test case will not be added to ATS		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"><input type="checkbox"/></td> <td style="width: 20px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="width: 20px;"><input type="checkbox"/></td> <td style="width: 20px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="width: 20px;"><input type="checkbox"/></td> <td style="width: 20px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.2.5 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.2.5 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_7_2_2_5
Test Group: RLC/UnacknowledgedMode/Segmentation/LI7Bit/
ATS Version: V1.40 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE
Verification Status: PASS

4 Corrections required for test case 7.2.2.5

4.1 Introduction

This section describes the changes required to make test case 7.2.2.5 run correctly with a real UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

Please note that this test case does not require any new changes. All changes have either already been approved (see clause 4.2) or have been submitted for approval for other test cases (see clause 4.3).

4.2 Changes already approved

The following changes have already been approved by T1/SIG for approval of test case 7.2.2.3. Please refer to CR [2] for further information.

WA #RLC 3000	WA #RLC 3008	WA #RLC 3015	WA #RLC 3027
WA #RLC 3002	WA #RLC 3009	WA #RLC 3016	WA #RLC 3028
WA #RLC 3003	WA #RLC 3011	WA #RLC 3020	
WA #RLC 3004	WA #RLC 3012	WA #RLC 3022	
WA #RLC 3005	WA #RLC 3013	WA #RLC 3024	
WA #RLC 3006	WA #RLC 3014	WA #RLC 3025	

4.3 Changes submitted for approval

The following changes have been submitted for approval of test case 7.2.3.6, but have not been fully approved by T1/SIG yet. Please refer to CR [3] for further information.

WA #RLC 3036	WA #RLC 3046		
--------------	--------------	--	--

5 Branches executed in test case 7.2.2.5

The test case implementation has only one main branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE

The Nokia 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_2_5-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1S030252**
HTML Execution log files, PICS/PIXIT file, TTCN MP file
- [2] **T1S030115**
CR for approval of test case 7.2.2.3
- [3] **T1S030244**
CR for approval of test case 7.2.3.6

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 045** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of RLC test case 7.2.2.6 to RLC ATS V3.0.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ -	Date:	⌘ 24 Feb 2003
Category:	⌘ B	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified RLC test case 7.2.2.6 to the approved RLC ATS V3.0.0		
Summary of change:	⌘ This document lists all changes applied to test case 7.2.2.6 required for approval. See detailed change description for further information.		
Consequences if not approved:	⌘ Test case will not be added to ATS		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.2.6 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.2.6 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UE (see section 6). Execution log files are provided as evidence.

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6.1	Nokia 3G UE.....	2
7	References	3

3 Verification Test Summary

Test Case: TC_7_2_2_6
Test Group: RLC/UnacknowledgedMode/Segmentation/LI7Bit/
ATS Version: V1.40 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE
Verification Status: PASS

4 Corrections required for test case 7.2.2.6

4.1 Introduction

This section describes the changes required to make test case 7.2.2.6 run correctly with a real UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

Please note that this test case does not require any new changes. All changes are identical to the changes described for test case 7.2.2.5. See [2] for further information.
--

5 Branches executed in test case 7.2.2.6

The test case implementation has only one main branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE

The Nokia 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_2_6-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1S030254**
HTML Execution log files, PICS/PIXIT file, TTCN MP file
- [2] **T1S030251**
CR for approval of test case 7.2.2.5

CHANGE REQUEST

34.123-3 CR 046 # rev - # Current version: 3.1.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Addition of RLC test case 7.2.3.17 to RLC ATS V3.0.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 26 Feb 2003
Category:	# B	Release:	# R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To add verified RLC test case 7.2.3.17 to the approved RLC ATS V3.0.0		
Summary of change:	# This document lists all changes applied to test case 7.2.3.17 required for approval. See detailed change description for further information.		
Consequences if not approved:	# Test case will not be added to ATS		

Clauses affected:	# N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	#	X	#	X	#	X		
Y	N										
#	X										
#	X										
#	X										
Other comments:	#										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.17 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.17 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_7_2_3_17
Test Group: RLC/AcknowledgedMode/Polling/
ATS Version: V1.40 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE
Verification Status: PASS

4 Corrections required for test case 7.2.3.17

4.1 Introduction

This section describes the changes required to make test case 7.2.3.17 run correctly with a real UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

Please note that this test case does not require any new changes. All changes have either already been approved (see clause 4.2) or have been submitted for approval for other test cases (see clause 4.3).

4.2 Changes already approved

The following changes have already been approved by T1/SIG for approval of test case 7.2.2.3. Please refer to CR [2] for further information.

WA #RLC 3000	WA #RLC 3008	WA #RLC 3015	WA #RLC 3028
WA #RLC 3002	WA #RLC 3009	WA #RLC 3016	WA #RLC 3034 = 3050
WA #RLC 3003	WA #RLC 3011	WA #RLC 3022	
WA #RLC 3004	WA #RLC 3012	WA #RLC 3024	
WA #RLC 3005	WA #RLC 3013	WA #RLC 3025	
WA #RLC 3006	WA #RLC 3014	WA #RLC 3027	

The following changes have already been approved by T1/SIG for approval of test case 7.2.3.4. Please refer to CR [3] for further information.

WA #RLC 3021			
--------------	--	--	--

4.3 Changes submitted for approval

The following changes have been submitted for approval of test case 7.2.3.6. Please refer to CR [4] for further information.

WA #RLC 3036	WA #RLC 3046		
--------------	--------------	--	--

5 Branches executed in test case 7.2.3.17

The test case implementation has only one main branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE

The Nokia 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_17-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1S030258**
HTML Execution log files, PICS/PIXIT file, TTCN MP file
- [2] **T1S030115**
CR for approval of test case 7.2.2.3
- [3] **T1S030118**
CR for approval of test case 7.2.3.4
- [4] **T1S030244**
CR for approval of test case 7.2.3.6

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 047** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of RLC test case 7.2.3.20 to RLC ATS V3.0.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ N/A	Date:	⌘ 26 Feb 2003
Category:	⌘ B	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified RLC test case 7.2.3.20 to the approved RLC ATS V3.0.0		
Summary of change:	⌘ This document lists all changes applied to test case 7.2.3.20 required for approval. See detailed change description for further information.		
Consequences if not approved:	⌘ Test case will not be added to ATS		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.20 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.20 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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7	References	3

3 Verification Test Summary

Test Case: TC_7_2_3_20
Test Group: RLC/AcknowledgedMode/Polling/
ATS Version: V1.40 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE
Verification Status: PASS

4 Corrections required for test case 7.2.3.20

4.1 Introduction

This section describes the changes required to make test case 7.2.3.20 run correctly with a real UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

Please note that this test case does not require any new changes. All changes have either already been approved (see clause 4.2) or have been submitted for approval for other test cases (see clause 4.3).

4.2 Changes already approved

The following changes have already been approved by T1/SIG for approval of test case 7.2.2.3. Please refer to CR [2] for further information.

WA #RLC 3000	WA #RLC 3008	WA #RLC 3015	WA #RLC 3028
WA #RLC 3002	WA #RLC 3009	WA #RLC 3016	WA #RLC 3034 = 3050
WA #RLC 3003	WA #RLC 3011	WA #RLC 3022	
WA #RLC 3004	WA #RLC 3012	WA #RLC 3024	
WA #RLC 3005	WA #RLC 3013	WA #RLC 3025	
WA #RLC 3006	WA #RLC 3014	WA #RLC 3027	

The following changes have already been approved by T1/SIG for approval of test case 7.2.3.4. Please refer to CR [3] for further information.

WA #RLC 3021			
--------------	--	--	--

4.3 Changes submitted for approval

The following changes have been submitted for approval of test case 7.2.3.6. Please refer to CR [4] for further information.

WA #RLC 3036	WA #RLC 3046		
--------------	--------------	--	--

5 Branches executed in test case 7.2.3.20

The test case implementation has only one main branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE

The Nokia 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_20-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1S030260**
HTML Execution log files, PICS/PIXIT file, TTCN MP file
- [2] **T1S030115**
CR for approval of test case 7.2.2.3
- [3] **T1S030118**
CR for approval of test case 7.2.3.4
- [4] **T1S030244**
CR for approval of test case 7.2.3.6

CR-Form-v7

CHANGE REQUEST

34.123-3 CR 048 # rev - # Current version: 3.1.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Addition of RLC test case 7.2.3.34 to RLC ATS V3.0.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 20 Feb 2003
Category:	# B	Release:	# R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To add verified RLC test case 7.2.3.34 to the approved RLC ATS V3.0.0		
Summary of change:	# This document lists all changes applied to test case 7.2.3.34 required for approval. See detailed change description for further information.		
Consequences if not approved:	# Test case will not be added to ATS		

Clauses affected:	# N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	#	X	#	X	#	X		
Y	N										
#	X										
#	X										
#	X										
Other comments:	#										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
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downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.34 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.34 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UE (see section 6). Execution log files are provided as evidence.

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7	References	3

3 Verification Test Summary

Test Case: TC_7_2_3_34
Test Group: RLC/AcknowledgedMode/Reset/
ATS Version: V1.40 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Qualcomm 3G UE
Verification Status: PASS

4 Corrections required for test case 7.2.3.34

4.1 Introduction

This section describes the changes required to make test case 7.2.3.34 run correctly with a real UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

Note that all changes are identical to the changes made in test case 7.2.3.6. Please refer to CR [2] for a detailed description of these changes.

5 Branches executed in test case 7.2.3.34

The test case implementation has only one main branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Qualcomm 3G UE

The Qualcomm 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_34-Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1S030249**
HTML Execution log files, PICS/PIXIT file, TTCN MP file
- [2] **T1S030244**
CR for approval of test case 7.2.3.6

CR-Form-v7

CHANGE REQUEST

34.123-3 CR 049 # rev **-** # Current version: **3.1.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Addition of SM test case 11.1.1.1 to NAS ATS V3.1.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 03 May 2003
Category:	# B	Release:	# R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To add verified SM test case 11.1.1.1 to the approved NAS ATS V3.1.0
Summary of change:	# This document lists all changes applied to test case 11.1.1.1 required for approval. See detailed change description for further information.
Consequences if not approved:	# Test case will not be added to ATS

Clauses affected:	# N/A								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	#	X	#	X	#	X
Y	N								
#	X								
#	X								
#	X								
Other comments:	#								

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 11.1.1.1 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document details the changes needed to correct problems in the TTCN implementation of test case 11.1.1.1 which is part of the NAS test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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4.7	Missing constraint cr_AuthAndCiphRspNone (WA#BasicM4005).....	6
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3 Verification Test Summary

Test Case: TC_11_1_1_1
Test Group: SM_TestCases/Activation/
ATS Version: V1.44 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 11.1.1.1

4.1 Introduction

This section describes the changes required to make test case 11.1.1.1 run correctly with a 3G UE. All modifications are marked with label “**WA#BasicM<number>**” for changes to the BasicM TTCN module and with label “**WA#NAS<number>**” for NAS related changes in the TTCN comments column of the enclosed NAS ATS [1].

The NAS ATS version used as basis was NASv144.mp provided by MCC 160. As a first step, the changes proposed by other TTCN verification teams were integrated to this ATS (see Anritsu document [2]). Changes presented in [2] but not considered by R&S were either already fixed in TTCN V1.44 or not necessary for this test case. Then a small number of new changes had to be applied to to get the test case running with the R&S 3G system simulator CRTU-W.

Please note that the provided ATS contains further modifications in common test steps for verification of other NAS test cases. For example, changes WA#BasicM4023-4032 are required for running GMM tests. The description of these changes, however, is out-of-scope of this document. Only the changes detailed below are necessary for running this SM test case.

4.2 Incorrect indentation (WA#BasicM4000)

Test step name	ts_GMM_IdleUpdated, local test step It_IdleUpdated_NMO_II
Reason for change	The indentation of TTCN statements from line 37 to 46 is wrong in V144.
Summary of change	Indented line 37 to 46.
Source of change	new change
Label	WA#BasicM4000

t_IdleUpdates_NMO_I			
33	+ts_MM_UE_SwitchOn		
34	+ts_RRC_ConnEst(p_CellId, est_Reg, registration)		Establish RRC connection
35	Do?RRC_DataReq (tcv_Start = RRC_DataReq start)	ca_rndirectTransfer(tsc_CellDedicated, tsc_RB3, cb_LocUpsReqAny(?)	Any Location Update request
36	(tcv_GMM_AttachExpect = TRUE, tcv_GMM_Attach Res = FALSE)		Set Flags in order to enable default handler to store ATTACH REQUEST PDU in case it is sent during Location Update procedure
37	+ts_SS_SecurityDownloadStart (ca_domain, tcv_Start)		
38	+ts_MM_Authentication(p_CellId)		Authentication
39	+ts_RRC_Security (p_CellId, tcv_AuthCK, tcv_AuthNK, tcv_AuthCQSM, TRUE, ts_domain)		
40	DoRRC_DataReq (tcv_MM_CmpIExpect = TRUE, tcv_MM_CmpRec = FALSE)	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdAppTMSI, tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac)	Location Updating Accept
41	{tcv_GMM_AttachRec = TRUE}		ATTACH REQUEST was received and handled by NAS default handler
42	(tcv_GMM_AttachExpect = FALSE)		Disable NAS default handler for ATTACH REQUEST
43	+ts_GMM_Authentication (p_CellId)		AUTHENTICATION AND CIPHERING REQUEST AUTHENTICATION AND CIPHERING RESPONSE
44	+t_SecurityMode		SECURITY MODE COMMAND SECURITY MODE COMPLETE
45	(tcv_AssignedPTMSI = px_PTMSI_Def, tcv_Assigned_PTMSI_Sig = px_PTMSI_SigDef)		Use default values
46	DoRRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, ca_AttachAcc(c_GMM_AttachResult(0010), c_RAI_w(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac, tcv_TmpCellInfo.rac), c_PTMSI_Signature (tcv_Assigned_PTMSI_Sig), c_MobileIDPTMSI,tcv_Assigned_PTMSI	ATTACH ACCEPT for PS only - Attach result 'GPRS attached' - RAI default (RAI-1) - P-TMSI-1 signature - MobileID P-TMSI-1 - omni TMSI

4.3 UE OpMode not checked (WA#BasicM4001)

Test step name	ts_GMM_IdleUpdated
Reason for change	Test case variable tcv_UE_OpMode is not set according to the type of attach requested by the UE.
Summary of change	Added lines 72 to 75 to check Ue_Opmode.
Source of change	new change
Label	WA#BasicM4001

Line	Code	Comments
81	[ts_GMM_AttachReq = TRUE]	ATTACH REQUEST was received and handled by HA-S default handler
82	(sv_GMM_AttachExpect = FALSE)	Disable NAS default handler for ATTACH REQUEST
83	!NOT (ts_AuthReqAttchReq) && !ts_UE	ATTACH REQUEST was NOT yet received and the UE does not automatically attach if switch on.
84	+RRC_Connect	RRC connection release
85	START_WAIT (1)	Wait 1 s to allow UE to relax
86	?TIMEOUT_WAIT	
87	START_WAIT (40)	Wait 40 s to allow UE to relax
88	+ts_AT_TaggerGMM_Attch	Trigger UE to initiate GMM Attach after allowing the UE to decode Sys Info
89	+ts_RRC_Connect	Establish RRC connection
90	ts_CoRRC, ts_Reg, ts_UEInfo	
91	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
92	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
93	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
94	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
95	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
96	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
97	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
98	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
99	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
100	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
101	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
102	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
103	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
104	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
105	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
106	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
107	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
108	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
109	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
110	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
111	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
112	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
113	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
114	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
115	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
116	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
117	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
118	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
119	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
120	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
121	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
122	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
123	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
124	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
125	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
126	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
127	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
128	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
129	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
130	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
131	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
132	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
133	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
134	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
135	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
136	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
137	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
138	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
139	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
140	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
141	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
142	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
143	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
144	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
145	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
146	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
147	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
148	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
149	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
150	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
151	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
152	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
153	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
154	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
155	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
156	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
157	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
158	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
159	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
160	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
161	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
162	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
163	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
164	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
165	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
166	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
167	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
168	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
169	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
170	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
171	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
172	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
173	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
174	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
175	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
176	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
177	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
178	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
179	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
180	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
181	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
182	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
183	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
184	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
185	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
186	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
187	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
188	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
189	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
190	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
191	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
192	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
193	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
194	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
195	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
196	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
197	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
198	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
199	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	
200	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	

4.4 Wait timer too low (WA#BasicM4002)

Test step name ts_GMM_IdleUpdated
Reason for change For some UEs the processing of AT commands for PS configuration takes longer than 5s.
Summary of change Changed wait timer in line 24 from 5 s to 40 s to allow UEs to receive AT commands and handle them accordingly.
Source of change new change
Label WA#BasicM4002

Line	Code	Comments
20	+ts_MM_Authentication_Ctrl	Authentication
21	+ts_RRC_Security (ts_CoRRC, ts_UEInfo, ts_Reg, ts_UEInfo)	
22	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	Location Updating Accept
23	ts_RRC_DataReq (ts_GMM_AttachReq, ts_CoRRC, ts_Reg, ts_UEInfo)	TMSI reallocation complete
24	START_WAIT (40)	Wait 40 s to allow UE to relax
25	+ts_AT_TaggerGMM_Attch	Trigger UE to initiate GMM Attach after allowing the UE to decode Sys Info

4.5 No distinction for authentication response cases (WA#BasicM4003)

Test step name ts_GMM_Authentication
Reason for change No distinction is made between the 3 possible authentication response cases (SRES only, Extension as well, neither of both)
Summary of change Steps 7-12 have been added, so as to be consistent with the MM procedures.
Source of change new change
Label WA#BasicM4003

Test Step						
Test Step ID:	E_GMM_Authentication (U_Comp: INTER)					
Test Step Group Ref:	Basic_M4_GMM_Steps					
Objective:	Generate authentication parameters and run the GMM Authentication procedure					
Default:	NAS_CipheringFail					
Comments:	WA#BasicM4004					
Id	Label	Behaviour Description	Constraint Ref	Workset	Comments	
1		+ts_GMM_Authentication			Compute all relevant authentication parameters.	
2		Cr: RRC_Dedicated	ts_PD_Dedicated, ts_CellDedicated, ts_RR3, ts_AuthAndCiphReq, ts_GMM_AuthRANDctr_AuthRand, ts_GMM_KeyGen_keyGen_PS_KeyGen, ts_GMM_AuthAUTNctr_AuthAUTN		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.	
3		Cr: RRC_Dedicated Ev: TrrsAuthAndCiphRspPDU = RRC_Dedicatedmsg, Ev_AuthRsp = Ev_TrrsAuthAndCiphRspPDU.authRsp.value, Ev_AuthRspExt = Ev_TrrsAuthAndCiphRspPDU.authRspExt	ts_PS_UplinkDirectTransfer (ts_CellDedicated, ts_RR3, ts_AuthAndCiphReq, ts_AuthRspExt)		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters	
4		Ev: Res = Ev_AuthRspCm, Ev_AuthRsp, Ev_AuthRspExt, Ev_AuthR, Ev_AuthRAND, TRUE()			Verify that the received Authentication Response parameters match expected response	
5	TSF1	[Ev_Res = FALSE]		(F)		
6		[Ev_Res = TRUE]		(F)		
7		Cr: RRC_Dedicated Ev: TrrsAuthAndCiphRspPDU = RRC_Dedicatedmsg, Ev_AuthRsp = Ev_TrrsAuthAndCiphRspPDU.authRsp.value	ts_PS_UplinkDirectTransfer (ts_CellDedicated, ts_RR3, ts_AuthAndCiphReqExt, ts_AuthRspExt_M)		AUTHENTICATION AND CIPHERING RESPONSE without Authentication Response Extension	
8		[Ev_Res = Ev_AuthRspCm, Ev_AuthRsp, Ev_AuthRspExt, Ev_AuthR, Ev_AuthRAND, FALSE()			Verify that the received Authentication Response parameters match expected response	
9	TSF2	[Ev_Res = FALSE]		(F)		
10		[Ev_Res = TRUE]		(F)		
11	TSF3	Cr: RRC_Dedicated	ts_PS_UplinkDirectTransfer (ts_CellDedicated, ts_RR3, ts_AuthAndCiphReq)	(F)	AUTHENTICATION AND CIPHERING RESPONSE without Authentication Response and Authentication Response Extension parameters	
12	TSF4	Cr: RRC_Dedicated	ts_PS_UplinkDirectTransfer (ts_CellDedicated, ts_RR3, ts_AuthFailure)	(F)	AUTHENTICATION FAILURE	

4.6 Missing constraint cr_AuthAndCiphRspNoExt (WA#BasicM4004)

Constraint name cr_AuthAndCiphRspNoExt
Reason for change This change is related to WA#BasicM4003.
Summary of change Added constraint cr_AuthAndCiphRspNoExt, to be used in line 7 of ts_GMM_Authentication.
Source of change new change
Label WA#BasicM4004

PDU Constraint Declaration				
Constraint Name:	cr_AuthAndCiphRspNoExt(p_authRsp : AuthRsp_M)			
Group:				
PDU Name:	AUTHENTICATIONANDCIPHERINGRESPONSE			
Derivation Path:				
Encoding Rule Name:				
Encoding Variation:				
Comments:	WA#BasicM4004			
Field Name	Element Value	Type Encoding	Comments	
skipIndicator	'0000'B			
gmmProtocolDiscriminator	ts_GMM_PD			
msgType	'00010011'B			
spare4	'0000'B			
acrRefNo	?		Should be the one sent in the auth request	
authRsp	p_authRsp		Authentication parameter RAND	
imeiSv	-		No IMEISV requested	
authRspExt	-		Authentication parameter AUTN, a UM TS challenge is requested	

4.7 Missing constraint cr_AuthAndCiphRspNone (WA#BasicM4005)

Constraint name cr_AuthAndCiphRspNone

Reason for change This change is related to WA#BasicM4003.
Summary of change Added Constraint cr_ AuthAndCiphRspNone, to be used in line 11 of ts_GMM_Authentication.
Source of change new change
Label WA#BasicM4005

PDU Constraint Declaration			
Constraint Name:	cr_AuthAndCiphRspNone		
Group:			
PDU Name:	AUTHENTICATIONANDCIPHERINGRESPONSE		
Derivation Path:			
Encoding Rule Name:			
Encoding Variation:			
Comments:	WA#BasicM4005		
Field Name	Element Value	Type Encod...	Comments
skipIndicator	'0000B		
gmmProtoDiscriminator	tsr_GMM_PD		
msgType	'00010011B		
spare4	'0000B		
acRefNo	?		Should be the one sent in the auth request
authRsp	-		Authentication parameter RAND
imeiEv	-		No IMEISV requested
authRepExt	-		Authentication parameter AUTN, a UMTS challenge is requested

4.8 Missing GMMStatus PDU (WA#BasicM4006)

PDU name GMMStatus
Reason for change Related to WA#BasicM4008
Summary of change Added PDU for GMMStatus message handling in NAS_OtherwiseFail default branch.
Source of change new change
Label WA#BasicM4006

PDU Type Definition			
PDU Name:	GMMSTATUS		
Group:			
PCO Type:	Dc_SAP		
Encoding Rule Name:			
Encoding Variation:			
Comments:	WA#BasicM4006		
Field Name	Field Type	Type Encoding	Comments
skipIndicator	SkipIndicator		
gmmProtoDiscriminator	ProtocolDiscriminator		
msgType	MsgType		
gmm_Cause	GMM_Cause		

4.9 Missing constraint cbr_GMM_StatusMO (WA#BasicM4007)

Constraint name cbr_GMM_StatusMO
Reason for change Related to WA#BasicM4008
Summary of change Added constraint for GMMStatus message handling in NAS_OtherwiseFail
Source of change new change
Label WA#BasicM4007

PDU Constraint Declaration			
Constraint Name:	cbr_GMM_StatusMO(p_gmm_cause GMM_Cause)		
Group:			
PDU Name:	GMMSTATUS		
Derivation Path:			
Encoding Rule Name:			
Encoding Variation:			
Comments:	WA#BasicM4007		
Field Name	Element Value	Type Encod...	Comments
skipIndicator	'0000B		
gmmProtoDiscriminator	tsr_GMM_PD		
msgType	'00100000B		
gmm_Cause	p_gmm_cause		

4.10 GMMStatus message handling (WA#BasicM4008)

Test step name NAS_OtherwiseFail

Reason for change The test case sends a SERVICE_ACCEPT message in the RRC security test step to the UE. The UE responds with a GMMStatus message as no SERVICE_REQUEST was sent by the UE. This status message is not handled in the default message handling.

Summary of change Added lines 10 & 11 to handle GMM status messages properly.

Source of change new change

Label WA#BasicM4008

Default					
Default Id:		NAS_OtherwiseFail			
Default Group Ref:		NAS_Defaults			
Objective:		To match unexpected events and fail the test case.			
Comments:					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		TIMEOUT_Count			1
2		UI_MMI_CmdReq	cr_MMI_CmdReq (" The pu and timer has run out Please take appropriate measures.")		4
3		UI?MMI_CmdCnf	cr_MMI_CmdCnf		
4		[try_TestBody = FALSE]			
5	DFFt	CANCEL		(f)	
6		[try_TestBody = TRUE]			
7	DFFt	CANCEL		(f)	
8		DeT RRC_DataInd	cr_PS_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, chr_RA_UsedRes_OC ("", " ", " ")).		
9		RETURN			
10		DeT RRC_DataInd	cr_PS_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, chr_GMM_StatusMO("")).		WA#BasicM4008
11		RETURN			

4.11 Inccornt initialisation of IE nmo in c_CellInfoDef (WA#BasicM4009)

Incorporated from CR [2], section 2.2.1, presented by Anritsu

4.12 Addition of PIXIT value px_NMO (WA#BasicM4010)

Incorporated from CR [2], section 2.4.1, presented by Anritsu

4.13 Constraint cr_QoS_InteractiveOrBackgroundMO_Iv (WA#BasicM4011)

Incorporated from CR [2], section 2.2.3, presented by Anritsu

4.14 Constraint cs_QoS_InteractiveOrBackgroundMT_Iv (WA#BasicM4012)

Incorporated from CR [2], section 2.2.5, presented by Anritsu

4.15 Constraint c_TrChInfoUL_336_148 (WA#BasicM4013)

Incorporated from CR [2], section 2.2.6, presented by Anritsu

4.16 Constraint cr_ActPDP_ContextReqMO (WA#BasicM4014)

Incorporated from CR [2], section 2.2.8, presented by Anritsu

4.17 Constraint ts_CRLC_UL_CipherCfg_RAB (WA#BasicM4015)

Incorporated from CR [2], section 2.2.12, presented by Anritsu

4.18 Test step ts_AT_OrgPS_Call (WA#BasicM4016)

Incorporated from CR [2], section 2.2.13, presented by Anritsu

4.19 Superfluous space characters in AT command (WA#BasicM4017)

Test step name	ts_AT_OrgPS_Call
Reason for change	The AT commands issued by this test step contain space characters between values.
Summary of change	Removed space character between parameter 1 and 2 in command "AT+CGACT=1,0"
Source of change	new change
Label	WA#BasicM4017

Test Step					
Test Step Id:	ts_AT_OrgPS_Call (p_CellId: INTEGER)				
Test Step Group Ref:	BasicM_UT_Step01				
Objective:	To originate a PDP Context from the UE.				
Default:	UT_OtherwiseFail				
Comments:	WA#BasicM4016				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+R_PrepareAT_CmdCGEQMIN			set up the Minimum QoS same as Required QoS
2		UI1AT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
3		UE1AT_CmdCnf	ca_AT_CmdCnf		
4		+Rs_AT_SetQoS			
5		+R_AssignAT_Cmd			
6		UI1AT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
7		UE1AT_CmdCnf	ca_AT_CmdCnf		
8		{<trv_AT_Cmd>="AT+CGACT=1,1"<CR>}			ACTIVATE PDP CONTEXT message for MO WA#BasicM4017 WA#BasicM4018
9		UI1AT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		

4.20 Missing line terminator in AT command (WA#BasicM4018)

Test step name	ts_AT_OrgPS_Call
Reason for change	The AT commands issued by this test step does not contain a <CR> (carriage return) line terminator.
Summary of change	Appended <CR> line terminator to AT command
Source of change	new change
Label	WA#BasicM4018

Test Step					
Test Step Id:	ts_AT_OrigPS_Call (p_CellId : INTEGER)				
Test Step Group Ref:	BasicM_UT_Steps				
Objective:	To originate a PDP Context from the UE				
Default:	UT_OtherwiseFail				
Comments:	WA#BasicM4019				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ IL_PrepareAT_CmdCGEQMIN			set up the Minimum QoS same as Required QoS
2		UI1AT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
3		UE1AT_CmdCnf	ca_AT_CmdCnf		
4		+ts_AT_SetQoS			
5		+ IL_AssignAT_Cmd			
6		UI1AT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
7		UE1AT_CmdCnf	ca_AT_CmdCnf		
8		{(trv_AT_Cmd =~"AT+CGACT=1,1<CR>")}			ACTIVATE PDP CONTEXT message for MO WA#BasicM4017 WA#BasicM4018
9		UI1AT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		

4.21 Wrong AT commands in test step ts_AT_SetQoS (WA#BasicM4019)

Incorporated from CR [2], section 2.2.14, presented by Anritsu

4.22 Superfluous space characters in AT command (WA#BasicM4020)

Test step name	ts_AT_SetQoS
Reason for change	The AT commands issued by this test step contain space characters between values.
Summary of change	Removed space characters in between AT command in line 5 and line 7 of test step ts_AT_SetQoS
Source of change	new change
Label	WA#BasicM4020

Test Step					
Test Step Id:	ts_AT_SetQoS				
Test Step Group Ref:	BasicM_UT_Steps				
Objective:	This Step sets the QoS				
Default:	UT_OtherwiseFail				
Comments:	WA#BasicM4020				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ IL_PrepareAT_CmdCGEQREQ			set up the QoS with the following parameters:
2		UI1AT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
3		UI1AT_CmdCnf	ca_AT_CmdCnf		
IL_PrepareAT_CmdCGEQREQ					
4		[!pc_interactive AND (!pc_RRC_PS_SenTested = !ps_interactive)]			
5		{(trv_AT_Cmd =~"AT+CGEQREQ=1,3,64,64,1,320 "1E3" "6E3",1,3<CR>")}			WA#BasicM4020
6		[!pc_Background AND (!pc_RRC_PS_SenTested = !ps_Background)]			
7		{(trv_AT_Cmd =~"AT+CGEQREQ=1,3,64,64,1,320 "1E3" "6E3",1,<CR>")}			WA#BasicM4020
8	ERR1	[TRUE]		I	Parameter error

4.23 ts_ActivatePDP_AcceptMO (WA#BasicM4021)

Incorporated from CR [2], section 2.2.15, presented by Anritsu

4.24 ts_ReceiveActivatePDP_Accept_DCH (WA#BasicM4022)

Incorporated from CR [2], section 2.2.17, presented by Anritsu

4.25 tcv_TrafficClass (WA#BasicM4033)

Incorporated from CR [2], section 2.4.3, presented by Anritsu

4.26 ts_DetermineDlyClassAndTrafficClass (WA#BasicM4034)

Incorporated from CR [2], section 2.4.5, presented by Anritsu

4.27 Test body of 11.1.1.1 (WA#NAS4000)

Incorporated from CR [2], section 2.5.1, presented by Anritsu

4.28 Missing line terminator in AT command (WA#NAS4003)

Test step name ts_AT_Detach_MO
Reason for change The AT commands issued by this test step does not contain a <CR> (carriage return) line terminator.
Summary of change Appended termination characters <CR> to AT command
Source of change new change
Label WA#NAS4003

Test Step					
No	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		drv_AT_Cmd := ("AT+CGATT=0<CR>")			WA#NAS4003
2		UI AT_CmdReq	ca_AT_CmdReq (drv_AT_Cmd)		
3		UI ?AT_CmdCnt	ca_AT_CmdCnt		

5 Branches executed in test case 11.1.1.1

The test case implementation executed the PS branch, Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE 6650

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 11_1_1_1-Logs\Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file 11_1_1_1-pics-pixit.doc**
A document containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030501**
This archive comprises HTML execution log files, PICS/PIXIT file and the TTCN MP file
- [2] **T1-030417**
CR for the introduction of test case 11.1.1.1 into NASv310 (Anritsu)

CR-Form-v7

CHANGE REQUEST

34.123-3 CR 050 # rev **-** # Current version: **3.1.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Addition of RLC test case 7.2.3.23 to RLC ATS V3.1.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 30 Apr 2003
Category:	# B	Release:	# R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To add verified RLC test case 7.2.3.23 to the approved RLC ATS V3.1.0		
Summary of change:	# This document lists all changes applied to test case 7.2.3.23 required for approval. See detailed change description for further information.		
Consequences if not approved:	# Test case will not be added to ATS		

Clauses affected:	# N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	#	X	#	X	#	X	#	
Y	N										
#	X										
#	X										
#	X										
Other comments:	#										

How to create CRs using this form:

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- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.23 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.23 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_7_2_3_23
Test Group: RLC/AcknowledgedMode/Polling/
ATS Version: V3.10d + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 7.2.3.23

4.1 Introduction

This section describes the changes required to make test case 7.2.3.23 run correctly with a 3G UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

The RLC ATS version used as basis was RLCv310d.mp provided by MCC 160. In a first step test case 7.2.3.23 was merged into this ATS. The test case and related TTCN objects were extracted from the RLC Module ATS version RLCv066.mp, as well provided by MCC 160.

In subsequent steps the changes described hereafter were integrated into the ATS.

4.2 Incorrect poll timer value (WA #RLC 3101)

Timer name	t_Poll
Reason for change	This timer is used to ensure that PDUs are received with the poll bit set. The timer value is set to 5000 which is too low for the majority of UEs used in verification.
Summary of change	t_Poll value in Timer declarations section changed from 5000 to 10000 to let the test case successfully continue.
Source of change	new change
Label	WA #RLC 3101

Timer Declarations				
Group:				
T Timer Name	T Duration	T Unit	T Comments	
T3395	30	s	Timer T3395, 24.008, section 11.2	
T_Dly	5000	ms	general purpose delay timer	
T_Guard	300	s	test case guard timer	
T_Poll	10000	ms	This timer is used to ensure that PDUs are received with the poll bit set. The duration of this timer must be longer than the duration of the test body. Expiry of this timer is handled in the RLC_Default behaviour table, and results in an inconclusive verdict. WA #RLC 3101	
T_Reset	5000	ms	This timer is used to ensure that RESET PDUs are received. The duration of this timer must be longer than the duration of the test body. Expiry of this timer is handled in the RLC_Default behaviour table, and results in an inconclusive verdict.	
T_Status	10000	ms	This timer is used to ensure that STATUS PDUs are received. In general, it is started at the beginning of the test body. The duration of this timer must be longer than the duration of the test body. Expiry of this timer is handled in the RLC_Default behaviour table, and results in an inconclusive verdict. WA #RLC 3127	

4.3 Incorrect status timer value (WA #RLC 3127)

Timer name	t_Status
Reason for change	This timer is used to ensure that STATUS PDUs are received. The timer value is set to 5000 which is too low for the majority of UEs used in verification.
Summary of change	t_Status value in Timer declarations section changed from 5000 to 10000 to let the test case continue.
Source of change	new change
Label	WA #RLC 3127

Timer Declarations				
Group:				
T Timer Name	T Duration	T Unit	T Comments	
T3395	30	s	Timer T3395, 24.008, section 11.2	
T_Dly	5000	ms	general purpose delay timer	
T_Guard	300	s	test case guard timer	
T_Poll	10000	ms	This timer is used to ensure that PDUs are received with the poll bit set. The duration of this timer must be longer than the duration of the test body. Expiry of this timer is handled in the RLC_Default behaviour table, and results in an inconclusive verdict. WA #RLC 3101	
T_Reset	5000	ms	This timer is used to ensure that RESET PDUs are received. The duration of this timer must be longer than the duration of the test body. Expiry of this timer is handled in the RLC_Default behaviour table, and results in an inconclusive verdict.	
T_Status	10000	ms	This timer is used to ensure that STATUS PDUs are received. In general, it is started at the beginning of the test body. The duration of this timer must be longer than the duration of the test body. Expiry of this timer is handled in the RLC_Default behaviour table, and results in an inconclusive verdict. WA #RLC 3127	

4.4 Incorrect transport format initialisation (WA #RLC 3115)

Constraint name c_UL_CommTrChInfoDCCH_13_6k
Reason for change The mode specific info IEs in constraint c_UL_CommTrChInfoDCCH_13_6k have to be initialised by completing c_TFCS_Cmpl0_1_Tx instead of adding the c_PowerOffsetInfoBelow64k information.
Summary of change Changed initialisation to ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k)
Source of change new change
Label WA #RLC 3115

ASN.1 Type Constraint Declaration	
Constraint Name:	c_UL_CommTrChInfoDCCH_13_6k
Group:	
Type Name:	UL_CommonTransChInfo
Derivation Path:	
Encoding Variations:	
Comments:	WA #RLC 3115
Constraint Value	
<pre> ! Subset Omit, prach_TFCS Omit, modeSpecificInfo fnd() ul_TFCS c_TFCS_Cmpl0_1_Tx (c_PowerOffsetInfoBelow64k) ! </pre>	

4.5 Status PDU incorrectly sent (WA #RLC 3128)

Test step name test body of test case 7.2.3.23, line 26
Reason for change The test cases sends a STATUS PDU acknowledging all received PDUs (line 27). This acknowledgement is wrong because the UE would no longer have a reason for repeating a poll.
Summary of change The premature acknowledgment is suppressed by removing line 26 (TM ! TxStatus) in the test body.
Source of change new change
Label WA #RLC 3128

IL_ToAndResp_T INTEGER			
18	TM ? RvAMD (dcx_AMD_PDU = RvAMD data)	car_DataAndRes_RB_AM_7 RLC_or_AMD_LI_Dataor_LI st_7BRLIor_PayloadSize - 1, 7)	(7)
20	!(tx_AMD_PDU pollingRt = tx_P_NoPoll)		(8)
21	!(tx_AMD_PDU pollingRt = tx_P_Poll)		(8)
22	(dcx_NumPollsRx = tx_NumPollsRx = 1)		(8)
23	!(tx_NumPollsRx = 1) AND (tx_NumTimeouts = 0)		(10)
24	!(tx_NumPollsRx = 2) AND (tx_NumTimeouts = 0)		(11)
25	START (LowerBound(p_T - tx_Tolerance), START (UpperBound(p_T + 1 tx_Tolerance))		(12), (13) WA #RLC 3128
26	!(tx_NumPollsRx = 3) AND (tx_NumTimeouts = 1)		(14)
27	CANCEL (UpperBound		(15)

4.6 Incorrect number of timeouts (WA #RLC 3123)

Test step name test body of test case 7.2.3.23, line 39
Reason for change The number of polls received are compared with the number of timeouts occurred. However, the number of timeouts is wrong and needs to be increased by 1.
Summary of change The comparison of number of polls received and timeouts occurred in line 39 of the test body was corrected by adding +1 to the number of timeouts.
Source of change new change
Label WA #RLC 3123

l_TxAndRx_T_INTEGER				
19		TM1 RxAMD (cv_AMD_PDU= RxAMD data)	cat_DataId(Rx_RB_AM_T_RLC, cv_AMD_LI_Data)_L1 s1_TBIL(cv_PayloadSize - 1), 7)	(7)
20		[cv_AMD_PDU.getingBit= tx_P_NoPoll]		(8)
21		[cv_AMD_PDU.getingBit= tx_P_Poll]		(9)
22		[cv_NumPollsRx= cv_NumPollsRx + 1]		(10)
23		[(cv_NumPollsRx = 1) AND (cv_NumTimeouts = 0)]		(11)
24		[(cv_NumPollsRx = 2) AND (cv_NumTimeouts = 0)]		(12), (13)
25		START_T_LowerBound_T - cv_Tolerance, START_T_UpperBound_T + 1 cv_Tolerance)		WA #RLC 3128
26		[(cv_NumPollsRx = 3) AND (cv_NumTimeouts = 1)]		(14)
27		CANCEL_T_UpperBound		(15)
28	TBF1	[(cv_NumPollsRx = 3) AND (cv_NumTimeouts == 1)]	(?)	(16)
29		[cv_NumPollsRx = 3]		(17)
30	ERR1	[TRUE]	!	(18)
31		? TIMEOUT_L_TT		(19)
32		[cv_NumPDUsTx = (cv_Count)		(19)
33		=> tx_TBIL(cv_P_NoPoll, cv_L1s1_TBIL(cv_PayloadSize - 1), cv_PayloadSize - 1)		(19)
34		[cv_NumPDUsTx= cv_NumPDUsTx + 1]		(19)
35		START_T_TT		(20)
36		[TRUE]		(20)
37		TIMEOUT_T_LowerBound (cv_NumTimeouts = cv_NumTimeouts + 1)		(21)
38	TBF2	[(cv_NumPollsRx == (cv_NumTimeouts + 1)) AND (cv_InvalidTimeout = TRUE)]	(?)	(22)
39		[(cv_NumPollsRx = cv_NumTimeouts + 1)]		WA #RLC 3122
40	TBF3	TIMEOUT_T_UpperBound (cv_InvalidTimeout = TRUE)	(?)	(23)

4.7 Missing Status PDU at the end of test body to stop polling (WA #RLC 3131)

Test step name	test body of test case 7.2.3.23, line 42
Reason for change	Polling is still active after leaving the test body. If data PDUs with poll bits are received during postamble, the test case will incorrectly come to an Inconclusive verdict.
Summary of change	A STATUS PDU is sent at the end of the test body to acknowledge ALL outstanding PDUs (see line 42 which was added to the test body). Thus, there is no more reason for polling.
Source of change	new change
Label	WA #RLC 3131

l_CheckNumPolls				
41	TBF1	[(cv_NumPollsRx == 3) AND (cv_InvalidTimeout = FALSE)]	(?)	(24)
42		TM1 TxStatus	cat_StatusReqstc_RB_AM_T_RLC, cv_SF_AskBIT_TO_INT(cv_AMD_PDU.seq Num) + 1, (2 * cv_PayloadSize + 2) - 5)	(25) WA #RLC 3131
43	TBF4	[TRUE]	(?)	

5 Branches executed in test case 7.2.3.23

The test case implementation executed the CS branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE 6650

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_23-Logs\Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file 7_2_3_23-pics-pixit.txt**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030536**
This archive comprises HTML Execution log files, PICS/PIXIT file and the TTCN MP file

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 051** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of RLC test case 7.2.3.24 to RLC ATS V3.1.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ -	Date:	⌘ 30 Apr 2003
Category:	⌘ B	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified RLC test case 7.2.3.24 to the approved RLC ATS V3.1.0		
Summary of change:	⌘ This document lists all changes applied to test case 7.2.3.24 required for approval. See detailed change description for further information.		
Consequences if not approved:	⌘ Test case will not be added to ATS		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

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- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.24 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.24 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_7_2_3_24
Test Group: RLC/AcknowledgedMode/Polling/
ATS Version: V3.10d + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 7.2.3.24

4.1 Introduction

This section describes the changes required to make test case 7.2.3.24 run correctly with a 3G UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

The RLC ATS version used as basis was RLCv310d.mp provided by MCC 160. In a first step test case 7.2.3.24 was merged into this ATS. The test case and related TTCN objects were extracted from the RLC Module ATS version RLCv066.mp, as well provided by MCC 160.

In subsequent steps the changes described hereafter were integrated into the ATS.

4.2 Incorrect poll timer value (WA #RLC 3101)

See change description in [2]

4.3 Incorrect status timer value (WA #RLC 3127)

See change description in [2]

4.4 Incorrect transport format initialisation (WA #RLC 3115)

See change description in [2]

4.5 Missing test case variable for AMD PDU sequ. num. handling (WA #RLC 3130)

Test case variable name tcv_AMD_SeqNum

Reason for change A test case variable is needed to hold the sequence number of the last received AMD PDU which has to serve as completion criterion for REPEAT loops. The REPEAT loops must 1) expect all looped back PDUs and 2) use the sequence number and not the number of PDUs received because some PDUs may have been repeated when polling.

Summary of change Test case variable tcv_AMD_SeqNum is created in the Test Case Variable Declarations section of the ATS.

Source of change new change

Label WA #RLC 3130

Test Case Variable Name	Variable Type	Value	Description
tcv_CellInfoH	CellInfoCfg	<code>c_CellInfoDef (tsc_CellH, px_PhSrmCode, tsc_URA_idCellH, px_TCCellH, px_SFN_OF, fncH, c_Fncqsts (px_URFCN_D_Mid-950, px_URFCN_D_Mid), (px_UL_Srca, m#ngCode + 7000; MOO 18777218))</code>	
tcv_Count	INTEGER	0	To hold a temporary counter value.
tcv_AMD_SeqNum	BITSTRING	0000000000000000B	To hold a temporary AMD sequence number value. WA #RLC 3130
tcv_DefaultRadioCnf	BOOLEAN	TRUE	To be used in test cases that require a non default radio configuration. TRUE: a default radio configuration is to be used. FALSE: a non default radio configuration is to be used.

4.6 Incorrect PDU handling in test body (WA #RLC 3125)

Test step name test body of test case 7.2.3.24, line 7, 12, 18, 30

Reason for change Looped back PDUs are not expected in the test body and therefore arrive in the postamble where they lead to INCONC.

Summary of change All looped back PDUs are expected in the test body, i.e. the REPEAT loop expects all of the looped back PDUs (which therefore arrive no longer in the postamble); as PDUs may be repeated when polling, the appropriate criterion is the sequence number of the last PDU expected to be received, stored in tcv_AMD_SeqNum. Additionally tcv_Count is used to hold a calculated number which is used several times.

Source of change new change

Label

WA #RLC 3125

Test Case					
Test Case ID:	E_7_2_3_24				
Test Group Reference:	RLCAcknowledgeModePolling				
Purpose:	1. To verify that no poll is transmitted if one or several polls are triggered when the Timer_Poll_Prohibit timer is active and has not expired. 2. To verify that the UE polls only once after Timer_Poll_Prohibit expires even though triggered several times during the prohibit time.				
Configuration:	RLC_Default				
Defaults:	RLC_Default				
Comments:	References: TS 25.322 Clauses 9.5, 9.7.1 and 11.3.2.1.1				
Id	Label	Default/Description	Constraint Ref	Verif.	Comments
1		START t_Guard(200)			
2		+pr_GenericSetupProcedures			
3		+R_TimerPollProhibitTest(rds_RLC_InfoAM_7_2_3_24, 500)			(1)
4		+pd_GenericCleanupProcedures			
R_TimerPollProhibitTest(rds_RLC_InfoAM_7_2_3_24, 500)					
5		+pr_RB_SetupAM(rds_RLC_Info)			
6		+pr_CloseUE_TestLoop(rds_PayloadSize - 1) * 8)			
7		{rv_NumPDUsTx = 0, rv_NumPollsRx = 0, rv_NumTimeouts = 0, rv_Count = Q * 2} + p_T / (ts_TT)			WA #RLC 3125
8		+ts_RLC_CalcTolerance(p_T)			(2)
9		START t_TT			(3)
10		START t_Poll			(4)
11	TBF	{rv_TestBody = TRUE}			
12		REPEAT t_TsAndRsp_T) UNTIL ((rv_NumPDUsTx == R v_Count) AND (rv_AMD_SeqNum = INT_TO_BIT(rv_Count - 1, 12)) AND (rv_NumPollsRx == 2)) OR (rv_InvalidTimeout = TRUE)}			(5) WA #RLC 3125
13		+t_CheckNumPolls			(6)
14	TBE	{rv_TestBody = FALSE}			
15		CANCEL t_TT			
16		CANCEL t_Poll			
17		+ps_OpenUE_TestLoop			
R_TxAndRxp_T_INTEGER)					
18		TM ? RvAMD (rv_AMD_PDU = RvAMD_data, rv_AMD_SeqNum = rv_AMD_PDU.seqNum)	car_DataAnd(rds_RB_AM_7_RLC, rds_A MD_LI_Data(rds_LI_7BLL)(rv_Payload Size - 1), *)		(7) WA #RLC 3125
19		{rv_AMD_PDU.packingBit = ts_P_NoPoll}			(8)
20		{rv_AMD_PDU.packingBit = ts_P_Poll}			(8)
21		{rv_NumPollsRx = rv_NumPollsRx + 1}			(9)
22		{ rv_NumPollsRx = 1 } AND (rv_NumTimeouts = 0)			(10)
23		START t_LowerBound(p_T - rv_Tolerance), START t_Upper Bound(p_T + rv_Tolerance)			(11)
24		{ rv_NumPollsRx = 2 } AND (rv_NumTimeouts = 1)			(12)
25		CANCEL t_UpperBound			(13)
26	TBF1	{ rv_NumPollsRx == 2 } AND (rv_NumPollsRx == rv_Nu mTimeouts + 1)		(F)	(14)
27	TBF2	{ rv_NumPollsRx > 2 }		(F)	(14)
28	ERR1	{ TRUE }		(F)	(14)
29		? TIMEOUT t_TT			(3)
30		{ rv_NumPDUsTx = rv_Count }			(17) WA #RLC 3125
31		+ts_ToAM_7_PRRS(rds_P_NoPoll, rds_LI_7BLL)(rv_Payloa dSize - 1), rv_PayloadSize - 1)			(17)
32		{rv_NumPDUsTx = rv_NumPDUsTx + 1}			(17)
33		START t_TT			(3)
34		{ TRUE }			(16)
35		? TIMEOUT t_LowerBound (rv_NumTimeouts = rv_NumTim eouts + 1)			(19)
36	TBF3	{ rv_NumPollsRx == rv_NumTimeouts } { rv_InvalidTimeout = TRUE }		(F)	(20)
37		{ rv_NumPollsRx = rv_NumTimeouts }			
38	TBF4	? TIMEOUT t_UpperBound (rv_InvalidTimeout = TRUE)		(F)	(21)
t_CheckNumPolls					
39	TBF1	{ rv_NumPollsRx == 2 } AND (rv_InvalidTimeout = FALSE }		(F)	(22)
40	TBF5	{ TRUE }		(F)	

5 Branches executed in test case 7.2.3.24

The test case implementation executed the CS branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE 6650

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_24-Logs\Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file 7_2_3_24-pics-pixit.txt**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030538**
This archive comprises HTML Execution log files, PICS/PIXIT file and the TTCN MP file
- [2] **T1-030535**
Changes to test case 7.2.3.23 required for approval

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 052** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of RLC test case 7.2.3.26 to RLC ATS V3.1.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ -	Date:	⌘ 30 Apr 2003
Category:	⌘ B	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified RLC test case 7.2.3.26 to the approved RLC ATS V3.1.0		
Summary of change:	⌘ This document lists all changes applied to test case 7.2.3.26 required for approval. See detailed change description for further information.		
Consequences if not approved:	⌘ Test case will not be added to ATS		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.26 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.26 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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7	References	4

3 Verification Test Summary

Test Case: TC_7_2_3_26
Test Group: RLC/AcknowledgedMode/RxStatusTriggers/
ATS Version: V3.10d + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 7.2.3.26

4.1 Introduction

This section describes the changes required to make test case 7.2.3.26 run correctly with a 3G UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

The RLC ATS version used as basis was RLCv310d.mp provided by MCC 160. In a first step test case 7.2.3.26 was merged into this ATS. The test case and related TTCN objects were extracted from the RLC Module ATS version RLCv066.mp, as well provided by MCC 160.

In subsequent steps the changes described hereafter were integrated into the ATS.

4.2 Incorrect poll timer value (WA #RLC 3101)

See change description in [2]

4.3 Incorrect status timer value (WA #RLC 3127)

See change description in [2]

4.4 Incorrect transport format initialisation (WA #RLC 3115)

See change description in [2]

4.5 Incorrect Status PDU handling (WA #RLC 3126)

Test step name	test body of test case 7.2.3.26, line 14
Reason for change	As the status polling is still active after the leaving the test body, a status poll might be received during postamble where it incorrectly leads to Inconclusive verdict.
Summary of change	As the status polling is still active in the postamble a status poll is to be ignored. This is achieved in RRC_Def1 if variable tcv_RLC_IgnoreStatus is

set to TRUE. Therefore line 14 was added setting tcv_RLC_IgnoreStatus to TRUE.

Source of change
Label

new change
WA #RLC 3126

Test Case					
Test Case ID:	N_7_2_3_26				
Test Group Reference:	RLC.knowledgeMeta/TestStatusTrigger/				
Purpose:	To verify that a status report is transmitted each time the Timer_Status_Periodic timer expires.				
Configuration:	RLC_Default				
Default:	RLC_Default				
Comments:	References: TS 36.322 Clauses 9.5, 9.7.2 and 11.5.2				
No	Label	Behavior Description	Constraint Ref	Variant	Comments
1		START_UseOfCDE			
2		+pr_DefaultSetupProcedures			
3		+R_TimerStatusPeriodicTestInfo_RLC_InfoAM_T_2_3_26_403			(1)
4		+pa_GenericCleanupProcedures			
5		R_TimerStatusPeriodicTestInfo_RLC_Info_R_T_INTEGER			
6		+st_RR_SetupRRPp_RLC_Info			
7		{sv_NumPDUsTx = 0, tc_NumStatusRcv = 0, tc_NumTimeouts = 0}			
8		+tc_RLC_CalcTolerancep_T			(2)
9		START_L_T1			(3)
10		START_L_Status			(4)
11	TBC	{sv_TestBody = TRUE}			(5)
12		REPEAT (L_TestBody_T1 UNTIL ((sv_NumPDUsTx = 0 * p_T / (sv_TT1) OR sv_InvalidTimeout = TRUE))			(6)
13	TBC	+E_ChpNumStatus {sv_TestBody = FALSE}			(7)
14		{sv_RLC_IgnoreStatus = TRUE}			(10) WA #RLC 3126
15		CANCEL_L_T1			
16		CANCEL_L_Status			

5 Branches executed in test case 7.2.3.26

The test case implementation executed the CS branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE 6650

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_26-LogsIndex.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file 7_2_3_26-pics-pixit.txt**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030540**
This archive comprises HTML Execution log files, PICS/PIXIT file and the TTCN MP file
- [2] **T1-030535**
Changes to test case 7.2.3.23 required for approval

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 053** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of RLC test case 7.2.3.27 to RLC ATS V3.1.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ -	Date:	⌘ 30 Apr 2003
Category:	⌘ B	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified RLC test case 7.2.3.27 to the approved RLC ATS V3.1.0		
Summary of change:	⌘ This document lists all changes applied to test case 7.2.3.27 required for approval. See detailed change description for further information.		
Consequences if not approved:	⌘ Test case will not be added to ATS		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 7.2.3.27 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.27 which is part of the RLC test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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4.4	Incorrect transport format initialisation (WA #RLC 3115).....	2
4.5	Incorrect Status PDU handling (WA #RLC 3126).....	2
5	Branches executed in test case 7.2.3.27.....	3
6	Execution Log Files	3
6.1	Nokia 3G UE 6650	3
7	References	3

3 Verification Test Summary

Test Case: TC_7_2_3_27
Test Group: RLC/AcknowledgedMode/RxStatusTriggers/
ATS Version: V3.10d + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 7.2.3.27

4.1 Introduction

This section describes the changes required to make test case 7.2.3.27 run correctly with a 3G UE. All changes are marked with label "WA #RLC <number>" in the TTCN comments column of the enclosed RLC ATS [1].

The RLC ATS version used as basis was RLCv310d.mp provided by MCC 160. In a first step test case 7.2.3.27 was merged into this ATS. The test case and related TTCN objects were extracted from the RLC Module ATS version RLCv066.mp, as well provided by MCC 160.

In subsequent steps the changes described hereafter were integrated into the ATS.

4.2 Incorrect poll timer value (WA #RLC 3101)

See change description in [2]

4.3 Incorrect status timer value (WA #RLC 3127)

See change description in [2]

4.4 Incorrect transport format initialisation (WA #RLC 3115)

See change description in [2]

4.5 Incorrect Status PDU handling (WA #RLC 3126)

See change description in [2]

5 Branches executed in test case 7.2.3.27

The test case implementation executed the CS branch which was completely executed. Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE 6650

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 7_2_3_27-Logs\Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file 7_2_3_27-pics-pixit.txt**
A text file containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030542**
This archive comprises HTML Execution log files, PICS/PIXIT file and the TTCN MP file
- [2] **T1-030539**
Changes to test case 7.2.3.26 required for approval

CR-Form-v7

CHANGE REQUEST

34.123-3 CR 054 # rev **-** # Current version: **3.1.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Addition of SM test case 11.3.1 to NAS ATS V3.1.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 03 May 2003
Category:	# B	Release:	# R99
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R96	(Release 1996)
	B (addition of feature),	R97	(Release 1997)
	C (functional modification of feature)	R98	(Release 1998)
	D (editorial modification)	R99	(Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# To add verified SM test case 11.3.1 to the approved NAS ATS V3.1.0
Summary of change:	# This document lists all changes applied to test case 11.3.1 required for approval. See detailed change description for further information.
Consequences if not approved:	# Test case will not be added to ATS

Clauses affected:	# N/A				
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications # <input type="checkbox"/> <input checked="" type="checkbox"/> Test specifications # <input type="checkbox"/> <input checked="" type="checkbox"/> O&M Specifications # <input type="checkbox"/>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Y	N				
<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Other comments:	#				

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 11.3.1 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document details the changes needed to correct problems in the TTCN implementation of test case 11.3.1 which is part of the NAS test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_11_3_1
Test Group: SM_TestCases/Deactivation/
ATS Version: V1.44 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 11.3.1

4.1 Introduction

This section describes the changes required to make test case 11.3.1 run correctly with a 3G UE. All modifications are marked with label "**WA#BasicM<number>**" for changes to the BasicM TTCN module and with label "**WA#NAS<number>**" for NAS related changes in the TTCN comments column of the enclosed NAS ATS [1].

The NAS ATS version used as basis was NASv144.mp provided by MCC 160. As a first step, the changes proposed by other TTCN verification teams were integrated to this ATS (see Anritsu document [2] and [3]). Changes presented in [2] but not considered by R&S were either already fixed in TTCN V1.44 or not necessary for this test case. Then a small number of new changes had to be applied to to get the test case running with the R&S 3G system simulator CRTU-W.

Please note that the provided ATS contains further modifications in common test steps for verification of other NAS test cases. For example, changes WA#BasicM4023-4032 are required for running GMM tests. The description of these changes, however, is out-of-scope of this document. Only the changes detailed below are necessary for running this SM test case.

4.2 Incorrect indentation (WA#BasicM4000)

Test step name ts_GMM_IdleUpdated, local test step It_IdleUpdated_NMO_II
Reason for change The indentation of TTCN statements from line 37 to 46 is wrong in V144.
Summary of change Indented line 37 to 46.
Source of change new change
Label WA#BasicM4000

t_IdleUpdates_NMO_I			
33	+ts_MM_UE_SwitchOn		
34	+ts_RRC_ConnEst(p_CellId, est_Reg, registration)		Establish RRC connection
35	Do?RRC_DataReq (tcv_Start = RRC_DataReq start)	ca_IniDirectTransfer(tsc_CellDedicated, tsc_RB3, cb_LocUpsReqAny(?)	Any Location Update request
36	(tcv_GMM_AttachExpect = TRUE, tcv_GMM_Attach Res = FALSE)		Set Flags in order to enable default handler to store ATTACH REQUEST PDU in case it is sent during Location Update procedure
37	+ts_SS_SecurityDownloadStart (ca_domain, tcv_Start)		
38	+ts_MM_Authentication(p_CellId)		Authentication
39	+ts_RRC_Security (p_CellId, tcv_AuthCK, tcv_AuthNK, tcv_AuthCQSM, TRUE, ts_domain)		
40	DoRRC_DataReq (tcv_MM_CmpIExpect = TRUE, tcv_MM_CmpRec = FALSE)	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdAppTMSI, tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac)	Location Updating Accept
41	{ tcv_GMM_AttachRec = TRUE }		ATTACH REQUEST was received and handled by NAS default handler
42	(tcv_GMM_AttachExpect = FALSE)		Disable NAS default handler for ATTACH REQUEST
43	+ts_GMM_Authentication (p_CellId)		AUTHENTICATION AND CIPHERING REQUEST AUTHENTICATION AND CIPHERING RESPONSE
44	+t_SecurityMode		SECURITY MODE COMMAND SECURITY MODE COMPLETE
45	(tcv_AssignedPTMSI = px_PTMSI_Def, tcv_Assigned_PTMSI_Sig = px_PTMSI_SigDef)		Use default values
46	DoRRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, ca_AttachAcc(c_GMM_AttachResult(0010), c_RAI_w(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac, tcv_TmpCellInfo.rac), c_PTMSI_Signature (tcv_Assigned_PTMSI_Sig), c_MobileIDPTMSI, tcv_Assigned_PTMSI)	ATTACH ACCEPT for PS only - Attach result 'GPRS attached' - RAI default (RAI-1) - P-TMSI-1 signature - MobileID P-TMSI-1 - omni TMSI

4.3 UE OpMode not checked (WA#BasicM4001)

Test step name	ts_GMM_IdleUpdated
Reason for change	Test case variable tcv_UE_OpMode is not set according to the type of attach requested by the UE.
Summary of change	Added lines 72 to 75 to check Ue_Opmode.
Source of change	new change
Label	WA#BasicM4001

Line	Code	Comments
81	[ts_GMM_AttachReq = TRUE]	ATTACH REQUEST was received and handled by HA-S default handler
82	(sv_GMM_AttachExpect = FALSE)	Disable NAS default handler for ATTACH REQUEST
83	!NOT (ts_AuthenReq || ts_AttachReq || ts_SecurityReq)	ATTACH REQUEST was NOT yet received and the UE does not automatically attach if switch on.
84	+!RRC_Connect	RRC connection release
85	START_WAIT (1)	Wait 1 s to allow UE to relax
86	?TIMEOUT_WAIT	
87	START_WAIT (40)	Wait 40 s to allow UE to relax
88	+ts_AT_TriggerGMM_Attach	Trigger UE to initiate GMM Attach after allowing the UE to decode Sys Info
89	+!RRC_Connect	Establish RRC connection
90	ts_CoRRC, ts_Reg, ts_SecurityReq	
91	ts_RRC_DataReq (sv_TmpAttachReqDCU = RRC_DataReqMsg, sv_TmpDCU = ts_TmpAttachReqDCU.attachType.type, sv_Start = RRC_DataReqStart | CANCEL_WAIT)	ATTACH REQUEST - Attach Attach has requested
92	ts_PS_InitReq (TransferReq, ts_CoRRC, ts_AttachReq, ts_AttachTypeAny, ts_MobilityAny, ts_RR_Access, ts_T)	
93	+ ts_GSM_SecurityDownReqStart (ts_domain, sv_Start)	
94	[ts_TempDCU = ts_TempDCU]	Set global variable according to the type of attach req. needed by UE
95	sv_CoRRC_CoMMsg = sv_MobilityReq	
96	TRUE	
97	sv_CoRRC_CoMMsg = sv_MobilityReq	
98	?TIMEOUT_WAIT	F

4.4 Wait timer too low (WA#BasicM4002)

Test step name ts_GMM_IdleUpdated
Reason for change For some UEs the processing of AT commands for PS configuration takes longer than 5s.
Summary of change Changed wait timer in line 24 from 5 s to 40 s to allow UEs to receive AT commands and handle them accordingly.
Source of change new change
Label WA#BasicM4002

Line	Code	Comments
20	+!MM_Authentication_CoRRC	Authentication
21	+ts_RRC_Security (ts_CoRRC, ts_AuthC, ts_AuthReq, ts_AuthCoRRC, TRUE, ts_domain)	
22	ts_RRC_DataReq (ts_CoRRC, ts_Dedicated, ts_RR3, ts_LacUpdAccTMD, ts_TempCidReq, ts_TempCidReq, ts_TempCidReq)	Location Updating Accept
23	ts_RRC_DataReq (ts_CoRRC, ts_Dedicated, ts_RR3, ts_TMD_Req, ts_TMD_Req)	TMD reactivation complete
24	START_WAIT (40)	WA#BasicM4002
25	+ts_AT_TriggerGMM_Attach	Trigger UE to initiate GMM Attach after allowing the UE to decode Sys Info

4.5 No distinction for authentication response cases (WA#BasicM4003)

Test step name ts_GMM_Authentication
Reason for change No distinction is made between the 3 possible authentication response cases (SRES only, Extension as well, neither of both)
Summary of change Steps 7-12 have been added, so as to be consistent with the MM procedures.
Source of change new change
Label WA#BasicM4003

Test Step						
Test Step ID:	E_GMM_Authentication (U_Comp: INTER)					
Test Step Group Ref:	Basic_M4_GMM_Steps					
Objective:	Generate authentication parameters and run the GMM Authentication procedure					
Default:	NAS_CipheringFail					
Comments:	WA#BasicM4004					
Id	Label	Behavioral Description	Constraint Ref	Workset	Comments	
1		+ts_GMM_Authentication			Compute all relevant authentication parameters.	
2		Cr: RRC_Dedicated	ts_PD_Dedicated, ts_CellDedicated, ts_RR3, ts_AuthAndCiphReq | ts_GMM_AuthRANDctr_AuthRAND, ts_GMM_KeyGen_keyGen_PS_KeyGen | ts_GMM_AuthAUTNctr_AuthAUTN		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.	
3		Cr: RRC_Dedicated | ts_TripAuthAndCiphReqPDU = RRC_Dedicatedmsg, ts_AuthResp = ts_TripAuthAndCiphReqPDU.authResp, ts_AuthRespExt = ts_TripAuthAndCiphReqPDU.authRespExt	ts_PS_UplinkDirectTransfer (ts_CellDedicated, ts_RR3, ts_AuthAndCiphReq | ts_AuthResp | ts_AuthRespExt)		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters	
4		ts_Resp = ts_AuthResp, ts_AuthRespExt, ts_Auth, ts_AuthRAND, TRUE			Verify that the received Authentication Response parameters match expected response.	
5	TSF1	ts_Resp = FALSE		(F)		
6		ts_Resp = TRUE		(F)		
7		Cr: RRC_Dedicated | ts_TripAuthAndCiphReqPDU = RRC_Dedicatedmsg, ts_AuthResp = ts_TripAuthAndCiphReqPDU.authResp	ts_PS_UplinkDirectTransfer (ts_CellDedicated, ts_RR3, ts_AuthAndCiphReqNoExt | ts_AuthResp)		AUTHENTICATION AND CIPHERING RESPONSE without Authentication Response Extension	
8		ts_Resp = ts_AuthResp, ts_AuthRespExt, ts_Auth, ts_AuthRAND, FALSE			Verify that the received Authentication Response parameters match expected response.	
9	TSF2	ts_Resp = FALSE		(F)		
10		ts_Resp = TRUE		(F)		
11	TSF3	Cr: RRC_Dedicated	ts_PS_UplinkDirectTransfer (ts_CellDedicated, ts_RR3, ts_AuthAndCiphReqNone)	(F)	AUTHENTICATION AND CIPHERING RESPONSE without Authentication Response and Authentication Response Extension parameters	
12	TSF4	Cr: RRC_Dedicated	ts_PS_UplinkDirectTransfer (ts_CellDedicated, ts_RR3, ts_AuthFailure)	(F)	AUTHENTICATION FAILURE	

4.6 Missing constraint cr_AuthAndCiphRspNoExt (WA#BasicM4004)

Constraint name cr_AuthAndCiphRspNoExt
Reason for change This change is related to WA#BasicM4003.
Summary of change Added constraint cr_AuthAndCiphRspNoExt, to be used in line 7 of ts_GMM_Authentication.
Source of change new change
Label WA#BasicM4004

PDU Constraint Declaration				
Constraint Name:	ts_AuthAndCiphRspNoExt, p_authResp : AuthResp_m			
Group:				
PDU Name:	AUTHENTICATIONANDCIPHERINGRESPONSE			
Derivation Path:				
Encoding Rule Name:				
Encoding Variation:				
Comments:	WA#BasicM4004			
Field Name	Element Value	Type Encoding	Comments	
skipIndicator	'0000'B			
gmmProtocolDiscriminator	ts_GMM_PD			
msgType	'00010011'B			
spare4	'0000'B			
acRefNo	?		Should be the one sent in the auth request	
authResp	p_authResp		Authentication parameter RAND	
imeiSv	-		No IMEISV requested	
authRespExt	-		Authentication parameter AUTN, a UMTS challenge is requested	

4.7 Missing constraint cr_AuthAndCiphRspNone (WA#BasicM4005)

Constraint name cr_AuthAndCiphRspNone

Reason for change This change is related to WA#BasicM4003.
Summary of change Added Constraint cr_ AuthAndCiphRspNone, to be used in line 11 of ts_GMM_Authentication.
Source of change new change
Label WA#BasicM4005

PDU Constraint Declaration			
Constraint Name:	cr_AuthAndCiphRspNone		
Group:			
PDU Name:	AUTHENTICATIONANDCIPHERINGRESPONSE		
Derivation Path:			
Encoding Rule Name:			
Encoding Variation:			
Comments:	WA#BasicM4005		
Field Name	Element Value	Type Encod...	Comments
skipIndicator	'0000B		
gmmProtoDiscriminator	ts_c_GMM_PD		
msgType	'00010011B		
spare4	'0000B		
acRefNo	?		Should be the one sent in the auth request
authRsp	-		Authentication parameter RAND
imeiEv	-		No IMEISV requested
authRepExt	-		Authentication parameter AUTN, a UMTS challenge is requested

4.8 Missing GMMStatus PDU (WA#BasicM4006)

PDU name GMMStatus
Reason for change Related to WA#BasicM4008
Summary of change Added PDU for GMMStatus message handling in NAS_OtherwiseFail default branch.
Source of change new change
Label WA#BasicM4006

PDU Type Definition			
PDU Name:	GMMSTATUS		
Group:			
PCO Type:	Dc_SAP		
Encoding Rule Name:			
Encoding Variation:			
Comments:	WA#BasicM4006		
Field Name	Field Type	Type Encoding	Comments
skipIndicator	SkipIndicator		
gmmProtoDiscriminator	ProtocolDiscriminator		
msgType	MsgType		
gmm_Cause	GMM_Cause		

4.9 Missing constraint cbr_GMM_StatusMO (WA#BasicM4007)

Constraint name cbr_GMM_StatusMO
Reason for change Related to WA#BasicM4008
Summary of change Added constraint for GMMStatus message handling in NAS_OtherwiseFail
Source of change new change
Label WA#BasicM4007

PDU Constraint Declaration			
Constraint Name:	cbr_GMM_StatusMO(p_gmm_cause GMM_Cause)		
Group:			
PDU Name:	GMMSTATUS		
Derivation Path:			
Encoding Rule Name:			
Encoding Variation:			
Comments:	WA#BasicM4007		
Field Name	Element Value	Type Encod...	Comments
skipIndicator	'0000B		
gmmProtoDiscriminator	ts_c_GMM_PD		
msgType	'00100000B		
gmm_Cause	p_gmm_cause		

4.10 GMMStatus message handling (WA#BasicM4008)

Test step name NAS_OtherwiseFail

Reason for change The test case sends a SERVICE_ACCEPT message in the RRC security test step to the UE. The UE responds with a GMMStatus message as no SERVICE_REQUEST was sent by the UE. This status message is not handled in the default message handling.

Summary of change Added lines 10 & 11 to handle GMM status messages properly.

Source of change new change

Label WA#BasicM4008

Default					
Default Id:		NAS_OtherwiseFail			
Default Group Ref:		NAS_Defaults			
Objective:		To match unexpected events and fail the test case.			
Comments:					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		TIMEOUT_Count			1
2		UI MML_CmdReq	ca_MMI_CmdReq (" The pu and timer has run out Please take appropriate measures.")		4
3		UI ? MML_CmdCnf	ca_MMI_CmdCnf		
4		[try_TestBody = FALSE]			
5	DFFt	CANCEL		(f)	
6		[try_TestBody = TRUE]			
7	DFFt	CANCEL		(f)	
8		De T RRC_DataInd	ca_P8_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cbr_RA_UsedRes_OC ("", " ", " "))		
9		RETURN			
10		De T RRC_DataInd	ca_P8_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cbr_GMM_StatusMO(" "))		WA#BasicM4008
11		RETURN			

4.11 Inccornt initialisation of IE nmo in c_CellInfoDef (WA#BasicM4009)

Incorporated from CR [2], section 2.2.1, presented by Anritsu

4.12 Addition of PIXIT value px_NMO (WA#BasicM4010)

Incorporated from CR [2], section 2.4.1, presented by Anritsu

4.13 Constraint cr_QoS_InteractiveOrBackgroundMO_Iv (WA#BasicM4011)

Incorporated from CR [2], section 2.2.3, presented by Anritsu

4.14 Constraint cs_QoS_InteractiveOrBackgroundMT_Iv (WA#BasicM4012)

Incorporated from CR [2], section 2.2.5, presented by Anritsu

4.15 Constraint c_TrChInfoUL_336_148 (WA#BasicM4013)

Incorporated from CR [2], section 2.2.6, presented by Anritsu

4.16 Constraint cr_ActPDP_ContextReqMO (WA#BasicM4014)

Incorporated from CR [2], section 2.2.8, presented by Anritsu

4.17 Constraint ts_CRLC_UL_CipherCfg_RAB (WA#BasicM4015)

Incorporated from CR [2], section 2.2.12, presented by Anritsu

4.18 Test step ts_AT_OrgPS_Call (WA#BasicM4016)

Incorporated from CR [2], section 2.2.13, presented by Anritsu

4.19 Superfluous space characters in AT command (WA#BasicM4017)

Test step name	ts_AT_OrgPS_Call
Reason for change	The AT command issued by this test step contain space characters between values.
Summary of change	Removed space character between parameter 1 and 2 in command "AT+CGACT=1,0"
Source of change	new change
Label	WA#BasicM4017

Test Step					
Test Step Id:	ts_AT_OrgPS_Call (p_CellId: INTEGER)				
Test Step Group Ref:	BasicM_UT_Step01				
Objective:	To originate a PDP Context from the UE.				
Default:	UT_OtherwiseFail				
Comments:	WA#BasicM4016				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ R_PrepareAT_CmdCGQMIN			set up the Minimum QoS same as Required QoS
2		UIIAT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
3		UEIAT_CmdCnf	ca_AT_CmdCnf		
4		+Rs_AT_SetQoS			
5		+ R_AssignAT_Cmd			
6		UIIAT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
7		UEIAT_CmdCnf	ca_AT_CmdCnf		
8		{@x_AT_Cmd =>"AT+CGACT=1,1<CR>"}			ACTIVATE PDP CONTEXT message for MO WA#BasicM4017 WA#BasicM4018
9		UIIAT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		

4.20 Missing line terminator in AT command (WA#BasicM4018)

Test step name	ts_AT_OrgPS_Call
Reason for change	The AT command issued by this test step does not contain a <CR> (carriage return) line terminator.
Summary of change	Appended <CR> line terminator to AT command
Source of change	new change
Label	WA#BasicM4018

Test Step					
Test Step Id:	ts_AT_OrigPS_Call (p_Cellid : INTEGER)				
Test Step Group Ref:	BasicM_UT_Steps				
Objective:	To originate a PDP Context from the UE				
Default:	UT_OtherwiseFail				
Comments:	WA#BasicM4019				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ IL_PrepareAT_CmdCGEQMIN			set up the Minimum QoS same as Required QoS
2		UI1AT_CmdReq	ca_AT_CmdReq (tx_AT_Cmd)		
3		UE1AT_CmdCnf	ca_AT_CmdCnf		
4		+ts_AT_SetQoS			
5		+ IL_AssignAT_Cmd			
6		UI1AT_CmdReq	ca_AT_CmdReq (tx_AT_Cmd)		
7		UE1AT_CmdCnf	ca_AT_CmdCnf		
8		{(tx_AT_Cmd =~"AT+CGACT=1,1<CR>")}			ACTIVATE PDP CONTEXT message for MO WA#BasicM4017 WA#BasicM4018
9		UI1AT_CmdReq	ca_AT_CmdReq (tx_AT_Cmd)		

4.21 Wrong AT commands in test step ts_AT_SetQoS (WA#BasicM4019)

Incorporated from CR [2], section 2.2.14, presented by Anritsu

4.22 Superfluous space characters in AT command (WA#BasicM4020)

Test step name	ts_AT_SetQoS
Reason for change	The AT commands issued by this test step contain space characters between values.
Summary of change	Removed space characters in between AT command in line 5 and line 7 of test step ts_AT_SetQoS
Source of change	new change
Label	WA#BasicM4020

Test Step					
Test Step Id:	ts_AT_SetQoS				
Test Step Group Ref:	BasicM_UT_Steps				
Objective:	This Step sets the QoS				
Default:	UT_OtherwiseFail				
Comments:	WA#BasicM4020				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ IL_PrepareAT_CmdCGEQREQ			set up the QoS with the following parameters:
2		UI1AT_CmdReq	ca_AT_CmdReq (tx_AT_Cmd)		
3		UI1AT_CmdCnf	ca_AT_CmdCnf		
IL_PrepareAT_CmdCGEQREQ					
4		[!pc_interactive AND (!pc_RRC_PS_SenTested = !ps_interactive)]			
5		{(tx_AT_Cmd =~"AT+CGEQREQ=1,3,64,64,1,320\n"1E3\n"6E3\n,1,3<CR>")}			WA#BasicM4020
6		[!pc_Background AND (!pc_RRC_PS_SenTested = !ps_Background)]			
7		{(tx_AT_Cmd =~"AT+CGEQREQ=1,3,64,64,1,320\n"1E3\n"6E3\n,1,<CR>")}			WA#BasicM4020
8	ERR1	[TRUE]		I	Parameter error

4.23 ts_ActivatePDP_AcceptMO (WA#BasicM4021)

Incorporated from CR [2], section 2.2.15, presented by Anritsu

4.24 ts_ReceiveActivatePDP_Accept_DCH (WA#BasicM4022)

Incorporated from CR [2], section 2.2.17, presented by Anritsu

4.25 tcv_TrafficClass (WA#BasicM4033)

Incorporated from CR [2], section 2.4.3, presented by Anritsu

4.26 ts_DetermineDlyClassAndTrafficClass (WA#BasicM4034)

Incorporated from CR [2], section 2.4.5, presented by Anritsu

4.27 Test body of 11.3.1 (WA#NAS4001)

Incorporated from CR [3], section 2.5.1, presented by Anritsu

4.28 Missing line terminator in AT command (WA#NAS4004)

Test step name ts_AT_DeactPDP_Context
Reason for change The AT command issued by this test step does not contain a <CR> (carriage return) line terminator.
Summary of change Appended <CR> to AT command
Source of change new change
Label WA#NAS4004

Test Step					
Test Step ID: ts_AT_DeactPDP_Context					
Test Step Group Ref: L3M_UT_Steps					
Objective: To deactivate a PDP Context using AT Commands					
Default: UT_OtherwiseFail					
Comments:					
No	Label	Behavior Description	Constraint Ref	Verdict	Comments
1		!<AT> AT+CGACT=0,1<CR>			Prepare DEACTIVATE PDP CONTEXT message for MO WA#NAS4004 WA#NAS4005
2		!<AT> AT+CGACT=0,1<CR>	ca_AT_CmdReq (ts_AT_Cmd)		
3		!<AT> AT+CGACT=0,1<CR>	ca_AT_CmdCnf		

4.29 Superfluous space characters in AT command (WA#NAS4005)

Test step name ts_AT_DeactPDP_Context
Reason for change The AT command issued by this test step contains space characters between parameters.
Summary of change Removed space characters
Source of change new change
Label WA#NAS4005

Test Step					
Test Step ID: ts_AT_DeactPDP_Context					
Test Step Group Ref: L3M_UT_Steps					
Objective: To deactivate a PDP Context using AT Commands					
Default: UT_OtherwiseFail					
Comments:					
No	Label	Behavior Description	Constraint Ref	Verdict	Comments
1		!<AT> AT+CGACT=0,1<CR>			Prepare DEACTIVATE PDP CONTEXT message for MO WA#NAS4004 WA#NAS4005
2		!<AT> AT+CGACT=0,1<CR>	ca_AT_CmdReq (ts_AT_Cmd)		
3		!<AT> AT+CGACT=0,1<CR>	ca_AT_CmdCnf		

5 Branches executed in test case 11.3.1

The test case implementation executed the PS branch, Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE 6650

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 11_3_1-Logs\Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file 11_3_1-pics-pixit.doc**
A document containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030502**
This archive comprises HTML execution log files, PICS/PIXIT file and the TTCN MP file
- [2] **T1-030417**
CR for the introduction of test case 11.1.1.1 into NASv310 (Anritsu)
- [3] **T1-030419**
CR for the introduction of test case 11.3.1 into NASv310 (Anritsu)

CR-Form-v7

CHANGE REQUEST

34.123-3 CR 055 # rev - # Current version: 3.1.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Addition of SM test case 11.3.2 to NAS ATS V3.1.0		
Source:	# Rohde & Schwarz		
Work item code:	# -	Date:	# 03 May 2003
Category:	# B	Release:	# R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# To add verified SM test case 11.3.2 to the approved NAS ATS V3.1.0
Summary of change:	# This document lists all changes applied to test case 11.3.2 required for approval. See detailed change description for further information.
Consequences if not approved:	# Test case will not be added to ATS

Clauses affected:	# N/A								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;">#</td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;">#</td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;">#</td> <td style="width: 20px;">X</td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	#	X	#	X	#	X
Y	N								
#	X								
#	X								
#	X								
Other comments:	#								

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Title: Changes to test case 11.3.2 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
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1 Overview

This document details the changes needed to correct problems in the TTCN implementation of test case 11.3.2 which is part of the NAS test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_11_3_2
Test Group: SM_TestCases/Deactivation/
ATS Version: V1.44 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 11.3.2

4.1 Introduction

This section describes the changes required to make test case 11.3.2 run correctly with a 3G UE. All modifications are marked with label "**WA#BasicM<number>**" for changes to the BasicM TTCN module and with label "**WA#NAS<number>**" for NAS related changes in the TTCN comments column of the enclosed NAS ATS [1].

The NAS ATS version used as basis was NASv144.mp provided by MCC 160. As a first step, the changes proposed by other TTCN verification teams were integrated to this ATS (see Anritsu document [2] and [3]). Changes presented in [2] but not considered by R&S were either already fixed in TTCN V1.44 or not necessary for this test case. Then a small number of new changes had to be applied to to get the test case running with the R&S 3G system simulator CRTU-W.

Please note that the provided ATS contains further modifications in common test steps for verification of other NAS test cases. For example, changes WA#BasicM4023-4032 are required for running GMM tests. The description of these changes, however, is out-of-scope of this document. Only the changes detailed below are necessary for running this SM test case.

4.2 Incorrect indentation (WA#BasicM4000)

Test step name ts_GMM_IdleUpdated, local test step It_IdleUpdated_NMO_II
Reason for change The indentation of TTCN statements from line 37 to 46 is wrong in V144.
Summary of change Indented line 37 to 46.
Source of change new change
Label WA#BasicM4000

t_IdleUpdates_NMO_I			
33	+ts_MM_UE_SwitchOn		
34	+ts_RRC_ConnEst(p_CellId, est_Reg, registration)		Establish RRC connection
35	Do?RRC_DataReq (tcv_Start = RRC_DataReq start)	ca_IniDirectTransfer(tsc_CellDedicated, tsc_RB3, cb_LocUpsReqAny(?)	Any Location Update request
36	(tcv_GMM_AttachExpect = TRUE, tcv_GMM_Attach Res = FALSE)		Set Flags in order to enable default handler to store ATTACH REQUEST PDU in case it is sent during Location Update procedure
37	+ts_SS_SecurityDownloadStart (ca_domain, tcv_Start)		
38	+ts_MM_Authentication(p_CellId)		Authentication
39	+ts_RRC_Security (p_CellId, tcv_AuthCK, tcv_AuthNK, tcv_AuthCK_GSM, TRUE, ts_domain)		
40	DoRRC_DataReq (tcv_MM_CmpIExpect = TRUE, tcv_MM_CmpRec = FALSE)	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdAppTMSI, tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac)	Location Updating Accept
41	[tcv_GMM_AttachRec = TRUE]		ATTACH REQUEST was received and handled by NAS default handler
42	(tcv_GMM_AttachExpect = FALSE)		Disable NAS default handler for ATTACH REQUEST
43	+ts_GMM_Authentication (p_CellId)		AUTHENTICATION AND CIPHERING REQUEST AUTHENTICATION AND CIPHERING RESPONSE
44	+t_SecurityMode		SECURITY MODE COMMAND SECURITY MODE COMPLETE
45	(tcv_AssignedPTMSI = px_PTMSI_Def, tcv_Assigned_PTMSI_Sig = px_PTMSI_SigDef)		Use default values
46	DoRRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, ca_AttachAcc(c_GMM_AttachResult(0010), c_RAI_w(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac, tcv_TmpCellInfo.rac), c_PTMSI_Signature (tcv_Assigned_PTMSI_Sig), c_MobileIDPTMSI (tcv_Assigned_PTMSI_Sig)	ATTACH ACCEPT for PS only - Attach result 'GPRS attached' - RAI default (RAI-1) - P-TMSI-1 signature - MobileID P-TMSI-1 - omni TMSI

4.3 UE OpMode not checked (WA#BasicM4001)

Test step name	ts_GMM_IdleUpdated
Reason for change	Test case variable tcv_UE_OpMode is not set according to the type of attach requested by the UE.
Summary of change	Added lines 72 to 75 to check Ue_Opmode.
Source of change	new change
Label	WA#BasicM4001

Line	Code	Comments
81	[ts_GMM_AttachReq = TRUE]	ATTACH REQUEST was received and handled by HA-S default handler
82	[ts_GMM_AttachExpect = FALSE]	Disable NAS default handler for ATTACH REQUEST
83	!NOT ts_AuthenReq[AttachReq] && !ts_	ATTACH REQUEST was NOT yet received and the UE does not automatically attach if switch on.
84	+ts_RRC_Connect	RRC connection release
85	START_WAIT(1)	Wait 1 s to allow UE to relax
86	?TIMEOUT_WAIT	
87	START_WAIT(40)	Wait 40 s to allow UE to relax
88	+ts_AT_TriggerGMM_Attach	Trigger UE to initiate GMM Attach after allowing the UE to decode Sys Info
89	+ts_RRC_Connect	Establish RRC connection
90	ts_CoRe, ts_Reg, ts_Stats()	
91	ts_RRC_DataReq (ts_TmpAttachReq[CDU = RRC_DataReq], ts_TmpReq[ts_TmpAttachReq[CDU.attachType.type, ts_Start = RRC_DataReq.start]CANCEL_WAIT])	ATTACH REQUEST - Attach Attach has requested
92	+ ts_GSM_SecurityDownwardStart (ts_domain, ts_Start)	
93	[ts_TmpReq = TRUE]	Set global variable according to the type of attach req. needed by UE
94	ts_CoRe_CoMMsg = ts_MobMgmt (TRUE)	
95	ts_CoRe_CoMMsg = ts_MobMgmt (?TIMEOUT_WAIT)	

4.4 Wait timer too low (WA#BasicM4002)

Test step name ts_GMM_IdleUpdated
Reason for change For some UEs the processing of AT commands for PS configuration takes longer than 5s.
Summary of change Changed wait timer in line 24 from 5 s to 40 s to allow UEs to receive AT commands and handle them accordingly.
Source of change new change
Label WA#BasicM4002

Line	Code	Comments
20	+ts_MM_Authentication[CDU]	Authentication
21	+ts_RRC_Security (ts_CoRe, ts_AuthC, ts_AuthC, ts_AuthC, ts_AuthC, TRUE, ts_domain)	
22	ts_RRC_DataReq (ts_CoRe[ts_CoReDedicated, ts_RRC, ts_LacUpdAccTMD, ts_TmpCidReq[ts_CoRe, ts_TmpCidReq[ts_CoRe]]])	Location Updating Accept
23	ts_RRC_DataReq (ts_CoRe[ts_CoReDedicated, ts_RRC, ts_TMD[ts_CoReDedicated, ts_RRC, ts_TMD[ts_CoReDedicated]]])	TMD reactivation complete
24	START_WAIT(40)	WA#BasicM4002
25	+ts_AT_TriggerGMM_Attach	Trigger UE to initiate GMM Attach after allowing the UE to decode Sys Info

4.5 No distinction for authentication response cases (WA#BasicM4003)

Test step name ts_GMM_Authentication
Reason for change No distinction is made between the 3 possible authentication response cases (SRES only, Extension as well, neither of both)
Summary of change Steps 7-12 have been added, so as to be consistent with the MM procedures.
Source of change new change
Label WA#BasicM4003

Test Step						
Test Step ID:	ts_GMM_Authentication (U-Conn: INT) (R)					
Test Step Group Ref:	Basic_M4_GMM_Steps					
Objective:	Generate authentication parameters and run the GMM Authentication procedure					
Default:	NAS_CipherNoExt					
Comments:	WA#BasicM4004					
Id	Label	Behavioral Description	Constraint Ref	Workset	Comments	
1		+ts_GMM_Authentication				
2		Di: RRC_Dedicated	ts_PD_Dedicated_CatCellMod, ts_RR3, ts_AuthAndCiphReq, ts_GMM_AuthRANDctr_AuthRAND, ts_GMM_KeyGen_hdr_PS_KeyGen, ts_GMM_AuthAUTNctr_AuthAUTN		Compute all relevant authentication parameters. AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.	
3		Di: RRC_Dedicated Ev: TrrsAuthAndCiphRspPDU = RRC_Dedicatedmsg, Ev_AuthRsp = Ev_TrrsAuthAndCiphRspPDU.authRsp.value, Ev_AuthRspExt = Ev_TrrsAuthAndCiphRspPDU.authRspExt	ts_PS_UpdateDirectTransfer (ts_CatDedicated, ts_RR3, ts_AuthAndCiphReq, ts_AuthRspExt)		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters	
4		Ev_Res = Ev_AuthRspCm, Ev_AuthRsp, Ev_AuthRspExt, Ev_AuthR, Ev_AuthRAND, TRUE()			Verify that the received Authentication Response parameters match expected response	
5	TSF1	Ev_Res = FALSE()		(F)		
6		Ev_Res = TRUE()		(F)		
7		Di: RRC_Dedicated Ev: TrrsAuthAndCiphRspPDU = RRC_Dedicatedmsg, Ev_AuthRsp = Ev_TrrsAuthAndCiphRspPDU.authRsp.value	ts_PS_UpdateDirectTransfer (ts_CatDedicated, ts_RR3, ts_AuthAndCiphReqNoExt, ts_AuthRspExt_M)		AUTHENTICATION AND CIPHERING RESPONSE without Authentication Response Extension	
8		Ev_Res = Ev_AuthRspCm, Ev_AuthRsp, Ev_AuthRspExt, Ev_AuthR, Ev_AuthRAND, FALSE()			Verify that the received Authentication Response parameters match expected response	
9	TSF2	Ev_Res = FALSE()		(F)		
10		Ev_Res = TRUE()		(F)		
11	TSF3	Di: RRC_Dedicated	ts_PS_UpdateDirectTransfer (ts_CatDedicated, ts_RR3, ts_AuthAndCiphReqNoExt)	(F)	AUTHENTICATION AND CIPHERING RESPONSE without Authentication Response and Authentication Response Extension parameters	
12	TSF4	Di: RRC_Dedicated	ts_PS_UpdateDirectTransfer (ts_CatDedicated, ts_RR3, ts_AuthFailure)	(F)	AUTHENTICATION FAILURE	

4.6 Missing constraint cr_AuthAndCiphRspNoExt (WA#BasicM4004)

Constraint name cr_AuthAndCiphRspNoExt
Reason for change This change is related to WA#BasicM4003.
Summary of change Added constraint cr_AuthAndCiphRspNoExt, to be used in line 7 of ts_GMM_Authentication.
Source of change new change
Label WA#BasicM4004

PDU Constraint Declaration				
Constraint Name:	cr_AuthAndCiphRspNoExt, p_authRsp : AuthRsp_M			
Group:				
PDU Name:	AUTHENTICATIONANDCIPHERINGRESPONSE			
Derivation Path:				
Encoding Rule Name:				
Encoding Variation:				
Comments:	WA#BasicM4004			
Field Name	Element Value	Type Encoding	Comments	
skipIndicator	'0000'B			
gmmProtocolDiscriminator	ts_GMM_PD			
msgType	'00010011'B			
spare4	'0000'B			
acrRefNo	?		Should be the one sent in the auth request	
authRsp	p_authRsp		Authentication parameter RAND	
imeiSv	-		No IMEISV requested	
authRspExt	-		Authentication parameter AUTN, a UMTS challenge is requested	

4.7 Missing constraint cr_AuthAndCiphRspNone (WA#BasicM4005)

Constraint name cr_AuthAndCiphRspNone

Reason for change This change is related to WA#BasicM4003.
Summary of change Added Constraint cr_ AuthAndCiphRspNone, to be used in line 11 of ts_GMM_Authentication.
Source of change new change
Label WA#BasicM4005

PDU Constraint Declaration			
Constraint Name:	cr_AuthAndCiphRspNone		
Group:			
PDU Name:	AUTHENTICATIONANDCIPHERINGRESPONSE		
Derivation Path:			
Encoding Rule Name:			
Encoding Variation:			
Comments:	WA#BasicM4005		
Field Name	Element Value	Type Encod...	Comments
skipIndicator	'0000B		
gmmProtoDiscriminator	tsr_GMM_PD		
msgType	'00010011B		
spare4	'0000B		
acRefNo	?		Should be the one sent in the auth request
authRsp	-		Authentication parameter RAND
imeiEv	-		No IMEISV requested
authRepExt	-		Authentication parameter AUTN, a UMTS challenge is requested

4.8 Missing GMMStatus PDU (WA#BasicM4006)

PDU name GMMStatus
Reason for change Related to WA#BasicM4008
Summary of change Added PDU for GMMStatus message handling in NAS_OtherwiseFail default branch.
Source of change new change
Label WA#BasicM4006

PDU Type Definition			
PDU Name:	GMMSTATUS		
Group:			
PCO Type:	Dc_SAP		
Encoding Rule Name:			
Encoding Variation:			
Comments:	WA#BasicM4006		
Field Name	Field Type	Type Encoding	Comments
skipIndicator	SkipIndicator		
gmmProtoDiscriminator	ProtocolDiscriminator		
msgType	MsgType		
gmm_Cause	GMM_Cause		

4.9 Missing constraint cbr_GMM_StatusMO (WA#BasicM4007)

Constraint name cbr_GMM_StatusMO
Reason for change Related to WA#BasicM4008
Summary of change Added constraint for GMMStatus message handling in NAS_OtherwiseFail
Source of change new change
Label WA#BasicM4007

PDU Constraint Declaration			
Constraint Name:	cbr_GMM_StatusMO(p_gmm_cause GMM_Cause)		
Group:			
PDU Name:	GMMSTATUS		
Derivation Path:			
Encoding Rule Name:			
Encoding Variation:			
Comments:	WA#BasicM4007		
Field Name	Element Value	Type Encod...	Comments
skipIndicator	'0000B		
gmmProtoDiscriminator	tsr_GMM_PD		
msgType	'00100000B		
gmm_Cause	p_gmm_cause		

4.10 GMMStatus message handling (WA#BasicM4008)

Test step name NAS_OtherwiseFail

Reason for change The test case sends a SERVICE_ACCEPT message in the RRC security test step to the UE. The UE responds with a GMMStatus message as no SERVICE_REQUEST was sent by the UE. This status message is not handled in the default message handling.

Summary of change Added lines 10 & 11 to handle GMM status messages properly.

Source of change new change

Label WA#BasicM4008

Default					
Default Id:		NAS_OtherwiseFail			
Default Group Ref:		NAS_Defaults			
Objective:		To match unexpected events and fail the test case.			
Comments:					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		TIMEOUT_Count			1
2		UI_MMI_CmdReq	ca_MMI_CmdReq (" The pu and timer has run out Please take appropriate measures.")		4
3		UI?MMI_CmdCnf	ca_MMI_CmdCnf		
4		[try_TestBody = FALSE]			
5	DFI1	CANCEL		(I)	
6		[try_TestBody = TRUE]			
7	DFI1	CANCEL		(F)	
8		DeT RRC_DataInd	ca_P8_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, chr_RA_UsedReq_OC ("", " ", " "))		
9		RETURN			
10		DeT RRC_DataInd	ca_P8_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, chr_GMM_StatusMO(" "))		WA#BasicM4008
11		RETURN			

4.11 Inccornt initialisation of IE nmo in c_CellInfoDef (WA#BasicM4009)

Incorporated from CR [2], section 2.2.1, presented by Anritsu

4.12 Addition of PIXIT value px_NMO (WA#BasicM4010)

Incorporated from CR [2], section 2.4.1, presented by Anritsu

4.13 Constraint cr_QoS_InteractiveOrBackgroundMO_Iv (WA#BasicM4011)

Incorporated from CR [2], section 2.2.3, presented by Anritsu

4.14 Constraint cs_QoS_InteractiveOrBackgroundMT_Iv (WA#BasicM4012)

Incorporated from CR [2], section 2.2.5, presented by Anritsu

4.15 Constraint c_TrChInfoUL_336_148 (WA#BasicM4013)

Incorporated from CR [2], section 2.2.6, presented by Anritsu

4.16 Constraint cr_ActPDP_ContextReqMO (WA#BasicM4014)

Incorporated from CR [2], section 2.2.8, presented by Anritsu

4.17 Constraint ts_CRLC_UL_CipherCfg_RAB (WA#BasicM4015)

Incorporated from CR [2], section 2.2.12, presented by Anritsu

4.18 Test step ts_AT_OrgPS_Call (WA#BasicM4016)

Incorporated from CR [2], section 2.2.13, presented by Anritsu

4.19 Superfluous space characters in AT command (WA#BasicM4017)

Test step name	ts_AT_OrgPS_Call
Reason for change	The AT command issued by this test step contain space characters between values.
Summary of change	Removed space character between parameter 1 and 2 in command "AT+CGACT=1,0"
Source of change	new change
Label	WA#BasicM4017

Test Step					
Test Step Id:	ts_AT_OrgPS_Call (p_CellId: INTEGER)				
Test Step Group Ref:	BasicM_UT_Step01				
Objective:	To originate a PDP Context from the UE				
Default:	UT_OtherwiseFail				
Comments:	WA#BasicM4016				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ R_PrepareAT_CmdCGEQMIN			set up the Minimum QoS same as Required QoS
2		UIIAT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
3		UEIAT_CmdCnf	ca_AT_CmdCnf		
4		+Rs_AT_SetQoS			
5		+ R_AssignAT_Cmd			
6		UIIAT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
7		UEIAT_CmdCnf	ca_AT_CmdCnf		
8		{(ca_AT_Cmd =>"AT+CGACT=1,1<CR>")}			ACTIVATE PDP CONTEXT message for MO WA#BasicM4017 WA#BasicM4018
9		UIIAT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		

4.20 Missing line terminator in AT command (WA#BasicM4018)

Test step name	ts_AT_OrgPS_Call
Reason for change	The AT command issued by this test step does not contain a <CR> (carriage return) line terminator.
Summary of change	Appended <CR> line terminator to AT command
Source of change	new change
Label	WA#BasicM4018

Test Step					
Test Step Id:	ts_AT_OrigPS_Call (p_Cellid : INTEGER)				
Test Step Group Ref:	BasicM_UT_Steps				
Objective:	To originate a PDP Context from the UE				
Default:	UT_OtherwiseFail				
Comments:	WA#BasicM4019				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ IL_PrepareAT_CmdCGEQMIN			set up the Minimum QoS same as Required QoS
2		UI1AT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
3		UE1AT_CmdCnf	ca_AT_CmdCnf		
4		+ts_AT_SetQoS			
5		+ IL_AssignAT_Cmd			
6		UI1AT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
7		UE1AT_CmdCnf	ca_AT_CmdCnf		
8		{(trv_AT_Cmd =>"AT+CGACT=1,1<CR>")}			ACTIVATE PDP CONTEXT message for MO WA#BasicM4017 WA#BasicM4018
9		UI1AT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		

4.21 Wrong AT commands in test step ts_AT_SetQoS (WA#BasicM4019)

Incorporated from CR [2], section 2.2.14, presented by Anritsu

4.22 Superfluous space characters in AT command (WA#BasicM4020)

Test step name	ts_AT_SetQoS
Reason for change	The AT commands issued by this test step contain space characters between values.
Summary of change	Removed space characters in between AT command in line 5 and line 7 of test step ts_AT_SetQoS
Source of change	new change
Label	WA#BasicM4020

Test Step					
Test Step Id:	ts_AT_SetQoS				
Test Step Group Ref:	BasicM_UT_Steps				
Objective:	This Step sets the QoS				
Default:	UT_OtherwiseFail				
Comments:	WA#BasicM4020				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ IL_PrepareAT_CmdCGEQREQ			set up the QoS with the following parameters:
2		UI1AT_CmdReq	ca_AT_CmdReq (trv_AT_Cmd)		
3		UI1AT_CmdCnf	ca_AT_CmdCnf		
IL_PrepareAT_CmdCGEQREQ					
4		[pc_interactive AND (pc_RRC_PS_SenTested = ps_interactive)]			
5		{(trv_AT_Cmd =>("AT+CGEQREQ=1,3,64,64,1,320\n" + "E3\n" + "B3\n" + ",3<CR>"))}			WA#BasicM4020
6		[pc_Background AND (pc_RRC_PS_SenTested = ps_Background)]			
7		{(trv_AT_Cmd =>("AT+CGEQREQ=1,3,64,64,1,320\n" + "E3\n" + "B3\n" + ",3<CR>"))}			WA#BasicM4020
8	ERR1	[TRUE]		I	Parameter error

4.23 ts_ActivatePDP_AcceptMO (WA#BasicM4021)

Incorporated from CR [2], section 2.2.15, presented by Anritsu

4.24 ts_ReceiveActivatePDP_Accept_DCH (WA#BasicM4022)

Incorporated from CR [2], section 2.2.17, presented by Anritsu

4.25 tcv_TrafficClass (WA#BasicM4033)

Incorporated from CR [2], section 2.4.3, presented by Anritsu

4.26 ts_DetermineDlyClassAndTrafficClass (WA#BasicM4034)

Incorporated from CR [2], section 2.4.5, presented by Anritsu

4.27 Test body of 11.3.2 (WA#NAS4002)

Incorporated from CR [3], section 2.5.1, presented by Anritsu

5 Branches executed in test case 11.3.2

The test case implementation executed the PS branch, Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE 6650

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 11_3_2-Logs\Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file 11_3_2-pics-pixit.doc**
A document containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030503**
This archive comprises HTML execution log files, PICS/PIXIT file and the TTCN MP file
- [2] **T1-030417**
CR for the introduction of test case 11.1.1.1 into NASv310 (Anritsu)
- [3] **T1-030421**
CR for the introduction of test case 11.3.2 into NASv310 (Anritsu)

CR-Form-v7	CHANGE REQUEST
⌘ 34.123-3 CR 056 ⌘ rev - ⌘ Current version: 3.1.0 ⌘	

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of GMM test case 12.3.1.5 to NAS ATS V3.1.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ -	Date:	⌘ 06/05/2003
Category:	⌘ B	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified GMM test case 12.3.1.5 to the approved NAS ATS V3.1.0
Summary of change:	⌘ This document lists all changes applied to test case 12.3.1.5 required for approval. See detailed change description for further information.
Consequences if not approved:	⌘ Test case will not be added to ATS

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px 5px;">Y</td> <td style="padding: 2px 5px;">N</td> </tr> <tr> <td style="padding: 2px 5px;"> </td> <td style="padding: 2px 5px;">X</td> </tr> <tr> <td style="padding: 2px 5px;"> </td> <td style="padding: 2px 5px;">X</td> </tr> <tr> <td style="padding: 2px 5px;"> </td> <td style="padding: 2px 5px;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N		X		X		X	⌘	
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 12.3.1.5 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document details the changes needed to correct problems in the TTCN implementation of test case 12.3.1.5 which is part of the NAS test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_12_3_1_5
Test Group: NAS_12_3_1_5/GMM/Detach_procedures/UE_initiated_detach/
ATS Version: V1.44 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Siemens 3G UE
Verification Status: PASS

4 Corrections required for test case 12.3.1.5

4.1 Introduction

This section describes the changes required to make test case 12.3.1.5 run correctly with a 3G UE. All modifications are marked with label "**WA#BasicM<number>**" for changes to the BasicM TTCN module and with label "**WA#NAS<number>**" for NAS related changes in the TTCN comments column of the enclosed NAS ATS [1].

The NAS ATS version used as basis was NASv144.mp provided by MCC 160. As a first step, changes proposed by other TTCN verification teams (for example in Anritsu document [2]) were integrated to this ATS if applicable to the V144 version. A number of additional changes had to be done to get the test case running with the R&S 3G system simulator CRTU-W and the UEs listed in section 6.

4.2 Auth. Resp. without Extension is not accounted for (WA#BasicM4003)

Test step name	ts_GMM_Authentication
Reason for change	No distinction is made between the 3 possible authentication response cases (SRES only, Extension as well, neither of both)
Summary of change	Lines 7-12 have been added, so as to be consistent with the MM procedures.
Source of change	new change
Label	WA#BasicM4003

Test Step					
Test Step Id:	ts_GMM_Authentication (p_CellId : INTEGER)				
Test Step Group Ref:	BasicM_MM_GMM_Steps/				
Objective:	Generate authentication parameters and run the GMM Authentication procedure				
Defaults:	NAS_OtherwiseFail				
Comments:	WA#BasicM4003				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_GMM_AuthenticationInit			Compute all relevant authentication parameters.
2		Dc | RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_b(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU => RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_t, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := e_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
5	TSF1	[tcv_Res = FALSE]		(F)	
6		[tcv_Res = TRUE]		(P)	
7		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU => RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRspNoExt (c_AuthRspAny_N))		AUTHENTICATION AND CIPHERING RESPONSE without Authentication Response Extension
8		(tcv_Res := e_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, FALSE))			Verify that the received Authentication Response parameters match expected response.
9	TSF2	[tcv_Res = FALSE]		(F)	
10		[tcv_Res = TRUE]		(P)	
11	TSF3	Dc ? RRC_DataInd	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRspNone)	(P)	AUTHENTICATION AND CIPHERING RESPONSE without Authentication Response and Authentication Response Extension parameters
12	TSF4	Dc ? RRC_DataInd	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, c_AuthFailAny)	(F)	AUTHENTICATION FAILURE

4.3 Missing constraint cr_AuthAndCiphRspNoExt (WA#BasicM4004)

Constraint name	cr_AuthAndCiphRspNoExt
Reason for change	This change is related to WA#BasicM4003.
Summary of change	Added constraint cr_AuthAndCiphRspNoExt, to be used in line 7 of ts_GMM_Authentication.
Source of change	new change
Label	WA#BasicM4004

PDU Constraint Declaration			
Constraint Name:	cr_AuthAndCiphRspNoExt(p_authRsp : AuthRsp_M)		
Group:			
PDU Name:	AUTHENTICATIONANDCIPHERINGRESPONSE		
Derivation Path:			
Encoding Rule Name:			
Encoding Variator:			
Comments:	WA#BasicM4004		
Field Name	Element Value	Type Encoding	Comments
skipIndicator	0000B		
gMMProtocolDiscriminator	tsc_GMM_PD		
msgType	00010011B		
spare4	0000B		
acRefNo	?		Should be the one sent in the auth request
authRsp	p_authRsp		Authentication parameter RAND
imeisv	-		No IMEISV requested
authRspExt	-		Authentication parameter AUTN, a UMTS challenge is requested

4.4 Missing constraint cr_AuthAndCiphRspNone (WA#BasicM4005)

Constraint name cr_AuthAndCiphRspNone
Reason for change This change is related to WA#BasicM4003.
Summary of change Added Constraint cr_AuthAndCiphRspNone, to be used in line 11 of ts_GMM_Authentication.
Source of change new change
Label WA#BasicM4005

PDU Constraint Declaration			
Constraint Name:	cr_AuthAndCiphRspNone		
Group:			
PDU Name:	AUTHENTICATIONANDCIPHERINGRESPONSE		
Derivation Path:			
Encoding Rule Name:			
Encoding Variator:			
Comments:	WA#BasicM4005		
Field Name	Element Value	Type Encoding	Comments
skipIndicator	0000B		
gMMProtocolDiscriminator	tsc_GMM_PD		
msgType	00010011B		
spare4	0000B		
acRefNo	?		Should be the one sent in the auth request
authRsp	-		Authentication parameter RAND
imeisv	-		No IMEISV requested
authRspExt	-		Authentication parameter AUTN, a UMTS challenge is requested

4.5 Missing GMMStatus PDU (WA#BasicM4006)

PDU name GMMStatus
Reason for change Related to WA#BasicM4008
Summary of change Added PDU for GMMStatus message handling in NAS_OtherwiseFail default branch.
Source of change new change
Label WA#BasicM4006

PDU Type Definition			
PDU Name:	GMMSTATUS		
Group:			
PCO Type:	Dt_SAP		
Encoding Rule Name:			
Encoding Variator:			
Comments:	WA#BasicM4006		
Field Name	Field Type	Type Encoding	Comments
skipIndicator	SkipIndicator		
gMMProtocolDiscriminator	ProtocolDiscriminator		
msgType	MsgType		
gMM_Cause	GMM_Cause		

4.6 Missing constraint cbr_GMM_StatusMO (WA#BasicM4007)

Constraint name cbr_GMM_StatusMO
Reason for change Related to WA#BasicM4008
Summary of change Added constraint for GMMStatus message handling in NAS_OtherwiseFail
Source of change new change
Label WA#BasicM4007

PDU Constraint Declaration			
Constraint Name:	cbr_GMM_StatusMO(p_gmm_cause: GMM_Cause)		
Group:			
PDU Name:	GMMSTATUS		
Derivation Path:			
Encoding Rule Name:			
Encoding Variation:			
Comments:	WA#BasicM4007		
Field Name	Element Value	Type Encoding	Comments
skipIndicator	0000'B		
gmmProtocolDiscriminator	tsc_GMM_PD		
msgType	00100000'B		
gmm_Cause	p_gmm_cause		

4.7 GMMStatus message handling (WA#BasicM4008)

Test step name NAS_OtherwiseFail
Reason for change The test case sends a SERVICE_ACCEPT message in the RRC security test step to the UE. The UE responds with a GMMStatus message as no SERVICE_REQUEST was sent by the UE. This status message is not handled in the default message handling.
Summary of change Added lines 10 & 11 to handle GMM status messages properly.
Source of change new change
Label WA#BasicM4008

Default					
Default Id:	NAS_OtherwiseFail				
Default Group Ref:	NAS_Defaults				
Objective:	To match unexpected events and fail the test case.				
Comments:					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		TIMEOUT_Count			1
2		UI MML_CmdReq	ca_MML_CmdReq (" The guard timer has run out. Please take appropriate measures.")		4
3		UI? MML_CmdCnf	ca_MML_CmdCnf		
4		[!trv_TestBody = FALSE]			
5	DFFt	CANCEL		(f)	
6		[!trv_TestBody = TRUE]			
7	DFFt	CANCEL		(F)	
8		De? RRC_DataInd	ca_PSI_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cbr_RA_UsedReq_OC ("", "tsc_"))		
9		RETURN			
10		De? RRC_DataInd	ca_PSI_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cbr_GMM_StatusMO("))		WA#BasicM4008
11		RETURN			

4.8 Inconrrent initialisation of IE nmo in c_CellInfoDef (WA#BasicM4009)

Incorporated from CR [2], section 2.2.1, presented by Anritsu

4.9 Addition of PIXIT value px_NMO (WA#BasicM4010)

Incorporated from CR [2], section 2.4.1, presented by Anritsu

4.10 GMM Attach Reject cannot handle NMO_I UEs (WA#BasicM4023)

Test step name ts_GMM_AttachReject_NMO_I
Reason for change ts_GMM_AttachReject considers only NMO II. A version for NMO I is needed.
Summary of change Created test step ts_GMM_AttachReject_NMO_I to handle NMO_I scenario.
Source of change new change
Label WA#BasicM4023

Test Step					
Test Step Id:	ts_GMM_AttachReject_NMO_I (p_CellId : INTEGER)				
Test Step Group Ref:	BasicM_MM_GMM_steps				
Objective:	Force UE to invalidate its SIM USF parameters, i.e. to delete P-TMSI, P-TMSI signature, RA and ciphering key sequence number Note: That in case of class A mobile and Network Mode of Operation II, the UE is allowed to register to CS services (normal Location Update procedure)				
Default:	NAS_OtherwiseFail				
Comments:	Initial conditions: - Cell referenced by p_CellId is configured - UE is switched off Procedure: - UE is forced to perform an Attach procedure - SS rejects the attach request from the UE which forces the UE to invalidate its USF. [WA#BasicM4023]				
Nr	Label	Behaviour Description	Constraint Ref	Work...	Comments
1		+ts_MM_UE_SwitchOn			
2		{pc_AutomaticAttachSwitchOn}			
3		+ts_RRC_ConnEst p_CellId, est_Reg, registration)			
4		+t_AttachProcedure			
5		{NOT pc_AutomaticAttachSwitchOn}			autobatch case not yet implemented
6		+tl_RegistrationOnCS_3GpModeA			Allow UE to Register to CS if UE is Class A mobile and Network Mode of Operation is II
7		+t_AttachProcedure			
tl_AttachProcedure					
8		+tl_AttachReject			ATTACH REQUEST ATTACH REJECT
9		+t_SignallingConnectionRelease			
10		+ts_RRC_ConnRelqp_CellId, cell_Dch)			Release RRC connection
11		{tx_PS_KeySeq = '1111'}			Invalidate ciphering key sequence number
12		+ts_MM_UE_SwitchOff			
tl_RegistrationOnCS_3GpModeA					
13		+ts_SetTempCellInfo (p_CellId)			
14		{tx_UE_OpMode = opModeA}			
15		+ts_RRC_ConnEst p_CellId, est_Reg, registration)			
16		Or?RRC_DataInd (tx_Start = RRC_DataInd.start)	car_IndirectTransfer(tx_CellDedicated, tx_RBS, tx_LocationReqAny(T))		LOCATION UPDATING REQUEST
17		+ts_SS_SecurityDownloadStart (cs_domain, tx_3Gpp)			
18		+ts_MM_Authentication(p_CellId)			AUTHENTICATION REQUEST AUTHENTICATION RESPONSE
19		+ts_RRC_Security(p_CellId, tx_AuthReq			SECURITY MODE COMMAND SECURITY MODE COMPLETE

20		Dc?RRC_DataReq	cs_DataReq, ts_CellDedicated, ts_RB3, r_LocUpdReqTMSI(lv_TmpCellInfo.mcc, lv_TmpCellInfo.mnc, lv_TmpCellInfo.lac)	LOCATION UPDATING ACCEPT
21		Dc?RRC_DataInd	cs_UplinkDirectTransfer(ts_CellDedicated, ts_RB3, r_TMSI_Rea- locCmpl)	TMSI REALLOCATION COMPLETE
22		[TRUE]		Do nothing (if not class A)
tl_AttachReject				
23		[pc_AutomaticAttachSwitchON]		
24		+tl_AttachReq		
25		[NOT pc_AutomaticAttachSwitchON]		
26		+ts_AT_TriggerOMM_Attach		
27		+tl_AttachReq		
tl_AttachReq				
28		Dc ? RRC_DataInd (lv_Start = RRC_DataInd.start)	cs_PS_IndirectTransfer (ts_CellDedicated, ts_RB3, cr_AttachReq (ts_AttachTypeAny, ts_MobilityMngt_v, ts_RAU_Anc_x, ts_FTMSI_SignatureAny, T))	ATTACH REQUEST with any contents
29		+ ts_SS_SecurityDownloadStart (ps_domain, lv_Start)		
30		Dc ! RRC_DataReq	cs_PS_DataReq (ts_CellDedicated, ts_RB3, cs_AttachReq) []	ATTACH REJECT - OMM cause 'GPRS and non-GPRS services not allowed'
tl_SignallingConnectionRelease				
31		START t_WaitMS(5000)		Start timer 5s.
32		? TIMEOUT t_WaitMS		UE did not send SIGNALLING CONNECTION RELEASE (just continue with release procedure)
33		AM ? RLC_AM_DATA_IND	cs_RRC_SigConnRelInd (ts_CellDedicated, ts_RB2, cr_RRC_SigConnRelInd (lv_CN_Domain))	Accept SIGNALLING CONNECTION RELEASE sent by the UE
34		CANCEL t_WaitMS		
36		AM ? RLC_AM_DATA_IND	cs_RRC_SigConnRelInd (ts_CellDedicated, ts_RB2, cr_RRC_SigConnRelInd (lv_CN_Domain))	Accept SIGNALLING CONNECTION RELEASE sent by the UE
37		CANCEL t_WaitMS		
Detailed Comment:				

4.11 Constraint c_GMM_AttachTypeCombinedCS_PS (WA#BasicM4026)

Constraint step name c_GMM_AttachTypeCombinedCS_PS
Reason for change UE may legally use different values of follow-on-request
Summary of change Changed value of element "for" from '0' to "?"
Source of change new change
Label WA#BasicM4026

Structured Type Constraint Declaration			
Constraint Name:	c_GMM_AttachTypeCombinedCS_PS		
Group:			
Type Name:	AttachType		
Derivation Path:			
Encoding Variations:			
Comments:			
Element Name	Element Value	Type Encoding	Comments
for	?		No follow on request WA#BasicM4026
type	011B		Combined GPRS/UMTS attach

4.12 Test step ts_RRC_ConnRel (WA#BasicM4029)

Test step name ts_RRC_ConnRel
Reason for change Added condition to check if UE is switched off & not expect RelCmpl as requested by tc_12_9_x

Summary of change Added 1s timer to check if UE is switched off or not
Source of change new change
Label WA#BasicM4029

It_Send_RRC_ConnectionRelease				
39		[p_RRC_RelStatus= cell_Dch]		
40		(tv_N308 >= 1, tv_K >= 1)		Maximum number of retransmissions of the RRC CONNECTION RELEASE COMPLETE message
41		UM?RLC_UM_DATA_REQ	cas_RRC_ConnRelDCCH (tsc_CellDedicated, tsc_RB1, cs_108_RRC_ConnRelDCCH(tv_CellIndInfo.d_IntegrityCheckInfo, tv_RRC_Ti, tv_N308))	
42		START t_Dly(1000)		WA#BasicM4029
43	TSP1	? TIMEOUT t_Dly		(P) WA#BasicM4029
44	TSP1	UM?RLC_UM_DATA_IND	car_RRC_ConnRelCmplUM (tsc_CellDedicated, tsc_RB1, cbr_108_RRC_ConnRelCmpl (tv_RRC_Ti))	(P)

4.13 Test step po_ConnectionAndSS_Rel (WA#BasicM4030)

Test step name po_ConnectionAndSS_Rel
Reason for change Added condition to check if UE is switched off & not expect RelCmpl as requested by tc_12_9_x
Summary of change Added 1s timer to check if UE is switched off or not
Source of change new change
Label WA#BasicM4030

10		UM?RLC_UM_DATA_REQ	cas_RRC_ConnRelDCCH (tsc_CellDedicated, tsc_RB1, cs_108_RRC_ConnRelDCCH(tv_CellIndInfo.d_IntegrityCheckInfo, tv_RRC_Ti, OMIT))	
11		START t_Dly(1000)		WA#BasicM4030
12	TSP1	? TIMEOUT t_Dly		(P) WA#BasicM4030
13		AM?RLC_AM_DATA_IND	car_RRC_ConnRelCmpl (tsc_CellDedicated, tsc_RB2, cbr_108_RRC_ConnRelCmpl (tv_RRC_Ti))	(P)
14		[TRUE]		2.
15		(tv_N308 >= 1, tv_K >= 1)		Maximum number of retransmissions of the RRC CONNECTION RELEASE COMPLETE message
16		UM?RLC_UM_DATA_REQ	cas_RRC_ConnRelDCCH (tsc_CellDedicated, tsc_RB1, cs_108_RRC_ConnRelDCCH(tv_CellIndInfo.d_IntegrityCheckInfo, tv_RRC_Ti, tv_N308))	
17		START t_Dly(1000)		WA#BasicM4030
18	TSP1	? TIMEOUT t_Dly		(P) WA#BasicM4030
19		UM?RLC_UM_DATA_IND	car_RRC_ConnRelCmplUM(tsc_CellDedicated, tsc_RB1, cbr_108_RRC_ConnRelCmpl (tv_RRC_Ti))	(P)
20		REPEAT It_RptRcvConnRel UNTIL [tv_K = (tv_N308+1)]		UE sends RRC Connection Release Complete for N308 times

4.14 void (WA#BasicM4037)

This change is not required for this test case.

4.15 void (WA#BasicM4038)

This change is not required for this test case.

4.16 void (WA#BasicM4039)

This change is not required for this test case.

4.17 Superfluous RRC Connection Release in test body of 12.1.3.5 (WA#NAS4013)

Test step name	tc_12_3_1_5, test body
Reason for change	Superfluous RRC Connection Release is performed at the end of the testbody.
Summary of change	Removed RRC Con rel at end of Test body
Source of change	new change
Label	WA#NAS4013

Test Case					
Test Case Id:	tc_12_3_1_5				
Test Group Reference:	ONMMDetach_procedures/UE_initiated_detach				
Purpose:	To test the behaviour of the UE when performing the detach procedure in Network Mode of Operation.				
Configuration:					
Default:	NAS_OtherwiseFail				
Comments:	Initial conditions - SS - One cells operating in network operation mode 1 - UE - The UE has a valid IMSI WA#NAS4013 WA#NAS4014				
No	Label	Behaviour Description	Constraint Ref	Verdi...	Comments
1		START_L_Guard(200)			
2		+ts_InitVariables			
3		(tc_CellInfoA.nm => ts_NMO_0)			Test case specific cell settings WA#NAS4015
4		+ts_UMM_Config_CellA			Configure cell A WA#NAS4016
5		+ts_UMM_AttachReject_NMO_1 (ts_CellA)			Invalidate temporary USIM parameters WA#NAS4017
6		+ts_MME_SetOpModeA			
7		+R_TestBody			
8		+ts_ConnectionAndSR_Rele			
tl_TestBody					
9		(tc_TestBody > TRUE)		(F)	
10		+ts_UMM_TriggerPSRegistrationAtSwitchOn_NMO_1 (ts_CellA)			
11		+tl_Attach_Steps_3To5			
12		+ts_RRC_ConnRel(ts_CellA, cell_Dch)			
13		+ts_NNI_UE_SwitchOff			Step 6
14		+ts_RRC_ConnEstab_CellA, est_M0, detach)			
15		Dc ? RRC_DataInd (tc_Start = RRC_DataInd.start)	ca_PS_InitDirectTransfer(ts_CellDedicated, ts_RB3, cr_DetachReq { c_DetachType('B', 011 B), c_MobileIDPTMSI (ts_AssignedPTMSI), c_PTMSI_Signature_3v (ts_Assigned_PTMSI_Sig1) })		Step 7. DETACH REQUEST - Detach type is 'power switched off, PS/MSI detach' - P-TMSI (as assigned in the attach procedure) - P-TMSI signature (as assigned)
tl_Attach_Steps_3To5					
16		Dc ? RRC_DataInd (tc_Start = RRC_DataInd.start)	ca_PS_InitDirectTransfer(ts_CellDedicated, ts_RB3, cr_AttachReq { c_UMM_AttachTypeCombinedCS_PS, c_MobileIDMSI_M, T, -, ts_PS_KeyDer() })		Step 3. ATTACH REQUEST - Attach type is 'Combined PS/MSI attach' - MobileID IMSI
17		+ ts_SS_SecurityDownloadStart (ss_domain, tc_Start)			
18		+ ts_UMM_AuthenticateAndStartIntegrityProtection (ts_CellA)			
19		Dc ! RRC_DataReq (ts_AssignedPTMSI = ps_PTMSI_2, ts_Assigned_PTMSI_Sig => ps_PTMSI_Sig2)	ca_PS_DataReq (ts_CellDedicated, ts_RB3, ts_AttachAcc { c_UMM_AttachResultCombinedCS_PS, c_RAI_Def_1, c_PTMSI_Signature (ps_PTMSI_Sig2), c_MobileIDPTMSI (ps_PTMSI_2), - })		Step 4. ATTACHACCEPT - Attach result 'Combined PS/CS' - RAI-1 - P-TMSI-2 - P-TMSI signature 2
20		Dc ? RRC_DataInd	ca_PS_UplinkDirectTransfer(ts_CellDedicated, ts_RB3, cr_AttachComplete)		ATTACH COMPLETE
Detailed Comment:					

4.18 Mistake in test case header (WA#NAS4014)

Test step name	tc_12_3_1_5, test body
Reason for change	Number of cells incorrectly stated in header of test case
Summary of change	Change comments in the test case header about using 1 cell & not 2 cells
Source of change	new change
Label	WA#NAS4014

see TTCN code snippet for WA#NAS4013

4.19 Superfluous Cell B assignment (WA#NAS4015)

Test step name	tc_12_3_1_5, test body
Reason for change	Cell B is not going to be configured according to the prose: assignments for CellB unnecessary
Summary of change	All assignments for Cell B removed
Source of change	new change
Label	WA#NAS4015

see TTCN code snippet for WA#NAS4013

4.20 Superfluous Cell B configuration (WA#NAS4016)

Test step name	tc_12_3_1_5, test body
Reason for change	Cell B is not going to be configured according to the prose: creation of Cell B not necessary
Summary of change	Create & configure only CellA
Source of change	new change
Label	WA#NAS4016

see TTCN code snippet for WA#NAS4013

4.21 Test step call ts_GMM_AttachReject_NMO_I (WA#NAS4017)

Test step name	tc_12_3_1_5, test body
Reason for change	ts_GMM_AttachReject considers only NMO II. A version for NMO I is needed.
Summary of change	Calling test step ts_GMM_AttachReject_NMO_I in line 5 of test body
Source of change	new change
Label	WA#NAS4017

Test Case					
Test Case ID:	ts_12_3_1_5				
Test Group Reference:	GMMDetach_procedure(UE_initiated_detach)				
Purpose:	To test the behaviour of the UE when performing the detach procedure in Network Mode of Operation 1				
Configuration:					
Defaults:	NAS_OtherwiseFail				
Comments:	Initial conditions - BS : One cells operating in network operation mode 1 - UE : The UE has a valid IMEI WAFNAS4013 WAFNAS4014				
Nr	Label	Sequence Description	Constraint Ref	Verif.	Comments
1		START T_Guard(300)			
2		+ts_InitVariables			
3		{ts_CellInfoA.nmo = ts_NMO_1}			Test case specific cell settings WAFNAS4015
4		+ts_GMM_Config_CellA			Configure cell A WAFNAS4016
5		+ts_GMM_AttachReject_NMO_1 (ts_CellA)			Invalidate temporary USIM parameters WAFNAS4017
6		+ts_MM1_SetOpModeA			
7		+t_TestBody			
8		+po_ConnectionAndSS_Rets			
t_TestBody					

5 Branches executed in test case 12.3.1.5

The test case implementation executed the PS branch, Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Siemens 3G UE

The Siemens 3G UE passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 12_3_1_5-Logs\Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file 12_3_1_5-pics-pixit.doc**
A document containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030579**
This archive comprises HTML execution log files, PICS/PIXIT file and the TTCN MP file
- [2] **T1-030419**
CR for the introduction of test case 11.3.1 into NASv310 (Anritsu)

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 057** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of GMM test case 12.7 to NAS ATS V3.1.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ -	Date:	⌘ 06/05/2003
Category:	⌘ B	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified GMM test case 12.7 to the approved NAS ATS V3.1.0		
Summary of change:	⌘ This document lists all changes applied to test case 12.7 required for approval. See detailed change description for further information.		
Consequences if not approved:	⌘ Test case will not be added to ATS		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 12.7 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
thomas.moosburger@rsd.rohde-schwarz.com
Tel. +49 89 4129 11731

1 Overview

This document details the changes needed to correct problems in the TTCN implementation of test case 12.7 which is part of the NAS test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_12_7_1
Test Group: NAS_12_7_1/GMM/Identification_procedures/
ATS Version: V1.44 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 12.7

4.1 Introduction

This section describes the changes required to make test case 12.7 run correctly with a 3G UE. All modifications are marked with label **“WA#BasicM<number>”** for changes to the BasicM TTCN module and with label **“WA#NAS<number>”** for NAS related changes in the TTCN comments column of the enclosed NAS ATS [1].

The NAS ATS version used as basis was NASv144.mp provided by MCC 160. As a first step, changes proposed by other TTCN verification teams (for example in Anritsu document [2]) were integrated to this ATS if applicable to the V144 version. A number of additional changes had to be done to get the test case running with the R&S 3G system simulator CRTU-W and the UEs listed in section 6.

4.2 Missing constraint cr_AuthAndCiphRspNoExt (WA#BasicM4004)

Constraint name cr_AuthAndCiphRspNoExt
Reason for change This change is related to WA#BasicM4003.
Summary of change Added constraint cr_AuthAndCiphRspNoExt, to be used in line 7 of ts_GMM_Authentication.
Source of change new change
Label WA#BasicM4004

PDU Constraint Declaration			
Constraint Name:	cr_AuthAndCiphRspNoExt(p_authRsp: AuthRsp_t)		
Group:			
PDU Name:	AUTHENTICATIONANDCIPHERINGRESPONSE		
Derivation Path:			
Encoding Rule Name:			
Encoding Variator:			
Comments:	WA#BasicM4004		
Field Name	Element Value	Type Encoding	Comments
skipIndicator	'0000'B		
gmmProtocolDiscriminator	ts_GMM_PD		
msgType	'00010011'B		
spare4	'0000'B		
acRefNo	?		Should be the one sent in the auth request
authRsp	p_authRsp		Authentication parameter RAND
imeisv	-		No IMEISV requested
authRspExt	-		Authentication parameter AUTHN, a UMTS challenge is requested

4.3 Missing GMMStatus PDU (WA#BasicM4006)

PDU name GMMStatus
Reason for change Related to WA#BasicM4008
Summary of change Added PDU for GMMStatus message handling in NAS_OtherwiseFail default branch.
Source of change new change
Label WA#BasicM4006

PDU Type Definition			
PDU Name:	GMMSTATUS		
Group:			
PCO Type:	Dt_SAP		
Encoding Rule Name:			
Encoding Variator:			
Comments:	WA#BasicM4006		
Field Name	Field Type	Type Encoding	Comments
skipIndicator	SkipIndicator		
gMMProtocolDiscriminator	ProtocolDiscriminator		
msgType	MsgType		
gMM_Cause	GMM_Cause		

4.4 Missing constraint cbr_GMM_StatusMO (WA#BasicM4007)

Constraint name cbr_GMM_StatusMO
Reason for change Related to WA#BasicM4008
Summary of change Added constraint for GMMStatus message handling in NAS_OtherwiseFail
Source of change new change
Label WA#BasicM4007

PDU Constraint Declaration			
Constraint Name:	cbr_GMM_StatusMO(p_gmm_cause: GMM_Cause)		
Group:			
PDU Name:	GMMSTATUS		
Derivation Path:			
Encoding Rule Name:			
Encoding Variator:			
Comments:	WA#BasicM4007		
Field Name	Element Value	Type Encoding	Comments
skipIndicator	'0000'B		
gMMProtocolDiscriminator	tsc_GMM_PD		
msgType	'00100000'B		
gMM_Cause	p_gmm_cause		

4.5 GMMStatus message handling (WA#BasicM4008)

Test step name NAS_OtherwiseFail
Reason for change The test case sends a SERVICE_ACCEPT message in the RRC security test step to the UE. The UE responds with a GMMStatus message as no SERVICE_REQUEST was sent by the UE. This status message is not handled in the default message handling.
Summary of change Added lines 10 & 11 to handle GMM status messages properly.
Source of change new change
Label WA#BasicM4008

Default					
Default Id:	NAS_OtherwiseFail				
Default Group Ref:	NAS_Defaults/				
Objective:	To match unexpected events and fall the test case.				
Comments:					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		TIMEOUT_Quant			1
2		U1 MMI_CmdReq	ca_MMI_CmdReq (" The guard timer has run out. Please take appropriate measures.")		4
3		U1? MMI_CmdCnf	ca_MMI_CmdCnf		
4		[!try_TestBody = FALSE]			
5	DFH	CANCEL		(f)	
6		[!try_TestBody = TRUE]			
7	DFF	CANCEL		(F)	
8		Dc? RRC_DataInd	ca_PS_UpgradeDirectTransfer(tsc_CellDedicated, tsc_RB3, cbr_RA_UsedReq_OC ("", "", ""))		
9		RETURN			
10		Dc? RRC_DataInd	ca_PS_UpgradeDirectTransfer(tsc_CellDedicated, tsc_RB3, cbr_GMM_StatusMO("))		WA#BasicM4009
11		RETURN			

4.6 Inccornt initialisation of IE nmo in c_CellInfoDef (WA#BasicM4009)

Incorporated from CR [2], section 2.2.1, presented by Anritsu

4.7 Addition of PIXIT value px_NMO (WA#BasicM4010)

Incorporated from CR [2], section 2.4.1, presented by Anritsu

20		DcRRC_DataReq	ca_DataReq(tsc_CellDedicated, tsc_RB3, t_LocUpdReqTMSI(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac))		LOCATION UPDATING ACCEPT
21		Dc?RRC_DataInd	ca_UpgradeDirectTransfer(tsc_CellDedicated, tsc_RB3, t_TMSI_ReallocCmpl)		TMSI REALLOCATION COMPLETE
22		[TRUE]			Do nothing (if not class A)
IL_AttachReject					
23		[pc_AutomaticallyAttachSwitchON]			
24		+IL_AttachReq			
25		[NOT px_AutomaticallyAttachSwitchON]			
26		+ts_AT_TriggerGMM_Attach			
27		+IL_AttachReq			
IL_AttachReq					
28		Dc? RRC_DataInd (tcv_Start = RRC_DataInd.start)	ca_PS_UpgradeDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq(t_AttachTypeAny, t_MobilityAny, t_RAU_Any, t_PTMCI_SignatureAny, T))		ATTACH REQUEST with any contents
29		+ ts_SS_SecurityDownloadStart(ps_domain, tcv_Start)			
30		Dc? RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_AttachReq("GPRS"))		ATTACH REJECT - GMM cause "GPRS and non-GPRS services not allowed"
IL_SignalingConnectionRelease					
31		START t_WaitMS(5000)			Start timer 5s.
32		? TIMEOUT_Quant			UE did not send SIGNALLING CONNECTION RELEASE (just continue with release procedure)
33		AM? RLC_AM_DATA_IND	ca_RRC_SigConnRetInd(tsc_CellDedicated, tsc_RB2, cr_RRC_SigConnRetInd(tcv_CN_Domain))		Accept SIGNALLING CONNECTION RELEASE sent by the UE
34		CANCEL t_WaitMS			

4.8 GMM Attach Reject cannot handle Auto Attach (WA#BasicM4024)

Test step name ts_GMM_AttachReject_NMO_II
Reason for change Test step ts_GMM_AttachReject considers only NMO II. But it does not account for AutoAttach.
Summary of change Test step ts_GMM_AttachReject_NMO_II extend to be capable of handling AutoAttach.
Source of change new change
Label WA#BasicM4024

Test Step					
Test Step Id:	ts_GMM_AttachReject_NMO_II(p_CellId : INTEGER)				
Test Step Group Ref:	Basic_MM_GMM_Stepsr				
Objective:	Force UE to invalidate its SIM for PS parameters, i.e. to delete P-TMSI, P-TMSI signature, RA and ciphering key sequence number Note: That in case of class A mobile and Network Mode of Operation II, the UE is allowed to register to CS services (normal Location Update procedure)				
Defaults:	NAS_OtherwiseFail				
Comments:	Initial conditions: - Cell referenced by p_CellId is configured - UE is switched off Procedure: - UE is forced to perform an Attach procedure - SS rejects the attach request from the UE which forces the UE to invalidate its USIM WA#BasicM4024				
Nr	Label	Behaviour Description	Constraint Ref	VerdiL	Comments
1		+ts_MMI_UE_SwitchOn			
2		{pc_AutoAttachSwitchON}			
3		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			Establish RRC connection
4		Dc?RRC_DataInd (tcv_Start = RRC_DataInd.start)	car_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		Any Location Update request
5		+tl_AttachProcedure			
6		{NOT pc_AutoAttachSwitchON}			autoattach case not yet implemented
7		+tl_RegistrationOnCS_HOpModeA			Allow UE to Register to CS if UE is Class A mobile and Network Mode of Operation is II
8		+tl_AttachProcedure			
tl_AttachProcedure					
9		+tl_AttachReject			ATTACH REQUEST ATTACH REJECT
10		+tl_SignalingConnectionRelease			
11		+ts_RRC_ConnRel(p_CellId, cell_Dch)			Release RRC connection
12		{tcv_PS_KeySeq = '111'B}			Invalidate ciphering key sequence number
13		+ts_MMI_UE_SwitchOff			
tl_RegistrationOnCS_HOpModeA					
14		+ts_SetTmpCellInfo (p_CellId)			
15		{tcv_UE_OpMode = opModeA}			
16		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
17		Dc?RRC_DataInd (tcv_Start = RRC_DataInd.start)	car_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
18		+ ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			

4.9 Constraint c_GMM_AttachTypePS_Only (WA#BasicM4025)

Constraint step name c_GMM_AttachTypePS_Only
Reason for change UE may legally use different values of follow-on-request
Summary of change Changed value of element "for" from '0' to "?"
Source of change new change
Label WA#BasicM4025

Structured Type Constraint Declaration			
Constraint Name:	c_GMM_AttachTypePS_Only		
Group:			
Type Name:	AttachType		
Derivation Path:			
Encoding Variations:			
Comments:			
Element Name	Element Value	Type Encoding	Comments
for	?		WA#BasicM4026
type	'001B		GPRS attach

4.10 Test step DetachOnSwitchOff (WA#BasicM4027)

Test step name ts_GMM_DetachOnSwitchOff
Reason for change ts_GMM_DetachOnSwitchOff does not account for NMO_I/II use
Summary of change Improved test step to account for NMO_I/II use
Source of change new change
Label WA#BasicM4027

Test Step					
Test Step Id:	ts_GMM_DetachOnSwitchOff (p_CellId : INTEGER)				
Test Step Group Ref:	BasicM_MM_GMM_Steps				
Objective:	Turn off UE and execute GMM Detach procedure for properly detach PS or combined PS/CS services on the cell referenced by p_CellId. Additionally, if Attach Flag is set, and the UE is in Operation Mode A, then IMSI DETACH INDICATION shall be send by the UE.				
Defaults:	NAS_OtherwiseFail				
Comments:	WA#BasicM4027				
Nr	Label	Behaviour Description	Constraint Ref	VerdiL	Comments
1		[pc_SwitchOnOff]			UE can actually be switched off
2		+ts_NMI_UE_SwitchOff			
3		+ts_SetTmpCellInfo (p_CellId)			Get CellInfo to be used later
4		+ts_RRC_ConnEstX p_CellId, est_MO, detach)			
5		[!tv_CellInfoAnno = tsc_NMO_I]			
6		+t_GMM_Detach			
7		+ts_RRC_ConnRel(p_CellId, cell_Dch)			
8		[!tv_CellInfoAnno = tsc_NMO_II]			
9		+t_Detach_NMO_II			WA#BasicM4028
10		+ts_RRC_ConnRel(p_CellId, cell_Dch)			
11		[TRUE]			UE power supply must be removed
12		+ts_NMI_UE_PwrOff			
tl_Detach_NMO_II					
13		Dc ? RRC_DataInd (tv_Start = RRC_DataInd.start, tv_TmpDetachReqPDU = RRC_DataInd.msg, tv_TmpB3 = tv_TmpDetachReqPDU.detachType)	cat_PS_InitDirectTransfer (tsc_CellDe- dicated, tsc_RB3, cr_DetachReq { c_DetachType ('PS', 0?1 B), c_MobileIdPTMSI (tv_AssignedPTMSI), c_PTMSI_Signature_tv (tv_Assigned_ PTMSI_Sig) })	(F)	DETACH REQUEST - Detach type 'power switched off, GPRS de- tach' or 'power switched off, GPRS/IMS detach'
14		+ts_SS_SecurityDownloadStart (ps_domain, tv_Start)			
15		+t_IMSI_Detach_IClassA			
16		Dc ? RRC_DataInd	cat_UplinkDirectTransfer (tsc_CellDe- dicated, tsc_RB3, c_IMSI_DetachInd)	(F)	IMSI DETACH INDICATION
17		+t_GMM_Detach			

E_GMM_Detach					
18		<pre> Dc ? RRC_DataInd (tv_Start = RRC_DataInd.start, tv_TmpDetachReqPDU = RRC_DataInd.msg, tv_TmpB3 = tv_TmpDetachReqPDU.detachType type) </pre>	<pre> car_PS_IndirectTransfer (tv_CellDe dicated, tv_RB3, cr_DetachReq (c_DetachType(1'B, 0?1'B), c_MobileIDPTMSI (tv_AssignedPTMSI) , c_PTMSI_Signature_tv (tv_Assigned_ PTMSI_Sig))) </pre>	(P)	DETACH REQUEST - Detach type 'power switched off, GPRS de tach' or 'power switched off, GPRS/MSI detach'
19		+ ts_SS_SecurityDownloadStart (ps_domain, tv_Start)			
E_IMSI_Detach_HClassA					
20		{ tv_TmpCellInfo.atFlag = tv_AtdOn } AND { tv_U E_OpMode = opModeA }			
21		<pre> Dc ? RRC_DataInd </pre>	<pre> car_UplinkDirectTransfer (tv_CellDe dicated, tv_RB3, c_IMSI_DetachInd) </pre>	(P)	IMSI DETACH INDICATION
22		{ TRUE }			do nothing

Detailed Comment: See 3GPP 24.008 4.7.4

4.11 Test step ts_GMM_DetachOnSwitchOff (WA#BasicM4028)

Test step name	ts_GMM_DetachOnSwitchOff
Reason for change	The test step does not consider that detach messages in NMO_II can arrive in any order.
Summary of change	Created localtree (It_Detach_NMO_II) to consider arrival of detach msgs in any order
Source of change	new change
Label	WA#BasicM4028

Test Step					
Test Step Id:	ts_GMM_DetachOnSwitchOff (p_CellId : INTEGER)				
Test Step Group Ref:	BasicM_MM_GMM_Steps				
Objective:	Turn off UE and execute GMM Detach procedure for properly detach PS or combined PS/CS services on the cell referenced by p_CellId. Additionally, if Attach Flag is set, and the UE is in Operation Mode A, then IMSI DETACH INDICATION shall be send by the UE.				
Defaults:	NAS_OtherwiseFail				
Comments:	WA#BasicM4027				
Nr	Label	Behaviour Description	Constraint Ref	Verdi.	Comments
1		{ pc_SwitchOnOff }			UE can actually be switched off
2		+ts_NMI_UE_SwitchOff			
3		+ts_GetTmpCellInfo (p_CellId)			Get CellInfo to be used later
4		+ts_RRC_ConnEst (p_CellId, est_MO, detach)			
5		{ tv_CellInfoA.nmo = tv_NMO_II }			
6		+t_GMM_Detach			
7		+ts_RRC_ConnRel (p_CellId, cell_Dch)			
8		{ tv_CellInfoA.nmo = tv_NMO_II }			
9		+t_Detach_NMO_II			WA#BasicM4028
10		+ts_RRC_ConnRel (p_CellId, cell_Dch)			
11		{ TRUE }			UE power supply must be removed
12		+ts_NMI_UE_PwrOff			
It_Detach_NMO_II					
13		<pre> Dc ? RRC_DataInd (tv_Start = RRC_DataInd.start, tv_TmpDetachReqPDU = RRC_DataInd.msg, tv_TmpB3 = tv_TmpDetachReqPDU.detachType type) </pre>	<pre> car_PS_IndirectTransfer (tv_CellDe dicated, tv_RB3, cr_DetachReq (c_DetachType(1'B, 0?1'B), c_MobileIDPTMSI (tv_AssignedPTMSI) , c_PTMSI_Signature_tv (tv_Assigned_ PTMSI_Sig))) </pre>	(P)	DETACH REQUEST - Detach type 'power switched off, GPRS de tach' or 'power switched off, GPRS/MSI detach'
14		+ ts_SS_SecurityDownloadStart (ps_domain, tv_Start)			
15		+E_IMSI_Detach_HClassA			
16		<pre> Dc ? RRC_DataInd </pre>	<pre> car_UplinkDirectTransfer (tv_CellDe dicated, tv_RB3, c_IMSI_DetachInd) </pre>	(P)	IMSI DETACH INDICATION
17		+t_GMM_Detach			

4.12 Test step ts_RRC_ConnRel (WA#BasicM4029)

Test step name ts_RRC_ConnRel
Reason for change Added condition to check if UE is switched off & not expect RelCmpl as requested by tc_12_9_x
Summary of change Added 1s timer to check if UE is switched off or not
Source of change new change
Label WA#BasicM4029

It_Send_RRC_ConnectionRelease				
39		[p_RRC_ReStatus= cell_Dch]		
40		(tcv_N308 >= 1, tcv_K >= 1)		Maximum number of retransmissions of the RRC CONNECTION RELEASE COMPLETE message
41		UM?RLC_UM_DATA_REQ	cas_RRC_ConnRelDCCH (tsc_CellDedicated, tsc_RB1, cs_108_RRC_ConnRelDCCH(tcv_CellIndInfo.d_IntegrityCheckInfo, tcv_RRC_Ti, tcv_N308))	
42		START t_Dly(1000)		WA#BasicM4029
43	TSP1	? TIMEOUT t_Dly		(P) WA#BasicM4029
44	TSP1	UM?RLC_UM_DATA_IND	car_RRC_ConnRelCmplUM (tsc_CellDedicated, tsc_RB1, cbr_108_RRC_ConnRelCmpl (tcv_RRC_Ti))	(P)

4.13 Test step po_ConnectionAndSS_Rel (WA#BasicM4030)

Test step name po_ConnectionAndSS_Rel
Reason for change Added condition to check if UE is switched off & not expect RelCmpl as requested by tc_12_9_x
Summary of change Added 1s timer to check if UE is switched off or not
Source of change new change
Label WA#BasicM4030

10		UM?RLC_UM_DATA_REQ	cas_RRC_ConnRelDCCH (tsc_CellDedicated, tsc_RB1, cs_108_RRC_ConnRelDCCH(tcv_CellIndInfo.d_IntegrityCheckInfo, tcv_RRC_Ti, OMIT))	
11		START t_Dly(1000)		WA#BasicM4030
12	TSP1	? TIMEOUT t_Dly		(P) WA#BasicM4030
13		AM?RLC_AM_DATA_IND	car_RRC_ConnRelCmpl (tsc_CellDedicated, tsc_RB2, cbr_108_RRC_ConnRelCmpl (tcv_RRC_Ti))	(P)
14		[TRUE]		2.
15		(tcv_N308 >= 1, tcv_K >= 1)		Maximum number of retransmissions of the RRC CONNECTION RELEASE COMPLETE message
16		UM?RLC_UM_DATA_REQ	cas_RRC_ConnRelDCCH (tsc_CellDedicated, tsc_RB1, cs_108_RRC_ConnRelDCCH(tcv_CellIndInfo.d_IntegrityCheckInfo, tcv_RRC_Ti, tcv_N308))	
17		START t_Dly(1000)		WA#BasicM4030
18	TSP1	? TIMEOUT t_Dly		(P) WA#BasicM4030
19		UM?RLC_UM_DATA_IND	car_RRC_ConnRelCmplUM(tsc_CellDedicated, tsc_RB1, cbr_108_RRC_ConnRelCmpl (tcv_RRC_Ti))	(P)
20		REPEAT It_RpRcvConnRel UNTIL [tcv_K = (tcv_N308+1)]		UE sends RRC Connection Release Complete for N308 times

4.14 Incorrect mobile ID expected in constraint c_IMSI_DetachInd (WA#BasicM4035)

Constraint name c_IMSI_DetachInd
Reason for change Incorrect mobile Id expected in constraint c_IMSI_DetachInd (IMSI instead of

TMSI)

Summary of change Changed value of mobileId to "c_MobileIdTMSI_Iv"
Source of change new change
Label WA#BasicM4035

PDU Constraint Declaration			
Constraint Name:	c_IMEI_DetachInd		
Group:			
PDU Name:	IMSIDETACHINDICATION		
Derivation Path:			
Encoding Rule Name:			
Encoding Variations:			
Comments:			
Field Name	Element Value	Type Encoding	Comments
skipIndicator	0000B		
mMProtocolDiscriminator	0101B		
msgType	??000001B		
mSCIsrmtI	c_MS_CIsrmtI_Def		
mobileId	c_MobileIdTMSI_Iv		WA#BasicM4035

4.15 void (WA#BasicM4037)

This change is not required for this test case.

4.16 void (WA#BasicM4038)

This change is not required for this test case.

4.17 void (WA#BasicM4039)

This change is not required for this test case.

4.18 Incorrect "iel" in constraint c_MobileIdIMEI_Iv (WA#NAS4006)

Constraint name c_MobileIdIMEI_Iv
Reason for change Incorrect iel
Summary of change Changed from '09'O to '08'O
Source of change new change
Label WA#NAS4006

Structured Type Constraint Declaration			
Constraint Name:	c_MobileIdIMEI_Iv		
Group:			
Type Name:	MS_Identity_Iv		
Derivation Path:			
Encoding Variations:			
Comments:	Default IMEI		
Element Name	Element Value	Type Encoding	Comments
iel	08'O		IMEI consists of 15 digits WA#NAS4006
iDigit1	o_FirstDigit(ps_IMEI_Def)		
oddEvenInd	1B		odd
typeOfId	010B		IMEI
otherDigits	o_OtherDigits(ps_IMEI_Def)		

4.19 Indexing error in test step ts_SysInfoModifyMM (WA#NAS4007)

Test step name ts_SysInfoModifyMM
Reason for change CN domain info not being changed during execution because of an indexing error in the TTCN code
Summary of change Modified CN domain enumeration to 1 & 0, not 2 & 1. cn_DomainSysInfoList indexes were changed accordingly.
Source of change new change
Label WA#NAS4007

Test Step					
Test Step Id:	ts_SysInfoModifyMM (p_CellId: INTEGER; p_MCC, p_MNC: HEXSTRING; p_LAC: OCTETSTRING; p_ATT: INTEGER; p_T3212: OCTETSTRING; p_RAC : OCTETSTRING; p_NMO : OCTETSTRING)				
Test Step Group Ref:	BasicM_SysInfoHandling_StepsDefault				
Objective:	To modify the values of MCC, MNC, ATT, LAC, T3212, RAC, NMO in relevant SIB's and then broadcast the modified SIB's.				
Defaults:	InitOtherwiseFail				
Comments:	5 seconds shall be reserved for UE receiving and decoding the modified system information blocks after calling this test Step. the order of HEX digits in p_MCC shall be MCC1, MCC2, MCC3. The order of HEX digits in p_MNC shall be MNC1, MNC2 or MNC1, MNC2, MNC3. The range of p_ATT is 0 or 1.				
Nr	Label	Behaviour Description	Constraint Ref	Verif..	Comments
1		[px_RAT = ftd]			
2		(tcv_MIB.plmn_Type.gsm_MAP.plmn_Identity.mcc = o_HexToDigitsMCC(p_MCC), tcv_MIB.plmn_Type.gsm_MAP.plmn_Identity.mnc = o_HexToDigitsMNC(p_MNC))			
3		(tcv_SIB1.cn_CommonOSM_MAP_NAS_SysInfo := p_LAC, tcv_SIB1.cn_DomainSysInfoList[1].cn_Type.gsm_MAP := o_OctetstringConcat(p_T3212, o_IntToOct(p_ATT, 1)), tcv_SIB1.cn_DomainSysInfoList[0].cn_Type.gsm_MAP := o_OctetstringConcat(p_RAC, p_NMO))			WA#NAS4007 WA#NAS4031
4		+ts_SendSIB1 (tcv_SIB1, p_CellId, tsc_Now)			
5		+ts_SendMIB(tcv_MIB, p_CellId, tsc_Now)			
6		+ts_SendPage1_ModifySI(p_CellId, tcv_MIB.mib_ValueTag)			
7		+ts_NAS_Delay(tsc_TWaltSysInfo)			WA#NAS4032
8	ERR1	[px_RAT = ftd]		I	
9	ERR2	[TRUE]		I	

4.20 Test step call ts_GMM_AttachReject_NMO_I (WA#NAS4018)

Test step name tc_12_7, test body
Reason for change ts_GMM_AttachReject considers only NMO II. But it does not account for AutoAttach.
Summary of change Created test step ts_GMM_AttachReject_NMO_II capable of handling AutoAttach and added call to this test step in test body, line 5
Source of change new change
Label WA#NAS4018

Test Case					
Test Case Id:	tc_12_7				
Test Group Reference:	GMMIdentification_proceduresf				
Purpose:	To verify that the UE sends the information (MSI, MEI, MEISV) as requested by the network.				
Configuration:					
Defaults:	NAS_OtherwiseFail				
Comments:	Initial conditions - SS : One cell operating in network operation mode II - UE : The UE has a valid IMSI (and no valid P-TMSI in its USIM)				
Nr	Label	Behaviour Description	Constraint Ref	Verif.	Comments
1		START Guard(300)			
2		+ts_InitVariables			
3		(tsc_CellInfoAnmo = tsc_NMO_II)			Test case specific cell settings
4		+ts_GMM_Config_CellA			Configure cell A and cell B
5		+ts_GMM_AttachReject_NMO_II (tsc_CellA)			Initiate P-TMSI and other USIM parameter WA#NAS4018
6		(tsc_CellInfoA.attFlag = tsc_ATTOff, tsc_CellInfoA.t3212 = '00'0)			WA#NAS4019
7		+ts_SystemInfoModifyMMI tsc_CellA, tsc_CellInfoAmcc, tsc_CellInfoAmns, tsc_CellInfoAfac, tsc_CellInfoAattFlag, tsc_CellInfoA.t3212, tsc_CellInfoAfac, tsc_CellInfoAnmo)			Modify GIB1 to set ATT flag to 0 (disable CS registration at turn on, CR T1-030101, Jan-03)
8		[pc_SupportOpModeC]			If operation mode C supported
9		+ts_MMI_SetOpModeC			Set UE in operation mode C
10		+R_TestBody			
11		+pc_ConnectionAndSS_Rel			
12		[pc_SupportOpModeA]			
13		+ts_MMI_SetOpModeA			Set UE in operation mode A
14		+R_TestBody			Step 14. Repeat test for UE mode of operation A
15		+pc_ConnectionAndSS_Rel			
16		[[NOT pc_SupportOpModeC] AND pc_SupportOpModeA]			If operation mode C is not supported but operation mode A is supported
17		+ts_MMI_SetOpModeA			Set UE in operation mode A
18		+R_TestBody			
19		+pc_ConnectionAndSS_Rel			
20		[TRUE]			

4.21 Incorrect initialisation of ATT flag and timer T3212 (WA#NAS4019)

Test step name	tc_12_7, test body
Reason for change	According to the prose ATT flag is to be set to OFF and T3212 is to be set to '00'0
Summary of change	Replaced '0' with tsc_AttOff & assigned t3212 = '00'0 in line 6 of test body
Source of change	new change
Label	WA#NAS4019

see TTCN code snippet for WA#NAS4018

4.22 CS registration not considered in test body (WA#NAS4020)

Test step name	tc_12_7, test body
Reason for change	As the GMM ATTACH REQUEST is rejected by the network, after switch off and switch on the UE tries to register on the CS domain first. ts_MMI_UE_SwitchOnTriggerGMM_Attach does not consider CS registration.
Summary of change	Test step ts_GMM_TriggerPSRegistrationAtSwitchOn_NMO_II substitutes test step ts_MMI_UE_SwitchOnTriggerGMM_Attach & ts_RRC_ConnEst.
Source of change	new change
Label	WA#NAS4020

It_TestBody			
21	(cv_TestBody = TRUE)		(P)
22	+ts_GMM_TriggerPSRegistrationAtSwitchOn_NMO_II (ts_CelIA)		WA#NAS4020
23	+It_Steps_3To5a		
24	+It_RequestIMSI_Steps_6To7		Request IMSI
25	+It_RequestIMEI_Steps_8To9		Request IMEI
26	+It_RequestIMEISV_Steps_10To11		Request IMEISV
27	+It_Steps_11aTo11c		
28	+ts_GMM_DetachOnSwitchOff (ts_CelIA)		Steps 12 and 13

4.23 Auth. Response without Extension is not accounted for (WA#NAS4021)

Test step name tc_12_7, test body
Reason for change Authentication Response without Extension is not accounted for.
Summary of change Added messages for complete handling of the Authentication response possibilities in line 35 in local test step It_Steps_3To5a
Source of change new change
Label WA#NAS4021

It_Steps_3To5a			
29	Dc ? RRC_DataInd (cv_Start = RRC_DataInd.start)	car_PS_InitDirectTransfer(ts_CelDedicated, ts_RB3, tt_AttachReq (c_GMM_AttachTypePS_Only, c_MobiledNSI_M, ?, -, kv_PS_KeySeq))	Step 3. ATTACH REQUEST - Attach type is 'PS attach' - MobileId is IMSI
30	+ ts_SS_SecurityDownloadStart (ps_domain, kv_Start)		
31	+ts_GMM_AuthenticationInit		Compute authentication parameters including kv_PS_AuthCK and kv_PS_AuthNK
32	Dc ! RRC_DataReq	ca_PS_DataReq(ts_CelDedicated, ts_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(kv_AuthRAND), c_GMM_KeySeq_In(kv_PS_KeySeq), c_GMM_AuthAUTN(kv_AuthAUTN)))	AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
33	Dc ? RRC_DataInd (kv_TmpAuthAndCiphRespPDU = RRC_DataInd.msg, kv_AuthResp = kv_TmpAuthAndCiphRespPDU.authResp.value, kv_AuthRespExt = kv_TmpAuthAndCiphRespPDU.authRespExt)	car_PS_UplinkDirectTransfer(ts_CelDedicated, ts_RB3, ct_AuthAndCiphResp (c_AuthRespAny_bv, c_AuthRespExtAny))	AUTHENTICATION AND CIPHERING RESPONSE including Authentication Response parameters (RES)
34	+ ts_RRC_Security(ts_CelIA, kv_PS_AuthCK, kv_PS_AuthNK, kv_AuthKcGSM, TRUE, ps_domain)		Start ciphering and integrity protection
35	Dc ? RRC_DataInd (kv_TmpAuthAndCiphRespPDU = RRC_DataInd.msg, kv_AuthResp = kv_TmpAuthAndCiphRespPDU.authResp.value, kv_AuthRespExt = kv_TmpAuthAndCiphRespPDU.authRespExt)	car_PS_UplinkDirectTransfer (ts_CelDedicated, ts_RB3, ct_AuthAndCiphRespNoExt (c_AuthRespAny_bv))	AUTHENTICATION AND CIPHERING RESPONSE without Authentication Response Extension WA#NAS4021
36	+ ts_RRC_Security(ts_CelIA, kv_PS_AuthCK, kv_PS_AuthNK, kv_AuthKcGSM, TRUE, ps_domain)		Start ciphering and integrity protection

4.24 Test step ts_GMM_TriggerPSRegistrationAtSwitchOn_NMO_II (WA#NAS4030)

Test step name ts_GMM_TriggerPSRegistrationAtSwitchOn_NMO_II
Reason for change As the GMM ATTACH REQUEST is rejected by the network, after switch off and switch on the UE tries to register on the CS domain first. ts_MMI_UE_SwitchOnTriggerGMM_Attach does not consider CS registration.
Summary of change Created ts_GMM_TriggerPSRegistrationAtSwitchOn_NMO_II

Source of change new change
 Label WA#NAS4030

Test Step					
Test Step Id: ts_GMM_TriggerPSRegistrationAtSwitchOn_NMO_1 (p_CellId : INTEGER)					
Test Step Group Ref: GMM_InternalSteps/					
Objective: To trigger PS registration after switch ON in case of NMO_1					
Defaults: NAS_OtherwiseFail					
Comments: First switch on the UE. After switch on in NMO_1 the UE basically will perform Parallel CS/PS registration procedures if [pc_AutomaticAttachSwitchON = TRUE], else the UE will perform CS registration (because ATT flag is set). In the last case, to trigger PS registration via an AT command for GPRS Attach. WA#NAS4030					
Nr	Label	Behaviour Description	Constraint Ref	Verdi...	Comments
1		+ts_MM_UE_SwitchOn			
2		+ts_SetTmpCellInfo (p_CellId)			
3		[pc_AutomaticAttachSwitchON]			autoattach case not yet implemented
4		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			Establish RRC connection
5		Dc?RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_IntDirectTransfer (tsc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		Any Location Update request
6		(tcv_GMM_AttachExpect := TRUE, tcv_GMM_AttachRec := FALSE)			Set flags in order to enable default handler to store ATTACH REQUEST PDU in case it is sent during Location Update procedure
7		+ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			
8		+ts_MM_Authentication(p_CellId)			Authentication
9		+ts_RRC_Security (p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, cs_domain)			
10		Dc?RRC_DataReq (tcv_MM_CmplExpect := TRUE, tcv_MM_CmplRec := FALSE)	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdAcqTMSI(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac))		Location Updating Accept
11		[NOT pc_AutomaticAttachSwitchON]			
12		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
13		Dc?RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_IntDirectTransfer(tsc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
14		+ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			
15		+ts_MM_Authentication(p_CellId)			AUTHENTICATION REQUEST AUTHENTICATION RESPONSE
16		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, FALSE, cs_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
17		Dc?RRC_DataReq	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdAcqTMSI(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac))		LOCATION UPDATING ACCEPT
18		Dc?RRC_DataInd	car_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, c_TMSI_ReallocCmp)		TMSI REALLOCATION COMPLETE
19		+ts_RRC_ConnRel (p_CellId, cell_Dch)			
20		+ts_AT_TriggerGMM_Attach			
21		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
Detailed Comment:					

4.25 Test step ts_SysInfoModifyMM (WA#NAS4031)

Test step name ts_SysInfoModifyMM
Reason for change Removed MCC & MNC from concatenation as this is not included in the default SIB1 configurations. Also not specified in the spec
Summary of change Replaced o_ConvtAndConcatStr(p_MCC, p_MNC, p_LAC, OMIT) with p_LAC
Source of change new change
Label WA#NAS4031

Test Step					
Test Step Id:	ts_SysInfoModifyMM (p_CellId : INTEGER; p_MCC : HEXSTRING; p_MNC : HEXSTRING; p_LAC : OCTETSTRING; p_ATT : INTEGER; p_T3212 : OCTETSTRING; p_RAC : OCTETSTRING; p_NMO : OCTETSTRING)				
Test Step Group Ref:	BasicM_SysInfoHandling_StepsDefault				
Objective:	To modify the values of MCC, MNC, ATT, LAC, T3212, RAC, NMO in relevant SIB's and then broadcast the modified SIB's.				
Defaults:	InitOtherwiseFail				
Comments:	5 seconds shall be reserved for UE receiving and decoding the modified system information blocks after calling this test Step. the order of HEX digits in p_MCC shall be MCC1, MCC2, MCC3. The order of HEX digits in p_MNC shall be MNC1, MNC2 or MNC1, MNC2, MNC3. The range of p_ATT is 0 or 1.				
Nr	Label	Behaviour Description	Constraint Ref	Verdi...	Comments
1		[px_RAT = fdd]			
2		(tcv_MIB.plmn_Type.gsm_MAP.plmn_Identity.mcc = o_HexToDigitsMCC(p_MCC), tcv_MIB.plmn_Type.gsm_MAP.plmn_Identity.mnc = o_HexToDigitsMNC(p_MNC))			
3		(tcv_SIB1.cn_CommonGSM_MAP_NAS_SysInfo := p_LAC, tcv_SIB1.cn_DomainSysInfoList [1].cn_Type.gsm_MAP := o-OctetstringConcat(p_T3212, o_InIToOct(p_ATT, 1)), tcv_SIB1.cn_DomainSysInfoList [0].cn_Type.gsm_MAP := o-OctetstringConcat(p_RAC, p_NMO))			WA#NAS4007 WA#NAS4031
4		+ts_SendSIB1 (tcv_SIB1, p_CellId, tsc_Now)			
5		+ts_SendMIB(tcv_MIB, p_CellId, tsc_Now)			
6		+ts_SendPage1_ModifySI(p_CellId, tcv_MIB.mib_ValueTag)			
7		+ts_NAS_Delay(tsc_TWaitSysInfo)			WA#NAS4032
8	ERR1	[px_RAT = fdd]		I	
9	ERR2	[TRUE]		I	

4.26 Test step ts_SysInfoModifyMM (WA#NAS4032)

Test step name ts_SysInfoModifyMM
Reason for change Allow some time for SIB's to be broadcasted to make sure that UE receives new SIBs
Summary of change Added ts_NAS_Delay (5sec) in line 7
Source of change new change
Label WA#NAS4032

see TTCN code snippet for WA#NAS4031

5 Branches executed in test case 12.7

The test case implementation executed the PS branch, Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE 6650

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 12_7_1-LogsIndex.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file 12_7_1-pics-pixit.doc**
A document containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030581**
This archive comprises HTML execution log files, PICS/PIXIT file and the TTCN MP file
- [2] **T1-030419**
CR for the introduction of test case 11.3.1 into NASv310 (Anritsu)

CHANGE REQUEST

⌘ **34.123-3 CR 058** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.2.1.9		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 06/05/2003
Category:	⌘ F	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.2.1.9 to RRCv310		
Summary of change:	⌘ - 0 table(s) deleted from RRCv310 - 8 table(s) modified in RRCv310 - 13 table(s) added from RRCv143 of which - 9 table(s) have been modified - 6 new table(s) added - cs_QoS_InteractiveMT_CellFACH_Iv has been renamed as cs_QoS_InteractiveOrBackgroundMT_CellFACH_Iv - cr_QoS_InteractiveMO_Iv has been renamed as cr_QoS_InteractiveOrBackgroundMT_Iv For more details see below.		
Consequences if not approved:	⌘ Test case 8.2.1.9 will not be added		

Clauses affected:	⌘ N/A									
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘
Y	N									
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
Other comments:	⌘									

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title	Introducing test case 8.2.1.9 required to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce TC 8.2.1.9 to RRCv310. With these changes applied the test case can be demonstrated to run on a single UE implementation. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 (V5.3.0) clause 8.2.1.9.

2 Changes required for test-case 8.2.1.9

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change

The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section 1.1.

Summary of Change

Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 cr_ActPDP_ContextReqFACH_MO

Reason for change

To provide a means for specifying the expected Quality of Service (QoS) in an Activate PDP Context Request constraint.

Summary of Change

Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqFACH_MO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			

	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_lv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqMO(p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

2.2.3 cr_AttachReq

Reason for change

The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST message.

Summary of Change

Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.4 cr_QoS_InteractiveMO_Iv

Reason for change:

1. There are a number of discrepancies between quality of service described in the receive constraint and the quality of service specified in the AT commands sent to the upper tester.
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. The traffic handling priority depends on the traffic class and traffic handling priority used in the AT command sent to the upper tester.
4. Some of the comments are wrong.

Summary of Change

1. Update cr_QoS_InteractiveMO_Iv to reflect the quality of service specified in the AT commands sent to the upper tester.
2. Allow dlyClass to be set by parameter.
3. Allow trafficHandPro to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	Acknowledge Mode of RLC
	peakThroughput	'0111'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive
	deliveryOrder	'01'B	Without delivery order
	deliveryErrorSDU	'010'B	Erroneour SDU are not delivered
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'40'O	64 kbps
	maxBitRateDnlink	'40'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'40'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'40'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_Iv (p_trafficClass : B3 ; p_dlyClass : B3 ; p_trafficHandPro : B2)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The expected QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the SS by the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	Interactive=traffic class, Background=4
	reliabilityClass	'100'B	Unacknowledged GTP, LLC and RLC, protected data
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed precedence
	spare2	'000'B	
	meanThroughput	'11111'B	best effort

trafficClass	p_trafficClass		Interactive='011'B, Background='100'B
deliveryOrder	'01'B		With delivery order
deliveryErrorSDU	'010'B		Erroneous SDUs are delivered
maxSDUSize	'20'O		320 bits
maxBitRateUplink	'40'O		64 kbps
maxBitRateDnlink	'40'O		64 kbps
residualBER	'1001'B		$6 \times 10E^{-8}$
sduErrRatio	'0011'B		$1 \times 10 E^{-3}$
transDly	?		The transfer delay is ignored if interactive or background class.
trafficHandpro	p_trafficHandPro		Interactive=value set in AT command Background=? (value is ignored)
bitRateUplink	?		The guaranteed bit is ignored if interactive or background class
bitRateDnlink	?		The guaranteed bit is ignored if interactive or background class

2.2.5 cs_QoS_InteractiveMT_CellFACH_Iv

Reason for change

1. There are a number of discrepancies between quality of service described in this constraint and the quality of service requested by the UE.
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. Some of the comments are wrong.

Summary of Change

1. Update the cs_QoS_InteractiveMT_CellFACH_Iv constraint to send the a quality of service that matches the request .
2. Allow dlyClass to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw		
	Element Name	Element Value	Comments
	length	'0D'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_CellFACH_Iv (p_trafficClass : B3 ; p_dlyClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The negotiated QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the UE by the OS		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	Interactive=traffic class, Background=4
	reliabilityClass	'100'B	Unacknowledged GTP, LLC and RLC, protected data
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed precedence
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	Interactive='011'B, background='100'B
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	320 bits

	maxBitRateUplink	'40'0		64 kbps
	maxBitRateDnlink	'40'0		64 kbps
	residualBER	'1001'B		6x 10E (-8)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	'111111'B		The transfer delay is ignored if interactive or background class.
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'00'0		The guaranteed bit is ignored if interactive or background class.
	bitRateDnlink	'00'0		The guaranteed bit is ignored if interactive or background class.

2.2.6 ts_CRLC_UL_CipherCfg_RAB

Reason for change

The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change

Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[px_CipheringOnOff]			
2		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		[NOT (px_CipheringOnOff)]			

2.2.7 ts_GMM_Authentication

Reason for change

The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint `c_AuthRspExtAny_tv`. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called `c_AuthCiphRspExtAny_tv`, detailed in section 1.1, has been added with the correct tag value and needs to be referenced instead.

Summary of Change

Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(			Verify that the

	tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))		received Authentication Response paramters match expected response.
--	---	--	---

2.2.8 ts_GMM_IdleUpdated

Reason for change

The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change

Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate(p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+It_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.3 Tables added to RRCv310

2.3.1 Tables added from RRCv143

Type	Name
Test Suite Constant Declaration	tsc_New_CRNTI
ASN.1 PDU Constraint Declarations	cbs_108_RB_SetUpDCH_ToFACH cr_UTRAN_MobilityInfoCnf
Test Step Dynamic Behaviour	pr_GotoState6_5_Or6_7_MO

2.3.2 New tables added

2.3.2.1 c_AuthCiphRspExtAny

Reason for change

The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem.

Summary of Change

Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny		
Structured Type	AuthRspExt		
Derivation Path			
Encoding Variation			
Comments			
	Element Name	Element Value	Element Encoding
	iei	'00101001'B	
	iel	?	
	rES	?	

2.3.2.2 px_NMO

Reason for change

Provision of a means of selecting the Network Mode of Operation from the PICS/Pixit file. Use of this new parameter declaration is detailed in section 1.1.

Summary of Change

Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.3.2.3 tcv_DlyClass

Reason for change

The value of delay class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of delay class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_DlyClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.4 tcv_TrafficClass

Reason for change

The value of traffic class (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic class is used in several locations a test step has been written (see below) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficClass
Type	B3
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.5 tcv_TrafficHandPro

Reason for change

The value of traffic handling priority (used in QoS IE's) depends on a couple of PICS/PIXIT values. Because the value of traffic handling priority is used in several locations a test step has been written (see 1.1) to determine the appropriate value and store it in this test case variable.

Summary of Change

Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_TrafficHandlingPro
Type	B2
Value	
Comments	Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.2.6 ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro

Reason for change

To provide a means of setting the new test case variables tcv_DlyClass, tcv_TrafficClass and tcv_TrafficHandPro.

Summary of Change

Table added to suite.

Add test step:

Test Step Name		ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro			
Group		BasicM_General_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B, tcv_TrafficHandPro := '??'B)			
5		[TRUE]		I	

2.4 Modifications to tables added from RRCv143

2.4.1 tc_8_2_1_9

Reason for change(s)

1. To force a cell update, the C-RNTI should be omitted from the RB setup request.
2. Frequency information IE is not required during the RB setup request.
3. The UE already knows its U-RNTI, there is no need to resend it in the Cell Update Confirmation.

Summary of Change(s)

1. C-RNTI omitted from RB Setup.
2. Frequency information omitted from RB Setup.
3. U-RNTI omitted from Cell Update Confirmation.

Change test case from:

Test Case Name		tc_8_2_1_9			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	...	.....	.....	....	.....
		It_LocalTest			
9	TBS	(tcv_TestBody:=TRUE)			
10		+ts_SetUpRAB_PS_DCH_ToFACH (tsc_CellA , cbs_108_RB_SetUpDCH_ToFACH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_CellInfoA.frequencyInfo, tcv_RAB_Id, tcv_CellInfoA.priScrmCode, tcv_CellInfoA.cRNTI))			
11		+ts_RRC_ReceiveCellUpdate (tsc_CellA, cbr_108_CellUpdate (tcv_CellInfoA.uRNTI , cellReselection) ,15000)			
12		(tcv_CellInfoA.cellConfig := cell_FACH_PS)			
13		UM! RLC_UM_DATA_REQ	cas_RRC_CellUpdate Cnf (tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdate CnfDCCH(tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_CellInfoA.uRNTI, tsc_New_CRNTI, cell_FACH, OMIT, OMIT, OMIT))		

To:

Test Case Name		tc_8_2_1_9			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	...	.....	.....	....	.....
		It_LocalTest			
9	TBS	(tcv_TestBody:=TRUE)			
10		+ts_SetUpRAB_PS_DCH_ToFACH (tsc_CellA , cbs_108_RB_SetUpDCH_ToFACH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, OMIT,))			

		<pre> tcv_RAB_Id, tcv_CellInfoA.priScrmCode, OMIT)) </pre>			
11		<pre> +ts_RRC_ReceiveCellUpdate (tsc_CellA, cbr_108_CellUpdate (tcv_CellInfoA.uRNTI , cellReselection) ,15000) </pre>			
12		<pre> (tcv_CellInfoA.cellConfig := cell_FACH_PS) </pre>			
13		<pre> UM! RLC_UM_DATA_REQ </pre>	<pre> cas_RRC_CellUpdate Cnf (tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdate CnfDCCH (tcv_CellIndInfo.dl_Inte grityCheckInfo, tcv_RRC_Ti, OMIT, tsc_New_CRNTI, cell_FACH, OMIT, OMIT, OMIT)) </pre>		

2.4.2 cbs_108_CellUpdateCnfDCCHReason for change

URA identity is only required for URA_PCH.

Summary of Change

URA identity is omitted.

Change ASN.1 PDU Type Constraint Declaration from:

Constraint Name	cbs_108_CellUpdateCnfDCCH (...)
ASP Type	DL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	
<pre>{ ... cn_InformationInfo OMIT, ura_Identity 0000000000000001B, rb_InformationReleaseList OMIT, ... }</pre>	

To:

Constraint Name	cbs_108_CellUpdateCnfDCCH (...)
ASP Type	DL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	
<pre>{ ... cn_InformationInfo OMIT, ura_Identity OMIT, rb_InformationReleaseList OMIT, ... }</pre>	

2.4.3 c_RAB_InfoListDCH_OrFACH_ToFACH_ToDCH_PS

Reason for change

The RLC size list for the RACH is incorrect; it should indicate which of the available sizes should be used.

Summary of Change

Explicitly define which RLC size should be used.

Change ASN.1 Type Constraint Declaration from:

Constraint Name	c_RAB_InfoListDCH_OrFACH_ToFACH_ToDCH_PS (p_RAB_Id: BITSTRING ; p_Reesttimer: Re_EstablishmentTimer)
ASP Type	RAB_InformationSetupList
Derivation Path	
Encoding Variation	
Comments	
<pre>{ ... rb_MappingInfo {{ ul_LogicalChannelMappings oneLogicalChannel : { ul_TransportChannelType dch : tsc_UL_DCH1, logicalChannelIdentity OMIT, rlc_SizeList configured :NULL, mac_LogicalChannelPriority 8 }, dl_LogicalChannelMappingList {{ dl_TransportChannelType dch : tsc_DL_DCH1, logicalChannelIdentity OMIT }} }, { ul_LogicalChannelMappings oneLogicalChannel:{ ul_TransportChannelType rach: NULL, logicalChannelIdentity 7, rlc_SizeList configured :NULL, mac_LogicalChannelPriority 8 }, dl_LogicalChannelMappingList {{ dl_TransportChannelType fach: NULL, logicalChannelIdentity OMIT }} }} }</pre>	

To:

Constraint Name	c_RAB_InfoListDCH_OrFACH_ToFACH_ToDCH_PS (p_RAB_Id: BITSTRING ; p_Reesttimer: Re_EstablishmentTimer)
ASP Type	RAB_InformationSetupList
Derivation Path	
Encoding Variation	

Comments	
	<pre>{ ... rb_MappingInfo {{ ul_LogicalChannelMappings oneLogicalChannel : { ul_TransportChannelType dch : tsc_UL_DCH1, logicalChannelIdentity OMIT, rlc_SizeList configured :NULL, mac_LogicalChannelPriority 8 }, dl_LogicalChannelMappingList {{ dl_TransportChannelType dch : tsc_DL_DCH1, logicalChannelIdentity OMIT }} }, { ul_LogicalChannelMappings oneLogicalChannel:{ ul_TransportChannelType rach: NULL, logicalChannelIdentity 7, rlc_SizeList explicitList {{ rlc_SizeIndex 2 }}, mac_LogicalChannelPriority 8 }, dl_LogicalChannelMappingList {{ dl_TransportChannelType fach: NULL, logicalChannelIdentity OMIT }} }} }</pre>

2.4.4 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change

The delay class, traffic class and traffic handling priority IEs in the received Activate PDP context request depend on the AT command issued to the upper tester, which in turn is controlled by various test suite parameters.

Summary of Change

1. Call a test step to determine the appropriate delay class, traffic class and traffic handling priority.
2. Pass these values into the modified quality of service receive constraint.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
4		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TL_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO)		
5		+ ts_SetTI_Rsp (tcv_TL_R)			
				

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			
3		+ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro			
4		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
5		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TL_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_ Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO(cr_QoS_InteractiveOrBackgroundMO Iv(tcv_TrafficClass, tcv_DlyClass, tcv_TrafficHandPro))		
6		+ ts_SetTI_Rsp (tcv_TL_R)			
				

2.4.5 ts_SetUpRAB_PS_DCH_ToFACH

Reason for change

RB20 and RB-3 are never configured. Common steps in the postamble expect them to be.

Summary of Change

In addition to the existing SS reconfiguration during the transition from cell DCH to cell FACH, configure RB20 and RB-3 as well.

Change test step from:

Test Step Name		ts_SetUpRAB_PS_DCH_ToFACH (p_CellId: INTEGER; p_SetUp :DL_DCCH_Message)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		+ts_SS_2_FACH_1_RACH_Modify(p_CellId , c_TrLogMappingRACH_DTCH, c_TrLogMappingPCH_FACH_PS)			

To:

Test Step Name		ts_SetUpRAB_PS_DCH_ToFACH (p_CellId: INTEGER; p_SetUp :DL_DCCH_Message)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
3		+ts_SS_2_FACH_1_RACH_Modify(p_CellId , c_TrLogMappingRACH_DTCH, c_TrLogMappingPCH_FACH_PS)			
4		+ts_SS_RB20_AM_PS_Cfg (320)			
5		+ts_SS_RB_BCCH_FACH_Cfg(p_CellId)			

2.4.6 ts_ReceiveActivatePDP_Accept_FACH

Reason for change

1. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
2. To accommodate the modified interactive QoS constraint.

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcvt_T1_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_Iv('011'B), cs_PktDataProtoAddrMT (tcvt_LenBit, px_PDP_IP_AddrInfoFACH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcvt_T1_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_Iv('100'B), cs_PktDataProtoAddrMT (tcvt_LenBit, px_PDP_IP_AddrInfoFACH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcvt_T1_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_Iv('011'B), cs_PktDataProtoAddrMT (tcvt_LenBit, px_PDP_IP_AddrInfoFACH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcvt_T1_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_Iv('100'B), cs_PktDataProtoAddrMT (tcvt_LenBit, px_PDP_IP_AddrInfoFACH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3,		

			cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFA CH_lv('011'B, '011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFA CH_lv('100'B, '100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFA CH_lv('011'B, '011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFA CH_lv('100'B, '100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.4.7 ts_AT_OrgPS_Call

Reason for change:

The are a number of problems with the AT commands issued by this test step:-

1. The activate PDP context command (CGACT) uses a different context ID to that of the other AT commands used.
2. The minimum quality of service command (CGEQMIN) used has too many fields (TS 27.007).
3. The minimum quality of service command (CGEQMIN) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
4. The minimum quality of service command (CGEQMIN) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,...,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,...,<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,,1,320,""1E3"",""6E8""1,,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,,1,320,""1E3"",""6E8""1,,<CR>"))			set up the Minimum QoS same as Required QoS
20	ERR1	[TRUE]		I	Parameter error

2.4.8 ts_AT_SetQoS

Reason for change

There are a number of problems with the AT commands issued by this test step:-

1. The quality of service command (CGEQREQ) used has too many fields (TS 27.007).
2. The quality of service command (CGEQREQ) used specifies guaranteed bit rates. These are not valid for either interactive and background classes (TS 23.107).
3. The quality of service command (CGEQREQ) should place the SDU error ratio and the Residual bit error ratio parameters between quotation marks.

Summary of Change

Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64, 1,320,""1E3"" , ""6E8"" ,1,,3<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, , , 1, 320, ""1E3"" , ""6E8"" ,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.4.9 ts_SS_2_FACH_1_RACH_Modify

Reason for change

The C-RNTI is not required here.

Summary of Change

The C-RNTI has been omitted.

Change test step from:

Test Step Name		ts_SS_2_FACH_1_RACH_Modify			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
16		+ts_SS_StopRL (p_CellId, tsc_DL_DPCH1)			
17		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfo ActNow (p_CellId, tsc_S_CCPCH1, c_UE_Info(tcv_TmpCellI nfo.uRNTI, tcv_TmpCellInfo.cRNTI), c_TrChInfoPCH_FACH_ PS, p_DL_TrLogMapping)		
18		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf(p_Ce llId, tsc_S_CCPCH1)		

To:

Test Step Name		ts_SS_2_FACH_1_RACH_Modify			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
16		+ts_SS_StopRL (p_CellId, tsc_DL_DPCH1)			
17		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfo ActNow (p_CellId, tsc_S_CCPCH1, c_UE_Info(tcv_TmpCellI nfo.uRNTI, Omit), c_TrChInfoPCH_FACH_ PS, p_DL_TrLogMapping)		
18		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf(p_Ce llId, tsc_S_CCPCH1)		

CHANGE REQUEST

⌘ **34.123-3 CR 059** ⌘ rev - ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 8.2.3.8		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 14/05/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 8.2.3.8 to RRCv310		
Summary of change:	⌘ - 0 table deleted from RRCv310, - 16 tables modified in RRCv310, - 5 tables added from RRCv143, - 9 new tables created. - cs_QoS_InteractiveMT_CellFACH_Iv has been renamed as cs_QoS_InteractiveOrBackgroundMT_CellFACH_Iv - cr_QoS_InteractiveMO_Iv has been renamed as cr_QoS_InteractiveOrBackgroundMT_Iv For more details see below.		
Consequences if not approved:	⌘ Test case 8.2.3.8 will not be added		

Clauses affected:	⌘ N/A								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;">X</td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;">X</td> <td style="width: 20px;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X	X	X	X	⌘	34.123-1
Y	N								
X	X								
X	X								
Other comments:	⌘								

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title	The introduction of test case 8.2.3.8 into RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed introduce test case 8.2.3.8 to RRCv310 by using RRCv143 as the primary source of the new tables and applying only essential fixes to the TTCN.

2 Changes required for test-case 8.2.3.8

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 c_CellInfoDef

Reason for change: The existing constraint c_CellInfoDef forces all cells into Network Mode of Operation I. The modification makes this selectable using the newly introduced Pixit parameter px_NMO detailed in section 2.3.2.2.

Summary of Change: Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 c_TrChInfoUL_336_148Reason for change

Transport channel ordering problem. Same problem as described in the approved CR T1S030234 for tc_8_2_1_1.

Summary of Change

Re-order the transport channel list as specified.

Change ASN.1 Type Constraint Declaration from:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrChInfo
Derivation Path	
Encoding Variation	
Comments	
<pre> { ulconnectedTrCHList { { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }, { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS } </pre>	

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrChInfo
Derivation Path	
Encoding Variation	
Comments	
<pre> { ulconnectedTrCHList { { trchid tsc_UL_DCH1, transportChannellInfo c_DCH_336_TFS }, { trchid tsc_UL_DCH5, transportChannellInfo c_DCH_148_TFS_UL }}, ulTFCS c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS } </pre>	

2.2.3 cr_ActPDP_ContextReqFACH_MO

Reason for change: To provide a means for selecting the requested Quality of Service. Use of this revised constraint is detailed in section 2.2.9 .

Summary of Change: Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name	cr_ActPDP_ContextReqFACH_MO			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	cr_QoS_InteractiveMO_CellFACH_lv (?)		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

To:

Constraint Name	cr_ActPDP_ContextReqFACH_MO(p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoFACH)		
			

2.2.4 cr_AttachReq

Reason for change: The information element “oldPTMSI_Signature” is optional in an ATTACH REQUEST nas message. The constraint should reflect this fact.

Summary of Change: Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.5 ts_ReceiveActivatePDP_Accept_DCH

Reason for change

1. The Activate PDP Context Request message from the UE has the PDP Address IE present. Consequently, the Activate PDP Context Accept message returned by the SS must have that IE omitted.
2. To accommodate the modified interactive QoS constraint (refer 2.3.2.7).

Summary of Change

Modify the constraint to omit the PDP Address.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_DCH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
8	ERR1	[TRUE]		I	Parameter error
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('011'B, '011'B), OMIT))		
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_lv('100'B, '100'B), OMIT))		
8	ERR1	[TRUE]		I	Parameter error
				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('011'B, '011'B), OMIT))		
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcpMT(tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_lv('100'B, '100'B), OMIT))		
14	ERR2	[TRUE]		I	Parameter error

2.2.6 ts_ReceiveActivatePDP_Accept_FACH

Reason for change: To provide for differing Quality of Service delay and traffic classes. Since the Packet Data Protocol Address IE is present in the Activate PDP Context Request message, it must be omitted from the Activate PDP Context Accept message.

Summary of Change: Pass QoS delay and traffic class values into the Activate PDP Context Accept message using the revised constraint detailed in section 2.3.2.6. Omit the Packet Data Protocol Address from the Activate PDP Context Accept message.

Change test step from:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPM (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 3
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPM (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_CellFACH_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 3
8	ERR1	[TRUE]		I	Parameter error
...				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPM (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_Iv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPM (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveMT_CellFACH_Iv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoFACH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

To:

Test Step Name		ts_ReceiveActivatePDP_Accept_FACH (p_CellId :INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 3
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPMT (tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 3
8	ERR1	[TRUE]		I	Parameter error
...				
10		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
11		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPMT (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
12		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
13		Dc! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextAcPMT (tcv_TI_S, cs_LLC_SAPI_UMTS_v, cs_QoS_InteractiveOrBackgroundMT_CellFACH_v (tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

2.2.7 ts_SS_2_FACH_1_RACH_Modify

Reason for change:

1. It is necessary to configure the MAC to use U-RNTI on the SCCPCH when entering Cell FACH – C-RNTI can only be used after Cell Update Confirm.
2. It is assumed in the test steps used to release channels at the end of the test case that the RLC for BCCH over FACH is configured when in Cell FACH. This test step reconfigures for Cell FACH but does not configure the RLC for that channel.

Summary of Change:

1. Omit the C-RNTI from the MAC configuration for the SCCPCH
2. Call the test step ts_SS_RB_BCCH_FACH_Cfg to configure the RLC for BCCH over FACH.

Change test step from:

Test Step Name		ts_SS_2_FACH_1_RACH_Modify (p_CellId : INTEGER; p_UL_TrLogMapping, p_DL_TrLogMapping: TrCH_LogCHMappingList1)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
10		+ts_SS_StopRL (p_CellId, tsc_DL_DPCH1)			
11		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfoActNow (p_CellId, tsc_S_CCPCH1, c_UE_Info(tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI), c_TrChInfoPCH_FACH_PS, p_DL_TrLogMapping)		4.
12		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf(p_CellId, tsc_S_CCPCH1)		

To:

Test Step Name		ts_SS_2_FACH_1_RACH_Modify (p_CellId : INTEGER; p_UL_TrLogMapping, p_DL_TrLogMapping: TrCH_LogCHMappingList1)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
10		+ts_SS_StopRL (p_CellId, tsc_DL_DPCH1)			
11		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfoActNow (p_CellId, tsc_S_CCPCH1, c_UE_Info(tcv_TmpCellInfo.uRNTI, OMIT), c_TrChInfoPCH_FACH_PS, p_DL_TrLogMapping)		4.
12		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf(p_CellId, tsc_S_CCPCH1)		
13		+ts_SS_RB_BCCH_FACH_Cfg(tsc_CellA)			

2.2.8 ts_SS_ReleaseDCH_ToFACH_PS

Reason for change: RB 20 is released twice – in this test step and at the end of the test cae.

Summary of change: Delete release of RB 20

Change test step from:

Test Step Name		ts_SS_ReleaseDCH_ToFACH_PS (p_CellId:INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC!CRLC_Config_REQ	ca_CRLC_RB_RelReq (tsc_CellDedicated, tsc_RB20)		
2		CRLC?CRLC_Config_CNF	ca_CRLC_CfgCnf(tsc_CellDedicated, tsc_RB20)		
3		+ts_SS_2_FACH_1_RACH_Modify(p_CellId, c_TrLogMappingRACH1, c_TrLogMappingPCH_FACH)			

To:

Test Step Name		ts_SS_ReleaseDCH_ToFACH_PS (p_CellId:INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_SS_2_FACH_1_RACH_Modify(p_CellId, c_TrLogMappingRACH1, c_TrLogMappingPCH_FACH)			

2.2.9 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change:

1. To provide for differing Quality of Service delay and traffic classes.
2. Variables concerning authentication which are only initialised for CS are passed to tc_RRC_Security in this PS test step.

Summary of Change:

1. Call the test step ts_DetermineDlyClassAndTrafficClass, detailed in section 2.3.2.8, to determine the values for QoS delay and traffic classes, and then to pass these values into the Activate PDP Context Request message using the revised constraints detailed in section 2.3.2.5.
2. Change these variables to the corresponding PS ones.

Change test step from:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_GMM_Authentication(p_CellId)			
2		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
7		(tcv_Len1_Oct := o_IntToOct(tcv_Len1, 1))			
8		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoDCH, px_AccessPtNameDCH))		Step 5 Send Request PDP Context
9		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		Step 6 Receive PDP Context Activation Request 1.
15		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
16		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO)		

To:

Test Step Name		ts_RRC_NAS_SessionActPS_MO_P9_P10 (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_GMM_Authentication(p_CellId)			
2		+ ts_RRC_Security (p_CellId, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			
3		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
7		(tcv_Len1_Oct := o_IntToOct(tcv_Len1, 1))			
8		+ts_DetermineDlyClassAndTrafficClass			
9		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoDCH, px_AccessPtNameDCH))		Step 5 Send Request PDP Context
10		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_IV(tcv_TrafficClass, tcv_DlyClass)))		Step 6 Receive PDP Context Activation Request 1.
16		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_ReqPDP_ContextReqMT (tcv_TI_S, tcv_Len1_Oct, tcv_LenBit, px_PDP_IP_AddrInfoFACH, px_AccessPtNameFACH))		Step 5 Send Request PDP Context
17		+ts_DetermineDlyClassAndTrafficClass			
18		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TI_R := tcv_ActPDP_ContextReq.ti, tcv_PktDataProtoAddr := tcv_ActPDP_ContextReq.pDP_Address, tcv_RAB_Id := INT_TO_BIT (BIT_TO_INT(tcv_ActPDP_ContextReq.requestedNSAPI.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_IV(tcv_TrafficClass, tcv_DlyClass)))		

2.2.10 ts_GMM_Authentication

Reason for change: The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint c_AuthRspExtAny_tv. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called c_AuthCiphRspExtAny_tv, detailed in section 2.3.2.10, has been added with the correct tag value and needs to be referenced instead.

Summary of Change: Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response paramters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response paramters match expected response.
				

2.2.11 ts_GMM_IdleUpdated

Reason for change: The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches. The mechanism used in v300 of the suite was found to work satisfactorily, and has been reintroduced.

Summary of Change: Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.

Change test step from:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate (p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+It_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

2.2.12 ts_CRLC_UL_CipherCfg_RAB

Reason for change: The ciphering activation request and confirm steps must only take place when ciphering is enabled. Enabling of ciphering is controlled by the Pixit value px_CipheringOnOff.

Summary of Change: Modify the test step so that the sending of CRLC_Ciphering_Activate_REQ and reception of CRLC_Ciphering_Activate_CNF only occur when px_CipheringOnOff is set to TRUE.

Change test step from:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimelInfoList : RB_ActivationTimelInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		CRLC ! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimelInfoList)		configure ciphering for signaling radio bearers
2		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		

To:

Test Step Name		ts_CRLC_UL_CipherCfg_RAB (p_CN_Domain : CN_DomainIdentity; p_RB_ActivationTimeInfoList : RB_ActivationTimeInfoList)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[px_CipheringOnOff]			
2		CRLC! CRLC_Ciphering_Activate_REQ	ca_CRLC_UL_CipherActReq (tsc_CellDedicated , p_CN_Domain, p_RB_ActivationTimeInfoList)		configure ciphering for signaling radio bearers
3		CRLC ? CRLC_Ciphering_Activate_CNF	ca_CRLC_CipherActCnf(tsc_CellDedicated)		
4		[NOT (px_CipheringOnOff)]			

2.2.13 ts_AT_OrgPS_Call

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,,1,320,""1E3""""6E8""",1,,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,,1,320,""1E3""""6E8""",1,,<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

2.2.14 ts_AT_SetQoS

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64,,1,320,""1E3""""6E8""",1,,3<CR>""))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64,64,,1,320,""1E3""""6E8""",1,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.2.15 cr_ActPDP_ContextReqMO

Reason for change: To provide a means for selecting the requested Quality of Service. Use of this revised constraint is detailed in section 2.2.9 .

Summary of Change: Introduce a new parameter p_RequestedQoS to the constraint.

Change the TTCN PDU Constraint Declaration from:

Constraint Name		cr_ActPDP_ContextReqMO			
Structured Type		ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path					
Encoding Variation					
Comments		Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments	
				
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.	
	requestedQoS	cr_QoS_InteractiveMO_CellFACH_lv (?)		The AT command interface will be used to set the QoS to this value.	
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoDCH)			
				

To:

Constraint Name	cr_ActPDP_ContextReqMO (p_RequestedQoS : QualityOfService_lv)			
Structured Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Variation				
Comments	Activate PDP Context Request ue -> n 3GPP 24.008, 9.5.1			
	Field Name	Field Value	Field Encoding	Comments
			
	requestedLLC_SAPI	cr_LLC_SAPI_v		This has to be set to Not Assigned by UE in UMTS domain.
	requestedQoS	p_RequestedQoS		The AT command interface will be used to set the QoS to this value.
	pDP_Address	cr_PktDataProtoAddrMO_lv (px_PDP_IP_AddrInfoDCH)		
			

2.2.16 cbs_108_CellUpdateCnfDCCH

Reason for change: This constraint includes the URA Identity which is only used by UE when entering Cell PCH

Summary of Change: Omit the URA Identity.

Change the ASN.1 PDU Constraint Declaration from:

Constraint Name	cbs_108_CellUpdateCnfDCCH (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_Ti: RRC_TransactionIdentifier; p_U_RNTI : U_RNTI; p_C_RNTI: C_RNTI; p_State_Ind: RRC_StateIndicator; p_UL_ChannelRequirement : UL_ChannelRequirement; p_DL_CommonInformation : DL_CommonInformation ; p_DL_InformationPerRL_List : DL_InformationPerRL_List)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	
Constraint Value	
<pre>cn_InformationInfo OMIT, ura_Identity '0000000000000001'B, rb_InformationReleaseList OMIT,</pre>	

To

Constraint Name	cbs_108_CellUpdateCnfDCCH (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_Ti: RRC_TransactionIdentifier; p_U_RNTI : U_RNTI; p_C_RNTI: C_RNTI; p_State_Ind: RRC_StateIndicator; p_UL_ChannelRequirement : UL_ChannelRequirement; p_DL_CommonInformation : DL_CommonInformation ; p_DL_InformationPerRL_List : DL_InformationPerRL_List)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	
Constraint Value	
<pre>cn_InformationInfo OMIT, ura_Identity OMIT, rb_InformationReleaseList OMIT,</pre>	

2.3 Tables added to RRCv310

2.3.1 Tables from RRCv143 – no changes necessary

tsc_CRNTI_1
car_UTRAN_MobilityInfoCnfInd
cbs_108_RB_ReIDCH_ToFACH
cr_UTRAN_MobilityInfoCnf

2.3.2 Other Tables

2.3.2.1 tc_8_2_3_8

This table is based on that issued in RRCv143 but modified as follows:

Reason for change:

1. The SS was not reconfigured for Cell FACH until after the UTRAN Mobility Information Confirm was received whereas it needs to be done before the Cell Update Confirm can be sent.
2. The Cell Update Confirm should not contain a new U-RNTI.
3. The new test step ts_SS_SwitchOffCipherringRB_PS should be used (see section 2.3.2.9)

Summary of Change:

1. Move ts_SS_ReleaseDCH_ToFACH_PS from after receiving UTRAN Mobility Information Confirm to before sending Cell Update Confirm.
2. Omit the U-RNTI parameter from the Cell Update Confirm constraint.
3. Use ts_SS_SwitchOffCipherringRB_PS instead of ts_SS_SwitchOffCipherringRB.

Change table from:

Test Case Name		tc_8_2_3_8			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
12		+ts_RRC_ReceiveCellUpdate(tsc_CellA, cbr_108_CellUpdate(tcv_CellInfoA.uRNTI , cellReselection) ,15000)			step 4 in prose;
13		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdateCnfDCC H(tcv_CellIndInfo.dl_IntegrityChe ckInfo, tcv_RRC_Ti, tcv_CellInfoA.uRNTI, tsc_CRNTI_1, cell_FACH, OMIT,OMIT,OMIT))		Step 5 in prose;
14		+ ts_CMAC_NewU_RNTI_R econfg (tsc_CellDedicated, tcv_CellInfoA.uRNTI, tsc_CRNTI_1)			updated SS for new cRNTI
15		AM ? RLC_AM_DATA_IND	car_UTRAN_MobilityInfoCnfIn d (tsc_CellDedicated, tsc_RB2, cr_UTRAN_MobilityInfoCnf(tcv_RRC_Ti))		step 6 in prose;
16		+ts_SS_SwitchOffCip heringRB (tsc_CellA, tcv_ActTime)			security switch-off before release of resources in SS
17		+ts_SS_ReleaseDC H_ToFACH_PS (tsc_CellA)			
18		+ts_RRC_Receiv eRB_RelCmpl (tsc_CellA, cell_FACH)			Step 7 in prose

To:

Test Case Name		tc_8_2_3_8			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
12		+ts_RRC_ReceiveCellUpdate(tsc_CellA, cbr_108_CellUpdate(tcv_CellInfoA.uRNTI , cellReselection) ,15000)			step 4 in prose;
17		+ts_SS_ReleaseDCH_ToFACH_PS (tsc_CellA)			
13		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdateCnfDCC H(tcv_CellIndInfo.dl_IntegrityChe ckInfo, tcv_RRC_Ti, OMIT, tsc_CRNTI_1, cell_FACH, OMIT,OMIT,OMIT))		Step 5 in prose;
14		+ ts_CMAC_NewU_RNTI_R econfg (tsc_CellDedicated, tcv_CellInfoA.uRNTI, tsc_CRNTI_1)			updated SS for new cRNTI
15		AM ? RLC_AM_DATA_IND	car_UTRAN_MobilityInfoCnfIn d (tsc_CellDedicated, tsc_RB2, cr_UTRAN_MobilityInfoCnf(tcv_RRC_Ti))		step 6 in prose;
16		+ts_SS_SwitchOffCipheringRB_PS (tsc_CellA, tcv_ActTime)			security switch-off before release of resources in SS
18		+ts_RRC_ReceiverB_RelCmpl (tsc_CellA, cell_FACH)			Step 7 in prose

2.3.2.2 px_NMO

This table is not based on one in any existing ATS.

Reason for change: Provision of a means of selecting the Network Mode of Operation from the PICS/Pixit file. Use of this new parameter declaration is detailed in section 2.2.1.

Summary of Change: Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.3.2.3 tcv_DlyClass

This table is not based on one in any existing ATS.

Reason for change: Provision of a means of selecting the Delay Class for Quality of Service constraints. Use of this new test case variable declaration is detailed in sections 2.2.5,, 2.2.6, 2.2.9, & 2.3.2.8.

Summary of Change: Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	Tcv_DlyClass
Type	B3
PICS/PIXIT Ref	
Comments	

2.3.2.4 tcv_TrafficClass

This table is not based on one in any existing ATS.

Reason for change: Provision of a means of selecting the Traffic Class for Quality of Service constraints. Use of this new test case variable declaration is detailed in sections 2.2.5,, 2.2.6, 2.2.9, & 2.3.2.8.

Summary of Change: Table added to suite.

Add Test Case Variable Declaration:

Parameter Name	TrafficClass
Type	B3
PICS/PIXIT Ref	
Comments	

2.3.2.5 cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv

This table is based on cr_QoS_InteractiveMO_CellFACH_Iv in RRCv310 but renamed and modified as follows:

Reason for change: There are a number of discrepancies between quality of service described in the receive constraint and the quality of service the UE is told to request. Use of this revised constraint is detailed in section 2.2.9.

Summary of Change: Rename the constraint to cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to check for the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
Element Name	Element Value	Element Encoding	Comments
length	'0B'O		
spare	'00'B		
dlyClass	'100'B		Best effort
reliabilityClass	'001'B		Acknowledge Mode of RLC
peakThroughput	'0110'B		64 kbps
spare1	'0'B		
precedenceClass	'100'B		Normal class
spare2	'000'B		
meanThroughput	'11111'B		best effort
trafficClass	p_trafficClass		Interactive
deliveryOrder	'01'B		Without delivery order
deliveryErrorSDU	'010'B		Erroneour SDU are not delivered
maxSDUSize	'20'O		320 bits
maxBitRateUplink	'20'O		64 kbps
maxBitRateDnlink	'20'O		64 kbps
residualBER	'1001'B		6 x 10E (-3)
sduErrRatio	'0011'B		1 X 10 E(-3)
transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
bitRateUplink	'20'O		The gaurented bit rate is set equal to requested bit rate.
bitRateDnlink	'20'O		This will be neglected by UE as the class is interactive

To:

Constraint Name	cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv (p_trafficClass : B3 | p_dlyClass : B3)		
Structured Type	QualityOfService_lv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE		
	Element Name	Element Value	Comments
	length	'0B'O	
	spare	'00'B	
	dlyClass	p_dlyClass	
	reliabilityClass	'100'B	Acknowledge Mode of RLC
	peakThroughput	'0100'B	64 kbps
	spare1	'0'B	
	precedenceClass	'000'B	Subscribed class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	?	
	deliveryErrorSDU	?	
	maxSDUSize	'20'O	320 bits
	maxBitRateUplink	'40'O	64 kbps
	maxBitRateDnlink	'40'O	64 kbps
	residualBER	'1001'B	$6 \times 10^E (-8)$
	sduErrRatio	'0011'B	$1 \times 10^E (-3)$
	transDly	?	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	?	To be neglected by the UE as the traffic class is interactive.
	bitRateUplink	?	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	?	This will be neglected by UE as the class is interactive

2.3.2.6 cs_QoS_InteractiveOrBackgroundMT_CellFACH_Iv

This table is based on cr_QoS_InteractiveMT_CellFACH_Iv in RRCv310 but renamed and modified as follows:

Reason for change: There are a number of discrepancies between quality of service described in the send constraint and the quality of service described in the test documentation. Use of this revised constraint is detailed in section 2.2.6.

Summary of Change: Rename the constraint to cs_QoS_InteractiveOrBackgroundMO_CellFACH_Iv, to reflect the fact that it is being used for both interactive and background traffic class tests. Update the constraint to send the correct quality of service.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_CellFACH_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw		
	Element Name	Element Value	Comments
	length	'0D'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_CellFACH_lv (p_trafficClass : B3 | p_dlyClass : B3)			
Structured Type	QualityOfService_lv			
Derivation Path				
Encoding Variation				
Comments	The QoS for interactive RAB at 64kbps uplink as well as down link, sent to the UE			
	Element Name	Element Value	Element Encoding	Comments
	length	0B		
	spare	00B		
	dlyClass	P_dlyClass		
	reliabilityClass	100B		
	peakThroughput	0110B		64 kbps
	spare1	0B		
	precedenceClass	000B		Subscribed class
	spare2	000B		
	meanThroughput	11111B		best effort
	trafficClass	p_trafficClass		
	deliveryOrder	01B		
	deliveryErrorSDU	010B		
	maxSDUSize	20O		
	maxBitRateUplink	40O		64 kbps
	maxBitRateDnlink	40O		64 kbps
	residualBER	1001B		6x 10E (-8)
	sduErrRatio	0011B		1 X 10 E(-3)
	transDly	111111B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	11B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	00O		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	00O		This will be neglected by UE as the class is interactive

2.3.2.7 cs_QoS_InteractiveOrBackgroundMT_Iv

This table is based on cr_QoS_InteractiveMT_Iv in RRCv310 but renamed and modified as follows:

Reason for change

1. There are a number of discrepancies between quality of service described in this constraint and the quality of service requested by the UE (see 2.2.5).
2. The delay class depends on the traffic class and the traffic handling priority (3GPP TS 23.107).
3. Some of the comments are wrong.

Summary of Change

1. Update the cs_QoS_InteractiveMT_Iv constraint to send the a quality of service that matches the request .
2. Allow dlyClass to be set by parameter.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_Iv (p_trafficClass : B3)		
Structured Type	QualityOfService_Iv		
Derivation Path			
Encoding Variation			
Comments	The QoS for interactive RAB at 32kbps uplink as well as down link, sent to the UE. This is set same as the one received by the nw		
	Element Name	Element Value	Comments
	length	'0D'O	
	spare	'00'B	
	dlyClass	'100'B	Best effort
	reliabilityClass	'001'B	
	peakThroughput	'0110'B	64 kbps
	spare1	'0'B	
	precedenceClass	'100'B	Normal class
	spare2	'000'B	
	meanThroughput	'11111'B	best effort
	trafficClass	p_trafficClass	
	deliveryOrder	'01'B	
	deliveryErrorSDU	'010'B	
	maxSDUSize	'20'O	
	maxBitRateUplink	'20'O	64 kbps
	maxBitRateDnlink	'20'O	64 kbps
	residualBER	'1001'B	6 x 10E (-3)
	sduErrRatio	'0011'B	1 X 10 E(-3)
	transDly	'111111'B	Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B	This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'20'O	The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	'20'O	This will be neglected by UE as the class is interactive

To:

Constraint Name	cs_QoS_InteractiveOrBackgroundMT_lv (p_trafficClass : B3 ; p_dlyClass : B3)			
Structured Type	QualityOfService_lv			
Derivation Path				
Encoding Variation				
Comments	The negotiated QoS for an interactive or background RAB at 64kbps, uplink and downlink, sent to the UE by the OS			
	Element Name	Element Value	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	reliabilityClass	'100'B		
	peakThroughput	'0110'B		64 kbps
	spare1	'0'B		
	precedenceClass	'000'B		
	spare2	'000'B		
	meanThroughput	'11111'B		best effort
	trafficClass	p_trafficClass		Interactive='011'B, background='100'B
	deliveryOrder	'01'B		
	deliveryErrorSDU	'010'B		
	maxSDUSize	'20'O		320 bits
	maxBitRateUplink	'40'O		64 kbps
	maxBitRateDnlink	'40'O		64 kbps
	residualBER	'1001'B		6x 10E (-8)
	sduErrRatio	'0011'B		1 X 10 E(-3)
	transDly	'111111'B		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	'11'B		This is set to 3, but has to be neglected by the UE as the traffic class is interactive.
	bitRateUplink	'00'O		The gauranteed bit rate is ignored if interactive or background class
	bitRateDnlink	'00'O		This will be neglected by UE as the class is interactive

2.3.2.8 ts_DetermineDlyClassAndTrafficClass

This table is not based on one in any existing ATS.

Reason for change: To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass. Use of this new test steps detailed in sections 2.2.5,, 2.2.6 & 2.2.9.

Summary of Change: Table added to suite.

Add test step:

Test Step Name	ts_DeterminedDlyClassAndTrafficClass				
Group	BasicM_General_Steps/				
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
2		(tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B)			
3		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
4		(tcv_DlyClass := '100'B, tcv_TrafficClass := '100'B)			
5		[TRUE]		I	

2.3.2.9 ts_SS_SwitchOffCipherringRB_PS

This table is based on ts_SS_SwitchOffCipherringRB in RRCv143 but renamed and modified as follows:

Reason for change:

1. In RRCv143 ts_SS_SwitchOffCipherringRB_PS references the cipherringStarted field in tcv_CellIndInfo, however this field does not exist in the type in RRCv310. There are now separate fields for PS and CS.
2. The parameter lists for ts_CMAC_DL_CipherCfg and ts_CRLC_DL_CipherCfgRB have changed.

Summary of change:

1. Reference tcv_CellIndInfo.ps_cipherringStarted instead of tcv_CellIndInfo.cipherringStarted.
2. The parameters passed to these test steps have been updated to match their new parameter lists.

Change test step from:

Test Step Name		ts_SS_SwitchOffCipherringRB (p_CellId : INTEGER; p_ActTime : ActivationTime)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		+ ts_SetTmpCellInfo (p_CellId)			
		[px_CipherringOnOff AND tcv_CellIndInfo.cipherringStarted]			1.
		[(tcv_TmpCellInfo.cellConfig <> cell_NoDPCH) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_NoDedicated) OR (tcv_TmpCellInfo.cellConfig <> cell_DCH_MAC_SRB) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_MAC_SRB) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_MAC_SRB0) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_2_PRACH_NoConn) OR (tcv_TmpCellInfo.cellConfig <> cell_DCH_StandAloneSRB_NoConn) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_BMC_NoConn) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_2_SCCPCH_NoConn) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_BMC) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_2_SCCPCH)]			
		+ ts_CMAC_DL_CipherCfg (p_CellId, tcv_TmpCellInfo.cellConfig, cs_CipherringModeCmdOn (uea0) , p_ActTime)			
		+ ts_CRLC_DL_CipherCfgRB (p_CellId, cs_CipherringModeCmdOn (uea0) , tcv_TmpCellInfo.cellConfig)			
		+ lt_CRLC_UL_CipherCfg			

To:

Test Step Name		ts_SS_SwitchOffCipherringRB_PS (p_CellId : INTEGER; p_ActTime : ActivationTime)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		+ ts_SetTmpCellInfo (p_CellId)			
		[px_CipherringOnOff AND tcv_CellIndInfo.ps_cipherringStarted]			1.
		[(tcv_TmpCellInfo.cellConfig <> cell_NoDPCH) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_NoDedicated) OR (tcv_TmpCellInfo.cellConfig <> cell_DCH_MAC_SRB) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_MAC_SRB) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_MAC_SRB0) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_2_PRACH_NoConn) OR (tcv_TmpCellInfo.cellConfig <> cell_DCH_StandAloneSRB_NoConn) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_BMC_NoConn) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_2_SCCPCH_NoConn) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_BMC) OR (tcv_TmpCellInfo.cellConfig <> cell_FACH_2_SCCPCH)]			
		+ ts_CMAC_DL_CipherCfg (cs_CipherringModeCmdOn (uea0) , p_ActTime , incr)			

		+ ts_CRLC_DL_CipherCfgRB (cs_CipheringModeCmdOn (uea0), tcv_TmpCellInfo.cellConfig)			
		+ It_CRLC_UL_CipherCfg			

2.3.2.10 c_AuthCiphRspExtAny

Reason for change: The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem. Use of this new constraint is detailed in section 2.2.10.

Summary of Change: Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny			
Structured Type	AuthRspExt			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	iei	'00101001'B		
	iel	?		
	rES	?		

CHANGE REQUEST

⌘ **34.123-3 CR 060** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 12.3.1.1		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 28/04/2003
Category:	⌘ F	Release:	⌘ R99
Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)	

Reason for change:	⌘ To introduce test case 12.3.1.1		
Summary of change:	⌘ - 0 table deleted from NASv310, - 4 table modified in NASv310, - 17 tables added from NASv143 - 11 new tables created. For more details see below.		
Consequences if not approved:	⌘ Test case will not be added		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title	Introducing test case 12.3.1.1
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce test case 12.3.1.1 to NASv310 by using NASv143 as the primary source of the new tables and applying only essential fixes to the TTCN.

Note that unless otherwise specified line numbers refer to the original mp file.

2 Changes required for test-case 12.3.1.1

2.1 Tables deleted from NASv310

None.

2.2 Tables modified in NASv310

2.2.1 c_CellInfoDef

Reason for change: For consistency with CR 030417 for 11.1.1.1.

Summary of Change: Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I. Table px_NMO is added as described in sub-clause 2.3.2.2 .

Change:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)		
Structured Type	CellInfoCfg		
Derivation Path			
Encoding Variation			
Comments			
Element Name	Element Value	Element Encoding	Comments
nmo	tsc_NMO_I		

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)		
Structured Type	CellInfoCfg		
Derivation Path			
Encoding Variation			
Comments			
Element Name	Element Value	Element Encoding	Comments
nmo	px_NMO		

2.2.2 cr_AttachReq

Reason for change: The information element “oldPTMSI_Signature” is optional in an ATTACH REQUEST NAS message. The constraint should reflect this fact.

Summary of Change: Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			

	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF PRESENT		
	readyTimer	*		
			

2.2.3 ts_GMM_Authentication

Reason for change: The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint c_AuthRspExtAny_tv. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called c_AuthCiphRspExtAny_tv, detailed in section 2.3.2.3, has been added with the correct tag value and needs to be referenced instead.

Summary of Change: Change line 3 to refer to the new constraint.

Change:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				

2		Dc! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

2.2.4 ts_GMM_IdleUpdated

Reason for change:

- i) The part of the test step dealing with a UE which does a CS attach followed by a PS attach calls the test step 'ts_ClassA_NMO_II_IdleUpdate' to handle the procedure. This test step does not work properly, as it does not release and then re-establish the RRC connection between the two attaches.
- ii) Between Line19 and line25: Logic does not correctly discriminate between different network modes and UE modes.

Summary of Change:

- i) Replace line 5 with two lines calling the test step ts_MM_IdleUpdated, followed by the local tree It_GMMIdleUpdated.
- ii) Between Line19 and line25: Correction to logic.

i) Change:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ ts_ClassA_NMO_II_IdleUpdate (p_CellId)			
6		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).

5		+ts_MM_IdleUpdated(p_CellId)			
6		+lt_GMMIdleUpdated			
7		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
				

ii) Change :

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
18		[tcv_TmpB3 = '011'B]			Set global variable according to the type of attach requested by UE
19		(tcv_UE_OpMode := opModeA)			
20		[TRUE]			
21		(tcv_UE_OpMode := opModeC)			
		lt_SecurityMode			
22		+ ts_RRC_Security (p_CellId, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
		lt_AttachAccept			
23		[tcv_UE_OpMode = opModeC]			
24		(tcv_AssignedPTMSI := px_PTMSI_Def, tcv_Assigned_PTMSI_Sig := px_PTMSI_SigDef)			Use default values
				
27		[tcv_UE_OpMode = opModeA]			

To:

Test Step Name		ts_GMM_IdleUpdated (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
19		[(tcv_TmpB3 = '011'B) AND (tcv_TmpCellInfo.nmo = tsc_NMO_I)]			Set global variable according to the type of attach requested by UE
20		(tcv_UE_OpMode := opModeA)			
21		[tcv_TmpCellInfo.nmo = tsc_NMO_I]			
22		(tcv_UE_OpMode := opModeC)			
23		[TRUE]			
		lt_SecurityMode			
24		+ ts_RRC_Security (p_CellId, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
		lt_AttachAccept			
25		[(tcv_UE_OpMode = opModeC) OR (tcv_TmpCellInfo.nmo = tsc_NMO_I)]			
26		(tcv_AssignedPTMSI := px_PTMSI_Def, tcv_Assigned_PTMSI_Sig := px_PTMSI_SigDef)			Use default values
				
29		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_I)]			

2.3 New Tables added to NASv310

2.3.1 Tables from NASv143 — no changes necessary

Test Suite Parameter Declarations:

- pc_SupportOpModeA
- px_SupportOpModeC
- px_PTMSI_2
- px_PTMSI_Sig2
- px_KeySeqDefxxxxx

Test Suite Constant Declarations:

- tsc_RAC_2

Structured Type Constraint Declarations:

- c_MobileIdTMSILoc
- c_GMM_AttachResultPS_Only
- c_GMM_AttachTypePS_Only
- c_MobileIdPTMSI_lv_Def

Tabular PDU Constraint Declarations:

- cs_LocUpdAcpTMSI_2

ASN.1 PDU Constraint Declarations:

- cr_108_RRC_ConnRelCmpl

Test Steps:

GMM_InternalSteps:

- ts_MMI_SetOpModeA
- ts_MMI_SetOpModeC
- ts_RegistrationOnCS
- ts_RegistrationOnCS_IfOpModeA
- ts_GMM_StartIntegrityProtection (replaced; see (v) in clause 2.3.2.9)

2.3.2 Other Tables

2.3.2.1 ts_GMM_Config_CellA

Reason for change: Table ts_GMM_Config_CellA need to be added since required by table tc_12_3_1_1.

Summary of Change: Add table

“Dynamic part/Test Step Library/GMM_InternalSteps/ ts_GMM_Config_CellA “as follows:

Test Step Name		ts_GMM_Config_CellA			
Group		GMM_InternalSteps/			
Objective					
Default		NAS_OtherwiseFail			
Comments		Configure cell A and start sending Sys Infos			
Description					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_SS_CreateCellDCH(tsc_CellA)			
2		+ts_SendDefSysInfo(tsc_CellA)			

2.3.2.2 px_NMO

Reason for change: Table px_NMO is needed by c_CellInfoDef (sub-clause 2.2.1)

Summary of Change: Table px_NMO is added as follows:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation. Valid values are NMO1='00'O, NMO2='01'O. Default NMO1

2.3.2.3 c_AuthCiphRspExtAny

Reason for change: The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem. Use of this new constraint is detailed in section 2.2.3.

Summary of Change: Table c_AuthCiphRspExtAny added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny		
Structured Type	AuthRspExt		
Derivation Path			
Encoding Variation			
Comments			
	Element Name	Element Value	Element Encoding
	lei	'00101001'B	
	lel	?	
	rES	?	

2.3.2.4 ts_GMM_DetachOnSwitchOff

Reason for change:

- i) GMM Detach and IMSI Detach could come in any order whereas current TTCN expects always GMM Detach first.
- ii) GMM Detach may or not come with a P-TMSI signature whereas current TTCN always expects a P-TMSI signature.

Summary of Change: Line 5 and 6 (which only accepts GMM detach first) replaced by It_Detach. It_Detach calls It_GMM_and_TMSI_Detach which copes with the ordering problem of GMM Detach and TMSI Detach. It_GMM_and_TMSI_Detach calls It_GMM_Detach which itself can cope whether a P-TMSI signature has been sent or not.

Table c_TMSI_DetachInd also added (see sub-clause 2.3.2.5)

Change from:

Test Step Name		ts_GMM_DetachOnSwitchOff (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[pc_SwitchOnOff]			
2		+ts_MMI_UE_SwitchOff			
3		+ts_SetTmpCellInfo(p_CellId)			
4		+ts_RRC_ConnEst(p_CellId, est_MO, detach)			
5		+It_GMM_Detach			
6		+It_IMSI_Detach_IfClassA			
7		+ts_RRC_ConnRel(p_CellId, cell_Dch)			
8		[TRUE]			UE power supply must be removed
9		+ts_MMI_UE_PwrOff			
		It_GMM_Detach			
10		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_DetachReq (c_DetachType('1'B, '0?'1'B), c_MobileIdPTMSI (tcv_AssignedPTMSI), c_PTMSI_Signature_tlv (tcv_Assigned_PTMSI_Sig)))	(P)	
11		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
		It_IMSI_Detach_IfClassA			

12		[(tcv_TmpCellInfo.attFlag = tsc_AttOn) AND (tcv_UE_OpMode = opModeA)]			
13		Dc ? RRC_DataInd	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, c_IMSI_DetachInd)	(P)	
14		[TRUE]			do nothing

To:

Test Step Name		ts_GMM_DetachOnSwitchOff (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[pc_SwitchOnOff]			
2		+ts_MMI_UE_SwitchOff			
3		+ts_SetTmpCellInfo (p_CellId)			
4		+ts_RRC_ConnEst(p_CellId, est_MO, detach)			
5		+It_Detach			
6		+ts_RRC_ConnRel(p_CellId, cell_Dch)			
7		[TRUE]			UE power supply must be removed
8		+ts_MMI_UE_PwrOff			
9		It_Detach			
9		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_I1) AND (tcv_TmpCellInfo.attFlag = tsc_AttOn)]			
10		+It_GMM_and_TMSI_Detach			
11		[TRUE]			
12		+It_GMM_Detach			
13		It_GMM_Detach			
13		Dc ? RRC_DataInd [LENGTH_OF(tcv_Assigned_PTMSI_Sig) = 0 (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_DetachReq (c_DetachType('1B, 0?1B), c_MobileIdPTMSI (tcv_AssignedPTMSI), OMIT))	(P)	
14		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
15		Dc ? RRC_DataInd [LENGTH_OF(tcv_Assigned_PTMSI_Sig) > 0 (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_DetachReq (c_DetachType('1B, 0?1B), c_MobileIdPTMSI (tcv_AssignedPTMSI), c_PTMSI_Signature_tlv (tcv_Assigned_PTMSI_Sig))	(P)	
16		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
		It_GMM_and_TMSI_Detach			
		+It_GMM_Detach			
17		+It_GMM_Detach			
18		Dc ? RRC_DataInd	car_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, c_TMSI_DetachInd)	(P)	
19		Dc ? RRC_DataInd	car_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, c_TMSI_DetachInd)	(P)	
		+It_GMM_Detach			

2.3.2.5 c_TMSI_DetachInd

Reason for change: Table Needed as described in sub-clause 2.3.2.4.

Summary of Change: Add Table c_TMSI_DetachInd as follows:

Constraint Name	c_TMSI_DetachInd			
PDU Type	IMSIDETACHINDICATION			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	skipIndicator	'0000'B		
	mMProtocolDiscriminator	'0101'B		
	msgType	'??000001'B		
	mSClsmk1	c_MS_Clsmk1_Def		
	mobileId	c_MobileIdTMSI_Iv		

2.3.2.6 ts_GMM_StartIntegrityProtection

Reason for change: Second parameter of ts_RRC_Security is no longer applicable.

Summary of Change: Remove Value "TRUE" of 2nd parameter in the call to ts_RRC_Security.

Change:

Test Step Name	ts_GMM_StartIntegrityProtection (p_CellId : INTEGER)
Group	
Objective	
Default	
Comments	To implement common test step 'The SS starts integrity protection' used in many test cases
Description	

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_RRC_Security (p_CellId, TRUE, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			

To:

Test Step Name	ts_GMM_StartIntegrityProtection (p_CellId : INTEGER)
Group	
Objective	
Default	
Comments	To implement common test step 'The SS starts integrity protection' used in many test cases
Description	

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_RRC_Security (p_CellId, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			

2.3.2.7 ts_MM_SecurityOn

Reason for change: Second parameter of ts_RRC_Security is no longer applicable.

Summary of Change: Remove Value "TRUE" of 2nd parameter in the call to ts_RRC_Security.

Change:

Test Step Name	ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)				
Group					
Objective	Start Cipherring if applicable				
Default	NAS_OtherwiseFail				
Comments	To implement common test step 'The SS starts integrity protection' used in many test cases				
Description	Cipherring is either generally applied or not. Starting takes effect only if cipherring is to be applied.				
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_RRC_Security(p_CellId, TRUE , tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

To:

Test Step Name	ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)				
Group					
Objective	Start Cipherring if applicable				
Default	NAS_OtherwiseFail				
Comments	To implement common test step 'The SS starts integrity protection' used in many test cases				
Description	Cipherring is either generally applied or not. Starting takes effect only if cipherring is to be applied.				
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

2.3.2.8 c_GMM_AttachTypePS_Only

Reason for change: Problem in AttachRequest Message (Table 12_3_1_1 (lt_Attach_Steps_3To5)). The first parameter of cr_AttachReq is c_GMM_AttachResultPS_Only which has the 'for' (follow on request) field. TTCN expects always a 0 for the 'for' field whereas according to 3GPP specifications (24.008) the UE can either send a 1 or a 0.

Summary of Change: Replace '0'B value of the 'for' field (in c_GMM_AttachResultPS_Only) by ?.

Change:

Constraint Name	c_GMM_AttachTypePS_Only		
Structured Type	AttachType		
Derivation Path			
Encoding Variation			
Comments			
Element Name	Element Value	Element Encoding	Comments
for	0B		
type	'001'B		

To:

Constraint Name	c_GMM_AttachTypePS_Only		
Structured Type	AttachType		
Derivation Path			
Encoding Variation			
Comments			
Element Name	Element Value	Element Encoding	Comments
for	?		
type	'001'B		

2.3.2.9 tc_12_3_1_1Reason for change:

- i) Cell_B is not required by the test hence reference to it should be removed (Line 3 and 4).
- ii) In line 20 there is an Attempt to perform a GMM attach after switch on whereas in some cases UE may need to perform a CS attach before GMM attach. Hence order need to be modified.
- iii) Some errors in Detach procedure so one possibility is to use detach procedure used in first part of test case.
- iv) The prose indicates that authentication should be performed during the attach in the test body so that the value of tcv_KeySeq is irrelevant (line 30).
- v) At line 32 an Authentication need to take place and ts_GMM_StartIntegrityProtection does not perform authentication

Summary of Change:

- i) Remove settings to Cell_B (line 3); Replace +ts_GMM_Config_CellA_CellB by +ts_GMM_Config_CellA (line 4) the latter is described in sub-clause 2.3.2.1.
- ii) Split functions of "+ts_MMI_UE_SwitchOnTriggerGMM_Attach" into switch on (ts_MMI_UE_SwitchOn) then GMM attach (ts_AT_TriggerGMM_Attach) on either side of the CS attach (ts_RegistrationOnCS_IfOpModeA(tsc_CellA, px_TMSI_Def))
- iii) Replace lines just after "+lt_Attach_Steps_3To5" , ie:

```

+ts_MMI_UE_SwitchOff
+ts_RRC_ConnEst(tsc_CellA, est_MO, detach)
Dc ? RRC_DataInd
+ ts_SS_SecurityDownloadStart (tsc_CellA, tcv_Start )
+lt_IMSI_Detach_IfClassA
+ts_RRC_ConnRel(tsc_CellA, cell_Dch)

```

by one line containing "+ts_GMM_DetachOnSwitchOff(tsc_CellA)".

- iv) Change tcv_PS_KeySeq (last parameter of cr_AttachReq in line 30 (lt_Attach_Steps_3To5)) by ?.
- v) Replace (in line 32) +ts_GMM_StartIntegrityProtection(tsc_CellA) by +ts_GMM_AuthenticateAndStartIntegrityProtection(tsc_CellA). The latter test step is descibed in sub-clause 2.3.2.11 .

Change tc_12_3_1_1 from:

Test Case Name	tc_12_3_1_1
Group	GMM/Detach_procedure/UE_initiated_detach
Purpose	To test the behaviour of the UE when performing the detach procedure
Configuration	
Default	NAS_OtherwiseFail
Comments	Initial conditions - SS : Two cells , operating in network operation mode II

		- UE : The UE has a valid P-TMSI-1, P-TMSI-1 signature and RAI-1			
Selection Ref					
Description					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START t_Guard(300)			
2		+ts_InitVariables			
3		(tcv_CellInfoA.nmo := tsc_NMO_II, tcv_CellInfoB.attenuationLevel := tsc_AttenuationSuitableNeighbourCell, tcv_CellInfoB.nmo := tsc_NMO_II, tcv_CellInfoB.rac := tsc_RAC_2)			
4		+ts_GMM_Config_CellA_CellB			
5		+ts_IdleUpdated(tsc_CellA)			

		It_TestBody			
19		(tcv_TestBody := TRUE)			
20		+ts_MMI_UE_SwitchOnTriggerGMM_Attach			
21		+ts_RegistratonOnCS_IfOpModeA(tsc_CellA, px_TMSI_Def)			
22		+It_Attach_Steps_3To5			
23		+ts_MMI_UE_SwitchOff			
24		+ts_RRC_ConnEst(tsc_CellA, est_MO, detach)			
25		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_DetachReq (c_DetachType('1'B, '001'B), c_MobileIdPTMSI (tcv_AssignedPTMSI), c_PTMSI_Signature_tlv (tcv_Assigned_PTMSI_Sig)))		
26		+ ts_SS_SecurityDownloadStart (tsc_CellA, tcv_Start)			
27		+It_IMSI_Detach_IfClassA			
28		+ts_RRC_ConnRel(tsc_CellA, cell_Dch)			
		It_Attach_Steps_3To5			
29		+ts_RRC_ConnEst(tsc_CellA, est_Reg, registration)			
30		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachTypePS_Only, c_MobileIdPTMSI_lv_Def, c_RAI_Def_v, c_PTMSI_SignatureDef, tcv_PS_KeySeq))		
31		+ ts_SS_SecurityDownloadStart (tsc_CellA , tcv_Start)			
32		+ts_GMM_StartIntegrityProtection (tsc_CellA)			

38		[TRUE]			do nothing

To:

Test Case Name	tc_12_3_1_1
Group	GMM/Detach_procedure/UE_initiated_detach

Purpose	To test the behaviour of the UE when performing the detach procedure				
Configuration					
Default	NAS_OtherwiseFail				
Comments	Initial conditions - SS : One cell , operating in network operation mode II - UE : The UE has a valid P-TMSI-1, P-TMSI-1 signature and RAI-1				
Selection Ref					
Description					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START t_Guard(300)			
2		+ts_InitVariables			
3		(tcv_CellInfoA.nmo := tsc_NMO_II)			
4		+ts_GMM_Config_CellA			
5		+ts_IdleUpdated(tsc_CellA)			
		lt_TestBody			
19		(tcv_TestBody := TRUE)		(P)	
20		+ts_MMI_UE_SwitchOn			
21		+ts_RegistrationOnCS_IfOpModeA(tsc_CellA, px_TMSI_Def)			
22		+ts_AT_TriggerGMM_Attach			
23		+lt_Attach_Steps_3To5			
24		+ts_GMM_DetachOnSwitchOff(tsc_CellA)			
		lt_Attach_Steps_3To5			
25		+ts_RRC_ConnEst(tsc_CellA, est_Reg, registration)			
26		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachTypePS_Only, c_MobileIdPTMSI_Iv_Def, c_RAI_Def_v, c_PTMSI_SignatureDef, ?))		
27		+ts_SS_SecurityDownloadStart (cs_domain , tcv_Start)			
28		+ts_GMM_AuthenticateAndStartIntegrityProtection (tsc_CellA)			
34		[TRUE]			do nothing

2.3.2.10 ts_RegistrationOnCS

Reason for change:

- i) Constraints have wrong cellID parameter (line 3, 7 and 8)
- ii) tcv_Start need to be 0 (line 3)
- iii) First parameter to ts_SS_SecurityDownloadStart (line 4) is of CN_DomainIdentity type
- iv) mnc and mcc parameters are in the wrong order in ca_DataReq constraint (line 7)

Summary of Change:

- i) p_CellId changed by tsc_CellDedicated in constraint columns (line 3, 7 and 8)
- ii) tcv_Start changed to '00000000000000000000'B (line 3)
- iii) Change first parameter to ts_SS_SecurityDownloadStart (line 4) to cs_domain
- iv) mnc and mcc parameters swapped in ca_DataReq constraint (line 7)

Change:

Test Step Name		ts_RegistrationOnCS (p_CellId : INTEGER; p_TMSI : OCTETSTRING)			
Group					
Objective		Register to CS services according to 3GPP 34.108 clause 7.2.2.1.			
Comments					
Description					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
3		Dc?RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_InitDirectTransfer(p_CellId, tsc_RB3, cb_LocUpdReqAny(?))		
4		+ ts_SS_SecurityDownloadStart (p_CellId, tcv_Start)			
7		Dc!RRC_DataReq (tcv_AssignedTMSI := p_TMSI)	ca_DataReq(p_CellId, tsc_RB3, cs_LocUpdAcpTMSI_2(tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.lac, p_TMSI))		
8		Dc?RRC_DataInd	car_UplinkDirectTransfer (p_CellId, tsc_RB3, c_TMSI_ReallocCmpl)		

To:

Test Step Name		ts_RegistrationOnCS (p_CellId : INTEGER; p_TMSI : OCTETSTRING)			
Group					
Objective		Register to CS services according to 3GPP 34.108 clause 7.2.2.1.			
Comments					
Description					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
3		Dc?RRC_DataInd (tcv_Start := 00000000000000000000'B)	car_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		
4		+ ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			
7		Dc!RRC_DataReq (tcv_AssignedTMSI := p_TMSI)	ca_DataReq(tsc_CellDedicated, tsc_RB3, cs_LocUpdAcpTMSI_2(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac, p_TMSI))		
8		Dc?RRC_DataInd	car_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, c_TMSI_ReallocCmpl)		

2.3.2.11 ts_GMM_AuthenticateAndStartIntegrityProtection

Reason for change: Table ts_GMM_AuthenticateAndStartIntegrityProtection need to be added since required by table tc_12_3_1_1. Line 2 of ts_GMM_AuthenticateAndStartIntegrityProtection modified (2nd parameter 'TRUE' removed as not applicable to ts_RRC_Security)

Summary of Change: Add table

“Dynamic part/Test Step Library/GMM_InternalSteps/
ts_GMM_AuthenticateAndStartIntegrityProtection “ from NASv143 and Line 2 of modified (2nd
parameter 'TRUE' removed as not applicable to ts_RRC_Security). Hence:

Change from:

Test Step Name		ts_GMM_AuthenticateAndStartIntegrityProtection (p_CellId : INTEGER)			
Group		GMM_InternalSteps/			
Objective					
Default					
Comments		To implement common test step 'The SS starts integrity protection' used in many test cases			
Description					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_GMM_Authentication (p_CellId)			
2		+ ts_RRC_Security (p_CellId, TRUE, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			

To:

Test Step Name		ts_GMM_AuthenticateAndStartIntegrityProtection (p_CellId : INTEGER)			
Group		GMM_InternalSteps/			
Objective					
Default					
Comments		To implement common test step 'The SS starts integrity protection' used in many test cases			
Description					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_GMM_Authentication (p_CellId)			
2		+ ts_RRC_Security (p_CellId, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			

CHANGE REQUEST

⌘ **34.123-3 CR 061** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 12.9.1		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 1/05/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 12.9.1 to NASv310
Summary of change:	⌘ - 0 table deleted from NASv310, - 7 tables modified in NASv310, - 15 tables added from NASv143, - 5 new tables created. For more details see below.
Consequences if not approved:	⌘ Test case 12.9.1 will not be added

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Seoul, Korea

12 – 15th May, 2003

Title	The introduction of test case 12.9.1 into NASv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed to introduce test case 12.9.1 in to NASv310. With these changes applied the test case can be demonstrated to run on a single UE implementation. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 (V5.2.0) clause 12.9.1.

2 Changes required for test-case 12.9.1

2.1 Tables deleted from NASv310

None

2.2 Tables modified in NASv310

2.2.1 c_IMSI_DetachInd

Reason for change: The existing constraint checks that the UE is using IMSI as its Mobile ID for CS whereas it should be using TMSI in the situation where this constraint is used.

Summary of Change: Replace c_MobileIdIMSI_Iv with c_MobileIdTMSI_Iv.

Change the PDU Type Constraint Declaration from:

Constraint Name	c_IMSI_DetachInd			
PDU Type	IMSIDETACHINDICATION			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	mSClsmk1	c_MS_Clsmk1_Def		
	mobileId	c_MobileIdIMSI_Iv		

To:

Constraint Name	c_IMSI_DetachInd			
PDU Type	IMSIDETACHINDICATION			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	mSClsmk1	c_MS_Clsmk1_Def		
	mobileId	c_MobileIdTMSI_Iv		

2.2.2 cr_AttachReq

Reason for change: The information element “oldPTMSI_Signature” is optional in an ATTACH REQUEST nas message. The constraint should reflect this fact.

Summary of Change: Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.3 ts_GMM_AttachReject

Reason for change: The information element “oldPTMSI_Signature” is optional in an ATTACH REQUEST nas message. The constraint should reflect this fact.

Summary of Change: Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.4 ts_GMM_AttachReject

Reason for change: The existing test step did not satisfactorily handle CS registration. In two places, p_CellId was used for the Cell Id of a received Direct Transfer, when tsc_CellDedicated should have been used. ts_RRC_Security should have been called with the fifth parameter set to TRUE rather than FALSE so that a new keys would be generated.

Summary of Change:

Changes as detailed below.

Change test step from:

Test Step Name		ts_GMM_AttachReject (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_MM_UE_SwitchOnTriggerGMM_Attach			
2		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
.....					
10		[(tcv_TmpCellInfo.nmo = tsc_NMO_II) AND (tcv_UE_OpMode = opModeA)]			
11		Dc?RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_InitDirectTransfer(p_CellId, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
12		+ ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			
13		+ts_MM_Authentication(p_CellId)			AUTHENTICATION REQUEST AUTHENTICATION RESPONSE
14		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, FALSE, cs_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
15		DclRRC_DataReq	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdAcpTMSI(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac))		LOCATION UPDATING ACCEPT
16		Dc?RRC_DataInd	car_UplinkDirectTransfer(p_CellId, tsc_RB3, c_TMSI_ReallocCmpl)		TMSI REALLOCATION COMPLETE
17		[TRUE]			Do nothing (if not class A or not NMO II)
.....					

To:

Test Step Name	ts_GMM_AttachReject (p_CellId : INTEGER)				
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_MM_UE_SwitchOn			
2		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
.....					
10		[(tcv_TmpCellInfo.nmo = tsc_NMO_II) AND (tcv_UE_OpMode = opModeA)]			
11		Dc?RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
12		+ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			
13		+ts_MM_Authentication(p_CellId)			AUTHENTICATION REQUEST AUTHENTICATION RESPONSE
14		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, cs_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
15		DclRRC_DataReq	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdAcqTMSI(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac)		LOCATION UPDATING ACCEPT
16		Dc?RRC_DataInd	car_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, c_TMSI_ReallocCmpl)		TMSI REALLOCATION COMPLETE
17		+ts_RRC_ConnRel (p_CellId, cell_Dch)			
18		+ts_AT_TriggerGMM_Attach			
19		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
20		[TRUE]			Do nothing (if not class A or not NMO II)
.....					

2.2.5 ts_GMM_Authentication

Reason for change: The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint c_AuthRspExtAny_tv. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called c_AuthCiphRspExtAny_tv, has been added with the correct tag value and needs to be referenced instead.

Summary of Change: Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response paramters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response paramters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response paramters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response paramters match expected response.
				

2.2.6 ts_AT_OrgPS_Call

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 0")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
		It_AssignAT_Cmd			
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
7		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
8		(tcv_AT_Cmd := "AT+CGACT=1, 1")			ACTIVATE PDP CONTEXT message for MO
9		Ut ! AT_CmdReq	ca_AT_CmdReq (tcv_AT_Cmd)		
		Ut ? AT_CmdCnf	ca_AT_CmdCnf		
		It_AssignAT_Cmd			
				
16		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
17		(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64,64,,1,320,""1E3""""6E8""",1,,3<CR>"))			set up the Minimum QoS same as Required QoS
18		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
19		(tcv_AT_Cmd := ("AT+CGEQMIN=1,3,64,64,,1,320,""1E3""""6E8""",1,,<CR>"))			
20	ERR1	[TRUE]		I	Parameter error

2.2.7 ts_AT_SetQoS

Reason for change: The AT commands issued by this test step do not match up with the quality of service constraints.

Summary of Change: Modify the AT commands issued.

Change test step from:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

To:

Test Step Name		ts_AT_SetQoS			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
4		[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]			
5		(tcv_AT_Cmd := ("AT+CGEQREQ=1,2,64,64,,1,320,""1E3""""6E8""",1,,3<CR>""))			
6		[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]			
7		(tcv_AT_Cmd := ("AT+CGEQREQ=1,3,64,64,,1,320,""1E3""""6E8""",1,,,<CR>"))			
8	ERR1	[TRUE]		I	Parameter error

2.3 Tables added to NASv310

2.3.1 Tables added from NASv143

Type	Name
Test Suite Parameter Declarations	pc_SupportOpModeA
	px_SupportOpModeC
Structured Type Constraint Declarations	c_GMM_AttachResultPS_Only
	c_GMM_AttachTypePS_Only
	c_MobileIdTMSILoc
	c_ServiceTypeSignalling
TTCN PDU Constraint Declarations	cs_LocUpdAcpTMSI_2
Test Cases	tc_12_9_1
Test Steps	ts_MM_SecurityOn
	ts_GMM_AuthenticateAndStartIntegrityProtection
	ts_GMM_Config_CellA
	ts_MMI_SetOpModeA
	ts_MMI_SetOpModeC
	ts_RegistrationOnCS
	ts_RegistrationOnCS_IfOpModeA

2.4 New tables added

2.4.1 ACTIVATEPDPCONTEXTREJECT_dl

Reason for change: It is necessary to send an Activate PDP Context Reject message in response to the UE sending its Activate PDP Context Request otherwise after the RRC Connection is removed, the UE immediately tries to re-establish the RRC Connection in order to retry the Activate PDP Context Request.

Summary of Change: Table added to suite.

Add TTCN PDU Type Definition:

PDU Name	ACTIVATEPDPCONTEXTREJECT_dl			
PCO Type	Dc_SAP			
Encoding Rule Name				
Encoding Variation				
Comments	Activate PDP Context Reject n -> ue Reference 3GPP 24.008 clause, 9.5.3			
	Field Name	Field Value	Field Encoding	Comments
	ti	Tl		
	sM_ProtocolDiscriminator	ProtocolDiscriminator		
	msgType	MsgType		
	sM_Cause	SM_Cause_v		
	protocolConfOpts	ProtoCfgOpt		

2.4.2 c_AuthCiphRspExtAny

Reason for change: The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem

Summary of Change: Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny			
Structured Type	AuthRspExt			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	lei	'00101001'B		
	lel	?		
	rES	?		

2.4.3 cb_SM_Cause_v

Reason for change: In sending an Activate PDP Context Reject message to the UE, it is necessary to specify a cause. This constraint enables that to be done.

Summary of Change: Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	cb_SM_Cause_v (p_cause : CauseValue)			
Structured Type	SM_Cause_v			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	causeValue	p_cause		

2.4.4 cs_ActPDP_ContextRejMT

Reason for change: This constraint enables the Activate PDP Context Reject message to be sent to the UE.

Summary of Change: Table added to suite.

Add TTCN PDU Constraint Declaration:

Constraint Name	cs_ActPDP_ContextRejMT (p_ti : TI ; p_cause_v : SM_Cause_v ; p_proto_config_opt : ProtoCfgOpt)			
PDU Type	ACTIVATEPDPCONTEXTREJECT_dl			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	ti	p_ti		
	sM_ProtocolDiscriminator	tsc_SMPD		
	msgType	'01000011'B		
	sM_Cause	p_cause_v		
	protocolConfOpts	p_proto_config_opt		

2.4.5 ts_GMM_DetachOnSwitchOffPreamble

Reason for change: To fix problems with the existing ts_GMM_DetachOnSwitchOff test step. In particular that for UE operation mode A and Network Mode of Operation II the CS IMSI detach and PS detach may occur in either order.

Summary of Change: Table added to suite.

Add test step:

Test Step Name		ts_GMM_DetachOnSwitchOffPreamble (p_CellId : INTEGER)			
Group		BasicM_MM_GMM_Steps/			
Objective		Turn off UE and execute GMM Detach procedure for properly detach PS or combined PS/CS services on the cell referenced by p_CellId. Additionally, if Attach Flag is set, and the UE is in Operation Mode A, then IMSI DETACH INDICATION shall be send by the UE.			
Default		NAS_OtherwiseFail			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_SwitchOnOff]			UE can actually be switched off
2		+ts_MMI_UE_SwitchOff			
3		+ts_SetTmpCellInfo (p_CellId)			Get CellInfo to be used later
4		+ts_RRC_ConnEst(p_CellId, est_MO, detach)			
5		+lt_Detach			
6		+ts_RRC_ConnRel(p_CellId, cell_Dch)			
7		[TRUE]			UE power supply must be removed
8		+ts_MMI_UE_PwrOff			
		lt_Detach			
9		[(tcv_TmpCellInfo.attFlag = tsc_AttOn) AND (tcv_UE_OpMode = opModeA)]			
10		+lt_GMM_and_IMSI_Detach			
11		[TRUE]			
12		+lt_GMM_Detach			
		lt_GMM_Detach			
13		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_DetachReq (c_DetachType('1B, 0?1B), c_MobileIDPTMSI (tcv_AssignedPTMSI), c_PTMSI_Signature_tlv (tcv_Assigned_PTMSI_Sig)))	(P)	DETACH REQUEST - Detach type 'power switched off, GPRS detach' or 'power switched off, GPRS/IMSI detach'
14		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
		lt_GMM_and_IMSI_Detach			
15		+lt_GMM_Detach			
16		Dc ? RRC_DataInd	car_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, c_IMSI_DetachInd)	(P)	IMSI DETACH INDICATION
17		Dc ? RRC_DataInd	car_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, c_IMSI_DetachInd)	(P)	IMSI DETACH INDICATION
18		+lt_GMM_Detach			

2.5 Modifications to tables added from NASv143

2.5.1 c_GMM_AttachTypePS_Only

Reason for change: The newly added constraint c_GMM_AttachTypePS_Only assumes that a UE will not include a follow on request, however it may be legitimate for it to do so and is irrelevant to the purposes of this test.

Summary of Change: Update the c_GMM_AttachTypePS_Only constraint to accept any value for the Follow On Request field.

Change the Structured Type Constraint Declaration from:

Constraint Name	c_GMM_AttachTypePS_Only			
Structured Type	AttachType			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	for	'0'B		No follow on request
	type	'001'B		GPRS attach

To:

Constraint Name	c_GMM_AttachTypePS_Only			
Structured Type	AttachType			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	for	'		
	type	'001'B		GPRS attach

2.5.2 tc_11_3_1

Reason for change: The newly added existing TTCN configures two cells although this is a single cell test case. For UEs supporting both PS and CS but not automatically attaching on switch on for PS, it is necessary to allow the UE to perform a location update for CS before the AT command for PS attach is acknowledged. To provide compatibility between this test case added from the v143 suite and existing test steps ts_SS_SecurityDownloadStart and ts_RRC_Security already present in the v310 suite. To optionally receive an Activate PDP Context Request message from the UE. To send Activate PDP Context Reject to the UE if an Activate PDP Context Request message is received. To optionally receive (and ignore) a Detach Request from the UE if the Activate PDP Context Reject is sent to the UE.

Summary of Change: Use ts_GMM_Config_CellA instead of ts_GMM_Config_CellA_CellB, and remove other references to CellB. Move the TriggerrGMM_Attach function to after the test step ts_RegistrationOnCS_IfOpModeA. The parameters to test steps ts_SS_SecurityDownloadStart and ts_RRC_Security, have been adjusted to suit the v310 suite. The constraint c_AuthCiphRspExtAny has been passed into the Authentication and Ciphering Response constraint instead of c_AuthRspExtAny. Add the local tree It_TimeoutOrReceiveActivatePdpContextRequest to deal with the Activate PDP Context Request message which may be received from the UE.

Change test case from:

Test Case Name	tc_11_3_1		Constraint Ref	Verdict	Comments
Nr	Label	Behaviour Description			
2		+ts_InitVariables			
3		(tcv_CellInfoA.nmo := tsc_NMO_II, tcv_CellInfoB.attenuationLevel := tsc_AttenuationSuitableNeighbourCell, tcv_CellInfoB.nmo := tsc_NMO_II, tcv_CellInfoB.rac := tsc_RAC_2)			Test case specific cell settings
4		+ts_GMM_Config_CellA_CellB			Configure cell A and cell B
5		+ts_GMM_AttachReject (tsc_CellA)			Invalidate temporary USIM parameters
19		(tcv_TestBody := TRUE)		(P)	
20		+ts_MMI_UE_SwitchOnTriggerGMM_Attach			Switch on UE and attempt to initiate the attach procedure.
21		+ts_RegistrationOnCS_IfOpModeA(tsc_CellA, px_TMSI_Def)			
22		+lt_Attach_Steps_3To5			
25		+lt_ServiceRequest_Steps_7To9			
26		+ts_GMM_DetachOnSwitchOff (tsc_CellA)			Steps 10 to 11
27		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachTypePS_Only, c_MobileIdIMSI_lv, ?, -, tcv_PS_KeySeq))		Step 3. ATTACH REQUEST - Attach type is 'PS attach' - Mobile Id = IMSI
28		+ ts_SS_SecurityDownloadStart (tsc_CellA, tcv_Start)			
29		+ts_GMM_AuthenticateAndStartIntegrityProtection (tsc_CellA)			
34		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_ServiceRequest(c_ServiceTypeSignalling, c_MobileIdPTMSI_lv (tcv_AssignedPTMSI), tcv_PS_KeySeq))		Step 7. SERVICE REQUEST - Service type is 'signalling' - Mobile Id is current P-TMSI
35		+ ts_SS_SecurityDownloadStart (tsc_CellA, tcv_Start)			
36		+ts_GMM_AuthenticationInit			
37		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		Step 8. AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
38		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthRspExtAny))		Step 9. AUTHENTICATION AND CIPHERING RESPONSE including Authentication Response parameters (RES)
39		+ ts_RRC_Security (tsc_CellA, TRUE, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			Start ciphering and integrity protection
40		+ts_RRC_ConnRel(tsc_CellA, cell_Dch)			

To:

Test Case Name		tc_11_3_1		Verdict	Comments
Nr	Label	Behaviour Description	Constraint Ref		
2		+ts_InitVariables			
3		(tcv_CellInfoA.nmo := tsc_NMO_II)			Test case specific cell settings
4		+ts_GMM_Config_CellA			Configure cell A
5		+ts_GMM_AttachReject (tsc_CellA)			Invalidate temporary USIM parameters
19		(tcv_TestBody := TRUE)		(P)	
20		+ts_MM1_UE_SwitchOn			Switch on UE and attempt to initiate the attach procedure.
21		+ts_RegistrationOnCS_IfOpModeA(tsc_CellA, px_TMSI_Def)			
22		+ts_AT_TriggerGMM_Attach			
23		+It_Attach_Steps_3To5			
25		+It_ServiceRequest_Steps_7To9			
26		+ts_GMM_DetachOnSwitchOffPreamble (tsc_CellA)			Steps 10 to 11
28		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachTypePS_Only, c_MobileIdIMSI_Iv (? , -, tcv_PS_KeySeq))		Step 3. ATTACH REQUEST - Attach type is 'PS attach' - Mobile Id = IMSI
29		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
30		+ts_GMM_AuthenticateAndStartIntegrityProtection (tsc_CellA)			
35		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_ServiceRequest(c_ServiceTypeSignalling, c_MobileIdPTMSI_Iv (tcv_AssignedPTMSI), tcv_PS_KeySeq))		Step 7. SERVICE REQUEST - Service type is 'signalling' - Mobile Id is current P-TMSI
36		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
37		+ts_GMM_AuthenticationInit			
38		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		Step 8. AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
39		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv, c_AuthCiphRspExtAny_tv))		Step 9. AUTHENTICATION AND CIPHERING RESPONSE including Authentication Response parameters (RES)
40		+ ts_RRC_Security (tsc_CellA, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			Start ciphering and integrity protection
41		+It_TimeoutOrReceiveActivatePdpContextRequest			
42		+ts_RRC_ConnRel(tsc_CellA, cell_Dch)			
43		It_TimeoutOrReceiveActivatePdpContextRequest			
44		START t_3390			
44		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg, tcv_TL_R := tcv_ActPDP_ContextReq.tl)	car_PS_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqMO_Any)		
45		+ts_SetTl_Rsp (tcv_TL_R)			
46		Dc ! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_ActPDP_ContextReqRejMTI (tcv_TL_S, cb_SM_Cause_v ('1FO', OMIT)))		
47		Dc ? RRC_DataInd	car_PS_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_DetachReq (? , *))		
48		CANCEL t_3390		(P)	
49		? TIMEOUT t_3390		(P)	
50		? TIMEOUT t_3390		(P)	

2.5.3 ts_MM_SecurityOn

Reason for change: To be compatible with the redefined ts_RRC_Security in suite v310.

Summary of Change: Remove parameter 2 from the call to ts_RRC_Security in line 1.

Change test step from:

Test Step Name		ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_RRC_Security(p_CellId, TRUE , tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

To:

Test Step Name		ts_MM_SecurityOn (p_CellId: INTEGER; p_On: BOOLEAN; p_NewKey : BOOLEAN; p_CN_domain: CN_DomainIdentity)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

2.5.4 ts_GMM_AuthenticateAndStartIntegrityProtection

Reason for change: To be compatible with the redefined ts_RRC_Security in suite v310.

Summary of Change: Remove parameter 2 from the call to ts_RRC_Security in line 2.

Change test step from:

Test Step Name		ts_GMM_AuthenticateAndStartIntegrityProtection (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_GMM_Authentication (p_CellId)			
2		+ts_RRC_Security(p_CellId, TRUE , tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

To:

Test Step Name		ts_GMM_AuthenticateAndStartIntegrityProtection (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_GMM_Authentication (p_CellId)			
		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, p_NewKey, p_CN_domain)			

2.5.5 ts_GMM_AuthenticateAndStartIntegrityProtection

Reason for change: To be compatible with the ts_SS_SecurityDownloadStart in suite v310. To reorder the mcc and mnc parameters passed into the Location Update Accept constraint in line 7.

Summary of Change: Changes as detailed below.

Change test step from:

Test Step Name		ts_RegistrationOnCS (p_CellId : INTEGER; p_TMSI : OCTETSTRING)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...		...			
2		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
3		Dc?RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_InitDirectTransfer(p_CellId, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
4		+ ts_SS_SecurityDownloadStart (p_CellId, tcv_Start)			
5		+ts_MM_Authentication(p_CellId)			AUTHENTICATION REQUEST AUTHENTICATION RESPONSE
6		+ ts_MM_SecurityOn (p_CellId, px_CipheringOnOff, FALSE, cs_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
7		Dc!RRC_DataReq (tcv_AssignedTMSI := p_TMSI)	ca_DataReq(p_CellId, tsc_RB3, cs_LocUpdAcqTMSI_2(tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.lac, p_TMSI))		LOCATION UPDATING ACCEPT
8		Dc?RRC_DataInd	car_UplinkDirectTransfer(p_CellId, tsc_RB3, c_TMSI_ReallocCmpl)		TMSI REALLOCATION COMPLETE
9		+ts_RRC_ConnRel(p_CellId, cell_Dch)			

To:

Test Step Name		ts_RegistrationOnCS (p_CellId : INTEGER; p_TMSI : OCTETSTRING)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
...		...			
2		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
3		Dc?RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_InitDirectTransfer(isc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
4		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
5		+ts_MM_Authentication(p_CellId)			AUTHENTICATION REQUEST AUTHENTICATION RESPONSE
6		+ ts_MM_SecurityOn (p_CellId, px_CipheringOnOff, FALSE, cs_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
7		Dc!RRC_DataReq (tcv_AssignedTMSI := p_TMSI)	ca_DataReq(p_CellId, tsc_RB3, cs_LocUpdAcqTMSI_2(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac, p_TMSI))		LOCATION UPDATING ACCEPT
8		Dc?RRC_DataInd	car_UplinkDirectTransfer(isc_CellDedicated, tsc_RB3, c_TMSI_ReallocCmpl)		TMSI REALLOCATION COMPLETE
9		+ts_RRC_ConnRel(p_CellId, cell_Dch)			

CHANGE REQUEST

⌘ **34.123-3 CR 062** ⌘ rev - ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Test Case 12.9.2		
Source:	⌘ Anritsu Ltd		
Work item code:	⌘ -	Date:	⌘ 25/04/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To introduce test case 12.9.2 to NASv310		
Summary of change:	⌘ - 0 table deleted from NASv310, - 5 tables modified in NASv310, - 15 tables added from NASv143, - 3 new tables created. For more details see below.		
Consequences if not approved:	⌘ Test case 12_9_2 will not be added		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title	The introduction of test case 12.9.2 into NASv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

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1 Overview

This document details the changes needed introduce test case 12.9.2 to NASv310 by using NASv143 as the primary source of the new tables and applying only essential fixes to the TTCN.

2 Changes required for test-case 12.9.2

2.1 Tables deleted from NASv310

None

2.2 Tables modified in NASv310

2.2.1 c_CellInfoDef

Reason for change: For consistency with CR 030417 for 11.1.1.1.

Summary of Change: Update the c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I (this has no effect on 12.9.2 as the use of network mode of operation II is hard coded).

Change the Structured Type Constraint Declaration from:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	tsc_NMO_I		
	ura_Identity	p_URA_Id		
			

To:

Constraint Name	c_CellInfoDef (p_CellId : INTEGER; p_priScrmCode : PrimaryScramblingCode; p_URA_Id : BITSTRING; p_tCell : Tcell; p_sfnOffset : INTEGER; p_FreqInfo : FrequencyInfo; p_UL_ScramblingCode : UL_ScramblingCode)			
Structured Type	CellInfoCfg			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
			
	attFlag	tsc_AttOn		
	nmo	px_NMO		
	ura_Identity	p_URA_Id		
			

2.2.2 c_IMSI_DetachInd

Reason for change: The existing constraint checks that the UE is using IMSI as its Mobile ID for CS whereas it should be using TMSI in the situation where this constraint is used.

Summary of Change: Replace c_MobileIdIMSI_Iv with c_MobileIdTMSI_Iv.

Change the PDU Type Constraint Declaration from:

Constraint Name	c_IMSI_DetachInd		
PDU Type	IMSIDETACHINDICATION		
Derivation Path			
Encoding Variation			
Comments			
	Element Name	Element Value	Element Encoding
		
	mSClsmk1	tsc_AttOn	
	nmo	c_MS_Clsmk1_Def	
	mobileId	c_MobileIdIMSI_Iv	

To:

Constraint Name	c_IMSI_DetachInd		
PDU Type	IMSIDETACHINDICATION		
Derivation Path			
Encoding Variation			
Comments			
	Element Name	Element Value	Element Encoding
		
	mSClsmk1	tsc_AttOn	
	nmo	c_MS_Clsmk1_Def	
	mobileId	c_MobileIdTMSI_Iv	

2.2.3 cr_AttachReq

Reason for change: The information element “oldPTMSI_Signature” is optional in an ATTACH REQUEST nas message. The constraint should reflect this fact.

Summary of Change: Change the cr_AttachReq constraint to make oldPTMSI_Signature optional.

Change the TCN PDU Constraint Declaration from:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig		
	readyTimer	*		
			

To:

Constraint Name	cr_AttachReq (p_AttachType : AttachType; p_MobId : MS_Identity_Iv; p_RAI : RAI_v; p_PTMSISig : PTMSI_Signature; p_KeySeq : KeySeq)			
PDU Type	ATTACHREQUEST			
Derivation Path				
Encoding Rule Name				
Encoding Variation				
Comments				
	Field Name	Field Value	Field Encoding	Comments
			
	msRadioAccessCap	?		
	oldPTMSI_Signature	p_PTMSISig IF_PRESENT		
	readyTimer	*		
			

2.2.4 ts_GMM_Authentication

Reason for change: The constraint which checks the Authentication and Ciphering Response message refers to the structured type constraint `c_AuthRspExtAny_tv`. This structured type constraint is also referenced elsewhere when checking an Authentication Response message. Although the two information elements are the same, they have different tag values in the two messages. A new structured type constraint called `c_AuthCiphRspExtAny_tv`, detailed in section 2.3.2.2, has been added with the correct tag value and needs to be referenced instead.

Summary of Change: Change line 3 to refer to the new constraint.

Change test step from:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
				

To:

Test Step Name		ts_GMM_Authentication (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
				
2		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated , tsc_RB3, cs_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_tv(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthCiphRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response paramters
4		(tcv_Res := o_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response paramters match expected response.
				

2.2.5 ts_GMM_AttachReject

Reason for change: The existing test step did not satisfactorily handle CS registration, in particular the UE could be in a state where the MM requests the RRC to abort the connection when the GMM attach procedure is in progress.

Summary of Change:

Replace the entire table with the following which is based on GMM_IdleUpdated

Test Step Name		ts_GMM_AttachReject (p_CellId : INTEGER)			
Group		BasicM_MM_GMM_Steps/			
Objective		Force UE to invalidate its SIM for PS parameters, i.e. to delete P-TMSI, P-TMSI signature, RAI and ciphering key sequence number Note: That in case of class A mobile and Network Mode of Operation II, the UE is allowed to register to CS services (normal Location Update procedure)			
Default		NAS_OtherwiseFail			
Comments		Initial conditions: - Cell referenced by p_CellId is configured - UE is switched off Procedure: - UE is forced to perform an Attach procedure - SS rejects the attach request from the UE which forces the UE to invalidate its USIM.			
Description		Attach reject procedure			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			
2		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_I)]			If UE is in operation mode A and network mode of operation is I, then run combined PS/CS procedures.
3		+lt_GMMAttachReject			
4		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II)]			If UE is in operation mode A and network mode of operation is II, then run first CS Idle Updated procedures, and then GMM procedure (for PS only attach).
5		+ts_MM_IdleUpdated(p_CellId)			
6		+lt_GMMAttachReject			
7		(tcv_PS_KeySeq := '111B')			Invalidate ciphering key sequence number
8		+ts_MMI_UE_SwitchOff			
9		[tcv_UE_OpMode = opModeC]			If UE is in operation mode C, then run GMM procedure (for PS only attach).
10		+lt_GMMAttachReject			

11	ERR	[TRUE]		I	Programming error
		lt_GMMAttachReject			
12		+ts_MMI_UE_SwitchOnTriggerGMM_Attach			
13		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			Establish RRC connection
14		+lt_AttachRequest			ATTACH REQUEST
15		[TRUE]			+ts_GMM_Authenticati on (p_CellId) AUTHENTICATION AND CIPHERING REQUEST AUTHENTICATION AND CIPHERING RESPONSE
16		[TRUE]			+lt_SecurityMode SECURITY MODE COMMAND SECURITY MODE COMPLETE
17		+lt_AttachReject			ATTACH REJECT
18		+lt_RRC_ConnRel			RRC connection release
		lt_AttachRequest			
19		Dc ? RRC_DataInd (tcv_TmpAttachReqPDU := RRC_DataInd.msg, tcv_TmpB3:= tcv_TmpAttachReqPDU.attachType.type, tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_AttachTypeAny, c_MobileIdAny_Iv, c_RAI_Any_v, c_PTMSI_SignatureAny, ?))		ATTACH REQUEST - Extract Attach type requested
20		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
21		[(tcv_TmpB3 = '011'B) AND (tcv_TmpCellInfo.nmo = tsc_NMO_I)]			Set global variable according to the type of attach requested by UE
22		(tcv_UE_OpMode := opModeA)			
23		[tcv_TmpCellInfo.nmo = tsc_NMO_I]			
24		(tcv_UE_OpMode := opModeC)			
25		[TRUE]			
		lt_SecurityMode			
26		+ ts_RRC_Security (p_CellId, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
		lt_AttachReject			
27		Dc ! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_AttachRej('08'0)		ATTACH REJECT - GMM cause 'GPRS and non-GPRS services not allowed'
		lt_RRC_ConnRel			
28		[(tcv_TmpCellInfo.cellConfig = cell_FACH) OR			

	(tcv_TmpCellInfo.cellConfig cell_FACH_2_SCCPCH_StandAlonePCH) OR (tcv_TmpCellInfo.cellConfig cell_FACH_2_PRACH) OR (tcv_TmpCellInfo.cellConfig cell_FACH_2_SCCPCH) OR (tcv_TmpCellInfo.cellConfig cell_FACH_3_SCCPCH_4_FACH_Cnfg1) OR (tcv_TmpCellInfo.cellConfig cell_FACH_3_SCCPCH_4_FACH_Cnfg2) OR (tcv_TmpCellInfo.cellConfig cell_FACH_3_SCCPCH_3_FACH_CTCH)]	=			
29	+ ts_RRC_ConnRel (p_CellId, cell_Fach_Dch)				
30	[tcv_TmpCellInfo.cellConfig <> cell_FACH]				
31	+ ts_RRC_ConnRel (p_CellId, cell_Dch)				
Detailed Comments	See 3GPP 24.008 / 4.7 and also 3GPP 34.108 / 7.2.2 (Registration on PS) See also the detailed description in test Step ts_MM_IdleUpdated, on which this test Step is based.				

2.3 Tables added to NASv310

2.3.1 Tables from NASv143 – no changes necessary

pc_SupportOpModeA
px_SupportOpModeC
c_GMM_AttachResultPS_Only
c_ServiceTypePagingResp
c_MobileIdTMSILoc
cs_LocUpdAcpTMSI_2
ts_GMM_Config_CellA
ts_MMI_SetOpModeA
ts_MMI_SetOpModeC
ts_RegistrationOnCS_IfOpModeA
ts_Paging_PTMSI

2.3.2 Other Tables

2.3.2.1 px_NMO

This table is not based on one in any existing ATS.

Reason for change: For consistency with CR 030417 for 11.1.1.1.

Summary of Change: Table added to suite.

Add Test Suite Parameter Declaration:

Parameter Name	px_NMO
Type	OCTETSTRING
PICS/PIXIT Ref	
Comments	Network Mode of Operation Valid values are '00'O - NMO I '01'O - NMO II

2.3.2.2 c_AuthCiphRspExtAny

This table is not based on one in any existing ATS.

Reason for change: The existing constraint c_AuthRspExtAny was referenced by both 'Authentication Response' and 'Authentication And Ciphering Response' receive constraints. This will not work, as the tag value for this IE is different for the two NAS messages. The new constraint has been introduced to get around that problem. Use of this new constraint is detailed in section 2.2.4.

Summary of Change: Table added to suite.

Add Structured Type Constraint Declaration:

Constraint Name	c_AuthCiphRspExtAny			
Structured Type	AuthRspExt			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	lei	'00101001'B		
	lel	?		
	rES	?		

2.3.2.3 ts_GMM_DetachOnSwitchOffPreamble

This table is based on ts_GMM_DetachOnSwitchOff issued in NASv310 but modified as follows:

Reason for change: The existing test step ts_GMM_DetachOnSwitchOff did not allow for the possibility that for UE operation mode A and Network Mode of Operation II the CS IMSI detach and PS detach may occur in either order. The behaviour has therefore been modified to allow for this situation – this has been done in a new test step because the existing test step is used in the test body of other test cases.

Summary of Change: Table added to suite.

Add test step:

Test Step Name		ts_GMM_DetachOnSwitchOffPreamble (p_CellId : INTEGER)			
Group		BasicM_MM_GMM_Steps/			
Objective		Turn off UE and execute GMM Detach procedure for properly detach PS or combined PS/CS services on the cell referenced by p_CellId. Additionally, if Attach Flag is set, and the UE is in Operation Mode A, then IMSI DETACH INDICATION shall be send by the UE.			
Default		NAS_OtherwiseFail			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_SwitchOnOff]			UE can actually be switched off
2		+ts_MMI_UE_SwitchOff			
3		+ts_SetTmpCellInfo (p_CellId)			Get CellInfo to be used later
4		+ts_RRC_ConnEst(p_CellId, est_MO, detach)			
5		+lt_Detach		I	
6		+ts_RRC_ConnRel(p_CellId, cell_Dch)			
7		[TRUE]			UE power supply must be removed
8		+ts_MMI_UE_PwrOff			
		lt_Detach			
9		[((tcv_TmpCellInfo.attFlag = tsc_AttOn) AND (tcv_UE_OpMode = opModeA)]			
10		+lt_GMM_and_IMSI_Detach			
11		[TRUE]			
12		+lt_GMM_Detach			
		lt_GMM_Detach			
13		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_DetachReq (c_DetachType('1'B, '0?'1'B), c_MobileIdPTMSI (tcv_AssignedPTMSI), c_PTMSI_Signature_tlv (tcv_Assigned_PTMSI_Sig)))	(P)	DETACH REQUEST - Detach type 'power switched off, GPRS detach' or 'power switched off, GPRS/IMSI detach'
14		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
		lt_GMM_and_IMSI_Detach			
15		+lt_GMM_Detach			
16		Dc ? RRC_DataInd	car_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, c_IMSI_DetachInd)	(P)	IMSI DETACH INDICATION
16		Dc ? RRC_DataInd	car_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, c_IMSI_DetachInd	(P)	IMSI DETACH INDICATION

		+lt_GMM_Detach)		
--	--	----------------	---	--	--

2.3.2.4 ts_MMI_UE_TriggerGMM_Attach_IfNotAutomatic

This table is not based on one in any existing ATS.

Reason for change: In the case of a UE supporting both PS and CS, not automatically attaching on switch on for PS, it is necessary to allow for the UE performing a location update for CS before the AT command for the PS attach is acknowledged. This test step is used in tc_12_3_1_2 as modified to cause the PS Attach to be initiated after the CS location update has been performed if necessary.

Summary of Change: Table added to suite.

Add test step:

Test Step Name		ts_MMI_UE_TriggerGMM_Attach_IfNotAutomatic			
Group		BasicM_UT_Steps/			
Objective					
Default					
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[pc_AutomaticAttachSwitchON]			If UE supports automatic Attach at switch ON, do nothing.
2		[NOT pc_AutomaticAttachSwitchON]			If not, then trigger UE via AT command to start PS attach procedure.
3		+ts_NAS_Delay(tsc_TWaitSysInfo)			
4		+ts_AT_TriggerGMM_Attach			trigger UE to initiate GMM Attach after allowing the UE to decode Sys Infos

2.3.2.5 c_GMM_AttachTypePS_Only

This table is based on that issued in NASv143 but modified as follows:

Reason for change: It was assumed that the UE would not include a follow on request, however it may be legitimate for it to do so and it is irrelevant to the test.

Summary of Change: The Follow On Request field is changed to AnyValue.

Change the Structured Type Constraint Declaration from:

Constraint Name		c_GMM_AttachTypePS_Only			
Structured Type		AttachType			
Derivation Path					
Encoding Variation					
Comments					
	Element Name	Element Value	Element Encoding	Comments	
	for	'0'B		No follow on request	
	type	'001'B		GPRS attach	

To:

Constraint Name		c_GMM_AttachTypePS_Only			
Structured Type		AttachType			
Derivation Path					
Encoding Variation					
Comments					
	Element Name	Element Value	Element Encoding	Comments	

	for	?		
	type	'001'B		GPRS attach

2.3.2.6 tc_12_9_2

This table is based on that issued in NASv143 but modified as follows:

Reason for change:

1. The existing TTCN configures two cells although this is a single cell test case.
2. In the case of a UE supporting both PS and CS, not automatically attaching on switch on for PS, it is necessary to allow for the UE performing a location update for CS before the AT command for the PS attach is acknowledged
3. The new test step `ts_GMM_DetachOnSwitchOffPreamble` described in section 2.3.2.3 should be used.
4. The prose indicates that authentication should be performed during the attach in the test body
5. To provide compatibility between this test case added from v143 suite and existing test steps `ts_SS_SecurityDownloadStart` and `ts_RRC_Security` already present in v310 suite.

Summary of Change:

1. Use `ts_GMM_Config_CellA` instead of `t_GMM_Config_CellA_CellB` and remove other references to Cell B
2. The AT command triggering PS attach has been split from the MMI command to switch the UE on and moved after the CS location update procedure where applicable.
3. Use `ts_GMM_DetachOnSwitchOffPreamble` described in section 2.4.3 instead of `ts_GMM_DetachOnSwitchOff`.
4. The authentication procedure has been added and corresponding changes made to the handling of start values and key sequence numbers.
5. Adjust the parameters to the two called test steps as detailed.

Test Case Name		tc_12_9_2			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		START t_Guard(300)			
2		+ts_InitVariables			
3		(tcv_CellInfoA.nmo := tsc_NMO_II, tcv_CellInfoB.attenuationLe vel := tsc_AttenuationSuitableNeig hbourCell, tcv_CellInfoB.nmo := tsc_NMO_II, tcv_CellInfoB.rac := tsc_RAC_2)			
4		+ts_GMM_Config_CellA_C ellB			
5		+ts_GMM_AttachReject (tsc_CellA)			
19		(tcv_TestBody := TRUE)			
20		+ts_MMI_UE_SwitchOnTrig gerGMM_Attach			
21		+ts_RegistrationOnCS_If OpModeA(tsc_CellA, px_TMSI_Def)			
22		+lt_Attach_Steps_3To5			
24		+lt_ServiceRequest_Steps_ 7To9			
25		+ts_GMM_DetachOnSwit chOff (tsc_CellA)			
		lt_Attach_Steps_3To5			
26		+ts_RRC_ConnEst(

		tsc_CellA, est_Reg, registration)			
27		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachTypePS_Only, c_MobileIdIMSI_lv, ?, -, tcv_PS_KeySeq))		Step 3. ATTACH REQUEST - Attach type is 'PS attach' - Mobile Id = IMSI
28		+ ts_SS_SecurityDownloadStart (tsc_CellA, tcv_Start)			
29		+ts_GMM_StartIntegrityProtec tion (tsc_CellA)			
30		Dc ! RRC_DataReq (tcv_AssignedPTMSI := px_PTMSI_Def, tcv_Assigned_PTMSI_Sig := px_PTMSI_SigDef)	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_AttachAcc(c_GMM_AttachResultPS_Only , c_RAI_Def_v, c_PTMSI_Signature (px_PTMSI_SigDef), c_MobileIdPTMSI (px_PTMSI_Def), -))		Step 4. ATTACH ACCEPT - Attach result 'PS attached' - RAI default (RAI-1) - P-TMSI-1 signature - MobileId P-TMSI-1
34		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_ServiceRequest(c_ServiceTypePagingResp, c_MobileIdPTMSI_lv (tcv_AssignedPTMSI), tcv_PS_KeySeq))		Step 7. SERVICE REQUEST - Service type is 'Paging response' - Mobile Id is current P- TMSI
35		+ ts_SS_SecurityDownloadStart (tsc_CellA, tcv_Start)			
36		+ts_GMM_AuthenticationInit			
38		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU .authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU .authRspExt)	car_PS_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthRsp ExtAny))		Step 9. AUTHENTICATION AND CIPHERING RESPONSE including Authentication Response paramters (RES)
39		+ ts_RRC_Security (tsc_CellDedicated, TRUE, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			Start ciphering and integrity protection
40		+ts_RRC_ConnRel(tsc_C ellA, cell_Dch)			

Test Case Name		tc_12_9_2			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		START t_Guard(300)			
2		+ts_InitVariables			
3		(tcv_CellInfoA.nmo := tsc_NMO_II)			
4		+ts_GMM_Config_CellA			
5		+ts_GMM_AttachReject (tsc_CellA)			
19		(tcv_TestBody := TRUE)			
20		+ ts MMI UE SwitchOn			
21		+ts_RegistrationOnCS_If OpModeA(tsc_CellA, px_TMSI_Def)			
		+ts_MMI_UE_TriggerG MM_Attach_IfNotAutom atic			
22		+lt_Attach_Steps_3To 5			
24		+lt_ServiceRequest_Steps_ 7To9			
25		+ts_GMM_DetachOnSwit chOffPreamble (tsc_CellA)			
		lt_Attach_Steps_3To5			
27		+ts_RRC_ConnEst(tsc_CellA, est_Reg, registration)			
28		Dc ? RRC_DataInd (tcv_Start := 00000000000000000000'B)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachTypePS_Only, c_MobileIdIMSI_Iv, ?, -, tcv_PS_KeySeq))		Step 3. ATTACH REQUEST - Attach type is 'PS attach' - Mobile Id = IMSI
29		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
30		+ts_GMM_AuthenticateAndSt artIntegrityProtection (tsc_CellA)			
31		Dc ! RRC_DataReq (tcv_AssignedPTMSI := px_PTMSI_Def, tcv_Assigned_PTMSI_Sig := px_PTMSI_SigDef)	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_AttachAcc(c_GMM_AttachResultPS_Only , c_RAI_Def_v, c_PTMSI_Signature (px_PTMSI_SigDef), c_MobileIdPTMSI (px_PTMSI_Def), -))		Step 4. ATTACH ACCEPT - Attach result 'PS attached' - RAI default (RAI-1) - P-TMSI-1 signature - MobileId P-TMSI-1
34		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_ServiceRequest(c_ServiceTypePagingResp, c_MobileIdPTMSI_Iv (tcv_AssignedPTMSI), tcv_PS_KeySeq))		Step 7. SERVICE REQUEST - Service type is 'Paging response' - Mobile Id is current P- TMSI
35		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
36		+ts_GMM_AuthenticationInit			

38		<pre>Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU := RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU .authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU .authRspExt)</pre>	<pre>car_PS_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthRsp ExtAny))</pre>		<p>Step 9. AUTHENTICATION AND CIPHERING RESPONSE including Authentication Response paramters (RES)</p>
39		<pre>+ ts_RRC_Security (tsc_CellA, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)</pre>			<p>Start ciphering and integrity protection</p>
40		<pre>+ts_RRC_ConnRel(tsc_C ellA, cell_Dch)</pre>			

2.3.2.7 ts_RegistrationOnCS

This table is based on that issued in NASv143 but modified as follows:

Reason for change:

1. As authentication is carried out the start value should be reset
2. To provide compatibility between test step ts_GMM_DetachMO added from v143 suite and existing test steps ts_SS_SecurityDownloadStart and ts_RRC_Security already present in v310 suite.
3. To provide compatibility with the constraints car_InitDirectTransfer , cs_LocUpdAcpTMSI_2 and car_UplinkDirectTransfer.

Summary of Change:

1. Set tcv_start to zero and call ts_RRC_Security directly.
2. Adjust the parameters to the two called test steps as detailed.
3. Adjust the parameters to the three constraints as detailed.

Change test step from:

Test Step Name		ts_GMM_DetachMO (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			Fetch SS_Cell_Info table corresponding
2		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
3		Dc?RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_InitDirectTransfer(p_CellId, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
4		+ ts_SS_SecurityDownloadStart (p_CellId, tcv_Start)			
5		+ts_MM_Authentication(p_CellId)			AUTHENTICATION REQUEST AUTHENTICATION RESPONSE
6		+ ts_MM_SecurityOn (p_CellId, px_CipheringOnOff, FALSE, cs_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
7		Dc!RRC_DataReq (tcv_AssignedTMSI := p_TMSI)	ca_DataReq(p_CellId, tsc_RB3, cs_LocUpdAcpTMSI_2(tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.lac, p_TMSI))		LOCATION UPDATING ACCEPT
8		Dc?RRC_DataInd	car_UplinkDirectTransfer(p_CellId, tsc_RB3, c_TMSI_ReallocCmpl)		TMSI REALLOCATION COMPLETE
9		+ts_RRC_ConnRel(p_CellId, cell_Dch)			

to:

Test Step Name		ts_GMM_DetachMO (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			Fetch SS_Cell_Info table correpoding
2		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
3		Dc?RRC_DataInd (tcv_Start := 00000000000000000000'B)	car_InitDirectTransfer(isc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
4		+ ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			
5		+ts_MM_Authentication(p_Cel lId)			AUTHENTICATION REQUEST AUTHENTICATION RESPONSE
6		+ts_RRC_Security p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, FALSE, cs_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
7		Dc!RRC_DataReq (tcv_AssignedTMSI := p_TMSI)	ca_DataReq(p_CellId, tsc_RB3, cs_LocUpdAcpTMSI_2(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac, p_TMSI))		LOCATION UPDATING ACCEPT
8		Dc?RRC_DataInd	car_UplinkDirectTransfer(isc_CellDedicated, tsc_RB3, c_TMSI_ReallocCmpl)		TMSI REALLOCATION COMPLETE
9		+ts_RRC_ConnRel(p_CellId, cell_Dch)			

2.3.2.8 ts_GMM_AuthenticateAndStartIntegrityProtection

This table is based on that issued in NASv143 but modified as follows:

Reason for change: To provide compatibility between test step ts_GMM_AuthenticateAndStartIntegrityProtection added from v143 suite and existing test step ts_RRC_Security already present in v310 suite.

Summary of Change: Adjust the parameters to the called test step as detailed.

Change test case from:

Test Step Name		ts_GMM_AuthenticateAndStartIntegrityProtection (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_GMM_Authentication (p_CellId)			
2		+ ts_RRC_Security (p_CellId, TRUE, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)	.....		.....

to:

Test Step Name		ts_GMM_AuthenticateAndStartIntegrityProtection (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_GMM_Authentication (p_CellId)			
2		+ ts_RRC_Security (p_CellId, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)	.....		.....

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 063** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Addition of GMM test case 12.3.2.1 to NAS ATS V3.1.0		
Source:	⌘ Rohde & Schwarz		
Work item code:	⌘ N/A	Date:	⌘ 06/05/2003
Category:	⌘ B	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To add verified GMM test case 12.3.2.1 to the approved NAS ATS V3.1.0		
Summary of change:	⌘ This document lists all changes applied to test case 12.3.2.1 required for approval. See detailed change description for further information.		
Consequences if not approved:	⌘ Test case will not be added to ATS		

Clauses affected:	⌘ N/A										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

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Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Title: Changes to test case 12.3.2.1 required for approval
Source: Rohde & Schwarz
Agenda Item: TTCN Issues
Document for: Approval
Contact: Thomas Moosburger
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Tel. +49 89 4129 11731

1 Overview

This document details the changes needed to correct problems in the TTCN implementation of test case 12.3.2.1 which is part of the NAS test suite. Only essential changes to the TTCN are applied and documented in section 4.

With these changes applied the test case can be demonstrated to run with one or more 3G UEs (see section 6). Execution log files are provided as evidence.

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3 Verification Test Summary

Test Case: TC_12_3_2_1
Test Group: GMM/Detach_procedures/NW_initiated_detach/
ATS Version: V1.44 + essential modifications
System Simulator used: Rohde & Schwarz 3G system simulator CRTU-W
UE used: Nokia 3G UE 6650
Verification Status: PASS

4 Corrections required for test case 12.3.2.1

4.1 Introduction

This section describes the changes required to make test case 12.3.2.1 run correctly with a 3G UE. All modifications are marked with label "**WA#BasicM<number>**" for changes to the BasicM TTCN module and with label "**WA#NAS<number>**" for NAS related changes in the TTCN comments column of the enclosed NAS ATS [1].

The NAS ATS version used as basis was NASv144.mp provided by MCC 160. As a first step, changes proposed by other TTCN verification teams (for example in Anritsu document [2]) were integrated to this ATS if applicable to the V144 version. A number of additional changes had to be done to get the test case running with the R&S 3G system simulator CRTU-W and the UEs listed in section 6.

4.2 Auth. Resp. without Extension is not accounted for (WA#BasicM4003)

Test step name	ts_GMM_Authentication
Reason for change	No distinction is made between the 3 possible authentication response cases (SRES only, Extension as well, neither of both)
Summary of change	Lines 7-12 have been added, so as to be consistent with the MM procedures.
Source of change	new change
Label	WA#BasicM4003

Test Step					
Test Step Id:	ts_GMM_Authentication (p_CellId : INTEGER)				
Test Step Group Ref:	BasicM_MM_GMM_Steps/				
Objective:	Generate authentication parameters and run the GMM Authentication procedure				
Defaults:	NAS_OtherwiseFail				
Comments:	WA#BasicM4003				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_GMM_AuthenticationInit			Compute all relevant authentication parameters.
2		Dc | RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphReq (c_GMM_AuthRAND(tcv_AuthRAND), c_GMM_KeySeq_b(tcv_PS_KeySeq), c_GMM_AuthAUTN(tcv_AuthAUTN)))		AUTHENTICATION AND CIPHERING REQUEST using relevant PS keys computed before.
3		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU => RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authRspExt)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_t, c_AuthRspExtAny))		AUTHENTICATION AND CIPHERING RESPONSE including both Authentication Response parameters
4		(tcv_Res := e_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, TRUE))			Verify that the received Authentication Response parameters match expected response.
5	TSF1	[tcv_Res = FALSE]		(F)	
6		[tcv_Res = TRUE]		(P)	
7		Dc ? RRC_DataInd (tcv_TmpAuthAndCiphRspPDU => RRC_DataInd.msg, tcv_AuthRsp := tcv_TmpAuthAndCiphRspPDU.authRsp.value)	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRspNoExt (c_AuthRspAny_N))		AUTHENTICATION AND CIPHERING RESPONSE without Authentication Response Extension
8		(tcv_Res := e_AuthRspChk(tcv_AuthRsp, tcv_AuthRspExt, tcv_AuthK, tcv_AuthRAND, FALSE))			Verify that the received Authentication Response parameters match expected response.
9	TSF2	[tcv_Res = FALSE]		(F)	
10		[tcv_Res = TRUE]		(P)	
11	TSF3	Dc ? RRC_DataInd	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRspNone)	(P)	AUTHENTICATION AND CIPHERING RESPONSE without Authentication Response and Authentication Response Extension parameters
12	TSF4	Dc ? RRC_DataInd	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, c_AuthFailAny)	(F)	AUTHENTICATION FAILURE

4.3 Missing constraint cr_AuthAndCiphRspNoExt (WA#BasicM4004)

Constraint name	cr_AuthAndCiphRspNoExt
Reason for change	This change is related to WA#BasicM4003.
Summary of change	Added constraint cr_AuthAndCiphRspNoExt, to be used in line 7 of ts_GMM_Authentication.
Source of change	new change
Label	WA#BasicM4004

PDU Constraint Declaration			
Constraint Name:	cr_AuthAndCiphRspNoExt(p_authRsp : AuthRsp_M)		
Group:			
PDU Name:	AUTHENTICATIONANDCIPHERINGRESPONSE		
Derivation Path:			
Encoding Rule Name:			
Encoding Variator:			
Comments:	WA#BasicM4004		
Field Name	Element Value	Type Encoding	Comments
skipIndicator	0000B		
gMMProtocolDiscriminator	tsc_GMM_PD		
msgType	00010011B		
spare4	0000B		
acRefNo	?		Should be the one sent in the auth request
authRsp	p_authRsp		Authentication parameter RAND
imeisv	-		No IMEISV requested
authRspExt	-		Authentication parameter AUTN, a UMTS challenge is requested

4.4 Missing constraint cr_AuthAndCiphRspNone (WA#BasicM4005)

Constraint name cr_AuthAndCiphRspNone
Reason for change This change is related to WA#BasicM4003.
Summary of change Added Constraint cr_AuthAndCiphRspNone, to be used in line 11 of ts_GMM_Authentication.
Source of change new change
Label WA#BasicM4005

PDU Constraint Declaration			
Constraint Name:	cr_AuthAndCiphRspNone		
Group:			
PDU Name:	AUTHENTICATIONANDCIPHERINGRESPONSE		
Derivation Path:			
Encoding Rule Name:			
Encoding Variator:			
Comments:	WA#BasicM4005		
Field Name	Element Value	Type Encoding	Comments
skipIndicator	0000B		
gMMProtocolDiscriminator	tsc_GMM_PD		
msgType	00010011B		
spare4	0000B		
acRefNo	?		Should be the one sent in the auth request
authRsp	-		Authentication parameter RAND
imeisv	-		No IMEISV requested
authRspExt	-		Authentication parameter AUTN, a UMTS challenge is requested

4.5 Missing GMMStatus PDU (WA#BasicM4006)

PDU name GMMStatus
Reason for change Related to WA#BasicM4008
Summary of change Added PDU for GMMStatus message handling in NAS_OtherwiseFail default branch.
Source of change new change
Label WA#BasicM4006

PDU Type Definition			
PDU Name:	GMMSTATUS		
Group:			
PCO Type:	Dt_SAP		
Encoding Rule Name:			
Encoding Variator:			
Comments:	WA#BasicM4006		
Field Name	Field Type	Type Encoding	Comments
skipIndicator	SkipIndicator		
gMMProtocolDiscriminator	ProtocolDiscriminator		
msgType	MsgType		
gMM_Cause	GMM_Cause		

4.6 Missing constraint cbr_GMM_StatusMO (WA#BasicM4007)

Constraint name cbr_GMM_StatusMO
Reason for change Related to WA#BasicM4008
Summary of change Added constraint for GMMStatus message handling in NAS_OtherwiseFail
Source of change new change
Label WA#BasicM4007

PDU Constraint Declaration			
Constraint Name:	cbr_GMM_StatusMO(p_gmm_cause: GMM_Cause)		
Group:			
PDU Name:	GMMSTATUS		
Derivation Path:			
Encoding Rule Name:			
Encoding Variation:			
Comments:	WA#BasicM4007		
Field Name	Element Value	Type Encoding	Comments
skipIndicator	0000'B		
gmmProtocolDiscriminator	tsc_GMM_PD		
msgType	00100000'B		
gmm_Cause	p_gmm_cause		

4.7 GMMStatus message handling (WA#BasicM4008)

Test step name NAS_OtherwiseFail
Reason for change The test case sends a SERVICE_ACCEPT message in the RRC security test step to the UE. The UE responds with a GMMStatus message as no SERVICE_REQUEST was sent by the UE. This status message is not handled in the default message handling.
Summary of change Added lines 10 & 11 to handle GMM status messages properly.
Source of change new change
Label WA#BasicM4008

Default					
Default Id:	NAS_OtherwiseFail				
Default Group Ref:	NAS_Defaults				
Objective:	To match unexpected events and fail the test case.				
Comments:					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		TIMEOUT_Count			1
2		UI MML_CmdReq	ca_MML_CmdReq (" The guard timer has run out. Please take appropriate measures.")		4
3		UI? MML_CmdCnf	ca_MML_CmdCnf		
4		[!trv_TestBody = FALSE]			
5	DFFt	CANCEL		(f)	
6		[!trv_TestBody = TRUE]			
7	DFFt	CANCEL		(F)	
8		De? RRC_DataInd	ca_PSI_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cbr_RA_UsedReq_OC ("", "tsc_"))		
9		RETURN			
10		De? RRC_DataInd	ca_PSI_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cbr_GMM_StatusMO("))		WA#BasicM4008
11		RETURN			

4.8 Inconrrent initialisation of IE nmo in c_CellInfoDef (WA#BasicM4009)

Incorporated from CR [2], section 2.2.1, presented by Anritsu

4.9 Addition of PIXIT value px_NMO (WA#BasicM4010)

Incorporated from CR [2], section 2.4.1, presented by Anritsu

4.10 GMM Attach Reject cannot handle Auto Attach (WA#BasicM4024)

Test step name ts_GMM_AttachReject_NMO_II
Reason for change Test step ts_GMM_AttachReject considers only NMO II. But it does not account for AutoAttach.
Summary of change Test step ts_GMM_AttachReject_NMO_II extend to be capable of handling AutoAttach.
Source of change new change
Label WA#BasicM4024

Test Step					
Test Step Id:	ts_GMM_AttachReject_NMO_II(p_CellId : INTEGER)				
Test Step Group Ref:	BasicM_MM_GMM_Steps				
Objective:	Force UE to invalidate its SIM for PS parameters, i.e. to delete P-TMSI, P-TMSI signature, RA and ciphering key sequence number Note: That in case of class A mobile and Network Mode of Operation II, the UE is allowed to register to CS services (normal Location Update procedure)				
Defaults:	NAS_OtherwiseFail				
Comments:	Initial conditions: - Cell referenced by p_CellId is configured - UE is switched off Procedure: - UE is forced to perform an Attach procedure - BS rejects the attach request from the UE which forces the UE to invalidate its USIM. WA#BasicM4024				
Nr	Label	Behaviour Description	Constraint Ref	Verdi...	Comments
1		+ts_MM_UE_SwitchOn			
2		{pc_AutomaticAttachSwitchON}			
3		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			Establish RRC connection
4		Dc?RRC_DataInd (tcv_Start = RRC_DataInd.start)	car_InitDirectTransfer (tsc_CelDedicated, tsc_RB3, cb_LocUpdReqAny(?))		Any Location Update request
5		+tl_AttachProcedure			
6		{NOT pc_AutomaticAttachSwitchON}			autoattach case not yet implemented
7		+tl_RegistrationOnCS_ifOpModeA			Allow UE to Register to CS if UE is Class A mobile and Network Mode of Operation is II
8		+tl_AttachProcedure			
tl_AttachProcedure					
9		+tl_AttachReject			ATTACH REQUEST ATTACH REJECT
10		+tl_SignalingConnectionRelease			
11		+ts_RRC_ConnRel(p_CellId, cell_Dch)			Release RRC connection
12		(tcv_PS_KeySeq = '111'B)			Invalidate ciphering key sequence number
13		+ts_MM_UE_SwitchOff			
tl_RegistrationOnCS_ifOpModeA					
14		+ts_SetTmpCellInfo(p_CellId)			
15		{(tcv_UE_OpMode = opModeA)}			
16		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
17		Dc?RRC_DataInd (tcv_Start = RRC_DataInd.start)	car_InitDirectTransfer(tsc_CelDedicated, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
18		+ ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			

19		+ts_MM_Authentication(p_CellId)		AUTHENTICATION REQUEST
20		+ts_RRC_Security(p_CellId, tv_AuthCK, tv_AuthIK, tv_AuthKcGSM, FALSE, cs_domain)		AUTHENTICATION RESPONSE SECURITY MODE COMMAND SECURITY MODE COMPLETE
21		DcRRC_DataReq	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdActTMSI, tv_TmpCellInfo.mcc, tv_TmpCellInfo.mnc, tv_TmpCellInfo.tsc)	LOCATION UPDATING ACCEPT
22		Dc?RRC_DataInd	car_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, c_TMSI_ReallocCmpb)	TMSI REALLOCATION COMPLETE
23		+ts_RRC_ConnRel (p_CellId, cell_Dch)		
24		[TRUE]		Do nothing (if not class A)
IL_AttachReject				
25		[pc_AutomaticAttachSwitchON]		
26		+IL_AttachReq		
27		[NOT pc_AutomaticAttachSwitchON]		
28		+ts_AT_TriggerGMM_Attach		
29		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)		
30		+IL_AttachReq		
IL_AttachReq				
31		Dc ? RRC_DataInd (tv_Start = RRC_DataInd.start)	car_PS_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_AttachTypeAny, c_MobileIdAny_N, c_RAI_Any_x, c_PTMSI_SignatureAny, ?)	ATTACH REQUEST with any contents
32		+ts_SS_SecurityDownloadStart (ps_domain, tv_Start)		
33		Dc ! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated, tsc_RB3, cs_AttachRej('08'0	ATTACH REJECT - GMM cause 'GPRS and non-GPRS services not allowed'
IL_SignallingConnectionRelease				
34		START t_WaitMS(5000)		Start timer 5s.
35		? TIMEOUT t_WaitMS		UE did not send SIGNALLING CONNECTION RELEASE (just continue with release procedure)
36		AM ? RLC_AM_DATA_IND	car_RRC_SigConnRelInd (tsc_CellDedicated, tsc_RB2, cr_RRC_SigConnRelInd (tv_CN_Domain))	Accept SIGNALLING CONNECTION RELEASE sent by the UE
37		CANCEL t_WaitMS		
Detailed Comment:				

4.11 Constraint c_GMM_AttachTypePS_Only (WA#BasicM4025)

Constraint step name c_GMM_AttachTypePS_Only
Reason for change UE may legally use different values of follow-on-request
Summary of change Changed value of element "for" from '0' to "?"
Source of change new change
Label WA#BasicM4025

Structured Type Constraint Declaration			
Constraint Name:	c_GMM_AttachTypePS_Only		
Group:			
Type Name:	AttachType		
Derivation Path:			
Encoding Variation:			
Comments:			
Element Name	Element Value	Type Encoding	Comments
for	?		WA#BasicM4025
type	'001B		GPRS attach

4.12 Test step ts_RRC_ConnRel (WA#BasicM4029)

Test step name ts_RRC_ConnRel
Reason for change Added condition to check if UE is switched off & not expect RelCmpl as requested by tc_12_9_x
Summary of change Added 1s timer to check if UE is switched off or not
Source of change new change
Label WA#BasicM4029

It_Send_RRC_ConnectionRelease				
39		[p_RRC_ReStatus= cell_Dch]		
40		(tcv_N308 >= 1, tcv_K >= 1)		Maximum number of retransmissions of the RRC CONNECTION RELEASE COMPLETE message
41		UM?RLC_UM_DATA_REQ	cas_RRC_ConnRelDCCH (tsc_CellDedicated, tsc_RB1, cs_108_RRC_ConnRelDCCH(tcv_CellIndInfo.d_IntegrityCheckInfo, tcv_RRC_Ti, tcv_N308))	
42		START t_Dly(1000)		WA#BasicM4029
43	TSP1	? TIMEOUT t_Dly		(P) WA#BasicM4029
44	TSP1	UM?RLC_UM_DATA_IND	car_RRC_ConnRelCmplUM (tsc_CellDedicated, tsc_RB1, cbr_108_RRC_ConnRelCmpl (tcv_RRC_Ti))	(P)

4.13 Test step po_ConnectionAndSS_Rel (WA#BasicM4030)

Test step name po_ConnectionAndSS_Rel
Reason for change Added condition to check if UE is switched off & not expect RelCmpl as requested by tc_12_9_x
Summary of change Added 1s timer to check if UE is switched off or not
Source of change new change
Label WA#BasicM4030

10		UM?RLC_UM_DATA_REQ	cas_RRC_ConnRelDCCH (tsc_CellDedicated, tsc_RB1, cs_108_RRC_ConnRelDCCH(tcv_CellIndInfo.d_IntegrityCheckInfo, tcv_RRC_Ti, OMIT))	
11		START t_Dly(1000)		WA#BasicM4030
12	TSP1	? TIMEOUT t_Dly		(P) WA#BasicM4030
13		AM?RLC_AM_DATA_IND	car_RRC_ConnRelCmpl (tsc_CellDedicated, tsc_RB2, cbr_108_RRC_ConnRelCmpl (tcv_RRC_Ti))	(P)
14		[TRUE]		2.
15		(tcv_N308 >= 1, tcv_K >= 1)		Maximum number of retransmissions of the RRC CONNECTION RELEASE COMPLETE message
16		UM?RLC_UM_DATA_REQ	cas_RRC_ConnRelDCCH (tsc_CellDedicated, tsc_RB1, cs_108_RRC_ConnRelDCCH(tcv_CellIndInfo.d_IntegrityCheckInfo, tcv_RRC_Ti, tcv_N308))	
17		START t_Dly(1000)		WA#BasicM4030
18	TSP1	? TIMEOUT t_Dly		(P) WA#BasicM4030
19		UM?RLC_UM_DATA_IND	car_RRC_ConnRelCmplUM(tsc_CellDedicated, tsc_RB1, cbr_108_RRC_ConnRelCmpl (tcv_RRC_Ti))	(P)
20		REPEAT It_RpRcvConnRel UNTIL [tcv_K = (tcv_N308+1)]		UE sends RRC Connection Release Complete for N308 times

4.14 void (WA#BasicM4037)

This change is not required for this test case.

4.15 void (WA#BasicM4038)

This change is not required for this test case.

4.16 void (WA#BasicM4039)

This change is not required for this test case.

4.17 Indexing error in test step ts_SysInfoModifyMM (WA#NAS4007)

Test step name	ts_SysInfoModifyMM
Reason for change	CN domain info not being changed during execution because of an indexing error in the TTCN code
Summary of change	Modified CN domain enumeration to 1 & 0, not 2 & 1. cn_DomainSysInfoList indexes were changed accordingly.
Source of change	new change
Label	WA#NAS4007

Test Step					
Test Step Id:	ts_SysInfoModifyMM (p_CellId: INTEGER; p_MCC: HEXSTRING; p_MNC: HEXSTRING; p_LAC: OCTETSTRING; p_ATT: INTEGER; p_T3212: OCTETSTRING; p_RAC : OCTETSTRING; p_NMO : OCTETSTRING)				
Test Step Group Ref:	BasicM_SysInfoHandling_StepsDefault				
Objective:	To modify the values of MCC, MNC, ATT, LAC, T3212, RAC, NMO in relevant SIB's and then broadcast the modified SIB's.				
Defaults:	InitOtherwiseFail				
Comments:	5 seconds shall be reserved for UE receiving and decoding the modified system information blocks after calling this test Step. the order of HEX digits in p_MCC shall be MCC1, MCC2, MCC3. The order of HEX digits in p_MNC shall be MNC1, MNC2 or MNC1, MNC2, MNC3. The range of p_ATT is 0 or 1.				
Nr	Label	Behaviour Description	Constraint Ref	Verif.	Comments
1		[px_RAT = fdd]			
2		(!tcv_MIB.plmn_Type.gsm_MAP.plmn_Identity.mcc = o_HexToDigitsMCC(p_MCC), !tcv_MIB.plmn_Type.gsm_MAP.plmn_Identity.mnc = o_HexToDigitsMNC(p_MNC))			
3		(!tcv_SIB1.cn_CommonGSM_MAP_NAS_SysInfo : = p_LAC, tcv_SIB1.cn_DomainSysInfoList[1].cn_Type.gsm_MAP => o-OctetstringConcat(p_T3212, o_IntToOct(p_ATT, 1)), tcv_SIB1.cn_DomainSysInfoList[0].cn_Type.gsm_MAP => o-OctetstringConcat(p_RAC, p_NMO))			WA#NAS4007 WA#NAS4031
4		+ts_SendSIB1(!tcv_SIB1, p_CellId, tsc_Now)			
5		+ts_SendMIB(!tcv_MIB, p_CellId, tsc_Now)			
6		+ts_SendPage1_ModifySIB_CellId,!tcv_MIB.mib_ValueTag)			
7		+ts_NAS_Delay(tsc_TWaitSysInfo)			WA#NAS4032
8	ERR1	[px_RAT = fdd]		|	
9	ERR2	[TRUE]		|	

4.18 Test step ts_GMM_TriggerPSRegistrationAtSwitchOn_NMO_II (WA#NAS4030)

Test step name	ts_GMM_TriggerPSRegistrationAtSwitchOn_NMO_II
Reason for change	As the GMM ATTACH REQUEST is rejected by the network, after switch off and switch on the UE tries to register on the CS domain first. ts_MMI_UE_SwitchOnTriggerGMM_Attach does not consider CS registration.
Summary of change	Created ts_GMM_TriggerPSRegistrationAtSwitchOn_NMO_II
Source of change	new change
Label	WA#NAS4030

Test Step					
Test Step Id:	ts_OMM_TriggerPSRegistrationAtSwitchOn_NMO_3 (p_CellId : INTEGER)				
Test Step Group Ref:	GMM_InternalSteps/				
Objective:	To trigger PS registration after switch ON in case of NMO_3				
Defaults:	NAS_OtherwiseFail				
Comments:	First switch on in the UE. After switch on in NMO_3 the UE basically will perform Parallel CS/PS registration procedures if [pc_AutomaticAttachSwitchOn = TRUE], else the UE will perform CS registration (because ATT flag is set). In the last case, to trigger PS registration via an AT command for GPRS Attach. [NA#NAS4030]				
Mr	Label	Behaviour Description	Constraint Ref	Verdi...	Comments
1		+ts_MMI_UE_SwitchOn			
2		+ts_SetTmpCellInfo (p_CellId)			
3		[pc_AutomaticAttachSwitchOn]			autoattach case not yet implemented
4		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			Establish RRC connection
5		Dc?RRC_DataInd (tv_Start => RRC_DataInd.start)	car_IniDirectTransfer (tsc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		Any Location Update request
6		(tv_OMM_AttachExpect => TRUE, tv_OMM_AttachRec => FALSE)			Set Flags in order to enable default handler to store ATTACH REQUEST PDU in case it is sent during Location Update procedure
7		+ts_SS_SecurityDownloadStart (cs_domain, tv_Start)			
8		+ts_MM_Authentication(p_CellId)			Authentication
9		+ts_RRC_Security (p_CellId, tv_AuthCK, tv_AuthK, tv_AuthKcGSM, TRUE, cs_domain)			
10		Dc?RRC_DataReq (tv_MM_CmplExpect => TRUE, tv_MM_CmplRec => FALSE)	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdAcqTMSI(tv_TmpCellInfo.mcc, tv_TmpCellInfo.mnc, tv_TmpCellInfo.lac))		Location Updating Accept
11		[NOT pc_AutomaticAttachSwitchOn]			
12		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
13		Dc?RRC_DataInd (tv_Start => RRC_DataInd.start)	car_IniDirectTransfer(tsc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		LOCATION UPDATING REQUEST
14		+ts_SS_SecurityDownloadStart (cs_domain, tv_Start)			
15		+ts_MM_Authentication(p_CellId)			AUTHENTICATION REQUEST AUTHENTICATION RESPONSE
16		+ts_RRC_Security(p_CellId, tv_AuthCK, tv_AuthK, tv_AuthKcGSM, FALSE, cs_domain)			SECURITY MODE COMMAND SECURITY MODE COMPLETE
17		Dc?RRC_DataReq	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdAcqTMSI(tv_TmpCellInfo.mcc, tv_TmpCellInfo.mnc, tv_TmpCellInfo.lac))		LOCATION UPDATING ACCEPT
18		Dc?RRC_DataInd	car_UpInkDirectTransfer(tsc_CellDedicated, tsc_RB3, c_TMSI_ReallocCmpl)		TMSI REALLOCATION COMPLETE
19		+ts_RRC_ConnRel (p_CellId, cell_Dch)			
20		+ts_AT_TriggerGMM_Attach			
21		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
Detailed Comment:					

4.19 Test step ts_SysInfoModifyMM (WA#NAS4031)

Test step name ts_SysInfoModifyMM
Reason for change Removed MCC & MNC from concatenation as this is not included in the default SIB1 configurations. Also not specified in the spec
Summary of change Replaced o_ConvtAndConcatStr(p_MCC, p_MNC, p_LAC, OMIT) with p_LAC
Source of change new change
Label WA#NAS4031

Test Step					
Test Step Id:	ts_SysInfoModifyMM (p_CellId: INTEGER; p_MCC: HEXSTRING; p_MNC: HEXSTRING; p_LAC: OCTETSTRING; p_ATT: INTEGER; p_T3212: OCTETSTRING; p_RAC: OCTETSTRING; p_NMO: OCTETSTRING)				
Test Step Group Ref:	BasicM_SysInfoHandling_StepsDefault				
Objective:	To modify the values of MCC, MNC, ATT, LAC, T3212, RAC, NMO in relevant SIB's and then broadcast the modified SIB's.				
Defaults:	InitOtherwiseFail				
Comments:	5 seconds shall be reserved for UE receiving and decoding the modified system information blocks after calling this test Step. The order of HEX digits in p_MCC shall be MCC1, MCC2, MCC3. The order of HEX digits in p_MNC shall be MNC1, MNC2 or MNC1, MNC2, MNC3. The range of p_ATT is 0 or 1.				
Nr	Label	Behaviour Description	Constraint Ref	Verdi..	Comments
1		[px_RAT = fdd]			
2		(tcv_MIB.plmn_Type.gsm_MAP.plmn_Identity.mcc := o_HexToDigitsMCC(p_MCC), tcv_MIB.plmn_Type.gsm_MAP.plmn_Identity.mnc := o_HexToDigitsMNC(p_MNC))			
3		(tcv_SIB1.cn_CommonGSM_MAP_NAS_SysInfo := p_LAC, tcv_SIB1.cn_DomainSysInfoList [1].cn_Type.gsm_MAP := o_OctetstringConcat(p_T3212, o_InIToOct(p_ATT, 1)), tcv_SIB1.cn_DomainSysInfoList [0].cn_Type.gsm_MAP := o_OctetstringConcat(p_RAC, p_NMO))			WA#NAS4007 WA#NAS4031
4		+ts_SendSIB1 (tcv_SIB1, p_CellId, tsc_Now)			
5		+ts_SendMIB(tcv_MIB, p_CellId, tsc_Now)			
6		+ts_SendPage1_ModifySI(p_CellId, tcv_MIB.mib_ValueTag)			
7		+ts_NAS_Delay(tsc_TWaitSysInfo)			WA#NAS4032
8	ERR1	[px_RAT = fdd]		I	
9	ERR2	[TRUE]		I	

4.20 Test step ts_SysInfoModifyMM (WA#NAS4032)

Test step name ts_SysInfoModifyMM
Reason for change Allow some time for SIB's to be broadcasted to make sure that UE receives new SIBs
Summary of change Added ts_NAS_Delay (5sec) in line 7
Source of change new change
Label WA#NAS4032

see TTCN code snippet for WA#NAS4031

4.21 Superfluous Cell B assignment (WA#NAS4033)

Test step name tc_12_3_2_1, test body
Reason for change Cell B is not going to be configured according to the prose: assignments for CellB unnecessary
Summary of change All assignments for Cell B removed
Source of change new change
Label WA#NAS4033

Test Case					
Test Case Id:	tc_12_3_2_1				
Test Group Reference:	GMM/Detach_procedures/NW_initiated_detach/				
Purpose:	To test the behaviour of the UE when the network initiates the detach procedure				
Configuration:					
Defaults:	NAS_OtherwiseFail				
Comments:	InBal conditions - SS : One cell operating in network operation mode II - UE : The UE has a valid IMSI				
Nr	Label	Behaviour Description	Constraint Ref	Verdi...	Comments
1		START_t_Guard(300)			
2		+ts_InitVariables			
3		(tcv_CellInfoA.nmo := tsc_NMO_II)			Test case specific cell settings
4		+ts_GMM_Config_CellA			Configure cell A WA#NAS4033
5		+ts_GMM_AttachReject_NMO_II (tsc_CellA)			Invalidate USIM parameters WA#NAS4034
6		(tcv_CellInfoA.attFlag := tsc_AttOff, tcv_CellInfoA.t3212 := '00'O)			WA#NAS4035
7		+ts_SysInfoModifyMMW(tsc_CellA, tcv_CellInfoA.mcc, tcv_CellInfoA.mnc, tcv_CellInfoA.lac, tcv_CellInfoA.attFlag, tcv_CellInfoA.t3212, tcv_CellInfoA.rac, tcv_CellInfoA.nmo)			Modify SIB1 to set ATT flag to 0 (disable C S registration at turn on, CR T1-030101, Jan-03)
8		+it_TestBody			
9		+po_ConnectionAndSS_Rels			
it_TestBody					
10		@cv_TestBody := TRUE)		(P)	
11		+ts_GMM_TriggerPSRegistrationASwitchOn_NM O_II (tsc_CellA)			WA#NAS4036
12		+it_Attach_Steps_4To6			
13		+it_Detach_Steps_8To9			
14		+ts_PS_Paging_PTMSI (@sc_CellA, terminating InteractiveCall)			Step 10
15		+it_Step_11			Step 11

4.22 Test body 12_3_2_1 (WA#NAS4034)

Test step name	tc_12_3_2_1, test body
Reason for change	ts_GMM_AttachReject considers only NMO II. But it does not account for AutoAttach.
Summary of change	created +ts_GMM_AttachReject_NMO_II capable of handling AutoAttach.
Source of change	new change
Label	WA#NAS4034

see TTCN code snippet for WA#NAS4033

4.23 Incorrect test ATT flag and timer T3212 initialisation (WA#NAS4035)

Test step name	tc_12_3_2_1, test body
Reason for change	According to the prose ATT flag is to be set to OFF and T3212 is to be set to '00'O
Summary of change	Replaced '0' with tsc_AttOff & assigned t3212 = '00'O
Source of change	new change
Label	WA#NAS4035

see TTCN code snippet for WA#NAS4033

4.24 Test body 12_3_2_1 (WA#NAS4036)

Test step name	tc_12_3_2_1, test body
Reason for change	As the GMM ATTACH REQUEST is rejected by the network, after switch off and switch on the UE tries to register on the CS domain first. ts_MMI_UE_SwitchOnTriggerGMM_Attach does not consider CS registration.
Summary of change	ts_GMM_TriggerPSRegistrationAtSwitchOn_NMO_II substitutes +ts_MMI_UE_SwitchOnTriggerGMM_Attach & ts_RRC_ConnEst
Source of change	new change
Label	WA#NAS4036

see TTCN code snippet for WA#NAS4033

5 Branches executed in test case 12.3.2.1

The test case implementation executed the PS branch, Integrity and ciphering were disabled.

6 Execution Log Files

6.1 Nokia 3G UE 6650

The Nokia 3G UE 6650 passed this test case on Rohde & Schwarz 3G System Simulator CRTU-W. The documentation below is enclosed as evidence of the successful test case run [1]:

- **Execution log file 12_3_2_1-Logs\Index.html**
This execution log file in HTML format shows the dynamic behaviour of the test in a tabular view and in message sequence chart (MSC) view. All message contents are fully decoded and listed in hexadecimal format. Preliminary verdicts and the final test case verdict are listed in the log file.
- **PICS/PIXIT file 12_3_2_1-pics-pixit.doc**
A document containing all PICS/PIXIT parameters used for testing.

7 References

- [1] **T1-030639**
This archive comprises HTML execution log files, PICS/PIXIT file and the TTCN MP file
- [2] **T1-030419**
CR for the introduction of test case 11.3.1 into NASv310 (Anritsu)

CHANGE REQUEST

⌘ **34.123-3 CR 064** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR for correction of generic test step in RLC ATS V3.1.0		
Source:	⌘ Anite Telecoms		
Work item code:	⌘ -	Date:	⌘ 07/05/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ The paging cause and establishment cause supplied to ts_RRC_ConnEst_DCH_MT_TMSI, in generic test step pr_GenericSetupProcedures, are invalid for PS domain.
Summary of change:	⌘ Declare a new test case variable for RLC Establishment Cause. Use the test case variables previously initialised in the local tree of pr_GenericSetupProcedures.
Consequences if not approved:	⌘ Test cases calling this test step will incorrectly fail a UE supporting the PS domain. A PS and CS capable UE will only pass if PS support is not indicated in the PICS. A PS only UE cannot pass the test cases.

Clauses affected:	⌘										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N							⌘	
Y	N										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Test case variable name	tcv_RLC_EstCau
Reason for change	A new test case variable is required to store the Establishment Cause.
Summary of change	Declare a new variable tcv_RLC_EstCau
Source of change	new change

Test Case Variable Declarations
--

Group:			
Variable Name	Type	Value	Comments
tcv_CN_domain	CN_DomainIdentity	ps_domain	This variable is used to store the CN domain
tcv_RLC_PagingCau	PagingCause	terminatingInteractiveCall	This variable is used to store the PagingCause
tcv_RLC_EstCau	EstablishmentCause	terminatingInteractiveCall	This variable is used to store the Establishment Cause
tcv_RLC_RB_Id	RB_Identity	tsc_PS_DefaultRB_Id	This variable is used to store the Radio Bearer Id
tcv_RLC_RAB_Id	BITSTRING	tsc_PS_DefaultRAB_Id	This variable is used to store the Radio Access Bearer Id
tcv_AM_RxData	AM_Data	"0	This variable is used to store the data part of the next AMD payload unit to be received when 7 or 15 bit length indicators are used. Generally this data is created via a call to <code>GetN-OctetsFromPRBS</code> .

Test step name	pr_GenericSetupProcedures
Reason for change	Paging cause and establishment cause supplied to <code>ts_RRC_ConnEst_DCH_MT_TMSI</code> are invalid for PS domain.
Summary of change	In line 7 of the test step reference the test case variables <code>tcv_RLC_PagingCau</code> and <code>tcv_RLC_EstCau</code> previously setup in the local tree <code>It_InitRLC_Variables</code>
Source of change	new change

Before:

Test Step					
Test Step Id: pr_GenericSetupProcedures					
Test Step Group Ref: Preambles/					
Objective:					
Defaults: RRC_Def1					
Comments: This preamble configures the system simulator for AM / UM testing, and then performs the Generic setup procedures as defined in 3G TS 34.108.					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[px_RAT = fdd]			
2		+ts_InitVariables			1
3		+It_InitRLC_Variables			9
4		+ts_SS_CreateCellDCH (tsc_DefaultCellId)			
5		+ts_SendDefSysInfo(tsc_DefaultCellId)			
6		+ts_IdleUpdated (tsc_DefaultCellId)			3
7		+ts_RRC_ConnEst_DCH_MT_TMSI(tsc_DefaultCellId, terminatingConversationalCall, px_TMSI_Def, terminatingConversationalCall)			4
8		+ It_ReceivePagingResponse			5
9		+ ts_SS_SecurityDownloadStart (tcv_CN_domain, tcv_Start)			
10		+ts_TC_ActivateRB_TestMode(tsc_DefaultCellId)			6
11	TSE1	[px_RAT = tdd]		I	7
12	TSE2	[TRUE]		I	8
It_InitRLC_Variables					
13		[pc_PS]			
14		(tcv_CN_domain := ps_domain, tcv_RLC_PagingCau := terminatingInteractiveCall, tcv_RLC_PagingCau := terminatingInteractiveCall, tcv_RLC_RB_Id := tsc_PS_DefaultRB_Id, tcv_RLC_RAB_Id := tsc_PS_DefaultRAB_Id)			
15		[pc_CS]			
16		(tcv_CN_domain := cs_domain, tcv_RLC_PagingCau := terminatingConversationalCall, tcv_RLC_PagingCau := terminatingConversationalCall, tcv_RLC_RB_Id := tsc_CS_DefaultRB_Id, tcv_RLC_RAB_Id := tsc_CS_DefaultRAB_Id)			
17		[TRUE]		I	

After:

Test Step					
Test Step Id: pr_GenericSetupProcedures					
Test Step Group Ref: Preambles/					
Objective:					
Defaults: RRC_Def1					
Comments: This preamble configures the system simulator for AM / UM testing, and then performs the Generic setup procedures as defined in 3G TS 34.108.					
Nr	Label	Behaviour Description	Constraint ...	Verdict	Comments
1		[px_RAT = fdd]			
2		+ts_InitVariables			1
3		+It_InitRLC_Variables			9
4		+ts_SS_CreateCellDCH (tsc_DefaultCellId)			
5		+ts_SendDefSysInfo(tsc_DefaultCellId)			
6		+ts_IdleUpdated (tsc_DefaultCellId)			3
7		+ts_RRC_ConnEst_DCH_MT_TMSI(tsc_DefaultCellId, tcv_RLC_PagingCau, px_TMSI_Def, tcv_RLC_EstCau)			4
8		+ It_ReceivePagingResponse			5
9		+ ts_SS_SecurityDownloadStart (tcv_CN_domain, tcv_Start)			
10		+ts_TC_ActivateRB_TestMode(tsc_DefaultCellId)			6
11	TSE1	[px_RAT = tdd]		I	7
12	TSE2	[TRUE]		I	8
It_InitRLC_Variables					
13		[pc_PS]			
14		(tcv_CN_domain := ps_domain, tcv_RLC_PagingCau := terminatingInteractiveCall, tcv_RLC_EstCau := terminatingInteractiveCall, tcv_RLC_RB_Id := tsc_PS_DefaultRB_Id, tcv_RLC_RAB_Id := tsc_PS_DefaultRAB_Id)			
15		[pc_CS]			
16		(tcv_CN_domain := cs_domain, tcv_RLC_PagingCau := terminatingConversationalCall, tcv_RLC_EstCau := terminatingConversationalCall, tcv_RLC_RB_Id := tsc_CS_DefaultRB_Id, tcv_RLC_RAB_Id := tsc_CS_DefaultRAB_Id)			
17		[TRUE]		I	

CHANGE REQUEST

34.123-3 CR 065 # rev **-** # Current version: **3.1.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# ASP Enhancement		
Source:	# MCC task 160, Ericsson, Motorola		
Work item code:	# -	Date:	# 02/05/2003
Category:	# F	Release:	# R99
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# 1. Security ASPs have to be enhanced to cope with the R99 25.331 security related CRs from the March 02 onwards. 2. In order to perform DSCH test, ASP for the DSCH test configuration need to be added. 3. Corrections needed for the test QoS when performing the PS UE test. 4. Corrections needed for the RAB test configurations. 5. Correction needed for the AT commands used 6. GERAN to UTRAN HO ASP need enhancement for the necessary GPRS protocol stacks.
Summary of change:	# 1. The security ASPs are updated according to the security-related CRs to R99 TS 25.331, from March 02 onwards. The detailed examples how to use the ASPs are given. 2. DSCH test model is created and the corresponding configuration ASPs are added. Examples of how to configure are given. 3. Test QoS is corrected. 4. Corrections of the RAB test configurations 5. Correction of the AT commands used (Ericsson comments) 6. GERAN to UTRAN HO ASP are updated and new ASPs are created (Motorola comments).
Consequences if not approved:	# Security, DSCH and GERAN to UTRAN test can not be correctly carried out.

Clauses affected:	# Change 1 affects 7.3.2.2.16, 7.3.2.2.19, 7.3.2.2.20, 7.3.2.2.23, 7.3.2.2.25, 7.3.2.2.26, 7.3.2.2.26a, 7.3.2.2.27a, 7.3.2.2.28, 7.3.2.2.28a, 8.2.6, 8.2.8, 8.5.3, 8.5.4. Change 2 affects 6.11, 7.3.2.2.11, 7.3.2.2.17, 8.2.1, 8.3.2.6, 8.3.2.7, 8.11. Change 3 affects 8.10. Change 4 affects 8.2.4, 8.3.1, 8.3.14, 8.3.15, 8.3.21, 8.3.22, 8.3.25, 8.7.1, 8.7.3, B.1.1, B.1.2, B.1.8, B.1.9 Change 5 affects 8.8. Change 6 affects 6.10.2, 7.3.4.3.
--------------------------	---

Y N

Other specs affected:	⌘	<input type="checkbox"/>	Other core specifications	⌘	
		<input type="checkbox"/>	Test specifications		
		<input type="checkbox"/>	O&M Specifications		
Other comments:	⌘	The CR was noted at T1#18 as T1S030159. The received comments from Ericsson and Motorola since then have been merged.			

6.10.2 ASP function description

6.10.2.1 Identities

- Within the SS, a cell is identified by cell identifier (cellId), which is of TTCN type CellId (INTEGER).
- Within a cell, a basic physical channel is identified by physical channel identifier (physicalChId), which is of TTCN type PhysicalChId (INTEGER). [In multislot configuration a basic physical channel is identified by physical channel identifier \(physicalChId\) and timeslot, which is of TTCN type TN \(INTEGER\).](#)
- Within a physical channel, logical channel is identified by logical channel type (g_LogicChType), which is of TTCN type G_LogicChType (INTEGER). When multiple logical channels of same type are carried by (mapped to) the same basic physical channel, they are differentiated by sub-channel number (subChannel), which is of TTCN type SubChannelNumber (INTEGER).
- At the top boundary of L2 emulation module two service access points (SAP) are available, they are identified by SAPI. SAPI=3 is used for short message service; SAPI=0 is used for L3 signalling messages and user data.

Example:

EXAMPLE: If G_L2_DATA_REQ ASP has the following parameter setting:

- cellId = tsc_CellA;
- sAPI = tsc_SAPI_0;
- physicalChId = tsc_PhyCh0;
- g_LogicChType = tsc_SDCCH4; and
- subChannel = tsc_SubChannel1;

it sends PDU on the SDCCH4(1) logical channel which is carried by the physical channel tsc_PhyCh0 in cell A.

6.10.2.2 Cell configuration and control

In GSM each base station has a base station identity code BSIC, it consists of network colour code and base station colour code (NCC + BCC). BSIC is continuously broadcasted on the SCH channel, and it shall be used as the training sequence code for broadcast and common control channels.

In the test model the function of G_CL1_CreateCell_REQ ASP is to create a cell and pass parameter BSIC to it. This ASP establishes the cell identifier which shall be used in the ASP's related to this cell.

This is the first step to configure L1 (GERAN) emulation module of the SS.

6.10.2.3 L1 (GERAN) configuration and control

Configuration and control functions identified for L1 (GERAN) of a cell are:

- creation of basic physical channels;
- creation of multislot configuration;
- release of basic physical channel;
- modifications of channel mode, ciphering parameters and transmission power level;
- reporting of L1 header of SACCH channel;
- pickup a frame in near future, which can carry L3 message.

6.10.2.3.1 Basic physical channel configuration

A basic physical channel uses a combination of frequency and time domain resources, therefore, the definition of a particular basic physical channel consists of a description in the frequency domain and a description in the time domain. In time domain the resource is called Time Slot, there are 8 time slots in one frame, numbered from 0 to 7. In frequency domain a basic physical channel may use only one frequency or may use multiple frequencies in frequency hopping.

Basic physical channel carrying FCCH + SCH + BCCH + CCCH (PCH, AGCH, RACH) or FCCH + SCH + BCCH + CCCH + SDCCH4 logical channels shall be located in time slot 0, and uses single frequency (non-hopping). The basic physical channel carrying additional BCCH, CCCH (PCH, AGCH, RACH) logical channels shall be located in time slot 2, 4, 6 and uses the same single frequency as the frequency used by the physical channel carrying FCCH, SCH.

GSM specification defines 24 permitted combinations of different logical channels, which can be mapped on to a basic physical channel. The combination defines which logical channels are carried by a basic physical channel, and it is also an indication of which modulation (GMSK or 8PSK) is used for the basic physical channel.

Training Sequence Code (TSC) is another parameter needed by physical channel. Common control and broadcast channel have to use BCC as its TSC.

Dedicated control channel and dedicated traffic channel need more parameters to configure. Parameter "Channel Mode" is needed to specify channel coding (therefore the user data rate). Ciphering related parameters are required to define the ciphering behaviour of the channel.

Common control channels need parameters to configure where in the 51-multiframe paging and access grant blocks are located.

Transmission power level is provided as per physical channel parameter, power level of each physical channel can be controlled independently.

The function of ASP G_CL1_CreateBasicPhyCh_REQ is to create a basic physical channel which has the required property defined by all the parameters mentioned above.

In the process of L1 (GERAN) configuration, calling the ASP is the next step after calling G_CL1_CreateCell_REQ.

6.10.2.3.2 Multislot configuration for circuit or packet switched channels

Multislot configuration for circuit switched connection consists of multiple circuit switched traffic channels, in L1 point of view these traffic channels are independent basic physical channels with the same frequency parameters (ARFCN or MA, MAIO, HSN) and the same training sequence code but located in different time slots, one of the basic physical channels is the main channel of the configuration carrying the main signalling (FACCH, SACCH, IACCH) for the configuration. The main channel shall be bi-directional channel and with channelCombination TCH/F+FACCH/F+SACCH/M or E-TCH/F+E-IACCH/F+E-FACCH/F+E-SACCH/M. When transmitting user data (not signalling message) stream is divided into substreams, each substream is transmitted independently on a channel in the configuration. At the receiving side all substreams are combined back to user stream.

~~In According to the test model all traffic channels in creation of a multislot configuration for circuit switched connection needs twp ASP calls, are created separately with Firstly, G_L1_CreatedBasicPhyCh_REQ is called to establish the main channel, then ASP G_L1_CreateMultiSlotConfig_REQ is called to allocate more timeslots to the channel established by the previous ASP. A substream of a multislot configuration is is identified with the physicalChId and timeslot. indicate to the L1 emulation model which channel is the main channel, and which channels are the members of the multislot configuration and their substreams shall be combined together to form the user data stream.~~

Multislot configuration for packet switched connection consists of multiple PDCHs which can carry PDTCH/Us or PDTCH/Ds. All these PDCHs use the same frequency parameters (ARFCN or MA, MAIO, HSN) and the same training sequence code, but are located on different timeslots.

Similarly, a multislot configuration for packet switched connection is created with two ASP calls. First G_L1_CreatedBasicPhyCh_REQ is called to establish the first PDCH channel, then G_L1_CreateMultiSlotConfig_REQ is called to allocate more timeslots to the channel established by the previous ASP. All data ASP on packet data channel use physicalChId and timeslot to address the physical channels.

6.10.2.3.3 Frame in the near future

ASP G_CL1_ComingFN_REQ is defined to request L1 (GERAN) return the reduced frame number (FN modulo 42432) which is far enough in the future from current frame number and is able to carry L3 message on the specified channel. "far enough" means that there is enough time left for TTCN to prepare a L3 message to be sent on that frame.

6.10.2.3.4 L1 header

The layer 1 header of SACCH from UE to network carries information of timing advance and UE uplink transmission power level, verifying L1 header contents is required in some test cases, ASP G_CL1_L1Header_REQ and G_CL1_L1Header_CNF are defined for fulfilling this requirement.

6.10.2.4 L2 configuration and control

For normal operation there is no parameter configurable in L2. Some abnormal L2 behaviours are required in test cases. In the test model two ASP's are currently defined to introduce abnormal L2 behaviour. [When creating a dedicated channel the initial SACCH header is set to the values in powerLevel and timingAdvance fields of DedCH_Info.](#)

6.10.2.4.1 Don't response to some handover access bursts

In non-synchronized handover procedure UE/MS, having received handover command, sends handover access bursts on the target channel repeatedly till it receives PHYSICAL INFORMATION message from network or T3124 times out. Normally network replies PHYSICAL INFORMATION as soon as it receives handover access burst. Some test cases require that the SS ignores several incoming handover access bursts then responses to the one that follows. ASP G_CL2_HoldPhyInfo_REQ is defined for fulfilling this requirement. It is used together with and before a data ASP sending PHYSICAL INFORMATION message. When SS receives the G_CL2_HoldPhyInfo_REQ, it does not transmit the PHYSICAL INFORMATION message until n handover access bursts have been received.

6.10.2.4.24 No UA reply to SABM

GSM L2 protocol is adapted from LAPD (HDLC subset). The multiframe operation mode is established through exchange of supervisory frame SABM and unnumbered frame UA between peer entities, and SABM is always sent by UE/MS, UA is always sent by network. UE/MS will repeatedly transmit SABM till it receives UA or retransmission counter is reached. Some handover test cases require that the SS does not response to the incoming SABM, so handover fails. G_CL2_NoUAforSABM_REQ is used for such purpose, it commands the SS not to send UA response to the UE when SABM is received.

6.10.2.5 System Information sending

There are 17 different SYSTEM INFORMATION messages on BCCH and 4 different SYSTEM INFORMATION messages on SACCH defined for circuit switched services in GSM specification. In a particular test case not all of them are required. SYSTEM INFORMATION messages on BCCH shall be broadcasted periodically by the SS, SYSTEM INFORMATION TYPE 5, 6 and optionally 5bis and 5ter messages shall be sent on SACCH by the SS when nothing else has to be sent on that channel.

G_L2_SYSINFO_REQ is defined to deliver a SYSTEM INFORMATION message and its type SysInfoType to the SS, SS shall store the SYSTEM INFORMATION and transmit it periodically according to the scheduling rules specified in 3GPP TS 45.002 [Error! Reference source not found.] clause 6.3.1.3. SYSTEM INFORMATION message newly delivered shall override the same type SYSTEM INFORMATION message previously stored in the SS.

SYSTEM INFORMATION message type 18, 19, 20 are scheduled by scheduling information in SYSTEM INFORMATION type 9. ASP for scheduling these messages has not been defined yet because these messages are not required in current test cases.

6.10.2.6 Paging

Paging message for a particular UE/MS shall be sent on the right CCCH_GROUP (or PCCCH_GROUP) and PAGING_GROUP which are determined by IMSI of the UE/MS and other parameters. In the test model TTCN code is responsible to calculate the value of CCCH_GROUP (or PCCCH_GROUP) and the value of PAGING_GROUP.

TTCN selects the right channel according to the value of CCCH_GROUP (or PCCCH_GROUP), then PAGING REQUEST message and the value of PAGING_GROUP are passed to the SS by using:

- ASP G_L2_Paging_REQ in case of UE/MS in idle mode or the UE/MS not supporting SPLIT_PG_CYCLE on CCCH when it is in GPRS attached mode and PCCCH is absent, or
- G_RLC_ControlMsg_REQ in case of UE/MS supporting TS 45.002 clause 6.5.6 when it is in GPRS attached mode and PCCCH is present.

The SS shall determine the position where the paging block is located using the value PAGING_GROUP and other CCCH (or PCCCH) parameters configured by G_CL1_CreateBasicPhyCH_REQ, then send the PAGING REQUEST message according the parameter pagingMode in the ASP:

- send the message on the paging block determined by PAGING_GROUP if pagingMode = "normal paging";
- send the message on the paging block determined by PAGING_GROUP and the "next but one" position on the PCH or in the third block period on PCCCH where paging may occur (PPCH) if pagingMode = "extended paging";
- send the message on all paging blocks if pagingMode = "paging reorganization".

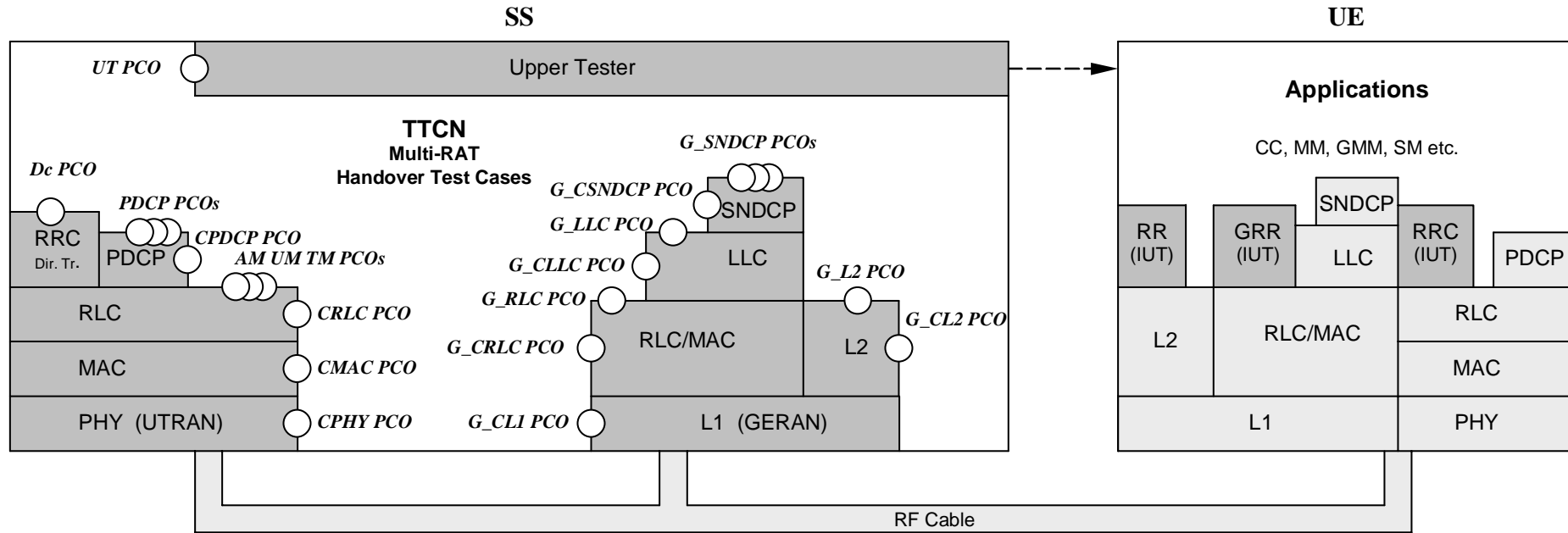


Figure 1: The model of multi-RAT handover testing

6.11 DCH-DSCH model

The model illustrates the relationship between various channels from logical channel to physical channels. DCH are associated with DSCH.

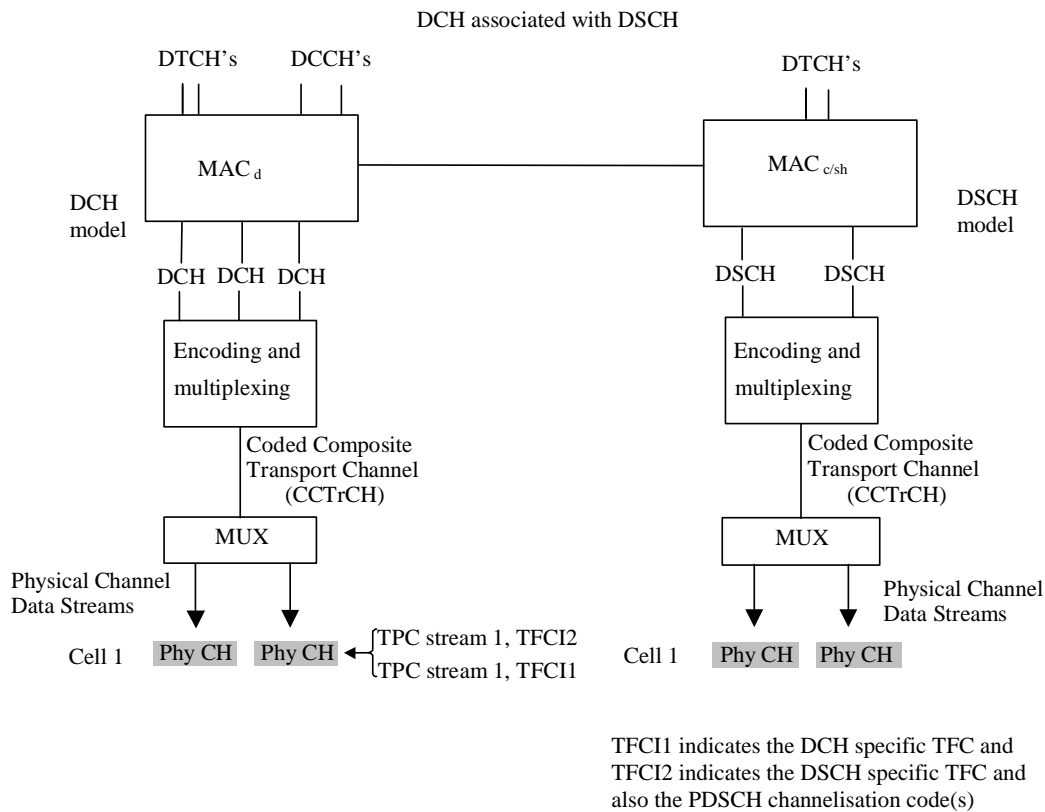


Figure 2: Associated DCH-DSCH model

The model associating DCH with DSCH enable in the SS:

- [To define DSCH transport channel,](#)
- [To define TFCI\(field2\) for DSCH;](#)
- [To configure PDSCH,](#)
- [To define DSCH-RNTI value.](#)

7 PCO and ASP definitions

7.3.2.2.11 CPHY_RL_Setup

ASN.1 ASP Type Definition	
Type Name	CPHY_RL_Setup_CNF
PCO Type	CSAP
Comment	To confirm to setup the Radio Link
Type Definition	
SEQUENCE	{
	cellId INTEGER(0..63),
	routingInfo RoutingInfo
	}

ASN.1 ASP Type Definition	
Type Name	CPHY_RL_Setup_REQ
PCO Type	CSAP
Comment	To request to setup the associated transport channels and the Radio Link itself.
Type Definition	
SEQUENCE	{
cellId	INTEGER(0..63),
routingInfo	RoutingInfo,
ratType	RatType,
setupMessage	CphyRlSetupReq
	}

ASN.1 Type Definition	
Type Name	CphyRlSetupReq
Comment	To request to setup the Radio Link
Type Definition	
SEQUENCE	{
physicalChannelInfo	CHOICE {
primaryCPICHInfo	PrimaryCPICHInfo,
secondaryCPICHInfo	SecondaryCPICHInfo,
primarySCHInfo	PrimarySCHInfo,
secondarySCHInfo	SecondarySCHInfo,
primaryCCPCHInfo	PrimaryCCPCHInfo,
secondaryCCPCHInfo	SecondaryCCPCHInfo,
pRACHInfo	PRACHInfo,
pICHInfo	PICHInfo,
aICHInfo	AICHInfo,
dPCHInfo	DPCHInfo
-- pCPCHInfo	PCPCHInfo,
-- aP_ICHInfo	AP_AICHInfo,
-- cD_ICHInfo	CD_ICHInfo,
-- cD_CA_ichInfo	CD_CA_ICHInfo,
-- cSICHInfo	CSICHInfo,
-- pDSCHInfo	PDSCHInfo,
-- pUSCHInfo	PUSCHInfo
	}
	}

ASN.1 Type Definition	
Type Name	PrimaryCPICHInfo
Comment	
Type Definition	
SEQUENCE	{
dl_TxPower_PCPICH	DL_TxPower_PCPICH,
tx_diversityIndicator	BOOLEAN
	}

ASN.1 Type Definition	
Type Name	SecondaryCPICHInfo
Comment	
Type Definition	
SEQUENCE	{
scramblingCode	INTEGER{0..15},
dl_ChannelizationCode	SF512_AndCodeNumber,
dl_TxPower	DL_TxPower
	}

ASN.1 Type Definition	
Type Name	PrimarySCHInfo
Comment	
Type Definition	
SEQUENCE	{
tstdIndicator	BOOLEAN,
dl_TxPower	DL_TxPower
	}

ASN.1 Type Definition	
Type Name	SecondarySCHInfo
Comment	
Type Definition	
SEQUENCE	{
	tstdIndicator BOOLEAN,
	dl_TxPower DL_TxPower
	}

ASN.1 Type Definition	
Type Name	PrimaryCCPCHInfo
Comment	
Type Definition	
SEQUENCE	{
	sttd_Indicator BOOLEAN,
	dl_TxPower DL_TxPower
	-- timeSlot TimeSlot OPTIONAL,
	-- burstType BurstType OPTIONAL,
	-- offset Offset OPTIONAL,
	-- repetitionPeriod RepetitionPeriod OPTIONAL,
	-- repetitionLength RepetitionLength OPTIONAL,
	}

ASN.1 Type Definition	
Type Name	SecondaryCCPCHInfo
Comment	The range for powerOffsetOfTFCI_PO1 and powerOffsetOfPILOT_PO3 is 0-6 dB, 0.25 dB per step.
Type Definition	
SEQUENCE	{
	scramblingCode INTEGER(0..1563),
	dl_ChannelizationCode SF256_AndCodeNumber,
	sCCPCHSlotFormat SCCPCHSlotFormat,
	timingOffset INTEGER(0..149),
	positionFixedOrFlexible PositionFixedOrFlexible,
	sttd_Indicator BOOLEAN,
	dl_TxPower DL_TxPower,
	powerOffsetOfTFCI_PO1 INTEGER(0..24),
	powerOffsetOfPILOT_PO3 INTEGER(0..24)
	-- timeSlot TimeSlot OPTIONAL,
	-- burstType BurstType OPTIONAL,
	-- midambleShift MidambleShift OPTIONAL,
	-- offset Offset OPTIONAL,
	-- repetitionPeriod RepetitionPeriod OPTIONAL,
	-- repetitionLength RepetitionLength OPTIONAL,
	-- tFCIPresence TFCIPresence OPTIONAL,
	}

ASN.1 Type Definition	
Type Name	PRACHInfo
Comment	
Type Definition	
SEQUENCE	{
	fdd_tdd CHOICE {
	fdd
	SEQUENCE {
	preambleSignature AvailableSignatures,
	spreadingFactorForDataPart SF_PRACH,
	preambleScramblingCode PreambleScramblingCodeWordNumber,
	puncturingLimit PuncturingLimit,
	accessSlot AvailableSubChannelNumbers
	},
	tdd
	SEQUENCE {
	-- timeSlot TimeSlot,
	-- spreadingCode SpreadingCode,
	-- midambleCode MidambleCode,
	}
	}

ASN.1 Type Definition	
Type Name	PICHInfo
Comment	
Type Definition	
SEQUENCE	{ pichinfo PICH_Info, dl_TxPower DL_TxPower }

ASN.1 Type Definition	
Type Name	AICHInfo
Comment	
Type Definition	
SEQUENCE	{ aichinfo AICH_Info, dl_TxPower DL_TxPower }

ASN.1 Type Definition	
Type Name	DPCHInfo
Comment	At least one of the fields shall be present.
Type Definition	
SEQUENCE	{ ul_DPCH_Info UL_DPCH_Info OPTIONAL, dl_DPCHInfo DL_DPCHInfo OPTIONAL }

ASN.1 Type Definition	
Type Name	DL_DPCHInfo
Comment	The range for powerOffsetOfTPC_PO2 and powerOffsetOfTFCI_PO1 and powerOffsetOfPILOT_PO3 is 0-6 dB, 0.25 dB per step.
Type Definition	
SEQUENCE	{ dl_CommonInformation DL_CommonInformation, dl_DPCH_InfoPerRL DL_DPCH_InfoPerRL, powerOffsetOfTFCI_PO1 INTEGER (0..24), powerOffsetOfTPC_PO2 INTEGER (0..24), powerOffsetOfPILOT_PO3 INTEGER (0..24), dl_TxPower DL_TxPower, dl_TxPowerMax DL_TxPower, dl_TxPowerMin DL_TxPower }

ASN.1 Type Definition	
Type Name	DL_TxPower_PCPICH
Comment	Absolute Tx Power of PCPICH
Type Definition	
INTEGER	(-60..-30)

ASN.1 Type Definition	
Type Name	DL_TxPower
Comment	Downlink Tx Power relative to PCPICH
Type Definition	
INTEGER	(-35..+15)

ASN.1 Type Definition	
Type Name	SCCPCHSlotFormat
Comment	Reference to 3GPP TS 25.211 [Error! Reference source not found.]
Type Definition	
INTEGER	(0..17)

ASN.1 Type Definition	
Type Name	UL_DPCCHSlotFormat
Comment	Reference to 3GPP TS 25.211 [40]
Type Definition	
INTEGER (0..5)	

ASN.1 Type Definition	
Type Name	PDSCHInfo
Comment	
Type Definition	
<pre> SEQUENCE { fdd_tdd CHOICE { fdd SEQUENCE { pdsch_CodeMapping PDSCH_CodeMapping }, tdd SEQUENCE { --pdsch_Identity PDSCH_Identity, --pdsch_Info PDSCH_Info, --pdsch_PowerControlInfo PDSCH_PowerControlInfo OPTIONAL }, }, dl_TxPower DL_TxPower } </pre>	

7.3.2.2.16 CMAC_Ciphering_Activate

ASN.1 ASP Type Definition	
Type Name	CMAC_Ciphering_Activate_CNF
PCO Type	CSAP
Comment	To confirm to activate or inactivate the ciphering
Type Definition	
SEQUENCE {	
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo
}	

ASN.1 ASP Type Definition	
Type Name	CMAC_Ciphering_Activate_REQ
PCO Type	CSAP
Comment	To request to start <u>or</u> ; restart or stop downlink ciphering or uplink deciphering. The physicalChannelIdentity of DPCH applies to routingInfo. <u>Do not increment HFN part of COUNT-C if the value of incrementCOUNT_C_Ind is "NotIncr".</u> <u>If valueForLSBsOfHFN is present the SS initialise the LSBs of HFN component in COUNT-C accordingly. If it is absent the SS initialise the LSBs of HFN component in COUNT-C to zero.</u>
Type Definition	
SEQUENCE {	
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo,
ratType	RatType,
<u>cn_DomainIdentity</u>	<u>CN_DomainIdentity,</u>
cipherringModeInfo	CipherringModeInfo,
<u>incrementCOUNT_C_Ind</u>	<u>ENUMERATED {Incr(0), NotIncr(1)},</u>
<u>valueForLSBsOfHFN</u>	<u>INTEGER(0..15) OPTIONAL</u>
}	

7.3.2.2.17 CMAC_Config

ASN.1 ASP Type Definition	
Type Name	CMAC_Config_CNF
PCO Type	CSAP
Comment	For MAC emulator to report that a previous attempt to setup, reconfigure or release a logical channel is successful.
Type Definition	
SEQUENCE {	
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo
}	

ASN.1 ASP Type Definition	
Type Name	CMAC_Config_REQ
PCO Type	CSAP
Comment	To request to configure MAC entity. Setup is used for creation of the MAC instances or the MAC resources. Release is used for free the all MAC resources. The reconfiguration is to change the MAC parameters, it is not the MAC modification.
Type Definition	
SEQUENCE {	
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo,
ratType	RatType,
configMessage	CHOICE {
setup	CmacConfigReq,
reconfigure	CmacConfigReq,
release	NULL
}	
}	

ASN.1 Type Definition	
Type Name	CmacConfigReq
Comment	To request to configure MAC
Type Definition	
SEQUENCE	{ activationTime SS_ActivationTime, uE_Info UE_Info, trCHInfo TrCHInfo, trCH_LogCHMapping TrCH_LogCHMappingList1 -- RACHTrasmissionCtroleElements TBD, -- CPCHTransmissionControlElements TBD }

ASN.1 Type Definition	
Type Name	UE_Info
Comment	The value of c_RNTI_DSCH_RNTI is 16 bits, used either for C-RNTI or DSCH-RNTI. DSCH is configured if the physical channel in CMAC_config_REQ is a PDSCH. Otherwise, C-RNTI is applied.
Type Definition	
SEQUENCE	{ u_RNTI U_RNTI OPTIONAL, c_RNTI_DSCH_RNTI C_RNTI OPTIONAL }

ASN.1 Type Definition	
Type Name	TrCH_LogCHMappingList1
Comment	maxulTrCH = maxdlTrCH = 16
Type Definition	
SEQUENCE	{ ulconnectedTrCHList SEQUENCE (SIZE (1..maxulTrCH)) OF SEQUENCE { trchid TransportChannelIdentity, trCH_LogCHMappingList TrCH_LogCHMappingList }, OPTIONAL, dlconnectedTrCHList SEQUENCE (SIZE (1..maxdlTrCH)) OF SEQUENCE { trchid TransportChannelIdentity, trCH_LogCHMappingList TrCH_LogCHMappingList }, OPTIONAL }

ASN.1 Type Definition	
Type Name	TrCH_LogCHMappingList
Comment	maxLogCHperTrCH = 15
Type Definition	
SEQUENCE	(SIZE (1..maxLogCHperTrCH)) OF TrCH_LogicalChannelMapping

ASN.1 Type Definition	
Type Name	TrCHInfo
Comment	The same TFCS information should be provided to the PHY and MAC layers at all times. When a CMAC_Config_REQ is used to configure the MAC layer, a corresponding CPHY_TrCH_Config_REQ should be sent to the PHY layer to ensure that the configuration is consistent.
Type Definition	
SEQUENCE	{ ulconnectedTrCHList SEQUENCE (SIZE (1..maxulTrCH)) OF SEQUENCE { trchid TransportChannelIdentity, transportChannelInfo CommonOrDedicatedTFS } OPTIONAL, ulTFCS TFCS OPTIONAL, dlconnectedTrCHList SEQUENCE (SIZE (1..maxdlTrCH)) OF SEQUENCE { trchid TransportChannelIdentity, transportChannelInfo CommonOrDedicatedTFS } OPTIONAL, dlTFCS TFCS OPTIONAL }

ASN.1 Type Definition	
Type Name	TrCH_LogicalChannelMapping
Comment	
Type Definition	
SEQUENCE	{
	CHOICE {
	ul_LogicalChannelMapping SS_UL_LogicalChannelMapping,
	dl_LogicalChannelMapping SS_DL_LogicalChannelMapping
	},
	rB_Identity INTEGER {-31..32} OPTIONAL,
	cn-DomainIdentity CN-DomainIdentity OPTIONAL
	}

ASN.1 Type Definition	
Type Name	SS_UL_LogicalChannelMapping
Comment	If the macHeaderManipulation field is 'NormalMacHeader', then data received on the transport channel supporting this logical channel shall have it's MAC header inspected to determine the appropriate routing, and removed as normal. The MAC SDU shall be passed to the appropriate logical channel. If the macHeaderManipulation field is 'OmitMacHeader', then data received on the transport channel supporting this logical channel shall have it's MAC header inspected to determine the appropriate routing, but the MAC layer shall not remove the MAC header. Thus the entire MAC PDU shall be passed to the appropriate logical channel, and the MAC header can be checked by the TTCN.
Type Definition	
SEQUENCE	{
	macHeaderManipulation MAC_HeaderManipulation,
	ul_TransportChannelType SS_UL_TransportChannelType,
	logicalChannelIdentity LogicalChannelIdentity,
	logicalChannelType LogicalChannelType
	}

ASN.1 Type Definition	
Type Name	SS_DL_LogicalChannelMapping
Comment	If the macHeaderManipulation field is 'NormalMacHeader', then data transmitted on this logical channel shall have an appropriate MAC header added before it is sent to lower layers for transmission. If the macHeaderManipulation field is 'OmitMacHeader', then data transmitted on this logical channel shall not have any MAC header information added, even if the logical channel type and mapping indicates that there should be a MAC header present. This allows the entire MAC PDU to be specified in the TTCN, so individual fields in the MAC header can be modified.
Type Definition	
SEQUENCE	{
	macHeaderManipulation MAC_HeaderManipulation,
	dlTransportChannelType SS_DL_TransportChannelType,
	logicalChannelIdentity LogicalChannelIdentity,
	logicalChannelType LogicalChannelType,
	rlc_SizeList CHOICE {
	allSizes NULL,
	configured NULL,
	explicitList RLC_SizeExplicitList},
	mac_LogicalChannelPriority MAC_LogicalChannelPriority OPTIONAL
	}

ASN.1 Type Definition	
Type Name	SS_UL_TransportChannelType
Comment	
Type Definition	
ENUMERATED	{
	dch (0),
	rach (1),
	cpch (2),
	usch (3)
	}

ASN.1 Type Definition	
Type Name	MAC_LogicalChannelPriority
Comment	
Type Definition	
INTEGER (1..8)	

ASN.1 Type Definition	
Type Name	SS_DL_TransportChannelType
Comment	
Type Definition	
<pre> ENUMERATED { dch (0), fach (1), bch (2), pch (3), dsch (4) } </pre>	

ASN.1 Type Definition	
Type Name	LogicalChannelType
Comment	
Type Definition	
<pre> ENUMERATED { bCCH (0), pCCH (1), cCCH (2), cTCH (3), dCCH (4), dTCH (5), sHCCH (6) } </pre>	

ASN.1 Type Definition	
Type Name	MAC_HeaderManipulation
Comment	
Type Definition	
<pre> ENUMERATED { NormalMacHeader (0), OmitMacHeader (1) } </pre>	

7.3.2.2.18 CMAC_PAGING_Config

ASN.1 ASP Type Definition	
Type Name	CMAC_PAGING_Config_CNF
PCO Type	CSAP
Comment	To confirm to setup the paging message
Type Definition	
<pre> SEQUENCE { cellId INTEGER(0..63), routingInfo RoutingInfo } </pre>	

ASN.1 ASP Type Definition	
Type Name	CMAC_PAGING_Config_REQ
PCO Type	CSAP
Comment	To request MAC layer to send the Paging message on the specified configuration.
Type Definition	
<pre> SEQUENCE { cellId INTEGER(0..63), routingInfo RoutingInfo, ratType RatType, configMessage CmacPagingConfigReq } </pre>	

ASN.1 Type Definition	
Type Name	CmacPagingConfigReq
Comment	
Type Definition	
SEQUENCE {	
pI_BitMapInfo	CHOICE {
e18	BIT STRING (SIZE (18)),
e36	BIT STRING (SIZE (36)),
e72	BIT STRING (SIZE (72)),
e144	BIT STRING (SIZE (144))
	},
dRX_CycleLength	INTEGER {3..9},
iMSI	SEQUENCE (SIZE (6..15)) OF Digit,
t_pich_T_sccpch	BOOLEAN -- T_pich>T_sccpch then FALSE
}	

7.3.2.2.19 CMAC_Restriction

ASN.1 ASP Type Definition	
Type Name	CMAC_Restriction_CNF
PCO Type	CSAP
Comment	For MAC emulator to report that a previous attempt of restricting TFCs have been successful.
Type Definition	
SEQUENCE {	
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo
}	

ASN.1 ASP Type Definition	
Type Name	CMAC_Restriction_REQ
PCO Type	CSAP
Comment	To request to configure MAC entity. The field restrictAllowedTFCs is provided to allow the UL and/or DL SS TFCS to be restricted for a specific transport channel. This information only needs to be sent to the MAC layer, since it is the MAC layer's responsibility to determine the set of valid TFCs each TTI.
Type Definition	
SEQUENCE {	
cellId entity	INTEGER (-1..63),
routingInfo	RoutingInfo,
ratType	RatType,
restrictAllowedTFCs	TFC_Restriction
}	

ASN.1 Type Definition	
Type Name	TFC_Restriction
Comment	<p>This type is used to specify the allowed TFCs within the current TFCS. A TFC restriction is applicable until a subsequent TFC restriction is applied. TFC restrictions are not cumulative, so each TFC restriction completely replaces the previous TFC restriction.</p> <p>The downlink restriction can be used to ensure that the SS uses a specific TFC for transmission of data, by only allowing the 'No data' TFC, and the 'desired' TFC. It may also be necessary to include one or more 'signalling only' TFCs to allow signalling to occur.</p> <p>The uplink restriction can be used to verify that the UE has used a specific TFC. Any data received by the SS using a forbidden TFCI shall be discarded.</p>
Type Definition	
<pre>SEQUENCE { ulTFCI_Restriction TFC_Subset OPTIONAL, dlTFCI_Restriction TFC_Subset OPTIONAL }</pre>	
Detailed Comments	<p>SS requirements for downlink:</p> <ol style="list-style-type: none"> 1. The SS MAC layer shall not use a restricted non-allowed TFC for DL. 2. The SS MAC layer shall not use a TFC that requires the SS RLC layer to provide padding PDUs (3GPP TS 25.322 [Error! Reference source not found.]) 3. In the case that there is data pending on one or more RLC entities, but not enough to use one of the allowed TFCs: <ol style="list-style-type: none"> a. The SS MAC layer shall use the 'No data' TFC until there is enough data in the RLC to use another allowed TFC. b. The SS RLC layer shall buffer the data until there is enough data in the RLC entities for the MAC layer to use an allowed TFC other than the 'No data' TFC for transmission of the data. <p>NB: The TTCN author is responsible for ensuring:</p> <ol style="list-style-type: none"> 1. The SDU discard function is not configured for TM and UM entities in the UE, and is configured to no_discard for AM entities in the UE. 2. That RLC SDUs that are expected to be sent in the same TTI (due to a TFC restriction) are sent as quickly as possible to minimise the number of 'no data' TFCs used by the MAC layer, and the amount of buffering that must be performed by the RLC layer. <p>SS requirements for uplink: The SS shall discard all data received using a restricted non-allowed TFC.</p>

7.3.2.2.20 CMAC_SecurityMode_Config

ASN.1 ASP Type Definition	
Type Name	CMAC_SecurityMode_Config_CNF
PCO Type	CSAP
Comment	To confirm to configure the MAC security mode
Type Definition	
<pre>SEQUENCE { cellId INTEGER(-1..63) }</pre>	

ASN.1 ASP Type Definition	
Type Name	CMAC_SecurityMode_Config_REQ
PCO Type	CSAP
Comment	<p>To request to configure the MAC security mode</p> <p>If there are several CMAC_Ciphering_Activate_REQ follow this ASP, the SS shall take a serial of specified actions on the same contents in this ASP at the activation time indicated in each CMAC_Ciphering_Activate_REQ.</p>
Type Definition	
<pre>SEQUENCE { cellId INTEGER(-1..63), macCipheringInfo SecurityInfo }</pre>	

7.3.2.2.21 CMAC_SequenceNumber

ASN.1 ASP Type Definition	
Type Name	CMAC_Sequence_Number_CNF
PCO Type	CSAP
Comment	To return the requested counter sequence number on MAC-d DCH. The physicalChannelIdentity of DPCH applies to routingInfo.
Type Definition	
SEQUENCE	{
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo,
count_C_MSB_UL	COUNT_C_MSB,
count_C_MSB_DL	COUNT_C_MSB
	}

ASN.1 ASP Type Definition	
Type Name	CMAC_SequenceNumber_REQ
PCO Type	CSAP
Comment	To request the MAC layer to return current counter sequence numbers. The physicalChannelIdentity of DPCH applies to routingInfo.
Type Definition	
SEQUENCE	{
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo
	}

7.3.2.2.22 CMAC_SYSINFO_Config

ASN.1 ASP Type Definition	
Type Name	CMAC_SYSINFO_Config_CNF
PCO Type	CSAP
Comment	To confirm to setup the system information block
Type Definition	
SEQUENCE	{
cellId	INTEGER(0..63),
routingInfo	RoutingInfo
	}

ASN.1 ASP Type Definition	
Type Name	CMAC_SYSINFO_Config_REQ
PCO Type	CSAP
Comment	To request MAC layer to send the BCCH message on the specified configuration.
Type Definition	
SEQUENCE	{
cellId	INTEGER(0..63),
routingInfo	RoutingInfo,
ratType	RatType,
configMessage	CmacSysinfoConfigReq
	}

ASN.1 Type Definition	
Type Name	CmacSysinfoConfigReq
Comment	
Type Definition	
SEQUENCE	{
sg_REP	INTEGER (2..12), -- Repetition period is the sg_REP-th power of 2.
sg_POS	INTEGER (0..2047), -- The position of each segment is 2 * sg_POS.
bcch_ModificationTime	BCCH_ModificationTime OPTIONAL
	}

7.3.2.2.23 CRLC_Ciphering_Activate

ASN.1 ASP Type Definition	
Type Name	CRLC_Ciphering_Activate_CNF
PCO Type	CSAP
Comment	To confirm to activate or inactivate the ciphering
Type Definition	
SEQUENCE {	
cellId	INTEGER(-1..63)
}	

ASN.1 ASP Type Definition	
Type Name	CRLC_Ciphering_Activate_REQ
PCO Type	CSAP
Comment	To request to start or restart downlink ciphering or uplink deciphering. Each call of the ASP includes one RLC SN in rb-DL-CiphActivationTimeInfo for the corresponding rb-identity. If valueForLSBsOfHFN is present the SS initialise the LSBs of HFN component in UM COUNT-C accordingly. If it is absent the SS initialise the LSBs of HFN component in UM COUNT-C to zero.
Type Definition	
SEQUENCE {	
cellId	INTEGER(-1..63),
ratType	RatType,
cn_DomainIdentity	CN_DomainIdentity ,
ciphActivationInfo	CiphActivationInfo,
valueForLSBsOfHFN	INTEGER(0..31) OPTIONAL
}	

ASN.1 Type Definition	
Type Name	CiphActivationInfo
Comment	DL or UL ciphering activation info If RB is omitted in rB_UL_CiphActivationTimeInfo the SS takes no action on this RB. CipheringModeCommand = dummy NULL means no ciphering.
Type Definition	
CHOICE {	
cipheringModeInfo	CipheringModeInfo,
rb_UL_CiphActivationTimeInfo	RB_ActivationTimeInfoList
}	

7.3.2.2.24 CRLC_Config

ASN.1 ASP Type Definition	
Type Name	CRLC_Config_CNF
PCO Type	CSAP
Comment	For RLC emulator to confirm that a previous attempt to establish, re_configure or release a radio bearer has been successful.
Type Definition	
SEQUENCE {	
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo
}	

ASN.1 ASP Type Definition	
Type Name	CRLC_Config_REQ
PCO Type	CSAP
Comment	To request to setup, reconfigure or release RLC entity
Type Definition	
SEQUENCE {	
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo,
ratType	RatType,
configMessage	CrlcConfigReq
}	

ASN.1 Type Definition	
Type Name	CrlcConfigReq
Comment	To request to setup, re_configure release RLC entity The Stop parameter indicates that the RLC entity shall not transmit or receive RLC PDUs. The Continue parameter indicates that the RLC entity shall continue transmission and reception of RLC PDUs. When the RLC entity is stopped, the all protocol parameters, such as the protocol variables, RLC timers and status are not affected. Triggered polls and status transmissions are delayed until the RLC entity is continued.
Type Definition	
<pre>CHOICE { setup RBInfo, reconfigure RBInfo, release NULL, stop NULL, continue NULL }</pre>	

ASN.1 Type Definition	
Type Name	RBInfo
Comment	
Type Definition	
<pre>SEQUENCE (sS_rlc_Info SS_RLC_Info OPTIONAL, rB_LogCH_Mapping RB_LogCH_Mapping)</pre>	

ASN.1 Type Definition	
Type Name	RB_LogCH_Mapping
Comment	Provide mapping information between RB, logical channel and CN domain.
Type Definition	
<pre>SEQUENCE { uLogicalChannelIdentity LogicalChannelIdentity OPTIONAL, dLogicalChannelIdentity LogicalChannelIdentity OPTIONAL, logicalChannelType LogicalChannelType OPTIONAL, cn-DomainIdentity CN-DomainIdentity OPTIONAL }</pre>	

ASN.1 Type Definition	
Type Name	SS_RLC_Info
Comment	UL and DL have been swapped intentionally in this type definition. This is to maximise re-use of the type definitions in 3GPP TS 25.331 [Error! Reference source not found.] which are intended to configure a UE, where UL is transmission, and DL is reception. For the SS, UL is reception, and DL is transmission. EXAMPLE: Consider configuring a DL AM RLC entity (transmitter) in the SS. The transmission parameters to be configured include PollingInformation, Transmission-RLC-Discard etc. If the DL-AM-RLC-Mode type definition is used to configure this entity, it is only possible to configure reception parameters such as StatusInformation, and receiving window size. By swapping UL and DL, it is possible to configure the DL AM RLC entity using the existing type definition UL-AM-RLC-Info, which contains all of the required transmission parameters.
Type Definition	
<pre>SEQUENCE { sS_ul_RLC_Mode DL_RLC_Mode OPTIONAL, sS_dl_RLC_Mode SS_DL_RLC_Mode OPTIONAL }</pre>	

ASN.1 Type Definition			
Type Name	SS_DL_RLC_Mode		
Comment			
Type Definition			
SEQUENCE	{		
	dl_PayloadSize	PayloadSize	OPTIONAL,
	dl_RLCModeInfo	UL_RLC_Mode	
	}		

ASN.1 Type Definition	
Type Name	PayloadSize
Comment	
Type Definition	
INTEGER	(0..4992)

7.3.2.2.25 CRLC_Integrity_Activate

ASN.1 ASP Type Definition	
Type Name	CRLC_integrity_Activate_CNF
PCO Type	CSAP
Comment	To confirm to activate or inactivate the integrity protection
Type Definition	
SEQUENCE	{
	cellId INTEGER(-1..63)
	}

ASN.1 ASP Type Definition	
Type Name	CRLC_Integrity_Activate_REQ
PCO Type	CSAP
Comment	To request to start or to modify the downlink or uplink integrity protection. The ASP shall be called before send SECURITY MODE COMMAND. It activates the integrity on all SRBs in DL. Not to call the ASP if wishing to switch off the integrity in the test case.
Type Definition	
SEQUENCE	{
	cellId INTEGER(-1..63),
	cn_DomainIdentity CN_DomainIdentity ,
	integrityActivationInfo IntegrityActivationInfo
	}

ASN.1 Type Definition	
Type Name	IntegrityActivationInfo
Comment	DL or UL integrity activation info At the RRC message sequence numbers specified in the ul_IntegrityProtActivationInfo the SS shall initialise COUNT-I for the SRB's indicated in the ul_IntegrityProtActivationInfo and start using the new configuration on uplink for the indicated SRB's. If the START value is omitted in the CRLC_SecurityMode_Config_REQ above COUNT-I initialisation shall not be performed.
Type Definition	
CHOICE	{
	integrityProtectionModeInfo IntegrityProtectionModeInfo,
	ul-IntegProtActivationInfo IntegrityProtActivationInfoList
	}

ASN.1 Type Definition	
Type Name	IntegrityProtActivationInfoList
Comment	List of SS IntegrityProtActivationInfo
Type Definition	
SEQUENCE	(SIZE (1..maxRB)) OF SS_IntegrityProtActivationTimeInfo

<u>ASN.1 Type Definition</u>	
<u>Type Name</u>	<u>SS_IntegrityProtActivationTimeInfo</u>
<u>Comment</u>	<u>Omitting rrc_MessageSequenceNumber means activation time set to "now".</u>
<u>Type Definition</u>	
SEQUENCE {	
<u>rb_Identity</u>	<u>INTEGER (-31..32),</u>
<u>rrc_MessageSequenceNumber</u>	<u>RRC_MessageSequenceNumber OPTIONAL</u>
}	

7.3.2.2.26 CRLC_Integrity_Failure

<u>ASN.1 ASP Type Definition</u>	
<u>Type Name</u>	<u>CRLC_Integrity_Failure_IND</u>
<u>PCO Type</u>	<u>CSAP</u>
<u>Comment</u>	<u>RLC emulator reports the occurrences of a failure in integrity protection, i.e. reception of an integrity-protected RLC AM/UM SDU containing a non-matching X-MAC value compared to the desired.</u>
<u>Type Definition</u>	
SEQUENCE {	
<u>cellId</u>	<u>INTEGER(-1..63),</u>
<u>routingInfo</u>	<u>RoutingInfo,</u>
<u>failureCause</u>	<u>ENUMERATED { codeNotMatched(0) }</u>
-- the enumerated types of failure cause field is ffs	
}	

7.3.2.2.26a CRLC_MAC_I_Mode

<u>ASN.1 ASP Type Definition</u>	
<u>Type Name</u>	<u>CRLC_MAC_I_Mode_CNF</u>
<u>PCO Type</u>	<u>CSAP</u>
<u>Comment</u>	<u>Confirm a previous CRLC_MAC_I_Mode_REQ being successful.</u>
<u>Type Definition</u>	
SEQUENCE {	
<u>cellId</u>	<u>INTEGER(-1..63),</u>
<u>srbId</u>	<u>INTEGER(0..4)</u>
}	

<u>ASN.1 ASP Type Definition</u>	
<u>Type Name</u>	<u>CRLC_MAC_I_Mode_REQ</u>
<u>PCO Type</u>	<u>CSAP</u>
<u>Comment</u>	<u>To set the MAC-I calculation mode. The ASP does not affect the UL integrity calculation. If mode = normal, the SS generates the correct MAC-I. If mode = erroneous, the SS generates any wrong MAC-I value different from the one it shall be. As default, when the integrity protection is jswitched on the SS enters the normal MAC-I calculation mode.</u>
<u>Type Definition</u>	
SEQUENCE {	
<u>cellId</u>	<u>INTEGER(-1..63),</u>
<u>srbId</u>	<u>INTEGER (0..4),</u>
<u>mode</u>	<u>ENUMERATED {normal(0), erroneous(1)}</u>
}	

7.3.2.2.27 CRLC_Resume

ASN.1 ASP Type Definition	
Type Name	CRLC_Resume_CNF
PCO Type	CSAP
Comment	To confirm the resume request
Type Definition	
SEQUENCE	{
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo
}	

ASN.1 ASP Type Definition	
Type Name	CRLC_Resume_REQ
PCO Type	CSAP
Comment	To request to resume data transmission
Type Definition	
SEQUENCE	{
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo
}	

7.3.2.2.27a CRLC_RRC_MessageSN

ASN.1 ASP Type Definition	
Type Name	CRLC_RRC_MessageSN_CNF
PCO Type	CSAP
Comment	To return the requested counter I contents (HFN and RRC message sequence number). COUNT_I_MSB is the 28 MSB of the COUNT-I (HFN)
Type Definition	
SEQUENCE	{
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo,
count_I_MSB_UL	COUNT_I_MSB,
count_I_LSB_UL	RRC_SequenceNumber,
count_I_MSB_DL	COUNT_I_MSB,
count_I_LSB_DL	RRC_SequenceNumber
}	

ASN.1 Type Definition	
Type Name	COUNT_I_MSB
Comment	28 bits long
Type Definition	
INTEGER (0..268435455)	

ASN.1 Type Definition	
Type Name	RRC_SequenceNumber
Comment	4 bits long
Type Definition	
INTEGER (0..15)	

ASN.1 ASP Type Definition	
Type Name	CRLC_RRC_MessageSN_REQ
PCO Type	CSAP
Comment	To request the SS to return current contents in COUNT-I
Type Definition	
SEQUENCE	{
cellId	INTEGER(-1..63),
routingInfo	RoutingInfo
}	

7.3.2.2.28 CRLC_SecurityMode_Config

ASN.1 ASP Type Definition	
Type Name	CRLC_SecurityMode_Config_CNF
PCO Type	CSAP
Comment	To confirm to configure the RLC security mode If several subsequent CRLC_Integrity_Activate_REQ or CRLC_Ciphering_Activate_REQ follow this ASP, the SS shall take a serial of specified actions on the same contents in this ASP at the activation time indicated in each CRLC_Integrity (or Ciphering)_Activate_REQ.
Type Definition	
SEQUENCE	{ cellId INTEGER(-1..63) }

ASN.1 ASP Type Definition	
Type Name	CRLC_SecurityMode_Config_REQ
PCO Type	CSAP
Comment	To request to configure the RLC security mode
Type Definition	
SEQUENCE	{ cellId INTEGER(-1..63), rlcSecurityInfo SecurityInfo} }

ASN.1 Type Definition	
Type Name	SecurityInfo
Comment	The integrityKey is not applicable to MAC
Type Definition	
SEQUENCE	{ cn-DomainIdentity CN-DomainIdentity, startValue START_VALUE OPTIONAL, cipheringKey BITSTRING(128) OPTIONAL, integrityKey BITSTRING(128) OPTIONAL, gsmCiperKey BITSTRING(64) OPTIONAL }
Detailed Comments	<p>SecurityInfo contains either a new START_VALUE for the existing security keys, or a set of new security keys with the zero value for START. The START value is activated at the activation time. When the SS receives SecurityInfo, the SS first stores the contents. The activation of the contents follows the subsequent ASP, CRLC_Ciphering_Activate_REQ, CMAC_Ciphering_Activate_REQ or CRLC_Integrity_Activate_REQ. Omitted fields of SecurityInfo shall not be affected by the subsequent ASP at the activation time.</p> <p><u>EXAMPLE: Omitting of startValue indicates not to re-initialise the relevant COUNT-C or COUNT-I, omitting of cipheringKey indicates that the current ciphering key is valid</u></p>

7.3.2.2.28a CRLC_SetRRC_MessageSN

ASN.1 ASP Type Definition	
Type Name	CRLC_SetRRC_MessageSN_CNF
PCO Type	CSAP
Comment	To confirm the RRC message sequence number setting request
Type Definition	
SEQUENCE	{ cellId INTEGER(-1..63), routingInfo RoutingInfo }

<u>ASN.1 ASP Type Definition</u>	
<u>Type Name</u>	<u>CRLC_SetRRC_MessageSN_REQ</u>
<u>PCO Type</u>	<u>CSAP</u>
<u>Comment</u>	<u>To request the SS to set the RRC message sequence number in COUNT-I to the value specified in this ASP. The ASP is used to initialise SS RRC SN.</u>
<u>Type Definition</u>	
SEQUENCE	{
cellId	INTEGER (-1..63),
routingInfo	RoutingInfo,
count_I_LSB_UL	RRC_SequenceNumber OPTIONAL,
count_I_LSB_DL	RRC_SequenceNumber OPTIONAL
	}

7.3.3 TTCN Primitives

7.3.3.1 UTRAN TTCN Primitives

Table 19 shows the primitives that are used for RLC, BMC ,RB and PDCP tests, these primitives are defined in TTCN tabular form.

Table 1: Primitives for RLC, BMC and RB tests

Primitive	Parameters	Use
RLC_TR_TestDataReq	Cell identity INTEGER (-31..32) Data (Meta type PDU)	The ASP is used to request the transmission of unstructured data using transparent mode in the downlink direction
RLC_TR_TestDataInd	Cell identity INTEGER (-31..32) Data (Meta type PDU)	The ASP is used to indicate the reception of unstructured data using transparent mode in the uplink direction
RLC_UM_TestDataReq	Cell identity INTEGER (-31..32) Data (Meta type PDU)	The ASP is used to request the transmission of unstructured data using unacknowledged mode in the downlink direction
RLC_UM_TestDataInd	Cell identity INTEGER (-31..32) Data (Meta type PDU)	The ASP is used to indicate the reception of unstructured data using unacknowledged mode in the uplink direction
RLC_AM_TestDataReq	Cell identity INTEGER (-31..32) Data (Meta type PDU)	The ASP is used to request the transmission of unstructured data using acknowledged mode in the downlink direction
RLC_AM_TestDataInd	Cell identity INTEGER (-31..32) Data (Meta type PDU)	The ASP is used to indicate the reception of unstructured data using acknowledged mode in the uplink direction
BMC_DataReq	Cell identity, INTEGER (-31..32), Data (Meta type PDU)	The ASP is used to request the transmission of unstructured BMC data or scheduling message, using unacknowledged mode in the downlink direction.
BMC_DataCnf	CellId, INTEGER (-31..32)	The ASP is used to confirm the reception of BMC CBS data
RLC_HandoverReq	CellId INTEGER (-31..32) Data (Meta type PDU)	The ASP is used to request the transmission of the HandoverFromUTRANCommand_GSM message using acknowledged operation (AM). The Meta PDU in turn consists of 2 components. <ol style="list-style-type: none"> 1. the ASN.1 PER encoded HandoverFromUTRANCommand, without any 1-7 bits of padding 2. The GSM Handover command The SS shall take care of inserting the MAC and RLC sequence number of Integrity check info, as in the case of other RRC DL PDU's

The TTCN tabular format applies to the primitive definitions.

7.3.4 GERAN PCO and ASP definitions

7.3.4.1 PCO Type definitions

7.3.4.1.1 PCO type for data transmission and reception in GERAN

Table 2: Declaration of the G_DSAP PCO Type

PCO Type Definition	
PCO Type	G_DSAP
Role	LT
Comment	DATA transmission and reception

7.3.4.1.2 PCO type for configuration and control in GERAN

Table 3: Declaration of the G_CSAP PCO Type

PCO Type Definition	
PCO Type	G_CSAP
Role	LT
Comment	Transmission and reception of control primitives

7.3.4.2 PCO definitions

7.3.4.2.1 PCOs for data transmission and reception in GERAN

7.3.4.2.1.1 PCO for data transmission and reception through GERAN L2

Table 4: Declaration of G_L2 PCO

PCO Type Definition	
PCO Name	G_L2
PCO Type	G_DSAP
Role	LT
Comment	Control and observation point of GERAN L3 messages and user data

7.3.4.2.1.2 PCO for data transmission and reception through GPRS RLC

Table 5: Declaration of G_RLC PCO

PCO Type Definition	
PCO Name	G_RLC
PCO Type	G_DSAP
Role	LT
Comment	Control and observation point of GPRS GRR signalling messages

7.3.4.2.1.3 PCO for data transmission and reception through GPRS LLC

Table 6: Declaration of LLC PCO

PCO Type Definition	
PCO Name	G_LLC
PCO Type	G_DSAP
Role	LT
Comment	Control and observation point of GPRS GMM signalling messages

7.3.4.2.1.4 PCO for data transmission and reception through GPRS SMDCP

Table 7: Declaration of SMDCP PCO

PCO Type Definition	
PCO Name	G_SMDCP
PCO Type	G_DSAP
Role	LT
Comment	Control and observation point of GPRS user packet data

7.3.4.2.2 PCOs for control primitives transmission and reception in GERAN

7.3.4.2.2.1 PCO for GERAN L1 control primitives transmission and reception

Table 8: Declaration of G_CL1 PCO

PCO Type Definition	
PCO Name	G_CL1
PCO Type	G_CSAP
Role	LT
Comment	Control GERAN Physical Layer (L1)

7.3.4.2.2.2 PCO for GERAN L2 control primitives transmission and reception

Table 9: Declaration of G_CL2 PCO

PCO Type Definition	
PCO Name	G_CL2
PCO Type	G_CSAP
Role	LT
Comment	Control GERAN L2

7.3.4.2.2.3 PCO for GPRS RLC control primitives transmission and reception

Table 10: Declaration of G_CRLC PCO

PCO Type Definition	
PCO Name	G_CRLC
PCO Type	G_CSAP
Role	LT
Comment	Control GPRS RLC/MAC layer

7.3.4.2.2.4 PCO for GPRS LLC control primitives transmission and reception

Table 11: Declaration of G_CLLC PCO

PCO Type Definition	
PCO Name	G_CLLC
PCO Type	G_CSAP
Role	LT
Comment	Control GPRS LLC layer

7.3.4.2.2.5 PCO for GPRS SMDCP control primitives transmission and reception

Table 12: Declaration of G_CSMDCP PCO

PCO Type Definition	
PCO Name	G_CSMDCP
PCO Type	G_CSAP
Role	LT
Comment	Control GPRS SMDCP layer

7.3.4.3 GERAN ASP Definitions

7.3.4.3.1 ASPs for data transmission and reception in GERAN

7.3.4.3.1.1 ASPs for data transmission and reception through GERAN L2

ASP Name	G_L2_DATA_REQ	
PCO Type	G_DSAP	
Comments	The ASP is used to send L3 signalling message on the signalling channels or user data on the traffic channels to the UE/MS in acknowledged mode.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
sAPI	SAPI	0 or 3
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
rfn	RFN	The reduced frame number of the first frame on which this message is sent. This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.
msg	PDU	Signalling message or user data to be sent
Detailed Comments	Parameter rfn is only used in the test cases that require specific L3 message to be sent on specified frame number.	

ASP Name	G_L2_DATA_IND	
PCO Type	G_DSAP	
Comments	The ASP is used to receive a L3 signalling message on the signalling channels or user data on the traffic channels from the UE/MS in acknowledged mode.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
sAPI	SAPI	0 or 3
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
rfn	RFN	The reduced frame number of the first frame carrying the message
msg	PDU	Signalling message or user data received
Detailed Comments		

ASP Name	G_L2_L2Estab_IND	
PCO Type	G_DSAP	
Comments	The ASP is used to receive an indication of that L2 multiple frame operation on the specified channel has been established.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4, This field shall be coded as 15 if it is not applicable.
sAPI	SAPI	0,3
establish_mode	OCTETSTRING[1]	
rfr	RFN	The reduced frame number of the first frame carries the L2 SABM frame
msg	PDU	this field is present only when the establish_mode is CoRes (collision resolution)
Detailed Comments	see 3GPP TS 44.006 [Error! Reference source not found.], clauses 7.1.1 and 7.1.3	

ASP Name	G_L2_UNITDATA_REQ	
PCO Type	G_DSAP	
Comments	The ASP is used to send L3 signalling message on the signalling channels or send user data on the traffic channels to the UE/MS in unacknowledged mode.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
sAPI	SAPI	0 or 3
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
rfr	RFN	The reduced frame number of the first frame on which this message is sent. This field is not applicable and the SS shall ignore it if the field t2 of rfr is coded as '11111'B.
msg	PDU	Signalling message or user data to be sent
Detailed Comments	Parameter rfr is only used in the test cases that require specific L3 message to be sent on specified frame number.	

ASP Name	G_L2_UNITDATA_IND	
PCO Type	G_DSAP	
Comments	The ASP is used to receive a L3 signalling message on the signalling channels or user data on the traffic channels from the UE/MS in unacknowledged mode.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
sAPI	SAPI	0 or 3
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
rfrn	RFN	The reduced frame number of the first frame carrying the message
msg	PDU	Signalling message or user data received
Detailed Comments		

ASP Name	G_L2_ACCESS_IND	
PCO Type	G_DSAP	
Comments	The ASP is used to receive a random access or handover access burst on the specified channel.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	RACH, FACCH, SDCCH/8, SDCCH/4. RACH is used for random access burst; others are used for handover access burst
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8, SDCCH/4. This field is not applicable and the SS shall ignore it if this field is coded as 15.
rfrn	RFN	The reduced frame number of the first frame carrying the burst
burst	PDU	Random access burst or handover access burst
Detailed Comments		

ASP Name	G_L2_Paging_REQ	
PCO Type	G_DSAP	
Comments	The ASP is used to send a paging message on the specified paging group of the specified paging channel to the UE/MS, <u>when the UE/MS is in idle mode or the UE/MS not supporting SPLIT_PG_CYCLE on CCCH is in GPRS attached mode and PCCCH is absent.</u>	
Parameter Name	Parameter Type	Comments
cellId	CellId	
sAPI	SAPI	0
physicalChId	PhysicalChId	Channel identifier of the right CCCH_GROUP or PCCCH_GROUP
g_LogicChType	G_LogicChType	PCH or PPCH
pagingGroup	PAGING_GROUP	
pagingMode	PagingMode	0—normal paging; 1—extended paging; 2—paging reorganization.
msg	PDU	Paging message
Detailed Comments	<p>The SS is required to send valid layer 3 messages continuously on all paging subchannels on CCCH and is required to send valid RLC data blocks or RLC/MAC control blocks continuously on all subchannels on PCCCH where paging can appear.</p> <p>For "normal paging" the SS send the paging message in the specified pagingGroup; For "extended paging" " the SS send the paging message in the specified pagingGroup and in the "next but one" position on the PCH or in the third block period on PCCCH where paging may occur (PPCH), following the block corresponding to pagingGroup;</p> <p>For "paging reorganization" the SS send the paging message in all paging subchannels.</p> <p><u>The required 51-multiframe occurs when:</u> $\text{pagingGroup div (N div BS_PA_MFRMS) = (FN div 51) mod (BS_PA_MFRMS)}$ <u>The index to the required paging block in the 51-multiframe determined above:</u> $\text{Paging block index} = \text{pagingGroup mod (N div BS_PA_MFRMS)}$ $\text{N} = (9\text{-BS_AG_BLKS_RES}) * \text{BS_PA_MFRMS}$ <u>CCCH not combined or</u> $\text{N} = (3\text{-BS_AG_BLKS_RES}) * \text{BS_PA_MFRMS}$ <u>CCCH + SDCCH combined</u></p>	

ASP Name	G_L2_PagingGPRS_REQ	
PCO Type	G_DSAP	
Comments	The ASP is used to send a paging message on the specified paging group of the specified paging channel to the UE/MS, <u>when the UE/MS supporting SPLIT_PG_CYCLE on CCCH is in GPRS attached mode and PCCCH absent.</u>	
Parameter Name	Parameter Type	Comments
cellId	CellId	
sAPI	SAPI	0
physicalChId	PhysicalChId	Channel identifier of the right CCCH_GROUP
g_LogicChType	G_LogicChType	PCH
pagingGroup	PAGING_GROUP	
pagingMode	PagingMode	0—normal paging; 1—extended paging; 2—paging reorganization.
msg	PDU	Paging message
Detailed Comments	<p>The SS is required to send valid layer 3 messages continuously on all paging subchannels on CCCH where paging can appear.</p> <p>For "normal paging" the SS send the paging message in the specified pagingGroup; For "extended paging" " the SS send the paging message in the specified pagingGroup and in the "next but one" position on the PCH, following the block corresponding to pagingGroup;</p> <p>For "paging reorganization" the SS send the paging message in all paging subchannels.</p> <p><u>The required 51-multiframe occurs when:</u> $\text{pagingGroup div (M div 64) = (FN div 51) mod 64}$ <u>The index to the required paging block in the 51-multiframe determined above:</u> $\text{Paging block index} = \text{pagingGroup mod (M div 64)}$ $\text{M} = (9\text{-BS_AG_BLKS_RES}) * 64$ <u>CCCH not combined or</u> $\text{M} = (3\text{-BS_AG_BLKS_RES}) * 64$ <u>CCCH + SDCCH combined</u></p>	

Note: this ASP may not be implemented if the MS/UE does not support SPLIT_PG_CYCLE on CCCH

Type Name	CellId
Type Definition	INTEGER
Type Encoding	
Comments	

Type Name	SAPI
Type Definition	INTEGER
Type Encoding	
Comments	Service access point identifier for GERAN L2 and LLC

Type Name	PhysicalChId
Type Definition	INTEGER(0..31)
Type Encoding	
Comments	Physical channel identifier in GERAN

Type Name	G_LogicalChType
Type Definition	INTEGER
Type Encoding	
Comments	<p>GERAN logical channel type:</p> <ul style="list-style-type: none"> 0—BCCH; 1—RACH; 2—PCH; 3—AGCH; 4—SDCCH/4; 5—SACCH/C4; 6—SDCCH/8; 7—SACCH/C8; 8—TCH/F; 9—FACCH/F; 10—SACCH/TF; 11—TCH/H; 12—FACCH/H; 13—SACCH/TH; 14—PBCCH; 15—PRACH; 16—PPCH; 17—PAGCH; 18—PDTCH/F; 19—PACCH/F; 20—PTCCH/F; 21—E-TCH/F; 22—E-IACCH/F; 23—E-FACCH/F; 24—SACCH/M; 25—SACCH/MD

Type Name	SubChannelNumber
Type Definition	INTEGER
Type Encoding	
Comments	<p>Subchannel number for TCH/H, FACCH/H, SACCH/TH, SDCCH/4, SDCCH/C4, SDCCH/8 and SDCCH/C8. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); For SDCCH/4 and SACCH/C4 value is (0..3).</p>

Type Name	PAGING_GROUP		
Type Definition	INTEGER		
Type Encoding			
Comments	3GPP TS 05.02 or TS 45.002 [Error! Reference source not found.] clauses 6.5.2 and 6.5.6		

Type Name	PagingMode		
Type Definition	INTEGER		
Type Encoding			
Comments	0 – normal paging; 1 – extended paging; 2 – paging reorganization		

Type Name	RFN		
Encoding Variation			
Comments	The reduced frame number, its range is 0 -- 42431 (FN modulo 42432) about 195.8 s		
Element Name	Type Definition	Field Encoding	Comments
t1_	BITSTRING[5]		(FN div 1326) mod 32
t2	BITSTRING[5]		FN mod 26
t3	BITSTRING[6]		FN mod 51
Detailed Comments	see 3GPP TS 04.18 or TS 44.018 [Error! Reference source not found.] clause 10.5.2.38. The reduced frame number, FN modulo 42432 can be calculated in the following formula: $51 * ((t3 - t2) \text{ mod } 26) + t3 + 1326 * t1_$. RFN is used for starting time and TBF starting time.		

ASP Name	G_L2_Release_IND	
PCO Type	G_DSAP	
Comments	This ASP from L2, indicates termination of previously established multiple frame operation on the specified SAPI	
Parameter Name	Parameter Type	Comments
cellId	CellId	
sAPI	SAPI	0 or 3
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
releaseMode	BITSTRING[1]	0 = normal release, 1 = local release
Detailed Comments		

ASP Name	G_L2_Release_CNF	
PCO Type	G_DSAP	
Comments	This ASP from L2, indicates that the multiple frame operation release was successful. This means that the UA message was received in response to L2 DISC command.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
sAPI	SAPI	0 or 3
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
releaseMode	BITSTRING[1]	0 = normal release, 1 = local release
Detailed Comments		

ASP Name	G_L2_Release_REQ	
PCO Type	G_DSAP	
Comments	This ASP requests L2 to send Layer 2 DISC command on the indicated SAPI.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
sAPI	SAPI	0 or 3
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
releaseMode	BITSTRING[1]	0 = normal release, 1 = local release
Detailed Comments		

ASP Name	G_L2_SYSINFO_REQ	
PCO Type	G_DSAP	
Comments	The ASP is used to send system information messages to the lower layer emulator.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
sAPI	SAPI	0
physicalChId	PhysicalChId	
g_LogicChType	G_LogicChType	BCCH or SACCH
instanceIndex	INTEGER	To indicate the instance of the system information messages. For SYSTEM INFORMATION Type 2ter, 18, 19, 20 the value is (0..7); for type 14, 15 the value is (0..3); for type 2quater the value is (0..15); for all other type the value is 0.
sysInfoType	SysInfoType	SYSTEM INFORMATION Type 5, 5bis, 5ter, and 6 are sent on SACCH, the other SYSTEM INFORMATION 's are sent on BCCH.
msg	PDU	This field contains SYSTEM INFORMATION message. See 3GPP TS 44.018 [Error! Reference source not found.] clause 9.1.31 to clause 9.1.43h for SYSTEM INFORMATION message definitions.
Detailed Comments	The lower layer emulator shall store the SYSTEM INFORMATION's, and transmit them periodically according to the rules specified in clause 6.3.1.3 of 3GPP TS 05.02 or TS 45.002 [Error! Reference source not found.]. The msg shall override the same type system information message previous stored in the lower layer emulator.	

Type Name	SysInfoType
Type Definition	INTEGER
Type Encoding	
Comments	25--SYSTEM INFORMATION TYPE 1 26--SYSTEM INFORMATION TYPE 2 2 -- SYSTEM INFORMATION TYPE 2bis 3 -- SYSTEM INFORMATION TYPE 2ter 7 -- SYSTEM INFORMATION TYPE 2quater 27--SYSTEM INFORMATION TYPE 3 28--SYSTEM INFORMATION TYPE 4 29--SYSTEM INFORMATION TYPE 5 5 -- SYSTEM INFORMATION TYPE 5bis 6 -- SYSTEM INFORMATION TYPE 5ter 30--SYSTEM INFORMATION TYPE 6 31--SYSTEM INFORMATION TYPE 7 24--SYSTEM INFORMATION TYPE 8 4 -- SYSTEM INFORMATION TYPE 9 0 -- SYSTEM INFORMATION TYPE 13 61--SYSTEM INFORMATION TYPE 16 62--SYSTEM INFORMATION TYPE 17 64--SYSTEM INFORMATION TYPE 18 65--SYSTEM INFORMATION TYPE 19 66--SYSTEM INFORMATION TYPE 20

7.3.4.3.1.2 ASPs for data transmission and reception through GERAN RLC

ASP Name	G_RLC_PSI_REQ	
PCO Type	G_DSAP	
Comments	The ASP is used to send packet system information messages to the lower layer emulator.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	
g_LogicChType	G_LogicChType	PBCCH or PACCH or PCCCH
timeslot	TN	Time slot number of the physical channel
packetSysInfoCategory	PSI_Category	PSI1 or high repetition rate or low repetition rate. Type of this field is INTEGER: 0-- PSI1; 1--high repetition category; 2--low repetition category.
positionInList	PositionInList	Position in the high repetition rate list or the low repetition rate list, for PSI1 this field is not applicable and set to 31. Type of this field is INTEGER, the order of the position is from 0, 1, 0 indicates the first position, 1 the second, and so on.
msg	PDU	This field contains PACKET SYSTEM INFORMATION message, see 3GPP TS 04.60 or TS 44.060 [Error! Reference source not found.] clause 11.2.18 to clause 11.2.25 for the message definitions
Detailed Comments	On PBCCH, the lower layer emulator shall store the PACKET SYSTEM INFORMATION's, and transmit them periodically according to the rules specified in clause 6.3.2.4 of 3GPP TS 05.02 or TS 45.002 [Error! Reference source not found.]. The msg shall override the same type packet system information message previous stored in the lower layer. Multiple instances of a PSI shall be put in the same list and in ascending order of the message instance number	

Type Name	PSI_Category
Type Definition	INTEGER
Type Encoding	
Comments	3GPP TS 05.02 or TS 45.002 [Error! Reference source not found.] clause 6.3.2.4

Type Name	PositionInList
Type Definition	INTEGER
Type Encoding	
Comments	0 is the first position, 1 is the second, and so on

ASP Name	G_RLC_ControlMsg_REQ	
PCO Type	G_DSAP	
Comments	The ASP is used to transmit a RLC/MAC control message to the UE/MS on the specified channel.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Valid for PCCCH only
g_LogicChType	G_LogicChType	PCCCH or PACCH or PTCCH
timeslot	TN	Time slot number of the physical channel
tBF_Direction	INTEGER	0—downlink; 1--uplink
tFI	TFI	Temporary flow identity
payloadType	PAYLOAD_TYPE	Payload Type
rRBP	RRBP	Relative reserved block period
s_P_Bit	S_P_Bit	Supplementary/polling bit
rfn	RFN	The reduced frame number of the first frame on which this message is sent. This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.
pagingGroup	PAGING_GROUP	for message other than PACKET PAGING REQUEST this field shall be omitted
pagingMode	PagingMode	0 -- normal paging; 1-- exteded paging; 3 -- paging reorganization. this field is valid only for PACKET PAGING REQUEST control message, for message other than PACKET PAGING REQUEST this field shall be omitted
msg	PDU	Down link RLC/MAC control message
Detailed Comments	PTCCH is valid for PACKET TIMING ADVANCE/POWER CONTROL message only if sending PACKET PAGING REQUEST. The required 52-multiframe occurs when: $\text{pagingGroup div (M div 64)} = (\text{FN div 52}) \text{ mod } 64$ The index to the required paging block in the 51-multiframe determined above: $\text{Paging block index} = \text{pagingGroup mod (M div 64)}$ $M = (12 - \text{BS_PAG_BLKS_RES} - \text{BS_PBCCH_BLKS}) * 64$	

Type Name	PAYLOAD_TYPE
Type Definition	BITSTRING[2]
Type Encoding	
Comments	3GPP TS 04.60 or TS 44.060 clause 10.4.7

Type Name	RRBP
Type Definition	BITSTRING[2]
Type Encoding	
Comments	3GPP TS 04.60 or TS 44.060 [Error! Reference source not found.] clause 10.4.5

Type Name	S_P_Bit
Type Definition	BITSTRING[1]
Type Encoding	
Comments	0 – RRBP field is not valid; 1 – RRBP field is valid

ASP Name	G_RLC_ControlMsg_IND	
PCO Type	G_DSAP	
Comments	The ASP is used to receive an uplink RLC/MAC control block sent by the UE/MS on the specified channel.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	
g_LogicChType	G_LogicChType	PACCH or PDTCH
timeslot	TN	Time slot number of the physical channel
tBF_Direction	INTEGER	0--downlink; 1--uplink
tFI	TFI	Temporary flow identity
retryBit	BITSTRING[1]	For access bursts on PRACH, RACH and PACCH, this field is no meaning
rfrn	RFN	The reduced frame number of the frame carrying the message
msg	PDU	Uplink RLC/MAC control message
Detailed Comments	Logical channel type PDTCH is valid for PACKET ENHANCED MEASUREMENT REPORT message only.	

ASP Name	G_RLC_ACCESS_IND	
PCO Type	G_DSAP	
Comments	The ASP is used to receive an access burst sent by the UE/MS on the specified channel.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	
g_LogicChType	G_LogicChType	PRACH or PACCH or PTCCH
timeslot	TN	Time slot number of the physical channel
rfrn	RFN	The reduced frame number of the frame carrying the burst
burst	PDU	8-bit or 11-bit access burst
Detailed Comments	PACKET CHANNEL REQUEST, EGPRS PACKET CHANNEL REQUEST and burst format of PACKET CONTROL ACKNOWLEDGEMENT are access bursts.	

7.3.4.3.1.3

ASPs for data transmission and reception through GERAN LLC

ASP Name	G_LLC_UNITDATA_REQ	
PCO Type	G_DSAP	
Comments	The ASP is used to send L3 PDU to the UE/MS in LLC unconfirmed transmission.	
Parameter Name	Parameter Type	Comments
cellLLMEId	CellLLMEId	
tLLI	TLLI	
sAPI	SAPI	
protectMode	BITSTRING[1]	0 -- unprotected; 1 -- protected
cipherMode	BITSTRING[1]	0 -- no encryption; 1 -- encrypted
msg	PDU	L3 PDU
Detailed Comments	3GPP TS 04.64 or TS 44.064 [Error! Reference source not found.] clause 8.4.1	

Type Name	LLMEId
Type Definition	INTEGER
Type Encoding	
Comments	The identifier of the Logical Link Management Entity in SGSN

ASP Name	G_LLC_UNITDATA_IND		
PCO Type	G_DSAP		
Comments	The ASP is used to receive a L3 PDU from the UE/MS in LLC unconfirmed transmission.		
	Parameter Name	Parameter Type	Comments
	cellLMEId	CellLMEId	
	tLLI	TLLI	
	sAPI	SAPI	
	msg	PDU	L3 PDU
Detailed Comments	3GPP TS 04.64 or TS 44.064 [Error! Reference source not found.] clause 8.4.2		

7.3.4.3.1.4 ASPs for data transmission and reception through GERAN SNDPCP

ASP Name	G_SN_DATA_REQ		
PCO Type	G_DSAP		
Comments	The ASP is used to send a valid IP datagram on the specified NSAPI to the UE/MS by acknowledged transmission.		
	Parameter Name	Parameter Type	Comments
	cellSNDPCPId	CellSNDPCPId	
	nSAPI	NSAPI	5-15
	n_PDU_Number	N_PDU_Number	
	n_PDU	N_PDU	Valid IPv4 or IPv6 datagram
Detailed Comments	Acknowledged transmission mode		

ASP Name	G_SN_DATA_IND		
PCO Type	G_DSAP		
Comments	The ASP is used to receive an IP datagram on the specified NASPI from the UE/MS in acknowledged transmission mode.		
	Parameter Name	Parameter Type	Comments
	cellSNDPCPId	CellSNDPCPId	
	nSAPI	NSAPI	5-15
	n_PDU	N_PDU	IPv4 or IPv6 datagram
Detailed Comments	Acknowledged transmission mode		

ASP Name	G_SN_UNIDATA_REQ		
PCO Type	G_DSAP		
Comments	The ASP is used to send a valid IP datagram on the specified NSAPI to the UE/MS by unacknowledged transmission.		
	Parameter Name	Parameter Type	Comments
	cellSNDPCPId	CellSNDPCPId	
	nSAPI	NSAPI	5-15
	n_PDU	N_PDU	Valid IPv4 or IPv6 datagram
Detailed Comments	Unacknowledged transmission mode		

ASP Name	G_SN_UNITDATA_IND		
PCO Type	G_DSAP		
Comments	The ASP is used to receive an IP datagram on the specified NASPI from the UE/MS in unacknowledged transmission mode.		
	Parameter Name	Parameter Type	Comments
	cellSNDPCPId	CellSNDPCPId	
	nSAPI	NSAPI	5-15
	n_PDU	N_PDU	IPv4 or IPv6 datagram
Detailed Comments	Unacknowledged transmission mode		

ASP Name	G_SN_XID_REQ	
PCO Type	G_DSAP	
Comments	The ASP is used to send the requested XID parameters to the UE/MS.	
	Parameter Name	Parameter Type
	CellSNDCEPId	CellSNDCEPId
	xID_Info	XID_Info
		XID parameters requested
Detailed Comments		

ASP Name	G_SN_XID_IND	
PCO Type	G_DSAP	
Comments	The ASP is used to receive the XID parameters requested by the UE/MS.	
	Parameter Name	Parameter Type
	CellSNDCEPId	CellSNDCEPId
	xID_Info	XID_Info
		XID parameters requested by the UE/MS
Detailed Comments		

ASP Name	G_SN_XID_CNF	
PCO Type	G_DSAP	
Comments	The ASP is used to receive the negotiated XID parameters agreed by the UE/MS.	
	Parameter Name	Parameter Type
	CellSNDCEPId	CellSNDCEPId
	xID_Info	XID_Info
		The negotiated XID parameters agreed by the UE/MS
Detailed Comments		

ASP Name	G_SN_XID_RES	
PCO Type	G_DSAP	
Comments	The ASP sends to the UE/MS the negotiated XID parameters agreed by the SS.	
	Parameter Name	Parameter Type
	CellSNDCEPId	CellSNDCEPId
	xID_Info	XID_Info
		The negotiated XID parameters agreed by the SS
Detailed Comments		

Type Name	SNDCEPId
Type Definition	INTEGER
Type Encoding	
Comments	The identifier of the SNDCEP entity in SGSN

7.3.4.3.2 ASPs for control primitive transmission and reception in GERAN

7.3.4.3.2.1 ASPs for configuration and control of GERAN L1

ASP Name	G_CL1_CreateCell_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to create a cell in GERAN	
	Parameter Name	Parameter Type
	cellId	CellId
	baseId	BITSTRING[6]
		base transceiver station identity code = NCC+BCC. see 3GPP TS 23.003 [Error! Reference source not found.]
Detailed Comments		

ASP Name	G_CL1_CreateCell_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_CreateCell_REQ	
	Parameter Name	Parameter Type
	cellId	CellId
		The cell created
Detailed Comments		

ASP Name	G_CL1_DeleteCell_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to delete a cell in GERAN	
	Parameter Name	Parameter Type
	cellId	CellId
		The cell to be deleted
Detailed Comments		

ASP Name	G_CL1_DeleteCell_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_DeleteCell_REQ	
	Parameter Name	Parameter Type
	cellId	CellId
		The cell deleted
Detailed Comments		

ASP Name	G_CL1_CreateBasicPhyCh_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to create a basic physical channel in GERAN	
	Parameter Name	Parameter Type
	cellId	CellId
	physicalChId	PhysicalChId
	channelCombination	ChannelCombination
	frqInfo	FrqInfo
	timeSlot	TN
	tsc	TSC
	channelSpecificInfo	ChannelSpecificInfo
	txPower	TX_Power
	bandIndicator	BITSTRING[1]
		Parameter for DCS or PCS frequency band selection. A value 0 for frqInfo.arfcn interpreted as DCS1800. A value 1 for frqInfo.arfcn interpreted as PCS1900. If omitted, the value in frqInfo.arfcn interpreted as DCS1800.
Detailed Comments	The value of channelCombination permitted currently: 1 TCH/F + FACCH/F + SACCH/TF 2 TCH/H(0,1) + FACCH/H(0,1) + SACCH/TH(0,1) 3 TCH/H(0,0) + FACCH/H(0,1) + SACCH/TH(0,1) + TCH/H(1,1) 4 FCCH + SCH + BCCH + CCCH 5 FCCH + SCH + BCCH + CCCH + SDCCH/4(0..3) + SACCH/C4(0..3) 6 BCCH + CCCH 7 SDCCH/8(0..7) + SACCH/C8(0..7) 8 TCH/F + FACCH/F + SACCH/M 9 TCH/F + SACCH/M 10 TCH/FD + SACCH/MD 11 PBCCH+PCCCH+PDTCH/F+PACCH/F+PTCCH/F 12 PCCCH+PDTCH/F+PACCH/F+PTCCH/F 13 PDTCH/F+PACCH/F+PTCCH/F 18 E-TCH/F + E-IACCH/F + E-FACCH/F + SACCH/TF 19 E-TCH/F + E-IACCH/F + E-FACCH/F + SACCH/M 20 E-TCH/F + E-IACCH/F + SACCH/M 21 E-TCH/FD + E-IACCH/F + SACCH/MD	

ASP Name	G_CL1_CreateBasicPhyCh_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_CreateBasicPhyCh_REQ	
	Parameter Name	Parameter Type
	cellId	CellId
	physicalChId	PhysicalChId
		The cell which the created channel belongs to
		The physical channel created.
Detailed Comments		

Type Name		FrqInfo	
Encoding Variation			
Comments		Parameters for Description of basic physical channel in frequency domain.	
Element Name	Type Definition	Field Encoding	Comments
h	BITSTRING[1]		h=1: hopping channel h=0: non-hopping channel
spr	BITSTRING [3]		'000'B
spr1	BITSTRING [2]		'00'B if h = 0, otherwise OMIT
maio	BITSTRING [6]		mobile allocation index offset if h = 1, otherwise OMIT
hsn	BITSTRING [6]		hopping sequence number if h = 1, otherwise OMIT
arfcn	BITSTRING [10]		absolute RF channel number if h = 0, otherwise OMIT
hoppingFreqList	FrequencyList		hopping frequency list if h = 1, otherwise OMIT. The definition see 3GPP TS 04.18 or TS 44.018 [Error! Reference source not found.] clause 10.5.2.13
Detailed Comments			

Type Name		ChannelSpecificInfo	
Encoding Variation			
Comments		Parameters for individual channel	
Element Name	Type Definition	Field Encoding	Comments
presence	BITSTRING[4]		4 bits field indicating which fields below are presented in the constraint of this structured type. B3 = 1 indicating dedCh_Info presence, B2 = 1 indicating cCCH_Info presence, B1 = 1 indicating pCCCH_Info presence, B0 = 1 indicating pBCCH_Info presence.
dedCH_Info	DedCH_Info		Parameters for dedicated channel. Valid for combination: 1, 2, 3, 5, 7, 8, 9, 10 This field is omitted if DedCH_Info does not apply for the channelCombination
cCCH_Info	CCCH_Info		Parameters for common control channels: PCH, SCH,... Valid for combination: 4, 5, 6 This field is omitted if CCCH_Info does not apply for the channelCombination
pCCCH_Info	PCCCH_Info		Parameters for packet common control channels: PCCCH, PPCH,... Valid for combination: 11, 12 This field is omitted if PCCCH_Info does not apply for the channelCombination
pBCCH_Info	PBCCH_Info		Parameters for packet broadcast channels: PBCCH Valid for combination: 11 This field is omitted if PBCCH_Info does not apply for the channelCombination
Detailed Comments			

Type Name		DedCH_Info	
Encoding Variation			
Comments		Parameters for dedicated channel	
Element Name	Type Definition	Field Encoding	Comments
chMod	CHMOD		Definition see 3GPP TS 04.18 or TS 44.018 [Error! Reference source not found.] clause 10.5.2.6
cipherMode	CPHMS		Definition see 3GPP TS 04.18 or TS 44.018 [Error! Reference source not found.] clause 10.5.2.9
cipherKey	BITSTRING[64]		
powerLevel	BITSTRING[5]		Initial MS uplink transmission power level
timingAdvance	BITSTRING[7]		Initial timing advance
Detailed Comments			

Type Name		CCCH_Info	
Encoding Variation			
Comments		Parameters for common control channels	
Element Name	Type Definition	Field Encoding	Comments
bS_PA_MFRMS	BITSTRING[3]		the number of 51-multiframes between transmissions of paging messages. Definition see 3GPP TS 04.18 or TS 44.018 [Error! Reference source not found.] clause 10.5.2.11
bS_AG_BLKRES	BITSTRING[3]		the number of blocks on each common control channel reserved for access grant messages. Definition see 3GPP TS 04.18 or TS 44.018 [Error! Reference source not found.] clause 10.5.2.11
splitOnCCCH	BITSTRING[1]		0 — no split pa cycle on CCCH; 1 — split pg cycle on CCCH 3GPP TS 45.002 [31] clause 6.5.6
Detailed Comments			

Type Name		PCCCH_Info	
Encoding Variation			
Comments		Parameters for packet common control channels	
Element Name	Type Definition	Field Encoding	Comments
bS_PBCCH_BLKs	BITSTRING[2]		3GPP TS 04.60 or TS 44.060 [Error! Reference source not found.] clause 12.25
bS_PAG_BLKRES	BITSTRING[4]		3GPP TS 04.60 or TS 44.060 [Error! Reference source not found.] clause 12.25
bS_PRACH_BLKs	BITSTRING[4]		3GPP TS 04.60 or TS 44.060 [Error! Reference source not found.] clause 12.25
Detailed Comments			

Type Name	PBCCH_Info		
Encoding Variation			
Comments	Parameters for packet broadcast channel		
Element Name	Type Definition	Field Encoding	Comments
pSI1_REPEAT_PERIOD	BITSTRING[4] PSI1_REPEAT_PERIOD		The repeat period of packet system information Type 1. See 3GPP TS 04.60 or TS-44.060 [Error! Reference source not found.] clause 11.2.18
pSI_COUNT_HR	BITSTRING[4] PSI_COUNT_HR		The number of PSI message instances sent with high repetition rate. See 3GPP TS 04.60 or TS 44.060 [Error! Reference source not found.] clause 11.2.18
pSI_COUNT_LR	BITSTRING[6] PSI_COUNT_LR		The number of PSI message instances sent with low repetition rate. See 3GPP TS 04.60 or TS 44.060 [Error! Reference source not found.] clause 11.2.18
Detailed Comments			

ASP Name	G_CL1_CreateMultiSlotConfig_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to create a multi-slot configuration in GERAN and should be preceded with G_CL1_CreateBasicPhyCh_REQ in order to create a basic physical channel with single timeslot.	
Parameter Name	Parameter Type	Comments
cellId	CellId	The cell which the configuration to be created belongs to
mainChannel	PhysicalChId	identifier of the main physical channel of this multi-slot configuration.
multiSlotAllocation	MultiSlotAllocation	The timeslot allocation of the configuration
Detailed Comments	This ASP is to create-add a multi-slot configuration to the physical channel created in G_CL1_CreateBasicPhyCh_REQ ASP. For multi-slot configuration refer 3GPP TS 05.02 or TS 45.002 clause 6.4.2. with combination of TCH/F+FACCH/F+SACCH/M, TCH/F+SACCH/M and TCH/FD+SACCH/MD or combination of E-TCH/F+E-IACCH/F+E-FACCH/F+SACCH/M, E-TCH/F+E-IACCH/F+SACCH/M and E-TCH/FD+E-IACCH/F+SACCH/MD	

ASP Name	G_CL1_CreateMultiSlotConfig_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G G_CL1_CreateMultiSlotConfig_REQ	
Parameter Name	Parameter Type	Comments
cellId	CellId	The cell which the created multi-slot configuration belongs to
physicalChId mainChannel	PhysicalChId	The main physical channel identifier.
Detailed Comments		

Type Name	MultiSlotAllocation		
Encoding Variation			
Comments	Used in multi-slot configuration		
Element Name	Type Definition	Field Encoding	Comments
tN0	BOOLEAN		TRUE – time slot 0 is allocated; FALSE -- not allocated
channelCombination0physicalChId0	ChannelCombinationPhysicalChId		Channel combination forPhysical channel of time slot 0; not applicable if tN0 = FALSE
tN1	BOOLEAN		TRUE – time slot 1 is allocated; FALSE -- not allocated
channelCombinationphysicalChId1	ChannelCombinationPhysicalChId		Channel Combination forPhysical channel of time slot 1; not applicable if tN1 = FALSE
tN2	BOOLEAN		TRUE – time slot 2 is allocated; FALSE -- not allocated
channelCombinationphysicalChId2	ChannelCombinationPhysicalChId		Channel Combination forPhysical channel of time slot 2; not applicable if tN2 = FALSE
tN3	BOOLEAN		TRUE – time slot 3 is allocated; FALSE -- not allocated
channelCombinationphysicalChId3	ChannelCombinationPhysicalChId		Channel Combination forPhysical channel of time slot 3; not applicable if tN3 = FALSE
tN4	BOOLEAN		TRUE – time slot 4 is allocated; FALSE -- not allocated
channelCombinationphysicalChId4	ChannelCombinationPhysicalChId		Channel Combination forPhysical channel of time slot 4; not applicable if tN4 = FALSE
tN5	BOOLEAN		TRUE – time slot 5 is allocated; FALSE -- not allocated
channelCombinationphysicalChId5	ChannelCombinationPhysicalChId		Channel Combination forPhysical channel of time slot 5; not applicable if tN5 = FALSE
tN6	BOOLEAN		TRUE – time slot 6 is allocated; FALSE -- not allocated
channelCombinationphysicalChId6	ChannelCombinationPhysicalChId		Channel Combination forPhysical channel of time slot 6; not applicable if tN6 = FALSE
tN7	BOOLEAN		TRUE – time slot 7 is allocated; FALSE -- not allocated
channelCombinationphysicalChId7	ChannelCombinationPhysicalChId		Channel Combination forPhysical channel of time slot 7; not applicable if tN7 = FALSE
Detailed Comments	Multislot configuration is referred to 3GPP TS 05.02 or TS 45.002 clause 6.4.2. The timeslot for which G_CL1_CreateBasicPhyCh_REQ has set the channel combination shall be set to FALSE.		

ASP Name	G_CL1_ComingFN_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to request lower layer return the reduced frame number (FN modulo 42432) which is far enough in the future from current frame number and is able to carry L3 message on the specified channel. The requirement of "far enough" is that there is enough time left for TTCN to prepare a L3 message to send before that frame.	
	Parameter Name	Parameter Type
	cellId	CellId
	physicalChId	PhysicalChId
	g_LogicChType	G_LogicChType
	subChannel	SubChannelNumber
		Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL1_ComingFN_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to receive the result of G_CL1_ComingFN_REQ.	
	Parameter Name	Parameter Type
	cellId	CellId
	physicalChId	PhysicalChId
	g_LogicChType	G_LogicChType
	subChannel	SubChannelNumber
		Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
	rfrn	RFN
		the reduced frame number (FN modulo 42432) which is about 5 seconds later than current frame number and is able to carry L3 message on the channel specified by "physicalChId"+"G_LogicChType"+"subChannel"
Detailed Comments		

ASP Name	G_CL1_L1Header_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to request lower layer return the L1 header of SACCH.	
	Parameter Name	Parameter Type
	cellId	CellId
	physicalChId	PhysicalChId
	g_LogicChType	G_LogicChType
	subChannel	SubChannelNumber
		Valid only for logical channel types: SACCH/TH, SACCH/C8, and SACCH/C4. This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL1_L1Header_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to receive the result of G_CL1_L1Header_REQ.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	SACCH
subChannel	SubChannelNumber	Valid only for logical channel types: SACCH/TH, SACCH/C8, and SACCH/C4 This field is not applicable and the SS shall ignore it if this field is coded as 15.
l1Header	L1HD	Power level and timing advance
Detailed Comments		

ASP Name	G_CL1_DeleteChannel_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to delete a basic physical channel or an multi-slot configuration	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell which the channel to be deleted belongs to
physicalChId	PhysicalChId	The physical channel or the multi-slot configuration to be deleted.
Detailed Comments		

ASP Name	G_CL1_DeleteChannel_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_DeleteChannel_REQ	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell which the deleted channel belongs to
physicalChId	PhysicalChId	The physical channel or multi-slot configuration deleted.
Detailed Comments		

ASP Name	G_CL1_ChModeModify_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to modify the channel mode of a dedicated channel	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
chMode	CHMOD	Definition see 3GPP TS 04.18 or TS 44.018 [Error! Reference source not found.] clause 10.5.2.1b
Detailed Comments		

ASP Name	G_CL1_ChModeModify_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_ChModeModify_REQ	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL1_SetNewKey_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to set new cipher key for a dedicated channel	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	The channel which uses the new key
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
cipherKey	BITSTRING[64]	
Detailed Comments		

ASP Name	G_CL1_SetNewKey_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_SetNewKey_REQ	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL1_CipherModeModify_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to modify cipher mode of a dedicated channel	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
cipherMode	CPHMS	The new cipher mode. Definition see 3GPP TS 04.18 or -TS 44.018 [Error! Reference source not found.] clause 10.5.2.9
Detailed Comments		

ASP Name	G_CL1_CipherModeModify_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_CipherModeModify_REQ	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL1_ChangePowerLevel_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to change the transmission power level of a physical channel	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell which the physical channel belongs to
physicalChId	PhysicalChId	Channel using the new transmission power level
txPower	TX_Power	The new transmission power level in dB μ Vemf()
Detailed Comments		

ASP Name	G_CL1_ChangePowerLevel_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_ChangePowerLevel_REQ	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	The physical channel which uses the new transmission power level
Detailed Comments		

7.3.4.3.2.2

ASPs for configuration and control of GERAN L2

ASP Name	G_CL2_HoldPhyInfo_REQ	
PCO Type	G_CSAP	
Comments	The ASP commands the SS to hold the PHYSICAL INFORMATION message, which will be sent on PCO G_L2 following the current ASP. The PHYSICAL INFORMATION message shall be sent to the UE/MS within T3124 from the time when the SS has received n handover access bursts.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4. This field is not applicable and the SS shall ignore it if this field is coded as 15.
n	INTEGER	The number of handover access bursts to be received
Detailed Comments	T3124 is defined in 3GPP TS 04.18 or TS 44.018 [Error! Reference source not found.] clause 3.4.4.2.2 and clause 11.1.1	

ASP Name	G_CL2_HoldPhyInfo_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get a confirmation of the G_CL2_HoldPhyInfo_REQ.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4. This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL2_NoUAforSABM_REQ	
PCO Type	G_CSAP	
Comments	The ASP commands the SS not to send UA response to the UE when it receives SABM from the UE on the specified channel.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4. This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL2_NoUAforSABM_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get a confirmation of the G_CL2_NoUAforSABM_REQ.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4. This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL2_ResumeUAforSABM_REQ	
PCO Type	G_CSAP	
Comments	The ASP commands the SS to send UA response to the UE when it receives SABM from the UE on the specified channel. This ASP is used after G_CL2_NoUAforSABM_REQ to resume the normal multiframe operation of L2	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4, This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL2_ResumeUAforSABM_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get a confirmation of the G_CL2_ResumeUAforSABM_REQ.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4. This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

7.3.4.3.2.3 ASPs for configuration and control of GERAN RLC/MAC

ASP Name	G_CRLC_CreateRLC_MAC_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to create a RLC/MAC entity in GERAN RLC/MAC emulation module.	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell
rlcMacEntityId	RlcMacEntityId	The identifier of RLC/MAC Entity in a cell.
Detailed Comments	The rlcMacEntityId is used for coupling the LLC layer module. One RLC/MAC entity per cell can exist. The packet channel description given in the ChannelSpecificInfo of G_CL1_CreateBasicPhyCh_REQ shall be used to configure this layer. This ASP shall be called after the G_CL1_CreateBasicPhyCh_REQ ASP.	

ASP Name	G_CRLC_CreateRLC_MAC_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to confirm the G_CRLC_CreateRLC_MAC_REQ	
Parameter Name	Parameter Type	Comments
cellId	CellId	The identifier of the cell
rlcMacEntityId	RlcMacEntityId	
Detailed Comments		

Type Name	RlcMacEntityId
Type Definition	INTEGER
Type Encoding	
Comments	The identifier of the RLC/MAC Entity in a cell

ASP Name	G_CRLC_UL_TBF_Config_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to configure a TBF used for uplink packet data transfer	
Parameter Name	Parameter Type	Comments
cellId	CellId	
tFI	TFI	
tBF_Mode	BITSTRING[1]	0 – GPRS; 1 – EGPRS
channelCoding	ChannelCoding	
tLLI_BlockChannelCoding	BITSTRING[1]	0 – CS-1 or MCS-1(EGPRS); 1 – same as channelCoding
rLC_Mode	BITSTRING[1]	0 – acknowledged mode; 1 – unacknowledged mode
startingTime	RFN	This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.
resourceAllocation	ResourceAllocation	Fixed, dynamic or single allocation and other parameters.
Detailed Comments	For GPRS channel coding can be: CS-1, CS-2, CS-3 and CS-4; For EGPRS channel coding can be : MCS-1, MCS-2, MCS-3, MCS-4, MCS-5, MCS-6, MCS-7, MCS-8, MCS-9, MCS-5-7 and MCS-6-9.	

ASP Name	G_CRLC_UL_TBF_Config_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CRLC_UL_TBF_Config_REQ	
Parameter Name	Parameter Type	Comments
cellId	CellId	
tFI	TFI	
Detailed Comments		

Type Name	ChannelCoding
Type Definition	INTEGER
Type Encoding	
Comments	1 – CS-1; 2 – CS-2; 3 – CS-3; 4 -- CS-4; 5 – MCS-1; 6 – MCS-2; 7 – MCS-3; 8 – MCS-4; 9 – MCS-5; 10 – MCS-6; 11 – MCS-7; 12 – MCS-8; 13 – MCS-9; 14 – MCS-5-7; 15 – MCS-6-9

Type Name	ResourceAllocation		
Encoding Variation			
Comments	Used for up link TBF		
Element Name	Type Definition	Field Encoding	Comments
resourceAllocationChoice	INTEGER		0 = Dynamic Allocation , 1 = Fixed Allocation 2 = Single Block Allocation
dynamicAllocation	DynamicAllocation		Dynamic allocation or extended dynamic allocation
fixedAllocation	FixedAllocation		
singleBlockAllocation	SingleBlockAllocation		
Detailed Comments			

Type Name	DynamicAllocation		
Encoding Variation			
Comments	Used for up link TBF; dynamic allocation or extended dynamic allocation		
Element Name	Type Definition	Field Encoding	Comments
extendedAllocation	BITSTRING[1]		0 – dynamic allocation; 1 – extended dynamic allocation
uSFGranularity	BITSTRING[1]		0 – one block; 1 – four blocks
physicalChId	PhysicalChId		Single PDCH or multislot-configured PDCHs
tN0	BOOLEAN		TRUE - time slot 0 is allocated; FALSE - not allocated
uSF_TN0	BITSTRING[3]		USF value for slot 0
physicalChId0	PhysicalChId		Physical channel of timeslot 0; not applicable if tN0 = FALSE
tN1	BOOLEAN		TRUE - time slot 1 is allocated; FALSE - not allocated
uSF_TN1	BITSTRING[3]		USF value for slot 1
physicalChId1	PhysicalChId		Physical channel of timeslot 1; not applicable if tN1 = FALSE
tN2	BOOLEAN		TRUE- time slot 2 is allocated; FALSE - not allocated
uSF_TN2	BITSTRING[3]		USF value for slot 2
physicalChId2	PhysicalChId		Physical channel of timeslot 2; not applicable if tN2 = FALSE
tN3	BOOLEAN		TRUE - time slot 3 is allocated; FALSE - not allocated
uSF_TN3	BITSTRING[3]		USF value for slot 3
physicalChId3	PhysicalChId		Physical channel of timeslot 3; not applicable if tN3 = FALSE
tN4	BOOLEAN		TRUE- time slot 4 is allocated; FALSE - not allocated
uSF_TN4	BITSTRING[3]		USF value for slot 4
physicalChId4	PhysicalChId		Physical channel of timeslot 4; not applicable if tN4 = FALSE
tN5	BOOLEAN		TRUE- time slot 5 is allocated; FALSE - not allocated
uSF_TN5	BITSTRING[3]		USF value for slot 5
physicalChId5	PhysicalChId		Physical channel of timeslot 5; not applicable if tN5 = FALSE
tN6	BOOLEAN		TRUE- time slot 6 is allocated; FALSE - not allocated
uSF_TN6	BITSTRING[3]		USF value for slot 6
physicalChId6	PhysicalChId		Physical channel of timeslot 6; not applicable if tN6 = FALSE
tN7	BOOLEAN		TRUE -time slot 7 is allocated; FALSE - not allocated
uSF_TN7	BITSTRING[3]		USF value for slot 7
physicalChId7	PhysicalChId		Physical channel of timeslot 7; not applicable if tN7 = FALSE

Type Name	DynamicAllocation		
Encoding Variation			
Comments	Used for up link TBF; dynamic allocation or extended dynamic allocation		
Element Name	Type Definition	Field Encoding	Comments
Detailed Comments	The uSF_TNx field is not applicable when tNx = FALSE.		

Type Name	FixedAllocation		
Encoding Variation			
Comments	Used for up link TBF		
Element Name	Type Definition	Field Encoding	Comments
downlinkControlSlot	BITSTRING[3]		Time slot for downlink control messages
physicalChId	PhysicalChId		single PDCH or multislot-configured PDCH's
timeSlotAllocation	TimeSlotAllocation		
blocksOrBlockPeriods	BITSTRING[1]		0 - blocks; 1 - block periods
allocationBitMap	BITSTRING		See 3GPP TS 04.60 or TS 44.060 [Error! Reference source not found.] clause 12.4
Detailed Comments			

Type Name	SingleBlockAllocation		
Encoding Variation			
Comments	Used for up link TBF		
Element Name	Type Definition	Field Encoding	Comments
physicalChId	PhysicalChId		The physical channel of the allocated block
timeslot	TN		
Detailed Comments	Time slot number is implicitly indicated by the physical channel identifier.		

ASP Name	G_CRLC_DL_TBF_Config_REQ		
PCO Type	G_CSAP		
Comments	The ASP is used to configure a TBF used for down link packet data transfer		
Parameter Name	Parameter Type	Comments	
cellId	CellId		
tFI	TFI		
tBF_Mode	BITSTRING[1]	0 – GPRS; 1 – EGPRS	
channelCoding	ChannelCoding		
rLC_Mode	BITSTRING[1]	0 – acknowledged mode; 1 – unacknowledged mode	
timeSlotAllocation	TimeSlotAllocation	Downlink TBF time slot allocation	
startingTime	RFN	This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.	
Detailed Comments	For GPRS channel coding can be: CS-1, CS-2, CS-3 and CS-4; For EGPRS channel coding can be : MCS-1, MCS-2, MCS-3, MCS-4, MCS-5, MCS-6, MCS-7, MCS-8, MCS-9, MCS-5-7 and MCS-6-9.		

ASP Name	G_CRLC_DL_TBF_Config_CNF		
PCO Type	G_CSAP		
Comments	The ASP is used to get the confirmation of a G_CRLC_DL_TBF_Config_REQ		
Parameter Name	Parameter Type	Comments	
cellId	CellId		
tFI	TFI		
Detailed Comments			

Type Name	TimeSlotAllocation		
Encoding Variation			
Comments	Used for downlink and up link TBF		
Element Name	Type Definition	Field Encoding	Comments
physicalChId	PhysicalChId		single PDCH or multislot-configured PDCHs
tN0	BOOLEAN		Timeslot 0; TRUE— allocated; FALSE— not allocated.
physicalChId0	PhysicalChId		Physical channel of timeslot 0; not applicable if tN0 = FALSE
tN1	BOOLEAN		Timeslot 1; TRUE - allocated; FALSE - not allocated.
physicalChId1	PhysicalChId		Physical channel of timeslot 1; not applicable if tN1 = FALSE
tN2	BOOLEAN		Timeslot 2; TRUE - allocated; FALSE - not allocated.
physicalChId2	PhysicalChId		Physical channel of timeslot 2; not applicable if tN2 = FALSE
tN3	BOOLEAN		Timeslot 3; TRUE - allocated; FALSE - not allocated.
physicalChId3	PhysicalChId		Physical channel of timeslot 3; not applicable if tN3 = FALSE
tN4	BOOLEAN		Timeslot 4; TRUE - allocated; FALSE - not allocated.
physicalChId4	PhysicalChId		Physical channel of timeslot 4; not applicable if tN4 = FALSE
tN5	BOOLEAN		Timeslot 5; TRUE - allocated; FALSE - not allocated.
physicalChId5	PhysicalChId		Physical channel of timeslot 5; not applicable if tN5 = FALSE
tN6	BOOLEAN		Timeslot 6; TRUE - allocated; FALSE - not allocated.
physicalChId6	PhysicalChId		Physical channel of timeslot 6; not applicable if tN6 = FALSE
tN7	BOOLEAN		Timeslot 7; TRUE - allocated; FALSE - not allocated.
physicalChId7	PhysicalChId		Physical channel of timeslot 7; not applicable if tN7 = FALSE
Detailed Comments			

Declaration of G_CRLC_TBF_Reconfig_REQ ASP

TBD

ASP Name	G_CRLC_TBF_Reconfig_CNF		
PCO Type	G_CSAP		
Comments	The ASP is used to get the confirmation of a G_CRLC_TBF_Reconfig_REQ		
Parameter Name	Parameter Type	Comments	
cellId	CellId		
tFI	TFI		
Detailed Comments			

ASP Name	G_CRLC_TBF_Setup_IND	
PCO Type	G_CSAP	
Comments	This ASP is used to indicate that the cell has downlink data blocks queued for transmission and a TBF must be created to transmit them.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
rLC_Mode	BITSTRING[1]	0 – acknowledged mode; 1 – unacknowledged mode
Detailed Comments		

7.3.4.3.2.4 ASPs for configuration and control of GERAN LLC

ASP Name	G_CLLC_CreateLLE_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to create an LLE (LLC Entity) in GERAN LLC emulation module.	
Parameter Name	Parameter Type	Comments
ILMEId	LLMEId	Logical Layer Management Entity Id
rlcMacEntityId	RlcMacEntityId	The identifier of the RLC /MAC entity to couple this ILMEId.
Detailed Comments	The RlcMacEntityId needs to be created prior to this by G_CRLC_CreateRLC_MAC_REQ ASP.	

ASP Name	G_CLLC_CreateLLE_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to confirm the G_CLLC_CreateLLE_REQ	
Parameter Name	Parameter Type	Comments
ILMEId	LLMEId	The identifier of the cell Logical Layer Management Entity Id
rlcMacEntityId	RlcMacEntityId	The identifier of the RLC /MAC entity this ILMEId is coupled.
Detailed Comments		

ASP Name	G_CLLC_DeleteLLE_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to delete an LLE (LLC Entity) in GERAN LLC emulation module.	
Parameter Name	Parameter Type	Comments
ILMEId	LLMEId	Logical Layer Management Entity Id
Detailed Comments		

ASP Name	G_CLLC_DeleteLLE_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to confirm the G_CLLC_DeleteLLE_REQ	
Parameter Name	Parameter Type	Comments
ILMEId	LLMEId	Logical Layer Management Entity Id
Detailed Comments		

ASP Name	G_CLLC_Assign_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to assign, change, or unassign the TLLI, the ciphering key (Kc) and the ciphering algorithm of GERAN LLC emulation module.	
Parameter Name	Parameter Type	Comments
cellILMEId	CellLLMEId	Logical Layer Management Entity Id The identifier of the cell
oldTLLI	TLLI	OCTETSTRING[4]
newTLLI	TLLI	
cipherKey	BITSTRING[64]	
cipherAlgorithm	GPRS_CipherAlg	BITSTRING[3], see 3GPP TS 24.008 [Error! Reference source not found.] clause 10.5.5.3
Detailed Comments		

ASP Name	G_CLLC_Assign_CNF	
PCO Type	G_CSAP	
Comments	the ASP is used to get confirmation of G_CLLC_Assign_REQ	
	Parameter Name	Parameter Type
	ILMEId	LLMEId
		Logical Layer Management Entity Id
Detailed Comments		

ASP Name	G_CLLC_ReassignLLE_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to reassign RLC/MAC entity to the specified LLME Identity.	
	Parameter Name	Parameter Type
	ILMEId	LLMEId
		Logical Layer Management Entity Id
	rlcMacEntityId	RlcMacEntityId
		The identifier of the RLC /MAC entity to couple this ILMEId.
	tLLI	TLI
Detailed Comments		
This ASP allows simulation of Intra-SGSN operations in tests.		

ASP Name	G_CLLC_ReassignLLE_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to confirm the G_CLLC_ReassignLLE_REQ	
	Parameter Name	Parameter Type
	ILMEId	LLMEId
		Logical Layer Management Entity Id
	rlcMacEntityId	RlcMacEntityId
		The identifier of the RLC /MAC entity to couple this ILMEId.
Detailed Comments		

7.3.4.3.2.5 ASPs for configuration and control of GERAN SNDNCP

~~Declaration of G_CSNDNCP_Activate_REQ ASP~~

ASP Name	G_CSNDNCP_Activate_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to activate the SNDNCP entity	
	Parameter Name	Parameter Type
	sNDNCPId	SNDNCPId
		The SNDNCP entity identifier of the cell
	ILMEId	LLMEId
		Logical link management entity Id
	nSAPI	NSAPI
		The Network Service Access Point Identifier
	sSAPI	SAPI
		LLC SAPI
	PCI_Compression	INTEGER
		0→ RFC1144 compress; 1→ RFC2507 compression; 32→ no compression
	dataCompression	INTEGER
		0→ V.42bis compression; 1→ V.44 compression; 32→ no compression
	nPDUNumberSync	INTEGER
		0→ Asynchronous 1→ Synchronous
Detailed Comments		

ASP Name	G_CSNDNCP_Activate_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CSNDNCP_Activate_REQ	
	Parameter Name	Parameter Type
	cellSNDNCPId	CellSNDNCPId
		SNDNCPThe entity identifier of the cell
	nSAPI	NSAPI
		The Network Service Access Point Identifier
Detailed Comments		

ASP Name	G_CSNDCP_SNSM_Activate_RES	
PCO Type	G_CSAP	
Comments	This ASP is used to inform that the NSAPI is in use and the acknowledge mode peer to peer LLC operation for the requested SAPI is established.	
Parameter Name	Parameter Type	Comments
sNDCPId	SND CPId	The SND CP entity identifier
tLLI	TLLI	Temporery Logical Link Entity
nSAPI	NSAPI	The Network Service Access Point Identifier
Detailed Comments		

ASP Name	G_CSNDCP_SNSM_Deactivate_IND	
PCO Type	G_CSAP	
Comments	This ASP is used to inform the SND CP emulator that an NSAPI has been deactivated and cannot be used anymore. Upon reception of this ASP the SND CP emulator shall release acknowledged peer-to-peer LLC operation for the associated SAPI.	
Parameter Name	Parameter Type	Comments
sNDCPId	SND CPId	The SND CP entity identifier
tLLI	TLLI	Temporery Logical Link Entity
nSAPI	NSAPI	The Network Service Access Point Identifier
ILCReleaseIndicator	INTEGER	Deactivation cause
Detailed Comments		

ASP Name	G_CSNDCP_SNSM_Deactivate_RES	
PCO Type	G_CSAP	
Comments	This ASP indicates that the NSAPI is no longer in use and the acknowledged peer to peer LLC operation for the requested SAPI has been released.	
Parameter Name	Parameter Type	Comments
sNDCPId	SND CPId	The SND CP entity identifier
tLLI	TLLI	Temporery Logical Link Entity
nSAPI	NSAPI	The Network Service Access Point Identifier
Detailed Comments		

ASP Name	G_CSNDCP_SNSM_Status_REQ	
PCO Type	G_CSAP	
Comments	This ASP informs that the SND CP cannot continue its operation due to errors in the lower layers of the protocol stack.	
Parameter Name	Parameter Type	Comments
sNDCPId	SND CPId	The SND CP entity identifier
tLLI	TLLI	Temporery Logical Link Entity
sAPI	SAPI	The Service Access Point Identifier
cause	INTEGER	Error cause
Detailed Comments		

ASP Name	G_CSNDCP_SNSM_Modify_IND	
PCO Type	G_CSAP	
Comments	This ASP informs the SND CP emulator to trigger the change of QoS profile for an NSAPI and indication of the SAPI to be used	
Parameter Name	Parameter Type	Comments
sNDCPId	SND CPId	The SND CP entity identifier
tLLI	TLLI	Temporery Logical Link Entity
nSAPI	NSAPI	The Network Service Access Point Identifier
qos	OCTETSTRING[4]	Quality of Service, defined 04.08 or 44.008 clause 10.5.6.5
sAPI	SAPI	
send_NPDU_Number	INTEGER	
received_NPDU_Number	INTEGER	
Detailed Comments		

ASP Name	<u>G_CSNDCP_SNSM_Modify_RES</u>	
PCO Type	<u>G_CSAP</u>	
Comments	<u>This ASP indicates that the NSAPI and QoS profile are now in used and the acknowledged peer to peer LLC operations for the appropriate SAPIs are established and/or released</u>	
	Parameter Name	Parameter Type
	<u>sNDCPIId</u>	<u>SNDCPIId</u>
	<u>tLLI</u>	<u>TLLI</u>
	<u>nSAPI</u>	<u>NSAPI</u>
	<u>The SMDCP entity identifier</u>	<u>Temporory Logical Link Entity</u>
	<u>The Network Service Access Point Identifier</u>	
Detailed Comments		

ASP Name	G_CLLC_Assign_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CLLC_Assign_REQ	
	Parameter Name	Parameter Type
	cellId	CellId
	The identifier of the cell	
Detailed Comments		

ASP Name	G_CLLC_Status_IND	
PCO Type	G_CSAP	
Comments	The ASP is used to get the LLC status report when an LLC error that cannot be recovered by the LLC layer has occurred.	
	Parameter Name	Parameter Type
	cellId	CellId
	tLLI	TLLI
	cause	Cause
	The identifier of the cell	32-bits
Detailed Comments	This ASP may be used in default tree to prevent dead lock when un-recoverable protocol error occurred in LLC emulator.	

8 Design Considerations

8.1 Channel mapping

Figure 3 shows the channel type mapping that is used for the configuration of the SS.

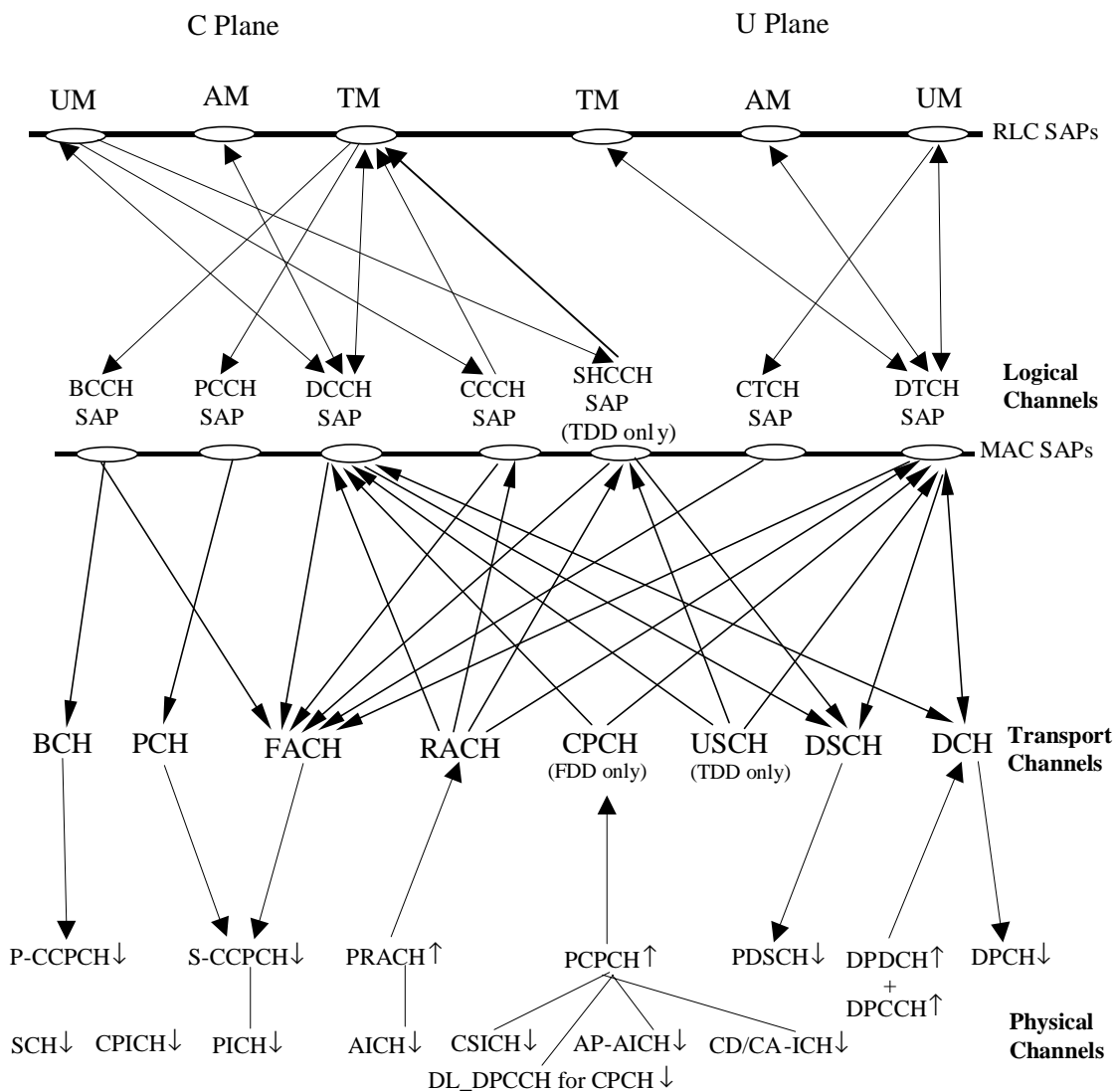


Figure 3: Channel mapping in SS

8.2 Channel and RB identity

The TTCN addresses the TTCN tester by using a channel identifier:

- Either Physical channel identifier (PhyCh id); or
- Transport channel identifier (TrCh id); or
- Radio bearer identifier (RB id).

The selected channel identifier identifies uniquely:

- a channel within a cell;
- a total path of the address in the lower layers concerned.

Having taken out the cell id and PCO id (AM, UM and TM), a complete address, as RoutingInfo in the RRC ASP definition, should have at least five fields, CN domain id, RB id, LogCH id, TrCH id and PhyCH id. For simplified application of CHOICE of the routing information, a TTCN writer must carefully follow a number of rules assigning the channel identifiers.

General requirements:

- a structured scheme of planning all channel identifiers assigned;

- the scheme shall meet the requirements for all test cases in 3GPP TS 34.123-1 [**Error! Reference source not found.**] including TDD channels;
- the scheme can apply to all radio bearer configurations in 3GPP TS 34.108 [**Error! Reference source not found.**], clause 6.10;
- a clear multiplex mapping between a PhyCH id to TrCH ids and a TrCH id to LogCH ids, RB ids is needed.

Requirements on identification of RB in a test case:

- unique identification of the individual SRBs;
- unique identification of the individual sub-flows of a RABs in CS and PS domain.;
- an assigned RB id can represent UL and DL.

Requirements on identification of Logical Channel in a test case:

- it is an instance number of the individual logical channel; and
- uniquely identifies among all the Logical Channel mapped onto a Transport Channel.

Requirements on identification of Transport Channel in a test case:

- unique identification of the individual Transport Channel;
- assign different identities for UL and DL of a same Transport Channel type;
- the order of the Transport Channel id assigned in a cell shall follow the TFCS definitions in the 3GPP TS 34.108 [**Error! Reference source not found.**], clause 6.10. For example, Transport Channel ids are assigned in the ascending order for (RABsubflow#1, RABsubflow#2, RABsubflow#3, 64kRAB, DCCH).

Requirements on identification of Physical Channel in a test case:

- unique identification of the individual Physical Channel;
- assign different identities for UL and DL of a same Physical Channel type;
- each S-CCPCH or PRACH has a unique identifier;
- for 2 Mbps PS data radio link (in case of demux of a Transport Channel), three DPCH are needed for high-speed data. A single Physical Channel id is assigned to a bundle of the three physical channels.

Table 31 shows which type of channel identity is chosen for the individual primitives. In table 31, the ASN.1 primitives use a CHOICE type for channel identity, while TTCN primitives use an explicit channel identity.

Table 13: Primitives and the associated channel identity type

Primitive name	Channel Identity
ASN.1 Primitives	
CPHY_AICH_AckModeSet_CNF	Physical Channel Identity
CPHY_AICH_AckModeSet_REQ	Physical Channel Identity
CPHY_Cell_Config_CNF	No Routing Info Field Present
CPHY_Cell_Config_REQ	No Routing Info Field Present
CPHY_Cell_Ini_CNF	No Routing Info Field Present
CPHY_Cell_Ini_REQ	No Routing Info Field Present
CPHY_Cell_TxPower_Modify_CNF	No Routing Info Field Present
CPHY_Cell_TxPower_Modify_REQ	No Routing Info Field Present
CPHY_Commit_CNF	Physical Channel Identity
CPHY_Commit_REQ	Physical Channel Identity
CPHY_Frame_Number_CNF	Physical Channel Identity
CPHY_Frame_Number_REQ	Physical Channel Identity
CPHY_Out_of_Sync_IND	Physical Channel Identity
CPHY_PRACH_Measurement_CNF	Physical Channel Identity
CPHY_PRACH_Measurement_REQ	Physical Channel Identity
CPHY_RL_Modify_CNF	Physical Channel Identity
CPHY_RL_Modify_REQ	Physical Channel Identity

Primitive name	Channel Identity
CPHY_RL_Release_CNF	Physical Channel Identity
CPHY_RL_Release_REQ	Physical Channel Identity
CPHY_RL_Setup_CNF	Physical Channel Identity
CPHY_RL_Setup_REQ	PhysicalChannelIdentity
CPHY_Sync_IND	Physical Channel Identity
CPHY_TrCH_Config_CNF	Physical Channel Identity
CPHY_TrCH_Config_REQ	PhysicalChannelIdentity
CPHY_TrCH_Release_CNF	Physical Channel Identity
CPHY_TrCH_Release_REQ	Physical Channel Identity
CMAC_BMC_Scheduling_CNF	Physical Channel Identity
CMAC_BMC_Scheduling_REQ	Physical Channel Identity
CMAC_Ciphering_Activate_CNF	Physical Channel Identity of DPCH
CMAC_Ciphering_Activate_REQ	Physical Channel Identity of DPCH
CMAC_Config_CNF	Physical Channel Identity
CMAC_Config_REQ	PhysicalChannelIdentity
CMAC_PAGING_Config_CNF	Physical Channel Identity
CMAC_PAGING_Config_REQ	Physical Channel Identity
CMAC_Restriction_CNF	PhysicalChannelIdentity
CMAC_Restriction_REQ	PhysicalChannelIdentity
CMAC_SecurityMode_Config_CNF	No Routing Info Field Present (applies to all RB Ids)
CMAC_Sequence_Number_CNF	Physical Channel Identity
CMAC_SequenceNumber_REQ	Physical Channel Identity
CMAC_SYSINFO_Config_CNF	RB Identity
CMAC_SYSINFO_Config_REQ	RB Identity
CRLC_Ciphering_Activate_CNF	No Routing Info Field Present (applies to all RB Ids)
CRLC_Ciphering_Activate_REQ	No Routing Info Field Present (applies to all RB Ids)
CRLC_Config_CNF	RB Identity
CRLC_Config_REQ	RB Identity
CRLC_Integrity_Activate_CNF	No Routing Info Field Present (applies to all RB Ids)
CRLC_Integrity_Activate_REQ	No Routing Info Field Present (applies to all RB Ids)
CRLC_Integrity_Failure_IND	RB Identity
CRLC_Resume_CNF	RB Identity (applies to all suspended RB Ids)
CRLC_Resume_REQ	RB Identity (applies to all suspended RB Ids)
CRLC_SecurityMode_Config_CNF	No Routing Info Field Present (applies to all RB Ids)
CRLC_SecurityMode_Config_REQ	No Routing Info Field Present (applies to all RB Ids)
CRLC_SequenceNumber_CNF	RB Identity
CRLC_SequenceNumber_REQ	RB Identity
CRLC_Status_Ind	RB Identity
CRLC_Suspend_CNF	RB Identity
CRLC_Suspend_REQ	RB Identity
CBMC_Config_CNF	RB Identity
CBMC_Config_REQ	RB Identity
RLC_AM_DATA_CNF	RB Identity
RLC_AM_DATA_IND	RB Identity
RLC_AM_DATA_REQ	RB Identity
RLC_TR_DATA_IND	RB Identity
RLC_TR_DATA_REQ	RB Identity
RLC_UM_DATA_IND	RB Identity
RLC_UM_DATA_REQ	RB Identity
TTCN Primitives	
RLC_AM_TestDataInd	RB Identity
RLC_AM_TestDataReq	RB Identity
RLC_TR_TestDataInd	RB Identity
RLC_TR_TestDataReq	RB Identity
RLC_UM_TestDataInd	RB Identity
RLC_UM_TestDataReq	RB Identity
BMC_DataReq	RB Identity

8.2.1 Physical Channels

Table 14: Physical channel identities

Type	Min. No.	Current Config.	Identities (value assigned)	Direction	Comment
P-CCPCH	1	1	tsc_P_CCPCH (4)	downlink	Primary Common Control Physical Channel. For Broadcasting System Information messages, using the Primary Scrambling Code for the Cell.
P-CPICH	1	1	tsc_P_CPICH (0)	downlink	Primary Common Pilot Channel using the Primary Scrambling Code for the Cell.
S-CPICH	1	FFS	tsc_S_CPICH (3)	downlink	Secondary Common Pilot Channel, used as the phase reference for some RF tests.
P-SCH	1	1	tsc_P_SCH (1)	downlink	Primary Synchronisation Channel
S-SCH	1	1	tsc_S_SCH (2)	downlink	Secondary Synchronisation Channel
S-CCPCH	2	1	tsc_S_CCPCH1 (5) tsc_S_CCPCH2 (10)	downlink	Secondary Common Control Physical Channel.
PICH	1	1	tsc_PICH1 (6) tsc_PICH2 (11)	downlink	To identify whether the UE should access the PCCH for Paging Messages.
AICH	1	1	tsc_AICH1 (7) tsc_AICH2 (12)	downlink	General Acquisition Indicator Channel, can be used for: <ul style="list-style-type: none"> - Acquisition Indicator Channel, for PRACH. - Access Preamble Acquisition Indicator Channel (AP-ICH), for PCPCH. - Collision-Detection/Channel-Assignment Indicator Channel (CD/CA-ICH), for PCPCH.
DPCH	3	1	tsc_DL_DPCH1 (26) tsc_DL_DPCH2 (27)	downlink	Downlink Physical Data Channel. Layer 1 signalling is transmitted only on the first DPCH. This number is for the First Cell. Additional Cells may define a lower number which should be at least 1.
PDSCH	4	FFS		downlink	Physical Downlink Shared Channel.
DPDCH	1	1	tsc_UL_DPCH1 (20) tsc_UL_DPCH2 (21)	uplink	Uplink Dedicated Physical Channel. A single DPCH associated with all the DPDCHs used for Layer 1 signalling.
PDSCH	1	1	tsc_DL_PDSCH1 (16)	downlink	Physical Downlink Shared Channel.
PRACH	2	1	tsc_PRACH1 (8) tsc_PRACH2 (9)	uplink	Physical Random Access Channel.
PCPCH	1	FFS		uplink	Physical Common Packet Channel.
CSICH	1	FFS		downlink	CPCH Status Indicator Channel

The Physical Channel values 20 to 25 are assigned to uplink DPCHs and the values 26 to 31 are assigned to downlink DPCHs.

8.2.2 Transport Channels

Table 15: Transport channel identities

Type	Min. No.	Current Config.	Identities (value assigned)	Direction	Comments
BCH	1	1	tsc_BCH1 (11)	downlink	
FACH	1	1	tsc_FACH1 (13) tsc_FACH2 (14) tsc_FACH3 (16) tsc_FACH4 (17)	downlink	
PCH	1	1	tsc_PCH1 (12) tsc_PCH2 (30)	downlink	
DCH	n	4	tsc_UL_DCH1 (1) tsc_UL_DCH2 (2) tsc_UL_DCH3 (3) tsc_UL_DCH4 (4) tsc_UL_DCH5 (5)	uplink	tsc_UL_DCH1 for RAB1-1 or RAB1, tsc_UL_DCH2 for RAB1-2 or RAB2, tsc_UL_DCH3 for RAB1-3, tsc_UL_DCH4 for RAB2, tsc_UL_DCH5 for SRB.
DCH	n	4	tsc_DL_DCH1 (6) tsc_DL_DCH2 (7) tsc_DL_DCH3 (8) tsc_DL_DCH4 (9) tsc_DL_DCH5 (10)	downlink	tsc_DL_DCH1 for RAB1-1 or RAB1, tsc_DL_DCH2 for RAB1-2 or RAB2, tsc_DL_DCH3 for RAB1-3, tsc_DL_DCH4 for RAB2, tsc_DL_DCH5 for SRB.
USCH	1	N/A	tsc_USCH1(20)	uplink	TDD only
DSCH	1	N/A	tsc_DSCH (19)	downlink	
RACH	2	1	tsc_RACH1 (15) tsc_RACH2 (31)	uplink	
CPCH	1	N/A	tsc_CPCH1(32)	uplink	
FAUSCH	N/A	N/A	tsc_FAUSCH1(18)	uplink	Not in Release 99

The TrCH values 20 - 29 are assigned to the TDD TrCH.

8.2.3 Logical Channels

Table 34 shows the logical channels identities.

Table 16: Logical channel identities

Type	Min. No.	Current Config.	Identities (value assigned)	Direction	Comments
BCCH_BCH	1	1	tsc_BCCH1 (1)	downlink	
BCCH_FACH	1	1	tsc_BCCH6 (6)	downlink	
CCCH	1	1	tsc_DL_CCCH5 (5)	downlink	
CCCH	1	2	tsc_UL_CCCH5 (5) tsc_UL_CCCH6 (6)	uplink	
DCCH	4	4	tsc_DL_DCCH1 (1) tsc_DL_DCCH2 (2) tsc_DL_DCCH3 (3) tsc_DL_DCCH4 (4)	downlink	tsc_DL_DCCH1 for SRB1, tsc_DL_DCCH2 for SRB2, tsc_DL_DCCH3 for SRB3, tsc_DL_DCCH4 for SRB4
DCCH	4	4	tsc_UL_DCCH1 (1) tsc_UL_DCCH2 (2) tsc_UL_DCCH3 (3) tsc_UL_DCCH4 (4)	uplink	tsc_UL_DCCH1 for SRB1, tsc_UL_DCCH2 for SRB2, tsc_UL_DCCH3 for SRB3, tsc_UL_DCCH4 for SRB4
PCCH	1	2	tsc_PCCH1 (1) tsc_PCCH2 (2)	downlink	
DTCH	n	4	tsc_UL_DTCH1 (7) tsc_UL_DTCH2 (8) tsc_UL_DTCH3 (9) tsc_UL_DTCH4 (10)	uplink	tsc_UL_DTCH1 for RAB1-1 or RAB1, tsc_UL_DTCH2 for RAB1-2 or RAB2, tsc_UL_DTCH3 for RAB1-3' tsc_UL_DTCH4 for RAB2
DTCH	n	4	tsc_DL_DTCH1 (7) tsc_DL_DTCH2 (8) tsc_DL_DTCH3 (9) tsc_DL_DTCH4 (10)	downlink	tsc_DL_DTCH1 for RAB1-1 or RAB1, tsc_DL_DTCH2 for RAB1-2 or RAB2, tsc_DL_DTCH3 for RAB-3, tsc_DL_DTCH4 for RAB2
CTCH	1	2	tsc_CTCH1 (11) tsc_CTCH2 (12)	downlink	

8.2.4 Radio bearers

Table 17: Radio bearer identities

Identities (value assigned)	Direction	Type	RLC mode	Service domain	Comments
tsc_RB_BCCH (-1)	downlink		TM	NA	BCCH-BCH
tsc_RB_PCCH (-2)	downlink		TM	NA	PCCH PCH
tsc_RB_BCCH_FACH (-3)	downlink		TM	NA	BCCH FACH
tsc_RB_2ndPCCH (-4)	downlink		TM	NA	Second PCCH PCH SCPCCH
tsc_RB_2ndCCCH (-5)	uplink		TM	NA	Second CCCH RACH PRACH
tsc_RB_UM_7_RLC (-10)	downlink	RAB	TM	CS	For UM RLC tests using 7 bit LIs
tsc_RB_UM_7_RLC (-10)	uplink	RAB	TM	CS	For UM RLC tests using 7 bit LIs
tsc_RB_UM_15_RLC (-11)	downlink	RAB	TM	CS	For UM RLC tests using 15 bit LIs
tsc_RB_UM_15_RLC (-11)	uplink	RAB	TM	CS	For UM RLC tests using 15 bit LIs
tsc_RB_AM_7_RLC (-12)	downlink	RAB	TM	CS	For AM RLC tests using 15 bit LIs
tsc_RB_AM_7_RLC (-12)	uplink	RAB	TM	CS	For AM RLC tests using 7 bit LIs
tsc_RB_AM_15_RLC (-13)	downlink	RAB	TM	CS	For AM RLC tests using 15 bit LIs
tsc_RB_AM_15_RLC (-13)	uplink	RAB	TM	CS	For AM RLC tests using 15 bit LIs
tsc_RB_DCCH_FACH_MAC (-14)	downlink	SRB3	TM	CS	For MAC tests using DCCH mapped to FACH
tsc_RB_DCCH_FACH_MAC (-14)	uplink	SRB3	TM	CS	For MAC tests using DCCH mapped to FACH
tsc_RB_DCCH_DCH_MAC (-15)	downlink	SRB3	TM	CS	For MAC tests using DCCH mapped to DCH
tsc_RB_DCCH_FACH_MAC (-15)	uplink	SRB3	TM	CS	For MAC tests using DCCH mapped to DCH
tsc_RB3_DCCH_RRC_(-16)	uplink	SRB3	AM	CS or PS	For RRC test cases to route UL NAS messages
tsc_RB_CCCH_FACH_MAC (-18)	downlink	SRB0	TM	CS or PS	For MAC test using downlink SRB0 on TM
tsc_RB_BCCH_FACH_RAB (-19)	downlink		TM	NA	BCCH FACH
tsc_RB0 (0)	uplink	SRB0	TM	CS or PS	The service domain for which the most recent security negotiation took place. CCCH
tsc_RB0 (0)	downlink	SRB0	UM	CS or PS	CCCH
tsc_RB1 (1)	uplink	SRB1	UM	CS or PS	DCCH
tsc_RB1 (1)	downlink	SRB1	UM	CS or PS	DCCH
tsc_RB2 (2)	uplink	SRB2	AM	CS or PS	DCCH
tsc_RB2 (2)	downlink	SRB2	AM	CS or PS	DCCH
tsc_RB3 (3)	uplink	SRB3	AM	CS or PS	DCCH
tsc_RB3 (3)	downlink	SRB3	AM	CS or PS	DCCH
tsc_RB4 (4)	uplink	SRB4	AM	CS or PS	DCCH
tsc_RB4 (4)	downlink	SRB4	AM	CS or PS	DCCH
tsc_RB5 (5)	uplink		TM		DCCH
tsc_RB5 (5)	downlink		TM		DCCH
tsc_RB10 (10)	uplink	RAB#1-1	TM	CS	or RAB1
tsc_RB10 (10)	downlink	RAB#1-1	TM	CS	or RAB1
tsc_RB11 (11)	uplink	RAB#1-2	TM	CS	or RAB2
tsc_RB11 (11)	downlink	RAB#1-2	TM	CS	or RAB2
tsc_RB12 (12)	uplink	RAB#1-3	TM	CS	
tsc_RB12 (12)	downlink	RAB#1-3	TM	CS	
tsc_RB13 (13)	uplink	RAB#2	TM	CS	
tsc_RB13 (13)	downlink	RAB#2	TM	CS	
tsc_RB20 (20)	uplink	RAB#1	AM	PS	
tsc_RB20 (20)	downlink	RAB#1	AM	PS	
tsc_RB21 (21)	uplink	RAB#2	UM	PS	
tsc_RB21 (21)	downlink	RAB#2	UM	PS	
tsc_RB22 (22)	uplink	RAB#2	AM	PS	
tsc_RB22 (22)	downlink	RAB#2	AM	PS	
tsc_RB30 (30)	downlink		UM		CTCH FACH
tsc_RB31 (31)	downlink		UM		Second CTCH FACH

The RB values 0-5 are used for the signalling bearers. The values 10-15 are assigned to the CS RAB sub-flows. The values 20-25 are assigned to the PS RAB sub-flows. The value 30 is assigned to the CBSMS/BMC service.

8.2.5 Scrambling and channelization codes

Table 36 shows the primary/secondary scrambling codes and the channelization codes for downlink channels.

Table 18: Primary/secondary scrambling codes and channelization codes for downlink channels

Type	Identities (value assigned)	Primary scrambling code	Secondary scrambling code	Channelization Code
P-CCPCH	tsc_P_CCPCH (4)	$(px_PrimaryScramblingCode + 50 * (cell\ No - 1)) \bmod 512$	NA	tsc_P_CCPCH_ChC (256:1)
P-CPICH	tsc_P_CPICH (0)	$(px_PrimaryScramblingCode + 50 * (cell\ No - 1)) \bmod 512$	NA	tsc_P_CPICH_ChC (256:0)
S-CCPCH	tsc_S_CCPCH1 (5)	$(px_PrimaryScramblingCode + 50 * (cell\ No - 1)) \bmod 512$	NA (carrying PCH)	tsc_S_CCPCH1_ChC (64:1)
	tsc_S_CCPCH2 (10)	$(px_PrimaryScramblingCode + 50 * (cell\ No - 1)) \bmod 512$	NA (carrying PCH)	tsc_S_CCPCH2_ChC (64:2)
PICH	tsc_PICH1 (6)	$(px_PrimaryScramblingCode + 50 * (cell\ No - 1)) \bmod 512$	NA	tsc_PICH1_ChC (256:2)
	tsc_PICH2 (11)	$(px_PrimaryScramblingCode + 50 * (cell\ No - 1)) \bmod 512$	NA	tsc_PICH2_ChC (256:12)
AICH	tsc_AICH1 (7)	$(px_PrimaryScramblingCode + 50 * (cell\ No - 1)) \bmod 512$	NA	tsc_AICH1_ChC (256:3)
	tsc_AICH2 (12)	$(px_PrimaryScramblingCode + 50 * (cell\ No - 1)) \bmod 512$	NA	tsc_AICH2_ChC (256:13)
DPCH	tsc_DL_DPCH1 (26)	$(px_PrimaryScramblingCode + 50 * (cell\ No - 1)) \bmod 512$	tsc_DL_DPCH1_2ndScrC (1) This value is related to the primary scrambling code of the cell	Depending on the configuration: tsc_DL_DPCH1_ChC_SRB (128:9) tsc_DL_DPCH1_ChC_Speech (128:0) tsc_DL_DPCH1_ChC_Streaming (32:0) tsc_DL_DPCH1_ChC_64k_CS (32:0) tsc_DL_DPCH1_ChC_64k_PS (32:0)
	tsc_DL_DPCH2 (27)	$(px_PrimaryScramblingCode + 50 * (cell\ No - 1)) \bmod 512$	tsc_DL_DPCH2_2ndScrC (1) This value is related to the primary scrambling code of the cell	Depending on the configuration: tsc_DL_DPCH2_ChC_SRB (256:1) tsc_DL_DPCH2_ChC_Speech (128:1) tsc_DL_DPCH2_ChC_Streaming (32:1) tsc_DL_DPCH2_ChC_64k_CS (32:1) tsc_DL_DPCH2_ChC_64k_PS (32:1)

Table 37 shows the scrambling codes, the signatures and the spreading factors for uplink channels.

Table 19: Scrambling codes, signatures and spreading factor for uplink channels

Type	Identities (value assigned)	Scrambling code	Signature	Spreading factor
DPDCH	tsc_UL_DPCH1 (20)	$(px_UL_ScramblingCode + 1000 * (cell\ No - 1)) \text{ MOD } 16777216$	NA	If only one DPDCH and depending on the configuration tsc_UL_DPDCH_SF_SRB (64) tsc_UL_DPDCH_SF_Speech (64) tsc_UL_DPDCH_SF_Streaming (16) tsc_UL_DPDCH_SF_64k_CS (16) tsc_UL_DPDCH_SF_64k_PS (16) If more than one DPDCH tsc_UL_DPDCH_SF_4 (4:1)
	tsc_UL_DPCH2 (21)	$(px_UL_ScramblingCode + 1000 * (cell\ No - 1)) \text{ MOD } 16777216$	NA	If only one DPDCH and depending on the configuration tsc_UL_DPDCH_SF_SRB (64) tsc_UL_DPDCH_SF_Speech (64) tsc_UL_DPDCH_SF_Streaming (16) tsc_UL_DPDCH_SF_64k_CS (16) tsc_UL_DPDCH_SF_64k_PS (16) If more than one DPDCH tsc_UL_DPDCH_SF_4 (4:1)
PRACH	tsc_PRACH1 (8)	tsc_PRACH1_ScrC (0)	tsc_PRACH1_Signatures (<code>'0000000011111111'B</code>)	tsc_PRACH1_SF (64)
	tsc_PRACH2 (9)	tsc_PRACH2_ScrC (1)	tsc_PRACH2_Signatures (<code>'0000000011111111'B</code>)	tsc_PRACH2_SF (64)

8.2.6 MAC-d

MAC-d and the served RLC are cell-independent and are configured by using the cell-id = -1. During reconfigurations, cell changes and state transitions, the relevant counters in the RLC and MAC-d are maintained.

For the active set updating, the DL DCH with the same channel Id in the different cells are implicitly connected to form the DL multiple paths.

8.2.6.1 MAC-d configuration examples

The following example shows how the MAC and RLC ASP are used to configure different configurations.

The 1st parameter in ASP represents the cell identity: p_CellId corresponds to the current cell identity, tsc_CellDedicated corresponds to the cell independent (-1). The 2nd parameter represents the channel Id, this parameter is not needed in the CRLC ASP)

1. Cell DCH StandAloneSRB: configuratio of DL/UL-DPCH1

CPHY!CPHY_RL_Setup_REQ	(p_CellId, tsc_DL_DPCH1)	-- Cell concerned
CPHY?CPHY_RL_Setup_CNF	(p_CellId, tsc_DL_DPCH1)	-- Cell concerned
CPHY!CPHY_TrCH_Config_REQ	(p_CellId, tsc_DL_DPCH1)	-- Cell concerned
CPHY?CPHY_TrCH_Config_CNF	(p_CellId, tsc_DL_DPCH1)	-- Cell concerned
CMAC ! CMAC_Config_REQ	(tsc_CellDedicated, tsc_DL_DPCH1)	-- Cell independant (-1)
CMAC ? CMAC_Config_CNF	(tsc_CellDedicated, tsc_DL_DPCH1)	-- Cell independant (-1)
CPHY!CPHY_RL_Setup_REQ	(p_CellId, tsc_UL_DPCH1)	-- Cell concerned
CPHY?CPHY_RL_Setup_CNF	(p_CellId, tsc_UL_DPCH1)	-- Cell concerned
CPHY!CPHY_TrCH_Config_REQ	(p_CellId, tsc_UL_DPCH1)	-- Cell concerned
CPHY?CPHY_TrCH_Config_CNF	(p_CellId, tsc_UL_DPCH1)	-- Cell concerned
CMAC ! CMAC_Config_REQ	(tsc_CellDedicated, tsc_UL_DPCH1)	-- Cell independant (-1)
CMAC ? CMAC_Config_CNF	(tsc_CellDedicated, tsc_UL_DPCH1)	-- Cell independant (-1)
CRLC ! CRLC_Config_REQ	(tsc_CellDedicated)	-- Cell independant (-1)
CRLC ? CRLC_Config_CNF	(tsc_CellDedicated)	-- Cell independant (-1)

2. Cell FACH: configuration of S-CCPCH1

CPHY!CPHY_RL_Setup_REQ	(p_CellId, tsc_S_CCPCH1)	-- Cell concerned
CPHY?CPHY_RL_Setup_CNF	(p_CellId, tsc_S_CCPCH1)	-- Cell concerned t
CPHY!CPHY_TrCH_Config_REQ	(p_CellId, tsc_S_CCPCH1)	-- Cell concerned
CPHY ? CPHY_TrCH_Config_CNF	(p_CellId, tsc_S_CCPCH1)	-- Cell concerned
CMAC ! CMAC_Config_REQ	(p_CellId, tsc_S_CCPCH1)	-- Cell concerned
CMAC ? CMAC_Config_CNF	(p_CellId, tsc_S_CCPCH1)	-- Cell concerned
CPHY!CPHY_RL_Setup_REQ	(p_CellId, tsc_PICH1)	-- Cell concerned
CPHY?CPHY_RL_Setup_CNF	(p_CellId, tsc_PICH1)	-- Cell concerned
CRLC ! CRLC_Config_REQ	(tsc_CellDedicated)	-- Cell independant (-1)
CRLC ? CRLC_Config_CNF	(tsc_CellDedicated)	-- Cell independant (-1)

3. Cell FACH: configuration of P-CCPCH

CPHY!CPHY_RL_Setup_REQ	(p_CellId, tsc_P_CPICH)	-- Cell concerned
CPHY?CPHY_RL_Setup_CNF	(p_CellId, tsc_P_CPICH)	-- Cell concerned
CPHY!CPHY_RL_Setup_REQ	(p_CellId, tsc_P_SCH)	-- Cell concerned
CPHY?CPHY_RL_Setup_CNF	(p_CellId, tsc_P_SCH)	-- Cell concerned
CPHY!CPHY_RL_Setup_REQ	(p_CellId, tsc_P_SCH)	-- Cell concerned
CPHY?CPHY_RL_Setup_CNF	(p_CellId, tsc_S_SCH)	-- Cell concerned
CPHY!CPHY_RL_Setup_REQ	(p_CellId, tsc_P_CCPCH)	-- Cell concerned
CPHY?CPHY_RL_Setup_CNF	(p_CellId, tsc_P_CCPCH)	-- Cell concerned
CPHY!CPHY_TrCH_Config_REQ	(p_CellId, tsc_P_CCPCH)	-- Cell concerned
CPHY?CPHY_TrCH_Config_CNF	(p_CellId, tsc_P_CCPCH)	-- Cell concerned
CMAC!CMAC_Config_REQ	(p_CellId, tsc_P_CCPCH)	-- Cell concerned
CMAC?CMAC_Config_CNF	(p_CellId, tsc_P_CCPCH)	-- Cell concerned
CRLC! CRLC_Config_REQ	(p_CellId)	-- Cell concerned
CRLC? CRLC_Config_CNF	(p_CellId)	-- Cell concerned

8.2.7 Configuration of compressed mode

8.2.7.1 UE Side

Two IE are available for the configuration of the compressed mode for the UE.

- a) DPCH_CompressedModeInfo.

b) DPCH_CompressedModeStatusInfo.

Compressed mode initiation at UE side can be divided into 2 steps:

- a) Downloading compressed mode parameters;
- b) Activating the compressed mode.

Both of them can be done in one shot.

8.2.7.2 SS Side

Compressed mode configuration at SS side shall be maintained the same status as that on the UE side. So there are 3 different types of compressed mode configuration states both on UE and SS side.

- Configuration of compressed mode parameters (Use of DPCH_CompressedModeInfo) without the activation;
- Configuration of compressed mode parameters and simultaneous activation (use of DPCH_CompressedModeInfo);
- Only activation (use of DPCH_CompressedModeStatusInfo).

If compressed mode parameters are to be downloaded to the UE without actually activation, it shall be configured on the SS side by any one of the following two procedures.

- If DPCH channel on which compressed mode is to be downloaded is not already configured, primitive 'CPHY_RL_Setup_REQ', with 'CphyRISetupReq. PhysicalChannelInfo' which is of choice, chosen to dPCHInfo shall be called. The procedure is used to pre-configure all compressed patterns necessary for test, but deactivate the all patterns configured at the beginning of the test. This procedure has not been implemented in the TTCN.
- If DPCH channel on which compressed mode is to be downloaded is already configured, the primitive 'CPHY_RL_Modify_REQ' with 'CphyRIModifyReq. PhysicalChannelInfo' which is of choice, chosen to dPCHInfo shall be called. This procedure is generally used in the TTCN.

If compressed mode parameters are to be configured and simultaneously activated, the same procedure as for the configuration of compressed mode without activation shall be used.

Activation of the compressed mode, whose parameters are already configured shall be achieved by the primitive 'CPHY_RL_Modify_REQ' with 'CphyRIModifyReq. PhysicalChannelInfo' which is of choice, chosen to dpch_CompressedModeStatusInfo.

8.2.8 Use of U-RNTI and C-RNTI

The uRNTI and cRNTI are optional when configuring the MAC (CMAC_Config_REQ). The following table gives indication on when uRNTI and cRNTI are needed.

Table 20: cRNTI and uRNTI in CMAC-Config_REQ

	<u>P-CCPCH</u>	<u>S-CCPCH with mapped DL-DCCH/DTCH (UE in cell_FACH)</u>	<u>S-CCPCH without mapped DL-DCCH/DTCH (UE in cell_DCH)</u>	<u>PRACH with mapped DL-DCCH/DTCH (UE in cell_FACH)</u>	<u>PRACH without mapped DL-DCCH/DTCH (UE in cell_DCH)</u>	<u>DPCH</u>
<u>uRNTI</u>	-	Included	-	Omit	-	-
<u>cRNTI</u>	-	Included	-	Included	-	-
<u>CMAC-Config_REQ</u>	<u>OMIT both</u>	<u>Download cRNTI and uRNTI</u>	<u>OMIT both</u>	<u>Download cRNTI</u>	<u>OMIT both</u>	<u>OMIT both</u>

In the case of DL-DCCH/DTCH mapped on S-CCPCH, cRNTI and uRNTI are downloaded to the MAC layer. As default, SS MAC shall use cRNTI as UE id. At the CMAC configuration of the beginning of test cases, the RLC payload size is configured, as default on cRNTI for the MAC header calculation. If uRNTI is to be used the SS RLC payload size shall be reconfigured as cRNTI and uRNTI do not have the same length (16 bits and 32 bits respectively).

CELL UPDATE CONFIRM or URA UPDATE CONFIRM shall be sent on DCCH at the test for the ciphering reason except the periodic update without carrying the UE identity information. In this case the CELL UPDATE CONFIRM or URA UPDATE CONFIRM is sent on CCCH at the test.

Table 21: Relationship between cell update cause, UE state and RLC size reconfiguration

<u>Cell update cause</u>	<u>UE State (before cell update)</u>	<u>CELL UPDATE CONFIRM</u>	<u>CRLC Reconf RLC Size Needed</u>	<u>Valid UE ID</u>
<u>Cell reselection</u>	<u>CELL_PCH / CELL_FACH</u>	<u>DCCH</u>	<u>Y</u>	<u>U_RNTI</u>
<u>Periodical cell update</u>	<u>CELL_PCH</u>	<u>DCCH or CCCH</u>	<u>Y (for DCCH)</u>	<u>U_RNTI</u>
<u>Periodical cell update</u>	<u>CELL_FACH</u>	<u>DCCH or CCCH</u>	<u>N</u>	<u>C_RNTI</u>
<u>Uplink data transmission</u>	<u>CELL_PCH / URA_PCH</u>	<u>DCCH</u>	<u>Y</u>	<u>U_RNTI</u>
<u>UTRAN paging response</u>	<u>CELL_PCH / URA_PCH</u>	<u>DCCH</u>	<u>Y</u>	<u>U_RNTI</u>
<u>Re-entered service area</u>	<u>CELL_PCH / URA_PCH</u>	<u>DCCH</u>	<u>Y</u>	<u>U_RNTI</u>
<u>Re-entered service area</u>	<u>CELL_FACH</u>	<u>DCCH</u>	<u>N</u>	<u>C_RNTI</u>
<u>Radio Link failure</u>	<u>CELL_DCH</u>	<u>DCCH</u>	<u>Y</u>	<u>U_RNTI</u>
<u>RLC unrecoverable error</u>	<u>CELL_DCH / CELL_FACH</u>	<u>DCCH</u>	<u>Y</u> <u>N (selected the same cell in CELL_FACH)</u>	<u>U_RNTI</u> <u>C_RNTI</u>

8.3 Channel configurations

8.3.1 Configuration of Cell_FACH

The configuration is based on 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.4.1.1.1 for uplink. The configuration is applied to the RRC tests related in the states CELL_FACH, CELL_PCH and URA_PCH. They need a minimum radio configuration for testing.

Table 22: Uplink configuration of Cell_FACH

RB Identity	tsc_RB20 (20)	tsc_RB0 (0)	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB3 (3)	tsc_RB4 (4)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH
LogCh Identity	Tsc_UL_DTCH1 (7)	tsc_UL_CCCH5 (5)	tsc_UL_DCCH1 (1)	tsc_UL_DCCH2 (2)	tsc_UL_DCCH3 (3)	tsc_UL_DCCH4 (4)
RLC mode	AM	TM	UM	AM	AM	AM
TrCH Type	RACH					
TrCH identity	tsc_RACH1 (15)					
PhyCh Type	PRACH					
PhyCH identity	tsc_PRACH1 (8)					

Table 23: Downlink configuration of Cell_FACH

RB Identity	tsc_RB20 (20)	tsc_RB0 (0)	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB3 (3)	tsc_RB4 (4)	tsc_RB_BC CH_FACH (-3)	tsc_RB_PC CH (-2)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	BCCH	PCCH
LogCh Identity	tsc_DL_DT CH1 (67)	tsc_DL_CC CH5 (5)	tsc_DL_DC CH1 (1)	tsc_DL_DC CH2 (2)	tsc_DL_DC CH3 (3)	tsc_DL_DC CH4 (4)	tsc_BCCH6 (6)	tsc_PCCH1 (1)
RLC mode	AM	UM	UM	AM	AM	AM	TM	TM
MAC priority	1	1	2	3	4	5	6	1
TrCH Type	FACH	FACH						PCH
TrCH identity	tsc_FACH2 (14)	tsc_FACH1 (13)						tsc_PCH1 (12)
PhyCh Type	Secondary CCPCH							
PhyCH identity	tsc_S_CCPCH1 (5)							

8.3.14 Configuration of Cell_Four_DTCH_CS_PS, Cell Four DTCH PS CS

The configuration is based on 3GPP TS 34.108 [Error! Reference source not found.], clauses 6.10.2.4.1.40. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

Table 24: Uplink configuration of Cell_Four_DTCH_CS_PS

RB Identity	tsc_RB10 (10)	tsc_RB11 (11)	tsc_RB12 (12)	tsc_RB20 (20)	Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH
LogCh Type	DTCH	DTCH	DTCH	DTCH		
LogCh Identity	tsc_UL_DTCH1 (7)	tsc_UL_DTCH2 (8)	tsc_UL_DTCH3 (9)	tsc_UL_DTCH4 (10)		
RLC mode	TM	TM	TM	AM		
MAC priority	1	1	1	1		
TrCH Type	DCH	DCH	DCH	DCH		
TrCH identity	tsc_UL_DCH1 (6)	tsc_UL_DCH2 (7)	tsc_UL_DCH3 (8)	tsc_UL_DCH4 (9)		
PhyCh Type	DPDCH				Secondary CCPCH	
PhyCH identity	tsc_UL_DPCH1 (20)				tsc_S_CCPCH1 (5)	

Table 25: Downlink configuration of Cell_Four_DTCH_CS_PS,Cell Four DTCH PS CS

RB Identity	tsc_RB10 (10)	tsc_RB11 (11)	tsc_RB12 (12)	tsc_RB20 (20)	Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH
LogCh Type	DTCH	DTCH	DTCH	DTCH		
LogCh Identity	tsc_DL_DTCH1 (7)	tsc_DL_DTCH2 (8)	tsc_DL_DTCH3 (9)	tsc_DL_DTCH4 (10)		
RLC mode	TM	TM	TM	AM		
MAC priority	1	1	1	1		
TrCH Type	DCH	DCH	DCH	DCH		
TrCH identity	tsc_DL_DCH1 (6)	tsc_DL_DCH2 (7)	tsc_DL_DCH3 (8)	tsc_DL_DCH4 (9)		
PhyCh Type	DPCH				Secondary CCPCH	
PhyCH identity	tsc_DL_DPCH1 (20)				tsc_S_CCPCH1 (5)	

8.3.15 Configuration of Cell_Two_DTCH_CS_PS, Cell Two DTCH PS CS

The configuration is based on 3GPP TS 34.108 [Error! Reference source not found.], clauses 6.10.2.4.1.51 and 6.10.2.4.1.53. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

Table 26: Uplink configuration of Cell_Two_DTCH_CS_PS, Cell_Two_DTCH_PS_CS

RB Identity	tsc_RB10 (10)	tsc_RB20 (20)	Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH
LogCh Type	DTCH	DTCH		
LogCh Identity	tsc_UL_DTCH1 (7)	tsc_UL_DTCH2 (8)		
RLC mode	TM	AM		
TrCH Type	DCH	DCH		
TrCH identity	tsc_UL_DCH1 (1)	tsc_UL_DCH2 (2)		
PhyCh Type	DPDCH			PRACH
PhyCH identity	tsc_UL_DPCH1 (20)			tsc_PRACH1 (8)

Table 27: Downlink configuration of Cell_Two_DTCH_CS_PS

RB Identity	tsc_RB10 (10)	tsc_RB20 (20)	Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH
LogCh Type	DTCH	DTCH		
LogCh Identity	tsc_DL_DTCH1 (7)	tsc_DL_DTCH2 (8)		
RLC mode	TM	AM		
MAC priority	1	1		
TrCH Type	DCH	DCH		
TrCH identity	tsc_DL_DCH1 (6)	tsc_DL_DCH2 (7)		
PhyCh Type	DPCH			Secondary CCPCH
PhyCH identity	tsc_DL_DPCH1 (20)			tsc_S_CCPCH1 (5)

8.3.16 Configuration of Cell_Four_DTCH_CS

The configuration is based on 3GPP TS 34.108 [Error! Reference source not found.], clauses 6.10.2.4.1.49. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

Table 28: Uplink configuration of Cell_Four_DTCH_CS

RB Identity	tsc_RB10 (10)	tsc_RB11 (11)	tsc_RB12 (12)	tsc_RB13 (13)	Same as uplink configuration of Cell_DCH_StandAlone SRB on DPCH	Same as uplink configuration of Cell_DCH_StandAlone SRB on PRACH
LogCh Type	DTCH	DTCH	DTCH	DTCH		
LogCh Identity	tsc_UL_DTCH1 (7)	tsc_UL_DTCH2 (8)	tsc_UL_DTCH3 (9)	tsc_UL_DTCH4 (10)		
RLC mode	TM	TM	TM	TM		
MAC priority	1	1	1	1		
TrCH Type	DCH	DCH	DCH	DCH		
TrCH identity	tsc_UL_DCH 1 (6)	tsc_UL_DCH 2 (7)	tsc_UL_DCH 3 (8)	tsc_UL_DCH 4 (9)		
PhyCh Type	DPDCH					Secondary CCPCH
PhyCH identity	tsc_UL_DPCH1 (20)					tsc_S_CCPCH1 (5)

Table 29: Downlink configuration of Cell_Four_DTCH_CS

RB Identity	tsc_RB10 (10)	tsc_RB11 (11)	tsc_RB12 (12)	tsc_RB13 (13)	Same as downlink configuration of Cell_DCH_StandAloneS RB on DPCH	Same as downlink configuration of Cell_DCH_StandAlone SRB on sCCPCH
LogCh Type	DTCH	DTCH	DTCH	DTCH		
LogCh Identity	tsc_DL_DTCH1 (7)	tsc_DL_DTCH2 (8)	tsc_DL_DTCH3 (9)	tsc_DL_DTCH4 (10)		
RLC mode	TM	TM	TM	TM		
MAC priority	1	1	1	1		
TrCH Type	DCH	DCH	DCH	DCH		
TrCH identity	tsc_DL_DCH 1 (6)	tsc_DL_DCH 2 (7)	tsc_DL_DCH 3 (8)	tsc_DL_DCH 4 (9)		
PhyCh Type	DPCH					Secondary CCPCH
PhyCH identity	tsc_DL_DPCH1 (20)					tsc_S_CCPCH1 (5)

8.3.21 Configuration of PS Cell_DCH_2AM_PS

The configuration is based on 3GPP TS 34.108 [Error! Reference source not found.], clauses 6.10.2.4.1.26 and 6.10.2.4.1.57. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.3.2.1.2 with 2 AM RAB and RB0/TM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.4.1.1.1. The configuration is applied to MAC and RAB test cases.

Table 30: Uplink configuration of Cell_DCH_2AM_PS

RB Identity	tsc_RB20 (20)	tsc_RB224 (224)	Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH
LogCh Type	DTCH	DTCH		
LogCh Identity	tsc_UL_DTCH 1 (7)	tsc_UL_DTCH 2 (8)		
RLC mode	AM	AM		
TrCH Type	DCH			
TrCH identity	tsc_UL_DCH1 (1)			
PhyCh Type	DPDCH			PRACH
PhyCh identity	tsc_UL_DPCH1 (20)			tsc_PRACH1 (8)

Table 31: Downlink configuration of Cell_DCH_2AM_PS

RB Identity	tsc_RB20 (20)	tsc_RB224 (224)	Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH
LogCh Type	DTCH	DTCH		
LogCh Identity	tsc_DL_DTCH 1 (7)	tsc_DL_DTCH 2 (8)		
RLC mode	AM	AM		
MAC priority	1	1		
TrCH Type	DCH			
TrCH identity	tsc_DL_DCH1 (6)			
PhyCh Type	DPCH			Secondary CCPCH
PhyCh identity	tsc_DL_DPCH1 (26)			tsc_S_CCPCH1 (5)

8.3.22 Configuration of PS Cell_DCH_2_PS_Call

The configuration is based on 3GPP TS 34.108 [Error! Reference source not found.], clauses 6.10.2.4.1.56 and 6.10.2.4.1.58. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

Table 32: Uplink configuration of Cell_DCH_2_PS_Call

RB Identity	tsc_RB20 (20)	tsc_RB24 ⁺ (24)	Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH
LogCh Type	DTCH	DTCH		
LogCh Identity	tsc_UL_DTCH 1 (7)	tsc_UL_DTCH 2 (8)		
RLC mode	AM	AM		
TrCH Type	DCH	DCH		
TrCH identity	tsc_UL_DCH1 (1)	tsc_UL_DCH2 (2)		
PhyCh Type	DPDCH			PRACH
PhyCH identity	tsc_UL_DPCH1 (20)			tsc_PRACH1 (8)

Table 33: Downlink configuration of Cell_DCH_2_PS_Call

RB Identity	tsc_RB20 (20)	tsc_RB24 ⁺ (24)	Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH
LogCh Type	DTCH	DTCH		
LogCh Identity	tsc_DL_DTCH 1 (7)	tsc_DL_DTCH 2 (8)		
RLC mode	AM	AM		
MAC priority	1	1		
TrCH Type	DCH	DCH		
TrCH identity	tsc_DL_DCH1 (6)	tsc_DL_DCH2 (7)		
PhyCh Type	DPCH			Secondary CCPCH
PhyCH identity	tsc_DL_DPCH1 (26)			tsc_S_CCPCH1 (5)

8.3.23 Configuration of Cell_FACH_3_SCCPCH_4_FACH_Cnfg1

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink. The configuration is applied to the RAB tests.

The uplink configuration of Cell_FACH_3_SCCPCH_4_FACH_Cnfg1 is the same as the uplink configuration of Cell_FACH.

Table 34: Downlink configuration of Cell FACH 3 SCCPCH 4 FACH Cnfg1: 1st & 2nd S-CCPCH

RB Identity	<u>tsc_RB22</u> (22)	<u>tsc_RB0</u> (0)	<u>tsc_RB_BCCH</u> <u>FACH</u> (-3)	<u>tsc_RB_PCCH</u> (-2)
LogCh Type	DTCH	CCCH	BCCH	PCCH
LogCh Identity	<u>tsc_DL_DTCH1</u> (7)	<u>tsc_DL_CCC</u> <u>H5</u> (5)	<u>tsc_BCCH6</u> (6)	<u>tsc_PCCH1</u> (1)
RLC mode	AM	UM	TM	TM
MAC priority	1	1	6	1
TrCH Type	FACH	FACH		PCH
TrCH identity	<u>tsc_FACH2</u> (14)	<u>tsc_FACH1</u> (13)		<u>tsc_PCH1</u> (12)
PhyCh Type	Secondary CCPCH			Secondary CCPCH
PhyCH identity	<u>tsc_S_CCPCH2</u> (10)			<u>tsc_S_CCPCH1</u> (5)

Table 35: Downlink configuration of Cell FACH 3 SCCPCH 4 FACH Cnfg1: 3rd S-CCPCH

RB Identity	<u>tsc_RB20</u> (20)	<u>tsc_RB29</u> (29)	<u>tsc_RB1</u> (1)	<u>tsc_RB2</u> (2)	<u>tsc_RB3</u> (3)	<u>tsc_RB4</u> (4)	<u>tsc_RB_B</u> <u>CCH_FAC</u> <u>H_RAB</u> (-19)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	BCCH
LogCh Identity	<u>tsc_DL_DT</u> <u>CH1</u> (7)	<u>tsc_DL_C</u> <u>CCH6</u> (6)	<u>tsc_DL_D</u> <u>CCH1</u> (1)	<u>tsc_DL_D</u> <u>CCH2</u> (2)	<u>tsc_DL_D</u> <u>CCH3</u> (3)	<u>tsc_DL_D</u> <u>CCH4</u> (4)	<u>tsc_BCCH</u> <u>7</u> (7)
RLC mode	AM	UM	UM	AM	AM	AM	TM
MAC priority	1	1	2	3	4	5	6
TrCH Type	FACH	FACH					
TrCH identity	<u>tsc_FACH4</u> (17)	<u>tsc_FACH3</u> (16)					
PhyCh Type	Secondary CCPCH						
PhyCH identity	<u>tsc_S_CCPCH3</u> (13)						

8.3.24 Configuration of Cell FACH 3 SCCPCH 4 FACH Cnfg2

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink. The configuration is applied to the RAB tests.

The uplink configuration of Cell FACH 3 SCCPCH 4 FACH Cnfg2 is the same as the uplink configuration of Cell FACH.

Table 36: Downlink configuration of Cell FACH 3 SCCPCH 4 FACH Cnfg2: 2nd S-CCPCH

RB Identity	<u>tsc_RB20</u> (20)	<u>tsc_RB29</u> (29)	<u>tsc_RB1</u> (1)	<u>tsc_RB2</u> (2)	<u>tsc_RB3</u> (3)	<u>tsc_RB4</u> (4)	<u>tsc_RB_B</u> <u>CCH_FAC</u> <u>H_RAB</u> (-19)
LogCh Type	<u>DTCH</u>	<u>CCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>BCCH</u>
LogCh Identity	<u>tsc_DL_DT</u> <u>CH1</u> (7)	<u>tsc_DL_C</u> <u>CCH6</u> (6)	<u>tsc_DL_D</u> <u>CCH1</u> (1)	<u>tsc_DL_D</u> <u>CCH2</u> (2)	<u>tsc_DL_D</u> <u>CCH3</u> (3)	<u>tsc_DL_D</u> <u>CCH4</u> (4)	<u>tsc_BCCH</u> <u>7</u> (7)
RLC mode	<u>AM</u>	<u>UM</u>	<u>UM</u>	<u>AM</u>	<u>AM</u>	<u>AM</u>	<u>TM</u>
MAC priority	1	1	2	3	4	5	6
TrCH Type	<u>FACH</u>	<u>FACH</u>					
TrCH identity	<u>tsc_FACH2</u> (14)	<u>tsc_FACH1</u> (13)					
PhyCh Type	<u>Secondary CCPCH</u>						
PhyCH identity	<u>tsc_S_CCPCH2</u> (10)						

Table 37: Downlink configuration of Cell FACH 3 SCCPCH 4 FACH Cnfg2: 1st & 3rd S-CCPCH

RB Identity	<u>tsc_RB22</u> (22)	<u>tsc_RB0</u> (0)	<u>tsc_RB_BCCH</u> <u>FACH</u> (-3)	<u>tsc_RB_PCCH</u> (-2)
LogCh Type	<u>DTCH</u>	<u>CCCH</u>	<u>BCCH</u>	<u>PCCH</u>
LogCh Identity	<u>tsc_DL_DTCH1</u> (7)	<u>tsc_DL_CCC</u> <u>H5</u> (5)	<u>tsc_BCCH6</u> (6)	<u>tsc_PCCH1</u> (1)
RLC mode	<u>AM</u>	<u>UM</u>	<u>TM</u>	<u>TM</u>
MAC priority	1	1	6	1
TrCH Type	<u>FACH</u>	<u>FACH</u>		<u>PCH</u>
TrCH identity	<u>tsc_FACH4</u> (17)	<u>tsc_FACH3</u> (16)		<u>tsc_PCH1</u> (12)
PhyCh Type	<u>Secondary CCPCH</u>			<u>Secondary CCPCH</u>
PhyCH identity	<u>tsc_S_CCPCH3</u> (13)			<u>tsc_S_CCPCH1</u> (5)

8.3.25 Configuration of Cell FACH 3 SCCPCH 3 FACH CTCH

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink. The configuration is applied to the RAB tests.

The uplink configuration of Cell FACH 3 SCCPCH 3 FACH CTCH is the same as the uplink configuration of Cell FACH.

Table 38: Downlink configuration of Cell FACH 3 SCCPCH 3 FACH CTCH : 1st & 2nd S-CCPCH

RB Identity	<u>tsc_RB30</u> (30)	<u>tsc_RB0</u> (0)	<u>tsc_RB_BCCH_FACH</u> (-3)	<u>tsc_RB_PCCH</u> (-2)
LogCh Type	<u>CTCH</u>	<u>CCCH</u>	<u>BCCH</u>	<u>PCCH</u>
LogCh Identity	<u>tsc_CTCH1</u> (11)	<u>tsc_DL_CCCH5</u> (5)	<u>tsc_BCCH6</u> (6)	<u>tsc_PCCH1</u> (1)
RLC mode	<u>UM</u>	<u>UM</u>	<u>TM</u>	<u>TM</u>
MAC priority	<u>7</u>	<u>1</u>	<u>6</u>	<u>1</u>
TrCH Type	<u>FACH</u>	<u>FACH</u>		<u>PCH</u>
TrCH identity	<u>tsc_FACH2</u> (14)	<u>tsc_FACH1</u> (13)		<u>tsc_PCH1</u> (12)
PhyCh Type	<u>Secondary CCPCH</u>			<u>Secondary CCPCH</u>
PhyCH identity	<u>tsc_S_CCPCH2</u> (10)			<u>tsc_S_CCPCH1</u> (5)

Table 39: Downlink configuration of Cell FACH 3 SCCPCH 3 FACH CTCH: 3rd S-CCPCH

RB Identity	<u>tsc_RB20</u> (20)	<u>tsc_RB29</u> (29)	<u>tsc_RB1</u> (1)	<u>tsc_RB2</u> (2)	<u>tsc_RB3</u> (3)	<u>tsc_RB4</u> (4)	<u>tsc_RB_B CCH_FACH_RAB (-19)</u>
LogCh Type	<u>DTCH</u>	<u>CCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>BCCH</u>
LogCh Identity	<u>tsc_DL_DTC H1</u> (7)	<u>tsc_DL_C CCH6</u> (6)	<u>tsc_DL_D CCH1</u> (1)	<u>tsc_DL_D CCH2</u> (2)	<u>tsc_DL_D CCH3</u> (3)	<u>tsc_DL_D CCH4</u> (5)	<u>tsc_BCCH 7</u> (7)
RLC mode	<u>AM</u>	<u>UM</u>	<u>UM</u>	<u>AM</u>	<u>AM</u>	<u>AM</u>	<u>TM</u>
MAC priority	<u>1</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
TrCH Type	<u>FACH</u>	<u>FACH</u>					
TrCH identity	<u>tsc_FACH4</u> (17)	<u>tsc_FACH3</u> (16)					
PhyCh Type	<u>Secondary CCPCH</u>						
PhyCH identity	<u>tsc_S_CCPCH3</u> (13)						

8.3.26 Configuration of PS Cell DCH DSCH PS RAB

The configuration is based on 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.2.1. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [Error! Reference source not found.], clause 6.10.2.4.4.1.1.1. The configuration is applied to those RAB signaling tests where a PS RAB on DTCH is setup for the interactive or background service class is mapped on to DSCH.

The uplink configuration is same 8.3.8.

Table a: Downlink configuration of PS Cell DCH DSCH PS RAB

RB Identity	tsc_RB20 (20)	Same as downlink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as downlink configuration of Cell_DCH_StandAloneSRB on sCCPCH
LogCh Type	DTCH		
LogCh Identity	tsc_DL_DTC H1 (7)		
RLC mode	AM		
MAC priority	1		
TrCH Type	DSCH		
TrCH identity	tsc_DSCH1 (19)		
PhyCh Type	PDSCH	DPCH	Secondary CCPCH
PhyCH identity	tsc_DL_PDS CH1 (16)	tsc_DL_DPCH1 (26)	tsc_S_CCPCH1 (5)

8.3.27 Configuration of Cell DCH DSCH CS PS

The configuration is based on 3GPP TS 34.108 [\[Error! Reference source not found.\]](#), clauses 6.10.2.4.2.4. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [\[Error! Reference source not found.\]](#), clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [\[Error! Reference source not found.\]](#), clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

The Uplink configuration is similar to 8.3.14.

Table b: Downlink configuration of Cell DCH DSCH CS PS

RB Identity	tsc_RB10 (10)	tsc_RB11 (11)	tsc_RB12 (12)	tsc_RB20 (20)	Same as downlink configuration of Cell_DCH_Stand AloneSRB on DPCH	Same as downlink configuration of Cell_DCH_StandAlone SRB on sCCPCH
LogCh Type	DTCH	DTCH	DTCH	DTCH		
LogCh Identity	tsc_DL_DTCH1 (7)	tsc_DL_DTCH2 (8)	tsc_DL_DTCH3 (9)	tsc_DL_DTCH4 (10)		
RLC mode	TM	TM	TM	AM		
MAC priority	1	1	1	1		
TrCH Type	DCH	DCH	DCH	DSCH		
TrCH identity	tsc_DL_DCH1 (6)	tsc_DL_DCH2 (7)	Tsc_DL_DCH3 (8)	tsc_DL_DSCH 1 (19)		
PhyCh Type	DPCH			PDSCH	DPCH	Secondary CCPCH
PhyCH identity	tsc_DL_DPCH1 (20)			tsc_DL_PDSC H1 (16)	tsc_DL_DPCH1 (20)	tsc_S_CCPCH1 (5)

8.5.3 Integrity

The integrity protection in the SS is activated through the ASP CRLC_Integrity_Activate_REQ for all SRB. A PIXIT parameter px_IntegrityOnOff can be set to on or off, in order to control the use of the integrity function at the test. For the correctness of the test execution, px_IntegrityOnOff shall be set to on. Otherwise, the UE NAS entity will reject all integrity-unprotected DL NAS messages.

MAC-I (MessageAuthenticationCode) is calculated by the SS. If the integrity protection is not started, the “integrity protection info” IE is omitted in TTCN. If integrity protection is started the TTCN includes the “integrity protection info” IE with all bits set to ‘0’. The SS takes care of all the necessary initialisation and calculation on SRBs.

-Once integrity is started, the SS initialises and calculates a correct Message Authentication Code, overrides the initial value all bits "0" and inserts a corresponding RRC message sequence number into the IntegrityCheckInfo for all DL DCCH messages. In UL, the SS checks the received MessageAuthenticationCode. If it is wrong, the ASP CRLC_Integrity_Failure_IND will report having received an UL message with integrity error.

In addition, CRLC_MAC_I_Mode_REQ can be used to force the SS generate wrong DL MAC-I on a specific SRB for the integrity error handling test.

~~For diagnostic reason, px_IntegrityOnOff can be set to off. At the SS side, the ASP CRLC_Integrity_Activate_REQ is not called. UE will not receive IE integrityProtectionModeInfo in SecurityModeCommand. In this way, the integrity function will not start at the both SS and UE side. IntegrityCheckInfo will not be sent in DL. If IntegrityCheckInfo is received in UL, it shall be ignored. In addition, the IE IntegrityResult in ASP_RLC_AM_DATA_IND and RLC_UM_DATA_IND can also be used to assist the integrity diagnostics.~~

8.5.4 Test security scenarios SRNS Relocation

~~TBD:~~ Five basic test scenarios are presented in this document. The corresponding core spec references are found in TS 25.331 clause 8.1.12, 8.2.2.2, 8.5.10.1, 8.5.10.2, 8.6.3.4, 8.6.3.5, 8.6.4.3 and 8.6.4.8.

Start security,
RB setup, AM RB reconfiguration
Security modification,
SRNS relocation,
Modification of RLC size of AM RB during RB reconfiguration.
Cell/URA update
InterRAt HO to UTRAN

As Default, the 1st three basic scenarios can be subdivided into

Start integrity without ciphering start,
Start integrity and ciphering at the same time.

In some specific security test cases, the start of integrity and ciphering can be activated subsequently, but not in one go.

Regarding the simultaneous SRNS relocation, the security scenarios at the relocation are split into

No security configuration modification
Modification of integrity (FRESH) without ciphering configuration change
Modification integrity FRESH and ciphering algorithm.
A security modification pending at the SRNS relocation.

This clause shows the procedures how the security ASP applied to the SS configurations at the different security test scenarios

8.5.4.1 Start security function

CIPHERING_STATUS = NotStarted for the CN domain concerned.

8.5.4.1.1 Start integrity protection without start of ciphering

INTEGRITY_PROTECTION Status = NotStarted.

SECURITY MODE COMMAND with "Integrity protection mode info" IE containing integrityProtectionModeCommand = Start, no "Ciphering mode info" IE

1 Before sending SECURITY MODE COMMAND (SMC)

CRLC_SecurityMode_Config_REQ
startValue = value most recently received or 0 (new key)
integrityKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CRLC_SetRRC_MessageSN_REQ (SN=0)
-- Downlink RRC message sequence number set to 0
CRLC_Integrity_Activate_REQ (CN domain concerned)
integrityProtectionModeCommand = startIntegrityProtection (FRESH)
integrityProtectionAlgorithm = selected value
-- downlink integrity protection starts immediately
CRLC_Integrity_Activate_REQ (CN domain concerned)
ul_IntegProtActivationInfo = 0 (RB2 only)

2 Send SECURITY MODE COMMAND

3 After receiving SECURITY MODE COMPLETE

CRLC_Integrity_Activate_REQ (CN domain concerned)
ul_IntegProtActivationInfo = value in "Uplink integrity protection activation time" (except RB2) received from SECURITY MODE COMPLETE

8.5.4.1.2 Start both integrity protection and ciphering

INTEGRITY_PROTECTION Status = NotStarted.

SECURITY MODE COMMAND with "Integrity protection mode info" IE containing integrityProtectionModeCommand = Start, and "Ciphering mode info" IE containing cipheringModeCommand = Start/Restart (algorithm UEA0 or UEA1)

1 Before sending SECURITY MODE COMMAND message

CRLC_SecurityMode_Config_REQ
startValue = value most recently received or 0 (new key)
cipheringKey = value maintained by TTCN
integrityKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CRLC_SequenceNumber_REQ
-- Get current RLC SN for calculating suitable down link activation time
CRLC_Suspend_REQ
CRLC_Ciphering_Activate_REQ (CN domain concerned)
cipheringModeCommand = Start/Restart (algorithm)
rb_DL_CiphActivationTimeInfo = calculated activation time
CRLC_SetRRC_MessageSN_REQ (SN=0)
-- Downlink RRC message sequence number set to 0
CRLC_Integrity_Activate_REQ (CN domain concerned)
integrityProtectionModeCommand = startIntegrityProtection (FRESH)
integrityProtectionAlgorithm = selected value
(downlink integrity protection starts immediate)
CRLC_Integrity_Activate_REQ (CN domain concerned)
ul_IntegProtActivationInfo = 0 (RB2 only)

2 Send SECURITY MODE COMMAND

3 After receiving SECURITY MODE COMPLETE

CRLC_Ciphering_Activate_REQ (CN domain concerned)
rb_UL_CipheringActivationTimeInfo = value received in SECURITY MODE COMPLETE
CRLC_Integrity_Activate_REQ (CN domain concerned)
ul_IntegProtActivationInfo = value in "Uplink integrity protection activation time"
(except RB2) received from SECURITY MODE COMPLETE
CRLC_Resume_REQ

8.5.4.1.3 Start ciphering after integrity protection started

INTEGRITY_PROTECTION Status = Started.

SECURITY MODE COMMAND with "Ciphering mode info" IE containing cipheringModeCommand = Start/Restart (algorithm UEA0 or UEA1) but without "Integrity protection mode info" IE, the same CN domain as in the previous SMC to start integrity protection, no new key.

1 Before sending SECURITY MODE COMMAND message

CRLC_SecurityMode_Config_REQ
startValue = value most recently received
cipheringKey = value maintained by TTCN
integrityKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
if TM RB exists
CMAC_SecurityMode_Config_REQ
startValue = value most recently received or 0 (new key)
cipheringKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CRLC_SequenceNumber_REQ
-- Get current RLC SN for calculating suitable down link activation time
CRLC_Suspend_REQ
CRLC_Ciphering_Activate_REQ (CN domain concerned)
cipheringModeCommand = Start/Restart (algorithm)
rb_DL_CiphActivationTimeInfo = calculated activation time

if TM RB exists
CPHY_Frame_Number_REQ
-- Get current CFN for calculating suitable DL activation time for TM RB
CMAC_Ciphering_Activate_REQ (CN domain concerned)
cipheringModeCommand = Start/Restart (algorithm)
activationTimeForDPCH = calculated activation time

2 Sending SECURITY MODE COMMAND

3 After receiving SECURITY MODE COMPLETE

CRLC_Ciphering_Activate_REQ (CN domain concerned)
rb_UL_CipheringActivationTimeInfo = value received in SECURITY MODE COMPLETE
CRLC_Resume_REQ

8.5.4.2 RB setup

INTEGRITY_PROTECTION Status = Started.
Condition: "RAB information for setup" IE included in RADIO BEARER SETUP

8.5.4.2.1 AM / UM RB

1 Sending the RADIO BEARER SETUP message

2 Configuring the RB

3 After receiving RADIO BEARER SETUP COMPLETE

8.5.4.2.1.1 Ciphering not started

CIPHERING_STATUS = NotStarted for the CN domain concerned

CRLC_SecurityMode_Config_REQ
startValue = value most recently received
cipheringKey = value maintained by TTCN

cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
cipheringModeCommand = NULL (no ciphering)
rb_DL_CiphActivationTimeInfo = 0 (from the first block)
CRLC_Ciphering_Activate_REQ (CN domain concerned)
rb_UL_CipheringActivationTimeInfo = 0 (from the first block)

8.5.4.2.1.2 Ciphering started

CIPHERING_STATUS = Started for the CN domain concerned

CRLC_SecurityMode_Config_REQ
startValue = value most recently received
cipheringKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
cipheringModeCommand = Start/Restart (algorithm)
rb_DL_CiphActivationTimeInfo = 0 (from the first block)
CRLC_Ciphering_Activate_REQ (CN domain concerned)
rb_UL_CipheringActivationTimeInfo = 0 (from the first block)

8.5.4.2.2 TM RB

Enter Cell_DCH,
no TM RB established before,
"COUNT-C activation time" IE included in RADIO BEARER SETUP COMPLETE message.

8.5.4.2.2.1 Ciphering not started

CIPHERING_STATUS = NotStarted for the CN domain concerned,

1 Send the RADIO BEARER SETUP message

2 Configuring the RB

3 After receiving RADIO BEARER SETUP COMPLETE

CMAC_SecurityMode_Config_REQ
startValue = value most recently received
cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
incrementCOUNT_C = NotIncr
cipheringModeCommand = NULL (no ciphering)
activationTimeForDPCH = value in "COUNT-C activation time"

8.5.4.2.2.2 Ciphering started

CIPHERING_STATUS = Started for the CN domain concerned,

1 Sending RADIO BEARER SETUP

2 Configuring the RB

CMAC_SecurityMode_Config_REQ
startValue = value most recently received
cipheringKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
incrementCOUNT_C = NotIncr
cipheringModeCommand = Start/Restart (algorithm)
activationTimeForDPCH = value in "Activation time" of the RB

3 After receiving RADIO BEARER SETUP COMPLETE message

CMAC_SecurityMode_Config_REQ
startValue = value received in response message
cipheringKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
incrementCOUNT_C = Incr

cipheringModeCommand = Start/Restart (algorithm)
activationTimeForDPCH = value in "COUNT-C activation time"

8.5.4.3 RB Reconfiguration for AM RAB modification of RLC size

CIPHERING_STATUS = Started for the CN domain concerned,
"RB mapping info" IE, **changing AM RB RLC size**, is included in
CELL UPDATE CONFIRM,
RADIO REARER RECONFIGURATION,
RADIO BEARER RELEASE

8.5.4.3.1 "RB mapping info" in CELL UPDATE CONFIRM

1) After sending the CELL UPDATE CONFIRM message, re-establish the RB and re-configure the RB with new RLC size and re-initialise COUNT-C for the RB

CRLC_Config_REQ
Release the concerned RB
CRLC_Config_REQ
Setup the concerned RB (new RLC size)
CRLC_SecurityMode_Config_REQ
startValue = value received in the CELL UPDATE message
integrityKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
cipheringModeCommand = Start/Restart (existing algorithm)
rb_DL_CiphActivationTimeInfo = now
CRLC_Ciphering_Activate_REQ
rb_UL_CiphActivationTimeInfo = now

8.5.4.3.2 "RB mapping info" in RB RECONFIGURATION / RELEASE

After receiving the reconfiguration complete message, re-establish the RB and re-configure the RB with new RLC size and re-initialise COUNT-C for the RB

CRLC_Config_REQ
Release the concerned RB
CRLC_Config_REQ
Setup the concerned RB (new RLC size)
CRLC_SecurityMode_Config_REQ
startValue = value received in the reconfiguration complete message
integrityKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
cipheringModeCommand = Start/Restart (existing algorithm)
rb_DL_CiphActivationTimeInfo = now
CRLC_Ciphering_Activate_REQ
rb_UL_CiphActivationTimeInfo = now

8.5.4.4 Security modification

Updating security keys is the scenario in this clause.

INTEGRITY_PROTECTION STATUS = Started
SECURITY MODE COMMAND contains "Ciphering mode info" IE and/or "Integrity protection mode info" IE

8.5.4.4.1 Integrity started, ciphering not started

CIPHERING_STATUS = NotStarted for the CN domain concerned
SECURITY MODE COMMAND with "Integrity protection mode info" IE containing
integrityProtectionModeCommand = modify, but "Ciphering mode info" IE absent the same CN domain as
in the previous SMC to start integrity protection.

1 Before sending SECURITY MODE COMMAND message

CRLC_SecurityMode_Config_REQ

```

startValue = 0 (new key)
integrityKey = new key
cn_DomainIdentity = CS or PS
CRLC_RRC_MessageSN_REQ
-- Get current RRC Message SN for calculation of DL activation time
CRLC_Integrity_Activate_REQ (CN domain concerned)
integrityProtectionModeCommand = modify
dl_IntegrityProtActivationInfo = now (SRB2), calculated value or a pending activation
time set by previous security mode control procedure (SRB2 other than SRB2)
CRLC_Integrity_Activate_REQ (CN domain concerned, RB2)
ul_IntegrityProtActivationInfo = now

```

2 Sending SECURITY MODE COMMAND message

3 After receiving SECURITY MODE COMPLETE

```

CRLC_Integrity_Activate_REQ (CN domain concerned)
ul_IntegProtActivationInfo = value in "Uplink integrity protection activation time"
(except RB2)

```

8.5.4.4.2 Integrity and ciphering started

```

CIPHERING_STATUS = Started for the CN domain concerned
SECURITY MODE COMMAND contains
"Integrity protection mode info" IE with integrityProtectionModeCommand = modify,
"Ciphering mode info" IE with cipheringModeCommand = Start/Restart.

```

1 Before sending SECURITY MODE COMMAND message

```

CRLC_SecurityMode_Config_REQ
startValue = 0 (new key)
integrityKey = new key
cipheringKey = new key
cn_DomainIdentity = CS or PS
if TM RB exist
CMAC_SecurityMode_Config_REQ
startValue = 0 ( new key)
cipheringKey = new key
integrityKey = new key
cn_DomainIdentity = CS or PS
CRLC_SequenceNumber_REQ
-- Get current RLC SN for calculating suitable down link activation time
CRLC_Suspend_REQ
CRLC_Ciphering_Activate_REQ (CN domain concerned)
cipheringModeCommand = Start/Restart (existing algorithm)
rb_DL_CiphActivationTimeInfo = calculated activation time
CRLC_RRC_MessageSN_REQ
-- Get current RRC message SN for calculating suitable DL activation time
CRLC_Integrity_Activate_REQ (CN domain concerned)
integrityProtectionModeCommand = modify
dl_IntegrityProtActivationInfo = now (SRB2), calculated value or a pending activation
time set by previous security mode control procedure (SRB other than SRB2)
CRLC_Integrity_Activate_REQ (CN domain concerned, RB2)
ul_IntegrityProtActivationInfo = now
if TM RB exist
CPHY_Frame_Number_REQ
--Get current CFN for calculating suitable activation time for TM RB
CMAC_Ciphering_Activate_REQ (CN domain concerned)
cipheringModeCommand = Start/Restart (existing algorithm)
activationTimeForDPCH = calculated activation time

```

2 Sending SECURITY MODE COMMAND message

3 After receiving SECURITY MODE COMPLETE

```

CRLC_Ciphering_Activate_REQ (CN domain concerned)
rb_UL_CipheringActivationTimeInfo = value received in SECURITY MODE COMPLETE
CRLC_Integrity_Activate_REQ (CN domain concerned, except RB2)
ul_IntegProtActivationInfo = value in "Uplink integrity protection activation time"
CRLC_Resume_REQ

```

8.5.4.5 SRNS relocation

Simultaneous SRNS relocation will take place either "Downlink count synchronisation info" IE is received in
CELL UPDATE CONFIRM,
PHYSICAL CHANNEL RECONFIGURATION,
RADIO BEARER RECONFIGURATION,
RADIO BEARER RELEASE,
TRANSPORT CHANNEL RECONFIGURATION,
URA UPDATE CONFIRM,
UTRAN MOBILITY INFORMATION,
 or "new U-RNTI" IE is received in
RADIO BEARER SETUP.

INTEGRITY_PROTECTION Status = Started

8.5.4.5.1 Absence of "Integrity protection mode info" and "Ciphering mode info"

SRNS relocation related messages listed does not include "Integrity protection mode info" and "Ciphering mode info".

CIPHERING_STATUS = Started or not Started for the CN domain concerned

1 Sending one of the SRNS relocation related messages

2 Re-establishing SRB2 and re-initialise COUNT-C for SRB2

```

CRLC_SequenceNumber_REQ
CRLC_SequenceNumber_CNF
  newHFN = MAX(HFN of DL COUNT-C of SRB2, HFN of UL COUNT-C of SRB2) + 1
CRLC_Config_REQ
  -- Release SRB2
CRLC_Config_REQ
  -- Setup SRB2
CRLC_SecurityMode_Config_REQ
  startValue = newHFN
  cn_DomainIdentity = CS or PS concerned
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  if CIPHERING_STATUS= NotStarted
    cipheringModeCommand = NULL (no ciphering)
  if CIPHERING_STATUS = Started
    cipheringModeCommand = Start/Restart (existing algorithm)
  rb_DL_CiphActivationTimeInfo = now (SRB2)
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  rb_UL_CipheringActivationTimeInfo = now (SRB2)

```

3 Receiving the response message

4 Re-establishing all RBs and SRBs (except SRB2) and re-initialise COUNT-C for all RBs and SRBs (except SRB2)

```

CRLC_Config_REQ
  -- Release all RB's and all SRB's (except RB2)
CRLC_Config_REQ
  -- Setup all RB's and all SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
  startValue = value received in the response message
  cipheringKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  if CIPHERING_STATUS= NotStarted
    cipheringModeCommand = NULL (no ciphering)
  if CIPHERING_STATUS = Started
    cipheringModeCommand = Start/Restart (existing algorithm)
  rb_DL_CiphActivationTimeInfo = now (except RB2)
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  rb_UL_CiphActivationTimeInfo = now (except RB2)

```

8.5.4.5.2 Presence of "Integrity protection mode info" but absence of "Ciphering mode info"

SRNS relocation related messages listed contains "Integrity protection mode info" but does not have "Ciphering mode info" IE.

SRNS relocation related message with "Integrity protection mode info" IE containing integrityProtectionModeCommand = Start, but no "Ciphering mode info" IE (no ciphering configuration change).

8.5.4.5.2.1 No security configuration pending

No security configuration pending triggered by previous SECURITY MODE COMMAND.

1 Before sending one of the SRNS relocation related messages

```

CRLC_SecurityMode_Config_REQ
  startValue = OMIT (no COUNT-I re-initialisation)
  integrityKey = OMIT or value maintained by TTCN (no key change)
  cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ (CN domain concerned)
  integrityProtectionModeCommand = Start (FRESH)
  integrityProtectionAlgorithm = selected value
  -- downlink integrity protection starts immediately
CRLC_Integrity_Activate_REQ (CN domain concerned)
  ul_IntegProtActivationInfo = value (now)

```

2 Sending one of the SRNS relocation related messages

3 Re-establishing RB2 and re-initialise COUNT-C for RB2

```

CRLC_SequenceNumber_REQ
CRLC_SequenceNumber_CNF
  newHFN = MAX(HFN of DL COUNT-C of RB2, HFN of UL COUNT-C of RB2) + 1
CRLC_Config_REQ
  -- Release RB2
CRLC_Config_REQ
  -- Setup RB2
CRLC_SecurityMode_Config_REQ
  startValue = newHFN
  cn_DomainIdentity = CS or PS concerned
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  if CIPHERING_STATUS= NotStarted
    cipheringModeCommand = NULL (no ciphering)
  if CIPHERING_STATUS = Started
    cipheringModeCommand = Start/Restart (existing algorithm)
  rb_DL_CiphActivationTimeInfo = now (RB2 only)
CRLC_Ciphering_Activate_REQ (CN domain concerned)
  rb_UL_CipheringActivationTimeInfo = now (RB2 only)

```

4 Receiving the response message

5 Re-establishing all RBs and SRBs (except SRB2) and re-initialise COUNT-C for all RBs and SRBs (except SRB2)

```

CRLC_Config_REQ
  -- Release all RBs and all SRBs (except SRB2)
CRLC_Config_REQ
  -- Setup all RB's and all SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
  startValue = value received in the response message
  integrityKey = value maintained by TTCN
  cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
  if CIPHERING_STATUS= NotStarted
    cipheringModeCommand = NULL (no ciphering)
  if CIPHERING_STATUS = Started
    cipheringModeCommand = Start/Restart (existing algorithm)
  rb_DL_CiphActivationTimeInfo = now (except SRB2)
CRLC_Ciphering_Activate_REQ
  rb_UL_CiphActivationTimeInfo = now (except SRB2)

```

8.5.4.5.2.2 Pending security configuration (new keys)

A pending security configuration is triggered by the previous SECURITY MODE COMMAND (new Key).

1 Before sending one of the SRNS relocation related messages

CRLC_SecurityMode_Config_REQ
 startValue = 0 (new key)
 integrityKey = new key
 cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
 IntegrityProtectionModeCommand = Start (FRESH)
 IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts immediately)
CRLC_Integrity_Activate_REQ
 ul_IntegProtActivationInfo = value (now)

2 Send one of the SRNS relocation related messages3 Re-establish RB2 and re-initialise COUNT-C for RB2

CRLC_SequenceNumber_REQ
CRLC_SequenceNumber_CNF
 HFN = MAX(HFN of DL/UL COUNT-C of RB2) + 1
CRLC_Config_REQ
 Release RB2
CRLC_Config_REQ
 Setup RB2
CRLC_SecurityMode_Config_REQ
 startValue = HFN calculated above
 cipheringKey = new key
 cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
 if CIPHERING_STATUS= NotStarted
 cipheringModeCommand = NULL (no ciphering)
 if CIPHERING_STATUS = Started
 cipheringModeCommand = Start/Restart (existing algorithm)
 rb_DL_CiphActivationTimeInfo = now (RB2 only)
CRLC_Ciphering_Activate_REQ
 rb_UL_CipheringActivationTimeInfo = now (RB2 only)

4 Receive the response message5 Re-establish all RBs and SRBs (except RB2) and re-initialise COUNT-C for all RBs and SRBs (except RB2)

CRLC_Config_REQ
 Release all RB's and SRB's (except RB2)
CRLC_Config_REQ
 Setup all RB's and SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
 startValue = value received in the response message
 integrityKey = new key
 cipheringKey = new key
 cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
 if CIPHERING_STATUS= NotStarted
 cipheringModeCommand = NULL (no ciphering)
 if CIPHERING_STATUS = Started
 cipheringModeCommand = Start/Restart (existing algorithm)
 rb_DL_CiphActivationTimeInfo = now (except RB2)
CRLC_Ciphering_Activate_REQ
 rb_UL_CiphActivationTimeInfo = now (except RB2)

6 Re-initialise COUNT-I for all RB's and SRB's (except RB2)

CRLC_SecurityMode_Config_REQ
 startValue = 0 (new key)
 integrityKey = new key
 cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
 IntegrityProtectionModeCommand = Start (FRESH)
 IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts immediately)
CRLC_Integrity_Activate_REQ
 ul_IntegProtActivationInfo = value (now)

8.5.4.5.2.3 Pending security configuration (no new keys)

A pending security configuration is triggered by the previous SECURITY MODE COMMAND (no new keys).

1 Before sending one of the SRNS relocation related messages

CRLC_SecurityMode_Config_REQ
startValue = OMIT (no COUNT-I re-initialisation)
integrityKey = OMIT or value maintained by TTCN (no key change) cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
SS_IntegrityProtectionModeCommand = Start (FRESH)
IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts immediately)
CRLC_Integrity_Activate_REQ
ul_IntegProtActivationInfo = value (now)

2 Send one of the SRNS relocation related messages3 Re-establish RB2 and re-initialise COUNT-C for RB2

CRLC_SequenceNumber_REQ
CRLC_SequenceNumber_CNF
HFN = MAX(HFN of DL/UL COUNT-C of RB2) + 1
CRLC_Config_REQ
Release RB2
CRLC_Config_REQ
Setup RB2
CRLC_SecurityMode_Config_REQ
startValue = HFN calculated above
cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
if CIPHERING_STATUS= NotStarted
 cipheringModeCommand = NULL (no ciphering)
if CIPHERING_STATUS = Started
 cipheringModeCommand = Start/Restart (existing algorithm)
rb_DL_CiphActivationTimeInfo = now (RB2 only)
CRLC_Ciphering_Activate_REQ
rb_UL_CipheringActivationTimeInfo = now (RB2 only)

4 Receive the response message5 Re-establish all RBs and SRBs (except RB2) and re-initialise COUNT-C for all RBs and SRBs (except RB2)

CRLC_Config_REQ
Release all RB's and SRB's (except RB2)
CRLC_Config_REQ
Setup all RB's and SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
startValue = value received in the response message
integrityKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
if CIPHERING_STATUS= NotStarted
 cipheringModeCommand = NULL (no ciphering)
if CIPHERING_STATUS = Started
 cipheringModeCommand = Start/Restart (existing algorithm)
rb_DL_CiphActivationTimeInfo = now (except RB2)
CRLC_Ciphering_Activate_REQ
rb_UL_CiphActivationTimeInfo = now (except RB2)

6 Re-initialise COUNT-I for all RB's and SRB's (except RB2)

CRLC_SecurityMode_Config_REQ
startValue = value received in the response message
integrityKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
IntegrityProtectionModeCommand = Start (FRESH)
IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts immediately)
CRLC_Integrity_Activate_REQ
ul_IntegProtActivationInfo = value (now)

8.5.4.5.3 Presence of "Integrity protection mode info" and "Ciphering mode info" IE

CIPHERING_STATUS = Started for the CN domain concerned,
SRNS relocation related message with "Integrity protection mode info" IE containing
integrityProtectionModeCommand = Start, and "Ciphering mode info" IE containing cipheringModeCommand

= Start/Restart (change ciphering algorithm, no "Radio bearer downlink ciphering activation time info")

8.5.4.5.3.1 No security configuration pending

1 Before sending one of the SRNS relocation related messages

CRLC_SecurityMode_Config_REQ
 startValue = OMIT (no COUNT-I re-initialisation)
 integrityKey = OMIT or value maintained by TTCN (no key change)
 cn_DomainIdentity = CS or PS

CRLC_Integrity_Activate_REQ
 SS_IntegrityProtectionModeCommand = Start (FRESH)
 IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts immediately)

CRLC_Integrity_Activate_REQ
 ul_IntegProtActivationInfo = value (now)

2 Send one of the SRNS relocation related messages

3 Re-establish RB2 and re-initialise COUNT-C for RB2

CRLC_SequenceNumber_REQ
CRLC_SequenceNumber_CNF
 HFN = MAX(HFN of DL/UL COUNT-C of RB2) + 1

CRLC_Config_REQ
 Release RB2

CRLC_Config_REQ
 Setup RB2

CRLC_SecurityMode_Config_REQ
 startValue = HFN calculated above
 cn_DomainIdentity = CS or PS

CRLC_Ciphering_Activate_REQ
 if CIPHERING_STATUS= NotStarted
 cipheringModeCommand = NULL (no ciphering)
 if CIPHERING_STATUS = Started
 cipheringModeCommand = Start/Restart (existing algorithm)
 rb_DL_CiphActivationTimeInfo = now (RB2 only)

CRLC_Ciphering_Activate_REQ
 rb_UL_CipheringActivationTimeInfo = now (RB2 only)

4 Receive the response message

5 Re-establish all RBs and SRBs (except RB2) and re-initialise COUNT-C for all RBs and SRBs (except RB2)

CRLC_Config_REQ
 Release all RB's and SRB's (except RB2)

CRLC_Config_REQ
 Setup all RB's and SRB's (except RB2)

CRLC_SecurityMode_Config_REQ
 startValue = value received in the response message
 integrityKey = value maintained by TTCN
 cn_DomainIdentity = CS or PS

CRLC_Ciphering_Activate_REQ
 cipheringModeCommand = Start/Restart (new algorithm)
 rb_DL_CiphActivationTimeInfo = now (except RB2)

CRLC_Ciphering_Activate_REQ
 rb_UL_CiphActivationTimeInfo = now (except RB2)

8.5.4.5.3.2 Pending security configuration (new keys)

1 Before sending one of the SRNS relocation related messages

CRLC_SecurityMode_Config_REQ
 startValue = 0 (new key)
 integrityKey = new key
 cn_DomainIdentity = CS or PS

CRLC_Integrity_Activate_REQ
 SS_IntegrityProtectionModeCommand = Start (FRESH)
 IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts immediately)

CRLC_Integrity_Activate_REQ
ul_IntegProtActivationInfo = value (now)

2 Send one of the SRNS relocation related messages

3 Re-establish RB2 and re-initialise COUNT-C for RB2

CRLC_SequenceNumber_REQ
CRLC_SequenceNumber_CNF
HFN = MAX(HFN of DL/UL COUNT-C of RB2) + 1
CRLC_Config_REQ
Release RB2
CRLC_Config_REQ
Setup RB2
CRLC_SecurityMode_Config_REQ
startValue = HFN calculated above
cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
cipheringModeCommand = NULL (no ciphering status change)
rb_DL_CiphActivationTimeInfo = now (RB2 only)
CRLC_Ciphering_Activate_REQ
rb_UL_CipheringActivationTimeInfo = now (RB2 only)

4 Receive the response message

5 Re-establish all RBs and SRBs (except RB2) and re-initialise COUNT-C for all RBs and SRBs (except RB2)

CRLC_Config_REQ
Release all RB's and SRB's (except RB2)
CRLC_Config_REQ
Setup all RB's and SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
startValue = 0
integrityKey = new key
cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
cipheringModeCommand = Start/Restart (new algorithm)
rb_DL_CiphActivationTimeInfo = now (except RB2)
CRLC_Ciphering_Activate_REQ
rb_UL_CiphActivationTimeInfo = now (except RB2)

6 Re-initialise COUNT-I for all RBs and SRBs (except RB2)

CRLC_SecurityMode_Config_REQ
startValue = 0 (new key)
integrityKey = new key
cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
IntegrityProtectionModeCommand = Start (FRESH)
IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts immediately)
CRLC_Integrity_Activate_REQ
ul_IntegProtActivationInfo = value (now)

8.5.4.5.3.3 Pending security configuration (no new key)

1 Before sending one of the SRNS relocation related messages

CRLC_SecurityMode_Config_REQ
startValue = OMIT (no COUNT-I re-initialisation)
integrityKey = OMIT or value maintained by TTCN (no key change)
cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
SS_IntegrityProtectionModeCommand = Start (FRESH)
IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts immediately)
CRLC_Integrity_Activate_REQ
ul_IntegProtActivationInfo = value (now)

2 Send one of the SRNS relocation related messages

3 Re-establish RB2 and re-initialise COUNT-C for RB2

CRLC_SequenceNumber_REQ
CRLC_SequenceNumber_CNF
HFN = MAX(HFN of DL/UL COUNT-C of RB2) + 1

CRLC_Config_REQ
 Release RB2
CRLC_Config_REQ
 Setup RB2
CRLC_SecurityMode_Config_REQ
 startValue = HFN calculated above
 n_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
 if CIPHERING_STATUS= NotStarted
 cipheringModeCommand = NULL (no ciphering)
 if CIPHERING_STATUS = Started
 cipheringModeCommand = Start/Restart (existing algorithm)
 rb_DL_CiphActivationTimeInfo = now (RB2 only)
CRLC_Ciphering_Activate_REQ
 rb_UL_CipheringActivationTimeInfo = now (RB2 only)

4 Receive the response message

5 Re-establish all RBs and SRBs (except RB2) and re-initialise COUNT-C for all RBs and SRBs (except RB2)

CRLC_Config_REQ
 Release all RB's and SRB's (except RB2)
CRLC_Config_REQ
 Setup all RB's and SRB's (except RB2)
CRLC_SecurityMode_Config_REQ
 startValue = value received in the response message
 integrityKey = value maintained by TTCN
 cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ
 cipheringModeCommand = Start/Restart (new algorithm)
 rb_DL_CiphActivationTimeInfo = now (except RB2)
CRLC_Ciphering_Activate_REQ
 rb_UL_CiphActivationTimeInfo = now (except RB2)

6 Re-initialise COUNT-I for all RBs and SRBs (except RB2)

CRLC_SecurityMode_Config_REQ
 startValue = value received in the response message
 integrityKey = value maintained by TTCN
 cn_DomainIdentity = CS or PS
CRLC_Integrity_Activate_REQ
 IntegrityProtectionModeCommand = Start (FRESH)
 IntegrityProtectionAlgorithm = selected value (downlink integrity protection starts immediately)
CRLC_Integrity_Activate_REQ
 ul_IntegProtActivationInfo = value (now)

8.5.4.6 CELL/URA update

8.5.4.6.1 RLC re-establish (RB2, RB3, RB4)

"RLC re-establish (RB2, RB3, RB4)" in CELL UPDATE CONFIRM message is set to TRUE CIPHERING_STATUS = Started for the CN domain concerned

1. After sending CELL UPDATE CONFIRM message, re-establish the RB2, RB3 and RB4(if established)

CRLC_SecurityMode_Config_REQ
 startValue = value received from CELL UPDATE message
 cipheringKey = value maintained by TTCN
 cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
 cipheringModeCommand = Start/Restart (existing algorithm)
 rb_DL_CiphActivationTimeInfo = now (RB2, RB3, RB4)
CRLC_Ciphering_Activate_REQ (CN domain concerned)
 rb_UL_CipheringActivationTimeInfo = now (RB2, RB3, RB4)

8.5.4.6.2 RLC re-establish (RAB)

"RLC re-establish (RB5 and upwards)" in CELL UPDATE CONFIRM message is set to TRUE CIPHERING_STATUS = Started for the CN domain concerned

1. After sending CELL UPDATE CONFIRM message, re-establish the RAB

```

CRLC_SecurityMode_Config_REQ
    startValue = value received from CELL UPDATE message
    cipheringKey = value maintained by TTCN
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    cipheringModeCommand = Start/Restart (existing algorithm)
    rb_DL_CiphActivationTimeInfo = now (RB5 and upwards)
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    rb_UL_CipheringActivationTimeInfo = now (RB5 and upwards)

```

8.5.4.7 Inter RAT handover to UTRAN

8.5.4.7.1 ciphering has not been activated

ciphering has not been started in the radio access technology from which inter RAT handover is performed. TM mode radio bearer will be established in the UTRAN.

1. Sending HANOVER TO UTRAN COMMAND in a RAT different from UTRAN

2. After receiving HANOVER TO UTRAN COMPLETE message

```

CMAC_SecurityMode_Config_REQ
    startValue = value received in HANOVER TO UTRAN COMPLETE message
    cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
    incrementCOUNT_C = NotIncr
    cipheringModeCommand = NULL
    activationTimeForDPCH = now
CRLC_SecurityMode_Config_REQ
    startValue = value received in HANOVER TO UTRAN COMPLETE
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    cipheringModeCommand = NULL
    rb_DL_CiphActivationTimeInfo = now (RB1)
    valueForLSBOfHFN = 1
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    rb_UL_CipheringActivationTimeInfo = now (RB1)
CRLC_SecurityMode_Config_REQ
    startValue = (value received in HANOVER TO UTRAN COMPLETE) + 1
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    cipheringModeCommand = NULL
    rb_DL_CiphActivationTimeInfo = now (RB2, RB3, RB4)
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    rb_UL_CipheringActivationTimeInfo = now (RB2, RB3, RB4)

```

8.5.4.7.2 ciphering has been activated

ciphering has been started in the radio access technology from which inter RAT handover is performed. TM mode radio bearer will be established in the UTRAN.

1. Before sending HANOVER TO UTRAN COMMAND

```

CRLC_SecurityMode_Config_REQ
    startValue = "START" value included in the IE "UE security information" in the variable
"INTER_RAT_HANOVER_INFO_TRANSFERRED"????
    cipheringKey = value generated in authentication procedure in GRAN
    cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    cipheringModeCommand = Start/Restart (algorithm in HANOVER TO UTRAN COMMAND)
    rb_DL_CiphActivationTimeInfo = now (RB1, RB2, RB3, RB4)
CRLC_Ciphering_Activate_REQ (CN domain concerned)
    rb_UL_CipheringActivationTimeInfo = now (RB1, RB2, RB3, RB4)
CMAC_SecurityMode_Config_REQ
    startValue = "START" value included in the IE "UE security information" in the variable
"INTER_RAT_HANOVER_INFO_TRANSFERRED"????
    cipheringKey = value generated in authentication procedure in GRAN
    cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)

```

incrementCOUNT_C = NotIncr
cipheringModeCommand = Start/Restart (algorithm algorithm in HANDOVER TO UTRAN COMMAND)
activationTimeForDPCH = now

2. Sending HANDOVER TO UTRAN COMMAND in a RAT different from UTRAN

3. After receiving HANDOVER TO UTRAN COMPLETE message

CMAC_SecurityMode_Config_REQ
startValue = value received in the response message
cipheringKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
incrementCOUNT_C = Incr
cipheringModeCommand = Start/Restart (algorithm) in HANDOVER TO UTRAN COMMAND)
activationTimeForDPCH = value in "COUNT-C activation time"
valueForLSBOfHFN = 1
CRLC_SecurityMode_Config_REQ
startValue = value received in HANDOVER TO UTRAN COMPLETE
cipheringKey = value generated in authentication procedure in GRAN
cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
cipheringModeCommand = Start/Restart (algorithm in HANDOVER TO UTRAN COMMAND)
rb_DL_CiphActivationTimeInfo = now (RB1)
valueForLSBsOfHFN = 1
CRLC_Ciphering_Activate_REQ (CN domain concerned)
rb_UL_CipheringActivationTimeInfo = now (RB1)
CRLC_SecurityMode_Config_REQ
startValue = (value received in HANDOVER TO UTRAN COMPLETE) + 1
cipheringKey = value generated in authentication procedure in GRAN
cn_DomainIdentity = CS or PS
CRLC_Ciphering_Activate_REQ (CN domain concerned)
cipheringModeCommand = Start/Restart (algorithm in HANDOVER TO UTRAN COMMAND)
rb_DL_CiphActivationTimeInfo = now (RB2, RB3, RB4)
CRLC_Ciphering_Activate_REQ (CN domain concerned)
rb_UL_CipheringActivationTimeInfo = now (RB2, RB3, RB4)

8.5.4.8 Hard handover

Ciphering is activated for any TM radio bearer;
"Downlink DPCH info for all RL" in a message performing timing re-initialised hard handover or;
"Downlink DPCH info for all RL" in a message other than RADIO BEARER SETUP tranfering UE to Cell_DCH
from non-Cell_DCH state.

1. Before sending the message

CMAC_SecurityMode_Config_REQ
startValue = value most recently received
cipheringKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
incrementCOUNT_C = NotIncr
cipheringModeCommand = Start/Restart (existing algorithm)
activationTimeForDPCH = now

2. Send the message for hard HO

3. After receiving the response message

CMAC_SecurityMode_Config_REQ
startValue = value received in the response message
cipheringKey = value maintained by TTCN
cn_DomainIdentity = CS or PS
CMAC_Ciphering_Activate_REQ (CN domain concerned)
incrementCOUNT_C = Incr
cipheringModeCommand = Start/Restart (existing algorithm)
activationTimeForDPCH = value in "COUNT-C activation time"
valueForLSBsOfHFN = 1

8.5.5 Test USIM configurations

The default test USIM is defined in 3GPP TS 34.108 [**Error! Reference source not found.**]. This clause specifies a number of specific test USIM configurations which are used for the concerned test cases.

8.5.5.1 Test USIM for Idle mode tests

The PLMN 1-12 identities used below have been defined in 3GPP TS 34.123-1 [**Error! Reference source not found.**], table 6.2. Clause numbers refer to 3GPP TS 34.123-1 [**Error! Reference source not found.**].

Test USIM is configured as bellow for PLMN selection of RPLMN, HPLMN, UPLMN and OPLMN in TC_6_1_1_1 and TC_6_1_1_4.

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
EF _{PLMNwAcT}	1 st	PLMN 3	UTRAN
	2 nd	PLMN 4	UTRAN
EF _{OPLMNwAcT}	1 st	PLMN 5	UTRAN
	2 nd	PLMN 6	UTRAN
EF _{FPLMN}		PLMN 3	

Test USIM is configured as bellow for PLMN selection of other PLMN with access technology combinations in TC_6_1_1_2 and TC_6_1_1_5.

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
EF _{PLMNwAcT}	1 st	PLMN 3	UTRAN
	2 nd	PLMN 4	UTRAN
EF _{OPLMNwAcT}	1 st	PLMN 5	UTRAN
	2 nd	PLMN 6	UTRAN
EF _{FPLMN}		PLMN 10	

Test USIM is configured as bellow for manual PLMN selection independent of RF level and preferred PLMN in TC_6_1_1_3.

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}			
EF _{HPLMNwAcT}	1 st	PLMN 1	UTRAN
EF _{PLMNwAcT}	1 st	PLMN 3	UTRAN

Test USIM for emergency calls requires that all the BCCH cells belong to the same PLMN, which is not the UE's home PLMN and is in the USIM's forbidden PLMN's list. This specific test USIM requirement applies to TC_6_1_2_6.

Test USIMs are configured as bellow for Selection of the correct PLMN and associated RAT in TC_6_2_1_1. Two test USIMs are needed for the test.

USIM A:

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}			
EF _{HPLMNwAcT}	1 st	PLMN 1	GSM
	2 nd		UTRAN

USIM B:

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}			
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd		GSM

Test USIMs are configured as bellow for Selection of RAT for HPLMN in TC_6_2_1_2 and TC_6_2_1_6. Two test USIMs are needed for the test.

USIM A:

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd		GSM

USIM B:

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd		

Test USIM for Selection of RAT for UPLMN or OPLMN in TC_6_2_1_3, TC_6_2_1_4, TC_6_2_1_7, TC_6_2_1_8 and for Selection of Other PLMN with access technology combinations"; Automatic mode in TC_6_2_1_9.

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd		GSM
EF _{PLMNwAcT}	1 st	PLMN 3	UTRAN
	2 nd	PLMN 4	GSM
EF _{OPLMNwAcT}	1 st	PLMN 5	UTRAN
	2 nd	PLMN 6	GSM

Test USIM is configured as bellow for manual selection of other PLMN with access technology combinations in TC_6_2_1_5.

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd		GSM
EF _{PLMNwAcT}	1 st	PLMN 3	UTRAN
	2 nd	PLMN 4	GSM
EF _{OPLMNwAcT}	1 st	PLMN 5	UTRAN
	2 nd	PLMN 6	GSM
EF _{FPLMN}		PLMN 7	
		PLMN 12	

Test USIM for cell reselection if cell becomes barred or for cell reselection timings requires that the USIM does not contain any preferred RAT. This specific test USIM applies to TC_6_2_2_1, TC_6_2_2_2 and TC_6_2_2_3.

8.6 Downlink power setting in SS

Refer to 3GPP TS 34.108 [Error! Reference source not found.] clause 6.1.5.

8.7 Test suite operation definitions

8.7.1 Test suite operation definitions in the module BasicM

Table 40: TSO definitions in BasicM

TSO Name	Description
o_AuthRspChk	<p>Type of the result: BOOLEAN</p> <p>Parameters: p_AuthRsp : AuthRsp p_AuthRspExt : AuthRspExt p_K : BITSTRING p_RAND : BITSTRING p_Ext : BOOLEAN</p> <p>Description Checks the input parameter p_AuthRsp and p_AuthRspExt, both received in an Authentication Response, according to the authentication algorithm defined in the following procedure. The extension, p_AuthRspExt, is optional. Its presence is indicated by p_Ext. Returns TRUE if the Authentication Response contained in parameters p_AuthRsp and eventually p_AuthRspExt is correct, FALSE otherwise. The value of tcv_Auth_n indicates whether the AuthRspExt has been provided by the UE or not (n=31, or 31 < n < 128). See 3GPP TS 34.108 [Error! Reference source not found.] clause 8.1.2. If not the parameter p_AuthRspExt is not to be used.</p> <p>Algorithm (without the knowledge of tcv_Auth_n): ===== if NOT p_Ext EvaluateAuthRsp else EvaluateAuthRspAndAuthRspExt EvaluateAuthRsp: ===== resultbitstring = o_BitstringXOR(XRES, AuthRsp) if resultbitstring is all 0s then there is a match.</p> <p>EvaluateAuthRspAndAuthRspExt: ===== XRESHigh = o_BitstringXtract(XRES, 32, 32, 0) /* XRES divides into 2 parts: the higher part of 32 bits related to AuthRsp and the lower part related to AuthRspExt */ /* SourceLength of 32 is only to ensure usage of the procedure */ resultbitstring = o_BitstringXOR(XRESHigh, AuthRsp) if resultbitstring is all 0s then there is a match for the first 32 bits: EvaluateAuthRspExt else Authentication failed.</p> <p>EvaluateAuthRspExt: ===== /* As AuthRspExt may not be octet aligned the last octet indicated in AuthRspExt is not used for checking */ if (AuthRspExt.iel = 1) then Authentication passed /* there was only 1 possibly incomplete octet which is not used */ else { AuthRspExthigh = o_BitstringXtract(AuthRspExt.authRsp, ((AuthRspExt.iel - 1) * 8), (AuthRspExt.iel - 1) * 8, 0) /* extract (AuthRspExt.iel - 1) * 8 bits starting from bit 0 */</p>

TSO Name	Description
	<p>XRESlow = o_BitstringXtract(XRES, ((AuthRspExt.iel -1)* 8 + 32), (AuthRspExt.iel -1)* 8, 32) /* extract (AuthRspExt.iel -1)* 8 bits starting from bit 32 */ resultbitstring = o_BitstringXOR(XRESlow, AuthRspExthigh, (AuthRspExt.iel -1)* 8) if resultbitstring is all 0s then there is a match for the bits following the first 32 bits else Authentication failed</p>
o_BCD_ToInt	<p>Type of the result: INTEGER Parameters: p_bcdstring:HEXSTRING</p> <p>Description The operation OC_BCDtoInt converts an HEXSTRING containing BCD coded digits to an integer representation of these relevant digits.</p> <p>EXAMPLE: OC_BCDtoInt('12345'H) := 12345.</p>
o_BitstringChange	<p>Type of the result: BITSTRING Parameters: P_Str: BITSTRING p_Len: INTEGER p_Offset: INTEGER</p> <p>Description Performs the manipulation of a bitstring by toggling the bit identified by p_Offset. The length of the string to be manipulated is specified in p_Len. This is only provided to help ensure that the p_Offset is less than p_Len. Returns a resulting bitstring of length p_Len.</p> <p>EXAMPLE 1: o_BitstringChange('010101'B, 6, 5) produces '010100'B. EXAMPLE 2: o_BitstringChange('010101'B, 6, 0) produces '110101'B.</p>
o_BitstringConcat	<p>Type of the result: BITSTRING Parameters: P_Str1: BITSTRING p_Str2: BITSTRING p_Len1: INTEGER p_Len2: INTEGER</p> <p>Description Performs the concatenation of 2 bitstrings of possibly different lengths. The bit significance is from left to right, ie the MSB is at the lefthand side. Returns a resulting bitstring p_Str1 || p_Str2 of length p_Len1 + p_Len.</p> <p>EXAMPLE: o_BitstringConcat('010101'B,'11'B) produces '01010111'B of length 6 + 2 = 8.</p>
o_BitstringXOR	<p>Type of the result: BITSTRING Parameters: P_Str1: BITSTRING p_Str2: BITSTRING p_Len: INTEGER</p> <p>Description Performs an XOR operation using 2 bitstrings of the same length (p_Len). Returns a resulting Bitstring of length p_Len.</p> <p>EXAMPLE: o_BitstringXOR('0011'B, '0101'B, 4) produces '0110'B.</p>
o_BitstringXtract	<p>Type of the result: BITSTRING Parameters: P_Str: BITSTRING p_SrcLen: INTEGER p_TargetLen: INTEGER p_Offset: INTEGER</p> <p>Description Performs the wrap around extract of a bitstring. The length of the string from which extraction is to be made is specified in p_SrcLen. The length of the bitstring to be extracted is indicated as p_TargetLen, the offset in the original string is indicated in p_Offset. The bit position 0 is at the left, the MSB is at the righthand side.</p>

TSO Name	Description
	<p>Returns a resulting bitstring of length p_TargetLen.</p> <p>EXAMPLE 1: o_BitstringXtract('101010'B, 6, 2, 1) produces '01'B. EXAMPLE 2: o_BitstringXtract('101010'B, 6, 4, 3) produces '0101'B, wrapping around. EXAMPLE 3: o_BitstringXtract('111000'B, 6, 4, 3) produces '0111'B, wrapping around.</p>
o_BitToOct	<p>Type of the result: OCTETSTRING</p> <p>Parameters: p_Str: BITSTRING</p> <p>Description This TSO is used to convert the given BITSTRING into an OCTETSTRING. If the bitstring length is not a multiple of 8, 1 to 7 padding bits are added at the end to fill the final octet.</p>
o_BMC_DrxScheduling	<p>Type of the result: BMC_ResultOfSchedulingLevel2</p> <p>Parameters: p_BMC_CBS_Message1 : BMCCBSMESSAGE p_BMC_CBS_Message2 : BMCCBSMESSAGE p_BMC_CB_RepPeriod : INTEGER p_BMC_NoOfBroadcast_Req : INTEGER p_Offset : BMC_DRX_Offset</p> <p>Description This TSO shall calculate all BMC CBS schedule Messages for the CBS messages as described in 3GPP TS 34.123-1[Error! Reference source not found.], clause 7.4.3.1. The TSO has to precalculate the CTCH Block SETs needed, i.e. it shall have all necessary knowledge (RLC segmentation, MAC handling, if needed) to predict the CTCH with BMC contents for the given input to be sent.</p> <p>The TSO shall consider the BMC CBS Scheduling Level2 as described in 3GPP TS 25.324 [Error! Reference source not found.], 3GPP TR 25.925 [Error! Reference source not found.] and the description of BMC test architecture and test method in the present document, clause 6.8.</p> <p>The TSO calculates the BMC CBS Schedule messages to predict its next BlockSet to be sent. In addition, a DRX scheduling Bitmap is created for each CTCH allocated TTI alligned to the pre-calculated offset in between 2 CTCH Block Sets.</p> <p>The prinziple of DRX shall be followed by this TSO. I.e. BMC Messages shall be sent blockwise (CTCH Block Set) with predicted offset in between 2 Block Sets.</p> <p>The TSO shall consider the following aspects to calculate the DRX Selection Bitmap and to create the BMC CBS Schedule messages:</p> <ol style="list-style-type: none"> 1. The first CTCH Block Set consists of the first BMC CBS Schedule message predicting the offset, length and content of the following Block Set where the BMC CBS Message1 shall be send as new message. 2. The BMC CBS Message1 shall be repeated for p_BMC_CB_RepPeriod multiplied by p_BMC_NoOfBroadcast_Req times before the BMC CBS Message2 is broadcasted. 3. The BMC CBS Schedule Messages shall be the last message of a CTCH Block Set, i.e. on the end of a Block Set. 4. If no further repetition of BMC CBS Messages is needed, no further BMC CBS Schedule message shall be created. <p>output parameter: DrxSelectionBitmap: The TSO creates a Bitmap as Octetstring for scheduled CTCH allocated TTI as described in the present document, clause 6.8.2.</p> <p>CBS_Schedule_Message01, CBS_Schedule_Message02, CBS_Schedule_Message03:Considering the given BMC PDUs BMC_DRX_Offset and BMCCBSMESSAGE to be sent, the BMC Schedule messages have to be created according the given parameter.</p>

TSO Name	Description
o_CheckStringStartWith	<p>Type of the result: BOOLEAN</p> <p>Parameters: p_SourceString: IA5String p_StartString : IA5String</p> <p>Description o_CheckStringStartWith returns TRUE if the p_sourceString start with the p_StartString. Otherwise it returns FALSE. For example: o_CheckStringStartWith ("+CLCC:1,0,0,2,0;", "+CLCC:1,0,0")=TRUE */</p>
o_ComputeSM_Contents	<p>Type of the result: OCTETSTRING</p> <p>Parameters: p_NumOfChars: INTEGER</p> <p>Description This operation provides a short message's contents with a specified number of characters 'p_NumOfChars', each represented by 7 bits. As possibly different characters are sent, the characters are those corresponding to the 7-bit representation of 0, 1, 2, ... up to ('p_NumOfChars' - 1). If more than 128 characters are sent, the rest of the characters is the corresponding to 0, 1, ... up to ('p_NumOfChars' - 128 - 1), e.g. for 160 characters: 0, 1, ..., 127, 0, 1, ..., 31. The bits are arranged acc. to 3GPP TS 23.038 [Error! Reference source not found.], clause 6.1.2.1.1. max. 160 characters, i.e. 140 octets.</p>
o_ComputeSM_ContentsSpec	<p>Type of the result: OCTETSTRING</p> <p>Parameters: p_NumOfChars: INTEGER p_Text: IA5String</p> <p>Description This operation provides a short message's contents with a specified number of characters 'p_NumOfChars', each represented by 7 bits. 'p_Text' is used as contents of the short message. If 'p_Text' contains less than 'p_NumOfChars' characters, 'p_Text' is repeated until the short message reaches the 'p_NumOfChars' characters long. The bits are arranged acc. to 3GPP TS 23.038 [Error! Reference source not found.], clause 6.1.2.1.1. max. 160 characters, i.e. 140 octets.</p>
o_ConcatStrg	<p>Type of the result: IA5String</p> <p>Parameters: P_String1: IA5String p_String2: IA5String</p> <p>Description o_ConcatString concatenates 'p_String1' and 'p_String2' and returns the resulting string. For example: o_ConcatString ("AT+CBST=0" , ",0") = "AT+CBST=0,0"</p>
o_ConvertIMSI	<p>Type of the result: IMSI_GSM_MAP</p> <p>Parameters: P_Imsi : HEXSTRING The input parameter 'p_Imsi' is a BCD string (subset of HEXSTRING), the result is of type IMSI_GSM_MAP.</p>
o_ConvertTMSI	<p>Type of the result: TMSI_GSM_MAP</p> <p>Parameters: p_Tmsi : OCTETSTRING</p> <p>Description The input parameter 'p_Tmsi' is an OCTETSTRING; the result is of type TMSI_GSM_MAP.</p>
o_ConvertPTMSI	<p>Type of the result: P_TMSI_GSM_MAP</p> <p>Parameters: p_PTMSI : OCTETSTRING</p> <p>Description The input parameter 'PTMSI' is a OCTETSTRING, the result is of type P_TMSI_GSM_MAP.</p>

TSO Name	Description
o_ConvtPLMN	<p>Type of the result:TMSI_GSM_MAP Parameters: OCTETSTRING p_MCC, p_MNC : HEXSTRING</p> <p>Description the functions of o_ConvtPLMN are as following:</p> <ol style="list-style-type: none"> 1. The least significant HEX of p_MNC is removed from p_MNC and inserted into p_MCC in the position left to the third HEX to form a new p_MCC of 4 HEXs, then swap the first HEX (left most, most significant Hex) with the second HEX of the new p_MCC. 2. Swap the first Hex with the second HEX of the remaining part of p_MNC and append it to the new p_MCC formed in Step1 above. <p>EXAMPLE 1: o_ConvtPLMN('123'H, '456'H) = '216354'O. EXAMPLE 2: o_ConvtPLMN ('234'H, '01F'H) = '32F410'O.</p>
o_ConvtAndConcatStr	<p>Type of the result:OCTETSTRING Parameters: p_MCC, p_MNC : HEXSTRING; p_LAC : OCTETSTRING; p_RAC : OCTETSTRING</p> <p>Description functions of o_ConvtAndConcatStr are as following:</p> <ol style="list-style-type: none"> 1. The least significant HEX of p_MNC is removed from p_MNC and inserted into p_MCC in the position left to the third HEX to form a new p_MCC of 4 HEXs, then swap the first HEX (left most, most significant Hex) with the second HEX of the new p_MCC. 2. Swap the first Hex with the second HEX of the remaining part of p_MNC and append it to the new p_MCC formed in Step1 above. 3. Append p_LAC to the result of Step 2, this is the final result if p_RAC is omitted. 4. Append p_RAC to the result of Step 3, this is the final result. <p>NOTE 1: Steps 1 and 2 are identical to o_ConvtPLMN. NOTE 2: If p_RAC is omitted, 5 octets of Location Area Identification are produced (for SysInfo sending). If p_RAC is not omitted, 6 octets of Routing Area Identification are produced (for SysInfo sending).</p> <p>EXAMPLE 1: o_ConvtAndConcatStr ('123'H, '456'H, '0001'O, '01'O) = '216354000101'O. EXAMPLE 2: o_ConvtAndConcatStr ('234'H, '01F'H, '0005'O, OMIT) = '32F4100005'O.</p>
o_DrawRandomNo	<p>Type of the result: INTEGER Parameters: p_LowerBound, p_UpperBound: INTEGER</p> <p>Description This operation draws a random number in the range of p_LowerBound and p_UpperBound. The result is in the range p_LowerBound, p_LowerBound+1, ..., p_UpperBound.</p>
o_FirstDigit	<p>Type of the result: B4 Parameters: p_BCDdigits : HEXSTRING</p> <p>Description The input parameter p_BCDdigits shall be a BCD string (subset of HEXSTRING), the result is a BITSTRING[4] of a binary representation of one BCD digit. The function of the o_FirstDigit is to return the first (most significant) digit of the input parameter 'p_BCDdigits'.</p> <p>EXAMPLE 1: o_FirstDigit('12345') = '0001'B. EXAMPLE 2: o_FirstDigit('012345678') = '0000'B.</p>

TSO Name	Description
o_GetBit	<p>Type of the result: BITSTRING</p> <p>Parameters: p_Source: BITSTRING p_DataLength: INTEGER</p> <p>Description o_GetBit returns the BITSTRING of length p_DataLength extracted from p_Source. The extraction shall start in the bit position 0 (at the left).</p>
o_GetN_OctetsFromPRBS	<p>Type of the result: OCTETSTRING</p> <p>Parameters: p_Start, p_N: INTEGER</p> <p>Description This operation returns N octets from a repeated pseudo random bit sequence, starting with octet position p_Start. The PRBS is the 2047 bit pseudo random test pattern defined in ITU-T Recommendation O.153 [Error! Reference source not found.] for measurements at 64 kbit/s and N x 64 kbit/s o_GetN_OctetsFromPRBS(p_Start, p_N) generates an OCTETSTRING containing p_N octets starting from octet number p_Start in the PRBS.</p> <p>Requirements p_Start >= 0 p_N >= 1</p> <p>Definition Define the 2047 bit PRBS sequence b(i) as an m-sequence produced by using the following primitive (over GF(2)) generator polynomial of degree 11: $X^{11} + X^9 + 1$</p> <p>This sequence is defined recursively as: $b(i) = 1$, i = 0,1,...,10 $b(i) = b(i - 2) + b(i - 11) \text{ modulo } 2$, i = 11,16,...,2046</p> <p>The OCTETSTRING, o(j) generated by the present TSO is produced by extracting p_N octets from the repeated sequence b(i) as follows: $o(j,k) = b(((n_Start + j) * 8 + k) \text{ modulo } 2047)$ where: j = 0,1,...,p_N - 1 k = 0,1,..7 o(j,k) is the kth bit of the jth octet in o(j), o(j,0) is the MSB of the jth octet in o(j), o(j,7) is the LSB of the jth octet in o(j),</p> <p>Example results: o_GetN_OctetsFromPRBS(0, 25) and o_GetN_OctetsFromPRBS(2047, 25) both return: 'FFE665A5C5CA3452085408ABEECE4B0B813FD337873F2CD1E2'O o_GetN_OctetsFromPRBS(255, 25) and o_GetN_OctetsFromPRBS(255 + 2047, 25) both return '01FFCCCB4B8B9468A410A81157DD9C9617027FA66F0E7E59A3'O</p>
o_GetPI	<p>Type of the result: BITSTRING</p> <p>Parameters: p_Imsi : HEXSTRING p_Np: INTEGER</p> <p>Description The PI is calculated as following: $PI = drx_index \text{ mod } np$ The drx_index is calculated as described hereafter: $drx_index = (p_Imsi / 8192)$</p> <p>This calculation is defined in 3GPP TS 25.304 [Error! Reference source not found.] clause 8.3.</p> <p>NOTE: The IMSI is passed as HEXSTRING, the relevant conversion shall be done.</p>

TSO Name	Description
o_GetSC_TimeStamp	<p>Type of the result: TP_ServCentreTimeSt</p> <p>Parameters: p_timezone : TZONES</p> <p>This operation provides the hexstring containing the service center time stamp (SCTS) according to 3GPP TS 23.040 [Error! Reference source not found.], clauses 9.2.2.1 and 9.2.3.11. The TSO reads the current time of the test systems clock and transforms the time in combination with the input parameter 'timezone' into a service center time stamp.</p> <p>Example: 2002 April 18, 15:32:46, timezone=4 o_GetSC_TimeStamp returns 20408151236440</p> <p>TPSCTS is HEXSTRING[14]</p>
o_HexToDigitsMCC	<p>Type of the result:MCC</p> <p>Parameters: p_BCDdigits : HEXSTRING</p> <p>Description The input parameter p_BCDdigits shall be a BCD string (subset of HEXSTRING), the result is a SEQUENCE (SIZE(3)) OF digit (MCC).</p> <p>NOTE: The length of p_BCDdigits shall be 3. User shall take the responsibility of fulfilling this requirement.</p> <p>EXAMPLE 1: o_HexToDigitsMCC('111'H) = {1, 1, 1}. EXAMPLE 2: o_HexToDigitsMCC('123'H) = {1, 2, 3}.</p>
o_HexToDigitsMNC	<p>Type of the result:MNC</p> <p>Parameters: p_BCDdigits : HEXSTRING</p> <p>Description The function of this operation is:</p> <ol style="list-style-type: none"> 1. The least significant HEX is removed if it is 'F' and the operation returns SEQUENCE (SIZE(2)) OF Digit. 2. The operation returns SEQUENCE (SIZE(3)) OF Digit if all 3 HEX digits in p_BCDdigits are BCD Digit. <p>EXAMPLE 1: o_HexToDigitsMNC('123'H) = {1, 2, 3}. EXAMPLE 2: o_HexToDigitsMNC('13F'H) = {1, 3}.</p>
o_HexToIA5	<p>Type of the result: IA5String</p> <p>Parameters: p_String: HEXSTRING</p> <p>Description o_HEX_TO_IA5 converts hexadecimal string 'p_String' to an IA5 String</p> <p>EXAMPLE: o_HEX_TO_IA5 ('15A'H) = "15A".</p>
o_IA5_ToOct	<p>Type of the result:OCTETSTRING</p> <p>Parameters: p_String : IA5String</p> <p>Description o_IA5_ToOct converts the string p_String from IA5String type to OCTETSTRING. Each character is mapped onto an octet, and bit 8 is set to 0. This TSO shall be used to convert Access Point Numbers for example. See 3G TS 24008, clause 10.5.6.1</p> <p>EXAMPLE: o_IA5_ToOct ("15A") = '313541'O.</p>

TSO Name	Description
o_IA5_BMC_ToOct	<p>Type of the result:OCTETSTRING</p> <p>Parameters: p_String :IA5String_BMC p_DCS: TP_DataCodingScheme</p> <p>Description o_IA5_BMC_ToOct converts the string p_String from IA5String_BMC type to OCTETSTRING. p_DCS determines how this is done (refer to 3GPP TS 23.038 [Error! Reference source not found.] clause 5). If a 7 bit packing is to be applied then proceed as described in 3GPP TS 23.038 [Error! Reference source not found.] clause 6.1.2.2.1 and clause 6.2.1. This is the default case. If 8bit data is to be used then proceed as described in 3GPP TS 23.038 [Error! Reference source not found.] clause 6.2.2. If UCS2is to be used then proceed as described in 3GPP TS 23.038 [Error! Reference source not found.] clause 6.2.3. The type IA5_BMC implies that the length of p_String is restricted to 1 246 octets. (Refer to 3GPP TS 23.041 [Error! Reference source not found.], 3GPP TS 23.038 [Error! Reference source not found.], 3GPP TS 25.324 [Error! Reference source not found.])</p> <p>EXAMPLE 1: o_IA5_BMC_ToOct ("15A", '0F'O) = 'B15A10'O ('0F'O is the default codepoint, GSM 7 bit packed). EXAMPLE 2: o_IA5_BMC_ToOct ("15A", '00'O) = 'B15A10'O (German Language, GSM 7 bit packed). EXAMPLE 3: o_IA5_BMC_ToOct ("15A", '01'O) = 'B15A10'O (English Language, GSM 7 bit packed). EXAMPLE 4: o_IA5_BMC_ToOct ("15A", 'F0'O) = 'B15A10'O (Data coding, no msg class, GSM 7 bit packed). EXAMPLE 5: o_IA5_BMC_ToOct ("15A", 'F1'O) = 'B15A10'O (Data coding, class 1, GSM 7 bit packed). EXAMPLE 6: o_IA5_BMC_ToOct ("15A", 'F2'O) = <8 bit data is user defined> (Data coding, no msg class, 8 bit data).</p>
o_IA5_IP_ToOct	<p>Type of the result:OCTETSTRING</p> <p>Parameters: p_String: IA5String p_IP_V4: BOOLEAN</p> <p>Description o_IA5_IP_ToOct converts the string p_String from IA5String type to OCTETSTRING. p_String represents an IP address consisting of a number of fields of digits, separated by dots. Each one of the numbers of which the IP address consists is converted into one octet. The dots separating the numbers are ignored. p_IP_V4 is a BOOLEAN. When TRUE, an IP Version 4 address is to be converted, the maximum length of which is 4 octets, otherwise an IP Version 6 address is to be converted, the maximum length of which is 16 octets. See 3GPP TS 24.008 [Error! Reference source not found.], clause 10.5.6.4.</p> <p>EXAMPLE 1: o_IA5_IP_ToOct ("200.1.1.80", TRUE) = 'C8010150'O. EXAMPLE 2: o_IA5_IP_ToOct ("200.1.1.80.100", TRUE) should result in an appropriate error message. EXAMPLE 3: o_IA5_IP_ToOct ("300.1.1.80", TRUE) should result in an appropriate error message.</p>
o_IA5_DigitsToOct	<p>Type of the result:OCTETSTRING</p> <p>Parameters: p_String: IA5String</p> <p>Description o_IA5_DigitsToOct converts the string p_String from IA5String type to OCTETSTRING. Each pair of characters is considered a pair of numbers to be mapped onto 1 octet. Each character of p_String shall represent a digit (0..9). In case the number of characters is odd, then a filler '1111'B is used to fill the last octet required to represent the digits. See 3GPP TS 24.008 [Error! Reference source not found.], clause 10.5.4.7.</p>

TSO Name	Description
	<p>EXAMPLE 1: o_IA5_DigitsToOct ("0613454120") = '6031541402'O. EXAMPLE 2: o_IA5_DigitsToOct ("06134541209") = '6031541402F9'O. EXAMPLE 3: o_IA5_DigitsToOct ("A6134541209") should result in an appropriate error message.</p>
o_IntToOct	<p>Type of the result:OCTETSTRING Parameters: p_N : INTEGER p_L: INTEGER</p> <p>Description o_IntToOct converts the INTEGER `p_N` into OCTETSTRING with length = `p_L`.</p> <p>EXAMPLE 1: o_IntToOct(14,1) = '0E'O. EXAMPLE 2: o_IntToOct(18,1) = '12'O. EXAMPLE 3: o_IntToOct(18,2) = '0012'O.</p>
o_IntToIA5	<p>Type of the result:IA5String Parameters: p_N : INTEGER; p_L: INTEGER</p> <p>Description o_IntToIA5 converts the INTEGER `p_N` into IA5 String with length = `p_L`.</p> <p>EXAMPLE 1: o_IntToIA5(160,3) = "160". EXAMPLE 2: o_IntToIA5(160,4) = " 160". EXAMPLE 3: o_IntToIA5(160,2) = "60".</p>
o_OctetstringConcat	<p>Type of the result:OCTETSTRING Parameters: p_Str1, p_Str2: OCTETSTRING</p> <p>Description o_OctetstringConcat Performs the concatenation of 2 octetstrings of possibly different lengths. The octet significance is from left to right, i.e. the MSB is at the lefthand side. Returns a resulting octetstring p_Str1 || p_Str2.</p> <p>EXAMPLE: o_OctetstringConcat('135'O, '9A38'O) = '1359A38'O.</p>
o_OctToBit	<p>Type of the result: BITSTRING Parameters: p_eOctetStr: OCTETSTRING</p> <p>Description Converts an OCTETSTRING into a BITSTRING. The size of the resulting BITSTRING is 8 times the size of the input OCTETSTRING.</p>
o_OctToInt	<p>Type of the result: INTEGER Parameters: p_oct : OCTETSTRING</p> <p>Description Transform an OCTETSTRING of length 1 to 4 into an unsigned 32 bits IINTEGER value. If the input octet string is larger than 4, then only the first 4 octets shall be considered.</p>
o_OctToIA5	<p>Type of the result: IA5String Parameters: p_String: OCTETSTRING</p> <p>Description o_OctToIA5 converts hexadecimal string 'p_String' to an IA5 String</p> <p>EXAMPLE: o_OctToIA5 ('2A15AF'O) = "2A15AF".</p>

TSO Name	Description
o_OeBit	<p>Type of the result:BITSTRING</p> <p>Parameters: p_BCDdigits: HEXSTRING</p> <p>Description The input parameter 'p_BCDdigits' is a BCD string (subset of HEXSTRING), the result is BITSTRING[1]. The function of the o_OeBit is as the follows:</p> <ol style="list-style-type: none"> 1. It returns '1'B, if the length of the 'p_BCDdigits' is odd. 2. It returns '0'B, if the length of the 'p_BCDdigits' is even. <p>EXAMPLE 1: o_OeBit('12583') = '1'B. EXAMPLE 2: o_OeBit('87259957') = '0'B.</p>
o_OtherDigits	<p>Type of the result:OCTETSTRING</p> <p>Parameters: p_BCDdigits : HEXSTRING</p> <p>Description The input parameter ` p_BCDdigits ` is a BCD string (subset of HEXSTRING), the result is an even string of BCD digits, with eventually a filler 'F'H used. */</p> <p>The function of the o_OtherDigits is as the follows:</p> <ol style="list-style-type: none"> 1. If the number of the 'p_BCDdigits' is odd, the operation removes the most significant digit, and then reverses the order of each pair of digits. 2. If the number of the 'p_BCDdigits' is even, first the operation suffixes the `bcdigits` with 'F'H, then removes the most significant digit, and then reverses the order of each pair of digits. <p>EXAMPLE 1: o_OtherDigi('12345') = '3254'. EXAMPLE 2: o_OtherDigi('12345678') = '325476F8'. See o_FirstDigit for the handling of the first digit.</p>
o_RoutingParameterIMSIResponsePaging	<p>Type of the result: RoutingParameter</p> <p>Parameters: p_IMSI : HEXSTRING</p> <p>Description The input parameter p_Imsi is a BCD string (subset of HEXSTRING), the result is of type RoutingParameter. The tso returns the RoutingParameter, which consists of DecimalToBinary [(IMSI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant.</p>
o_SendInSameFrame	<p>Type of the result: BOOLEAN</p> <p>Parameters: p_NumberMsg : INTEGER</p> <p>Description o_SendInSameFrame is called to request SS to send the p_NumberMsg messages in the same frame. Then it returns TRUE.</p>
o_SIB_PER_Encoding	<p>Type of the result:BITSTRING</p> <p>Parameters: p_SIB : SIB</p> <p>Description It returns the unaligned PER encoding (BIT STRING) of the input system information block p_SIB (without "Encoder added (1-7) bits padding"). The bits corresponding to the encoding of the CHOICE of the SIB type shall be removed. Example: for the following SIBType1 value:</p> <pre> SysInfoType1 ::= { cn-CommonGSM-MAP-NAS-SysInfo '32F4100001'H, cn-DomainSysInfoList { { cn-DomainIdentity ps-domain, cn-Type gsm-MAP : '0000'H, </pre>

TSO Name	Description
	<pre> cn-DRX-CycleLengthCoeff 7}, {cn-DomainIdentity cs-domain, cn-Type gsm-MAP : '0001'H, cn-DRX-CycleLengthCoeff 7}}, ue-ConnTimersAndConstants { t-304 ms100, n-304 7, t-308 ms40, t-309 8, t-313 15, n-313 s200, t-314 s20, t-315 s1800, n-315 s1000}, ue-IdleTimersAndConstants { t-300 ms400, n-300 7, t-312 10, n-312 s200}, nonCriticalExtensions { } } </pre> <p>The operation returns BITSTRING: "1000011001011110100000100000000000000000000000010110001000000000000000001000010000000000000000101000011001111111111111111111111110010111010011"</p>
o_SIB_Segmentation	<p>Type of the result: SegmentsOfSysInfoBlock Parameters: p_SIBBitString : BITSTRING</p> <p>Description The function of the o_SIB_Segmentation is as following:</p> <ol style="list-style-type: none"> 1. If the p_SIBBitString is less than or equal to 226 bits, the bit string is fit into a complete segment. If the segment is less than 226 bits but more than 214 bits, the segment shall be padded to 226 bits long with padding bits set to '0'B. 2. If the input operand p_SIBBitString is longer than 226 bits it is segmented from left to right into segments, each segment except the last one is 222 bits. The last segment may be 222 bits or shorter. If the length of last segment is greater than 214 bits pad it to 222 bits with padding bits set to '0'B. 3. The number of segments is assigned to segCount field of the result. 4. The first segment is assigned to seg1 field of the result, the second segment is assigned to the seg2 field of the result, the third segment is assigned to the seg3 field of the result, and so on till the last segment.
o_SIB_SegmentationFirstSpecial	<p>Type of the result: SegmentsOfSysInfoBlock Parameters: p_SIB_BitString : BITSTRING p_FirstSegLength : INTEGER</p> <p>Description The function of the o_SIB_Segmentation_FirstShort is as following:</p> <ol style="list-style-type: none"> 1. If the p_SIB_BitString is less than or equal to p_FirstSegLength bits, the bit string is fit into one segment. 2. If the input operand p_SIB_BitString is longer than p_FirstSegLength bits it is segmented from left to right into segments, each segment except the first one and the last one is 222 bits. The first one is p_FirstSegLength long. The last segment may be 222 bits or shorter. If the length of last segment is greater than 214 bits pad it to 222 bits with padding bits set to '0'B. 3. The number of segments is assigned to segCount field of the result. 4. The first segment is assigned to seg1 field of the result, the second segment is assigned to the seg2 field of the result, the third segment is assigned to the seg3 field of the result, and so on till the last segment.

TSO Name	Description
	5. The value of parameter p_FirstSegLength shall be less than 197.
o_CheckPDUsAcknowledged	<p>Type of the result: BOOLEAN</p> <p>Parameters: p_NackList: NackList Contains a list of integers (possibly empty), each of which corresponds to a PDU SN. Negative acknowledgement is expected for each of these PDUs.</p> <p>p_FSN: INTEGER Contains an integer representing the first SN expected to be acknowledged.</p> <p>p_LSN: INTEGER Contains an integer representing the last SN expected to be acknowledged.</p> <p>p_SUFI_List: SuperFields This parameter contains the received SUFI list to be checked.</p> <p>Description: This TSO is used to check that the given SUFI list contains any combination of SUFIs that fulfils the following requirements:</p> <ol style="list-style-type: none"> 1. Negatively acknowledges all PDUs whose sequence numbers are in p_NackList. Note that the list may be empty. 2. Positively acknowledges all other PDUs with sequence numbers greater than or equal to p_FSN, and less than or equal to p_LSN. <p>Output: This TSO returns a BOOLEAN value of TRUE if the SUFI list meets all of the requirements based on the given parameters. Otherwise the TSO returns FALSE.</p>

8.7.1.1 Specific test suite operation for RLC defined in BasicM

This TSO is defined in BasicM, it is used by RLC and MAC ATs.

Table 41: TSO definitions for RLC SUFI handling

TSO Name	Description
o_SUFI_Handler	<p>Type of the result: ResAndSUFIs</p> <p>Parameters: p_SUFI_Params: SUFI_Params p_SUFI_String: HEXSTRING</p> <p>Conditions: Inputs: p_SUFI_Params: the list of checking criteria to be applied by the TSO p_SUFI_String: the HEXSTRING received containing the SUFIs Outputs: the BOOLEAN result of the TSO: TRUE if all checking and the filling of the SuperFields structure were successful; FALSE otherwise; in this case the TSO shall produce sufficient output to allow problem analysis</p>

Table 42: ResAndSUFIs type and Processing of the SUFI parameters input to the TSO

Parameter	Type	Setting	Meaning	Comment
Lower Bound (LB) Upper Bound (UB)	BITSTRING [12]	OMIT	Do not use !	
		AnyOrOmit	Do not use !	
		Any	Do not use !	
		Value	Use !	
NackList Element i (Nacki)	BITSTRING [12]	OMIT	Do not use !	
		AnyOrOmit	Do not use !	
		Any	Do not use !	
		Value	Use !	Check negative ack
Window Size SUFI presence (WSN_ presence)	BOOLEAN	OMIT	Use !	Check absence
		AnyOrOmit	Do not use !	
		Any	Use !	Check presence
		Value	Use !	Check presence
MRW SUFI presence (MRW_ presence)	BOOLEAN	OMIT	Use !	Check absence
		AnyOrOmit	Do not use !	
		Any	Use !	Check presence
		Value	Use !	Check presence

8.7.1.1.1 Pseudocode in a C like notation

The pseudocode defined below can be written in a more compact fashion. The code hereafter is to allow easy identification of the TSO's tasks. All situations leading to a FALSE result must produce a log. This is not shown in the code hereafter. Possible wrap arounds are not shown in this clause. These have to be accounted for at the appropriate places.

```

/* INITIALIZATION */
Initialize_ResAndSUFIs();                                /* RESULT := TRUE, all SUFI fields are AnyOrOmit */

/* EXTRACTION OF SUFIS AND TRANSFER INTO THE TTCN SUFI STRUCTURE */
i = 0;
if (p_SUFI_String == NULL)
{
    RESULT := FALSE;                                    /* No SUFIS -> Result is FALSE */
    RETURN;
}
SUFI := Extract_SUFI(i);                                /* Let n SUFI be numbered from 0 to n-1 */
while (SUFI != NULL)                                    /* TRUE when there is a SUFI */
{
    Set_SUFI_ListRec(SUFI);                              /* Put the SUFI at the correct place in the
resulting */
    /* SUFI structure; overwrite if the SUFI type has */
    /* already been extracted */
    i++;
    SUFI := Extract_SUFI(i);                              /* Get next SUFI */
}

/* CHECK MUTUAL EXCLUSIVENESS OF ACK AND NO_MORE */
/* to be checked if needed */
if Exists_SUFI (ACK) AND Exists_SUFI (NO_MORE)
    RESULT := FALSE;                                    /* Exists_SUFI (SUFI_type) is TRUE when the */
/* specified type has been extracted */

/* CHECK ONE OF SUFIS ACK OR NO_MORE IS THE LAST SUFI */
/* check that only one of the SUFIS ACK or NO_MORE has been received and is the last SUFI */
/* FOR ALL SUFI TYPES: IF EXISTING, PERFORM CONSISTENCY CHECK */
if Exists_SUFI (ACK) AND NOT CheckConsistency (ACK)
    RESULT := FALSE;                                    /* ACK SUFI inconsistent -> Result is FALSE */
.....
if Exists_SUFI (WINDOW) AND NOT CheckConsistency (WINDOW)
    RESULT := FALSE;                                    /* WINDOW SUFI inconsistent -> Result is FALSE */

/* TAKE THE INDIVIDUAL CHECKING PARAMETERS & PERFORM THE EXPECTED CHECKING */
/* PART 1: EXISTENCE CHECKS */
if (WSN_presence) AND NOT Exists_SUFI(WINDOW)
    RESULT := FALSE;                                    /* WINDOW not ex. but should -> Result is FALSE */
    
```

```

if (MRW_presence) AND NOT Exists_SUFI(MRW)
RESULT := FALSE;                                     /* MRW not ex. but should -> Result is FALSE */

/* PART 2: RANGE AND NACK CHECKS OF SUFI CONTENTS*/
/* ACK: LB <= LSN received <= UB */
if NOT (LB <= Extract_SUFI_Value(ACK) -1 AND Extract_SUFI_Value(ACK) -1 <= UB)
RESULT := FALSE;                                     /* ACK value not in the expected range */
                                                    /* LB: first SN acceptable as LSN received */
                                                    /* UB: last SN acceptable as LSN received */
                                                    /* LSN received acks SNs upto LSN received -1 */

/* Bitmap */
/* for all SNs between between LB and UB */
{
if (ExtractBitmap(FSN extracted, LENGTH extracted, Bitmap extracted, SN) == 1) AND (SN in NackList)
RESULT := FALSE;                                     /* if the bit in the Bitmap is not 0 */
if (ExtractBitmap(FSN extracted, LENGTH extracted, Bitmap extracted, SN) == 0) AND (SN NOT in
NackList)
RESULT := FALSE;                                     /* if the bit in the Bitmap is not 0 */
}

/* LIST */
/* The (SNI,Li) pairs identify AMD PDUs which have not been correctly received. */
/* Therefore the (SNI,Li) pairs have to be consistent with the NackList. */

/* RLIST */

/* The CWs represent the distance between the previous indicated erroneous AMD PDU */
/* up to and including the next erroneous AMD PDU, starting from the FSN contained in the RLIST
SUFI. */
/* Therefore the FSN and the Codewords have to be consistent with the NackList. */
/* Error burst indicator has to be treated as a separate case. May not have to be implemented
currently. */
/* MRW */
/* LENGTH = 0 */
/* 1 SN_MRWi is present and the RLC SDU to be discarded extends above the configured transmission
window in the sender */
/* LENGTH = 1 ... 15 */
/* 1 ...15 SN_MRWi */
/* a) MRW configured -> an SN_MRWi indicates the end of each discarded RLC SDU */
/* n SN_MRWs -> n RLC SDUs discarded */
/* b) MRW not configured -> an SN_MRWi indicates end of last RLC SDU to be discarded */
/* in the receiver */

/* To be implemented as far as required by the RLC ATS */
/* MRW ACK */
/* The SN_ACK must be consistent with the information sent in a previous MRW SUFI upon which the */
/* MRW_ACK represents the answer. */
/* NO MORE */
/* no checking required */
/* SUBFUNCTIONS USED*/
Check_Consistency (SUFI_type)                       /* returns TRUE when the type fulfills the */

/* requirements of the spec. TS 25.322*/
Exists_SUFI (SUFI_type)                             /* returns TRUE when the specified */

/* type has been extracted, therefore exists*/
ExtractBitmap(FSN extracted, LENGTH extracted, Bitmap extracted, Criterion)
                                                    /* Extract the value in the Bitmap at position Criterion */
                                                    /* Calculation based on information received in the */
                                                    /* Bitmap SUFI */
Extract_SUFI (Counter)                              /* returns the SUFI extracted at position counter */

/* from the input p_SUFI_String; */
/* n SUFIs from positions 0 to n-1 */
/* returns NULL if there is no further SUFI */
Extract_SUFI_Value (SUFI_type, field_type )        /* extract the value of specific field type */

/* contained in a specific SUFI type */
/* There will be several flavours depending upon the */
/* result (field) type */
Initialize_ResAndSUFIs ()                          /* Initialize RESULT and all SUFI fields */
Set_SUFI_ListRec(SUFI)                             /* set return values RESULT and */
                                                    /* SUFI structure SUFI_ListRec */

```


8.7.2 Specific test suite operation definitions for Multi RAT Handover testing

Table 43: TSO definitions for Multi RAT handover

TSO Name	Description
o_GetEstCauRandomRef	<p>Type of the result: B_8</p> <p>Parameters: p_msg : CHANNELREQUEST</p> <p>Description Returns the Eight bits of the EstCauRandomRef of the PDU CHANNELREQUEST</p>
o_PagingGroupCalculate	<p>Type of the result: INTEGER</p> <p>Parameters: p_IMSI : HEXSTRING p_CCCH_Conf : B_3 p_N : INTEGER</p> <p>Description Calculate the PAGING_GROUP (0 .. N?1) = ((IMSI mod 1000) mod (BS_CC_CHANS x N)) mod N where : N = number of paging blocks "available" on one CCCH = (number of paging blocks "available" in a 51-multiframe on one CCCH) x BS_PA_MFRMS. IMSI = International Mobile Subscriber Identity, as defined in 3GPP TS 23.003 [Error! Reference source not found]. mod = Modulo. div = Integer division.</p>
o_SecondDigit	<p>Type of the result: B4</p> <p>Parameters: p_digits : HEXSTRING</p> <p>Description The input parameter bcdigits shall be a BCD string (subset of HEXSTRING) except the third digit can take value 'F'H, the resut is a BITSTRING[4] of a binary representation of one digit in the input string. The function of the o_SecondDigit is to return the second digit of the input parameter p_digits.</p> <p>EXAMPLE 1: o_G_FirstDigit('123') = '0010'B. EXAMPLE 2: o_G_FirstDigit('01F') = '0001'B.</p>
o_ThirdDigit	<p>Type of the result: B4</p> <p>Parameters: p_digits : HEXSTRING</p> <p>Description The input parameter bcdigits shall be a BCD string (subset of HEXSTRING) except the third digit can take value 'F'H, the resut is a BITSTRING[4] of a binary representation of one digit in the input string. The function of the o_ThirdDigit is to return the third digit of the input parameter p_digits.</p> <p>EXAMPLE 1: o_G_FirstDigit('123') = '0011'B. EXAMPLE 2: o_G_FirstDigit('01F') = '1111'B.</p>
o_TTCN_HO_CommandToBitstring	<p>Type of the result: BITSTRING</p> <p>Parameters: p_PDU : PDU</p> <p>Description The function of the o_TTCN_HOCommandToBitstring is as the follows: - It returns the bitstring representation of the input HANDOVERCOMMAND p_PDU.</p>

8.7.3 Specific test suite operation for Multi RAB testing

Table 44: TSO definitions for Multi RAB testing

TSO Name	Description
o_SendContinuousData	<p>Type of the result: BOOLEAN</p> <p>Parameters: p_RAB_Tx_Info : RAB_Tx_Info</p> <p>Conditions: Inputs: p_RAB_Tx_Info: test data, number of RBs, and RB info of each RB (RB id, SDU size and number of SDUs to be transmitted in consecutive TTIs)</p> <p>Outputs: The BOOLEAN result of the TSO: TRUE if system simulator accepts the information sent from TTCN FALSE if system simulator rejects the information sent from TTCN.</p> <p>Description <u>When sending the data through the TSO, after the CMAC_Restriction_REQ, the TFC under test will be one corresponding the maximum CTFC value in the Restricted list, so that SS can select the number of Transport blocks and the size of Transport blocks on individual Transport channels derived from this CTFC.</u> <u>Starting from the beginning of the raw data buffer given in the TSO:</u> <u>Data to be sent on a particular RbId is the first (number of SDUs * SDU_Size) bits</u> <u>All calls to TSO o_sendContinuosData in a test will always specify the exact same set of RbIds.</u></p>

Table 45: RAB_Tx_Info type

Structure Type Definition			
Type Name: RAB_Tx_Info			
Encoding Variation:			
Comments: To provide the information to SS to send data in every TTI on each RAB. Number of RBs depends on specific requirement. SS shall take care about all kind of discard info in all RLC modes and final aim is DL TFCs under test shall be selected in downlink for each TTI.			
Element name	Type Definition	Field Encoding	Comments
test data	BITSTRING		The raw test data buffer
no_of_rbs	INTEGER		No of Radio Bearers
rb_tx_info1	RB_Tx_Info		Info about RB id, SDU size and number of SDUs
rb_tx_info2	RB_Tx_Info		Info about RB id, SDU size and number of SDUs
rb_tx_info3	RB_Tx_Info		Info about RB id, SDU size and number of SDUs
rb_tx_info4	RB_Tx_Info		Info about RB id, SDU size and number of SDUs
rb_tx_info5	RB_Tx_Info		Info about RB id, SDU size and number of SDUs
rb_tx_info6	RB_Tx_Info		Info about RB id, SDU size and number of SDUs

Table 46: RB_Tx_Info type

Structure Type Definition			
Type Name: RB_Tx_Info			
Encoding Variation:			
Comments:			
Element name	Type Definition	Field Encoding	Comments
rb_id	INTEGER		
sdu_size	INTEGER		
no_of_sdus	INTEGER		

8.7.4 Specific test suite operation for InterSystem Handover testing

Table 47: TSO definitions for InterSystem testing

TSO Name	Description
o_GSM_ToUTRANHO_PER_Encoding	<p>Type of the result: OCTETSTRING</p> <p>Parameters: p_Msg : HandoverToUTRANCommand p_Len : 01</p> <p>Description: It returns the aligned PER encoding of the input downlink message p_Msg (with "Encoder added (1-7) bits padding") of p_Len octets.</p>
o_LengthofHO_Cmd	<p>Type of the result: INTEGER</p> <p>Parameters: p_Msg : HandoverToUTRANCommand</p> <p>Description: it returns the no. of octets of the input downlink message p_Msg</p>

8.8 AT commands

The following table shows a list of AT commands. By using these commands the ATs communicate with the SS for an automatic execution. The column 'ATS' indicates in which ATS the command is used.

Table 48: AT commands used in 3GPP ATs

Command	Reference	ATS
+CGACT	3GPP TS 27.007 [Error! Reference source not found.]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGATT	3GPP TS 27.007 [Error! Reference source not found.]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGCMOD	3GPP TS 27.007 [Error! Reference source not found.]	NAS
+CGDCONT	3GPP TS 27.007 [Error! Reference source not found.]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGDSCONT	3GPP TS 27.007 [Error! Reference source not found.]	NAS
+CGEQREQ	3GPP TS 27.007 [Error! Reference source not found.]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGEREQMIN	3GPP TS 27.007 [Error! Reference source not found.]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CLCC	3GPP TS 27.007 [Error! Reference source not found.]	NAS
+VTS	3GPP TS 27.007 [Error! Reference source not found.]	NAS
H	3GPP TS 27.007 [Error! Reference source not found.]	NAS, RAB, RRC, SMS
+CBST	3GPP TS 27.007 [Error! Reference source not found.]	RRC , NAS, RAB, RRC, SMS
+CMOD	3GPP TS 27.007 [Error! Reference source not found.]	RRC , NAS, RAB, RRC, SMS
A	3GPP TS 27.007 [Error! Reference source not found.]	RRC , NAS, RAB, RRC, SMS
D	3GPP TS 27.007 [Error! Reference source not found.]	BMC, MAC, RRC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGMD	3GPP TS 27.005 [Error! Reference source not found.]	SMS
+CGMF	3GPP TS 27.005 [Error! Reference source not found.]	SMS
+CGMR	3GPP TS 27.005 [Error! Reference source not found.]	SMS
+CMGW	3GPP TS 27.005 [Error! Reference source not found.]	SMS
+CMSS	3GPP TS 27.005 [Error! Reference source not found.]	NAS, RAB, RRC, SMS
+CNMI	3GPP TS 27.005 [Error! Reference source not found.]	SMS
+CPMS	3GPP TS 27.005 [Error! Reference source not found.]	SMS
+CSCA	3GPP TS 27.005 [Error! Reference source not found.]	SMS

	Reference source not found.]	
+CSCS	3GPP TS 27.005 [Error! Reference source not found.]	SMS
+CSMP	3GPP TS 27.005 [Error! Reference source not found.]	SMS
+CSMS	3GPP TS 27.005 [Error! Reference source not found.]	SMS

8.9 Bit padding

Three different kinds of bit padding at the RRC layer are defined in 3GPP TS 25.331 [**Error! Reference source not found.]**.

If a bit string is defined in ASN.1 and is an output from a (PER) encoder, it may need the segmentation and padding. One example is that each SIB message is PER-encoded and becomes a (PER) bit-string. A long bit-string is segmented in fixed length, for example with 222 bits. The (1 ... 7) padding bits shall be added at the last segment if it's length is between 215 - 211.

No bit padding shall be generated by the PER encoder. Contrary to ITU-T Recommendation X.691 [**Error! Reference source not found.]**, the unaligned PER encoder shall not generate any padding bit to achieve octet alignment at the end of a PER bit string.

RRC padding. The RRC padding bits shall be generated after PER encoder. If the PER bit strings are exchanged via AM or UM SAP, the (1 ... 7) padding bits shall be added to ensure the octet alignment. If the PER bit strings are exchanged via TR SAP, before the exchanges, RRC shall select the smallest transport format that fits the RRC PDU and shall add the lowest number of padding bits required to fit the size specified for the selected transport format. The RRC padding bits shall be taken into account at the calculation of the integrity checksum.

8.9.1 The requirements for implementation

The different kinds of bit padding occur at the different places in the testing architecture. Care must be taken, in order to ensure the correct implementation.

The bit padding for the embedded bit string in ASN.1 shall be resolved in TTCN. It is under the responsibility of the TTCN writer. Several TSO defined can resolve the necessary bit padding in the downlink direction.

The unaligned PER encoder used for TTCN shall not implement the octet alignment at the end of a PER bit string in the downlink direction.

The RRC padding should be implemented at the SS in the downlink direction both for AM/UM and TR modes according to 3GPP TS 25.331 [**Error! Reference source not found.]**, clause 12.1.3.

The SS PER decoder compliant with R99 has no need to distinguish the extension and padding parts in the UL direction, and shall match and accept RRC PDUs with any bit string in the extension and padding parts. The remaining part of the received bit string shall be discarded regardless of the RLC mode.

8.10 Test PDP contexts

The following table defines test PDP contexts used in the generic procedures for the PS establishment and other SM tests. The test PDP context [Dch+1](#) is the default Test PDP context used in the test cases where no particular Test PDP contexts are specified and UE is in DCH state. The test PDP context [Fach2](#) is the default Test PDP context used in the test cases where no particular Test PDP contexts are specified and UE is in FACH state.

[QoSmin is specified for entering AT commands.](#)

Table 49: Test PDP contexts

	PDP ContextDch⁴	PDP ContextFach²	PDP Context3
NSAPI	Selected by UE in Activate PDP Context Request	Selected by UE in Activate PDP Context Request	Selected by UE in Activate PDP Context Request
LLC SAPI	0	0	0
QoS	QoS ^{Dch} -UL64kAM-DL64kAM	QoS ^{Fach} - UL32kAM-DL32kAM	QoS- UL8kAM-DL8kAM
PDP address	PIXIT	PIXIT	PIXIT
Radio Priority	1	1	1
Access Point Name	PIXIT	PIXIT	PIXIT
Protocol configuration options	-	-	-
Packet Flow Identifier	Best Effort	Best Effort	Best Effort

Table 50: Test QoS

	QoS Dch -UL64kAM-DL64kAM	QoS Fach - UL32kAM-DL32kAM	QoS- UL8kAM-DL8kAM
Reliability class	'0101'B Unacknowledged GTP, LLC, and acknowledged RLC; Protected data	'0101'B Unacknowledged GTP, LLC, and acknowledged RLC; Protected data	'001' Acknowledged GTP, LLC, and RLC; Protected data
Delay class	'011'B / '100'B 3 / 4 (Best effort)	'011'B / '100'B 3 / 4 (Best effort)	'100' Best effort
Precedence class	UL:'000'B, Subscribed DL:'01100'B, Normal-Class Class 3	UL:'000'B, Subscribed DL:'01100'B, Normal-Class 3	'100' Normal Class
Peak throughput	'010011'B 64 kbps 8 000 Octets/s	'00110' Up to 432 000 octet/s	'0110' Up to 32 000 octet/s
Mean throughput	'11111'B Best Effort	'11111'B Best Effort	'11111'B Best Effort
Delivery of erroneous SDU	'010' B Erroneous SDUs are delivered ('yes')	'010' B Erroneous SDUs are delivered ('yes')	'010' B Erroneous SDUs are delivered ('yes')
Delivery order	'01'B With delivery order ('yes')	'01'B With delivery order ('yes')	'01'B With delivery order ('yes')
Traffic class	'011' B / '100'B Interactive class / Background	'011' B / '100'B Interactive / Background class	'011' B Interactive class
Maximum SDU size	'20' O 320 octets]	'20'O 320 octets	'20'O 320 octets
Maximum bit rate for uplink	'40' O 64 kbps	'20'O 32 kbps	'08'O 32 kbps
Maximum bit rate for downlink	'40' O 64 kbps	'20'O 32 kbps	'08'O 32 kbps
Residual BER	'011001' 61X10E-58	'011001' 16X10E-58	'1001' 6X10E-8
SDU error ratio	'001004'B 1X10E-43	'001004'B 1X10E-43	'0011' 1X10E-3
Traffic Handling priority	UL: '00'B for interactive, Any for Background DL: '11' B (for Interactive, for Background Needs-to be neglected -by UE)	UL: '00'B for interactive, Any for Background DL: '11' B (for Interactive, for Background Needs-to be neglected -by UE)	'11' B Needs to be neglected by UE
Transfer delay	UL: Any DL: '111111' B spare (not applicable for Interactive / Background)	UL: Any DL: '111111' B spare (not applicable for Interactive / Background)	'111111' B spare (not applicable for Interactive / Background)
Guaranteed bit rate for uplink	UL: Any DL: '140' O 164 kbps	UL: Any DL: 120'O 32 kbps	'08'O 8 kbps
Guaranteed bit rate for downlink	UL: Any DL: '140' O 164 kbps	UL: Any DL: 120'O 32-16 kbps	'08'O 8 kbps

Note: Residual BER 1X10E-5 corresponds to CRC 16.

Table 51: QoSmin for AT command

	QoSminDef- UL32kAM- DL32kAM		
Reliability class	'100'B Unacknowledged GTP, LLC, and RLC, Protected data		
Delay class	'011'/'100'B 3 / 4 (Best effort)		
Precedence class	'000'B, Subscribed		
Peak throughput	'0010'B Up to 2 000 octet/s		
Mean throughput	'11111'B Best Effort		
Delivery of erroneous SDU	'010' B Erroneous SDUs are delivered ('yes')		
Delivery order	'01'B With delivery order ('yes')		
Traffic class	'011' B / '100'B Interactive / Background		
Maximum SDU size	'20'O 320 octets		
Maximum bit rate for uplink	'20'O 32 kbps		
Maximum bit rate for downlink	'20'O 32 kbps		
Residual BER	'0110'B 4X10E-3		
SDU error ratio	'0011'B 1X10E-3		
Traffic Handling priority	UL: Any		
Transfer delay	UL: Any		
Guaranteed bit rate for uplink	UL: Any		
Guaranteed bit rate for downlink	UL: Any		

Note: Residual BER 4X10E-3 corresponds to CRC 8.

8.11 DCH-DSCH Configurations

1. Configure PDSCH physical channel

```

CPHY_RL_Setup_REQ(
    physicalChannelIdentity,
    pDSCHInfo)
-- set up the scrambling code and transmission power level for the PDSCH identified by
PhysicalChannelIdentity, and establishes the mapping between the spreading factor(and channelisation
codes) used for the PDSCH and TFCI(field2) transmitted in associated PDCH

```

2. Configure DSCH transport channels

```

CPHY_TrCH_Config_REQ(
    physicalChannelIdentity,
    dlconnectedTrCHList,
    dlTFCS)
-- set up TFS for each of DSCH's carried by the PDSCH defined in step 1 and TFCS (will be presented
in TFCI(field2) of PDCH configured in step 5) for the CCTrCH consisting of these DSCH's

```

3. Configure MAC entity for DSCH

```

CMAC_Config_REQ(
    physicalChannelIdentity,
    uE_Info,
    dlconnectedTrCHList,

```



```
dlTFCS)
-- set up TFS, DSCH-RNTI and TFCS (which will be presented in TFCI(field2) of PDCH configured in
step 5) for DSCH's, and map logical channel to DSCH transport channel
```

4. Configure RLC entity for DTCHs

```
CRLC_Config_REQ(
    physicalChannelIdentity,
    rBInfo)
-- set up RLC entity on top of DTCH logical channel which is mapped onto DSCH
```

5. Configure DPCH physical channel

```
CPHY_RL_Setup_REQ(
    physicalChannelIdentity,
    dPCHInfo)
```

6. Configure DCH transport channels

```
CPHY_TrCH_Config_REQ(
    physicalChannelIdentity,
    dlconnectedTrCHList,
    dlTFCS)
-- set up TFS for each DCH carried by the DPCH defined in step 5 and TFCS (TFCI(field1 and field2))
for the CTrCH consisting of all DCH's mapped on the DPCH.
```

7. Configure MAC entity for DCH

```
CMAC_Config_REQ(
    physicalChannelIdentity,
    dlconnectedTrCHList,
    dlTFCS)
-- set up TFS and TFCS (TFCI(field1) for DCH's, and TFCI(field2) for associated DSCH), and map
logical channel to DCH transport channel.
```

8. Configure RLC for DTCH, DCCH

```
CRLC_Config_REQ(
    physicalChannelIdentity,
    rBInfo)
-- set up RLC entity on top of DTCH and DCCH logical channels which are mapped onto DCH
```

Annex B (normative): Partial IXIT proforma

Notwithstanding the provisions of the copyright clause related to the text of the present document, 3GPP Organizational Partners grant that users of the present document may freely reproduce the partial IXIT proforma in this annex so that it can be used for its intended purposes and may further publish the completed partial IXIT.

B.0 Introduction

This partial IXIT proforma contained in the present document is provided for completion, when the related Abstract Test Suite is to be used against the Implementation Under Test (IUT).

Text in *italics* is comments for guidance for the production of a IXIT, and is not to be included in the actual IXIT.

The completed partial IXIT will normally be used in conjunction with the completed ICS, as it adds precision to the information provided by the ICS.

B.1 Parameter values

B.1.1 BasicM Test Suite Parameter Declarations

The following parameters are common to all ATSS.

Table B.1: BasicM PIXIT

Parameter Name	Description	Type	Default Value	Supported Value
px_AccessPtNameDCH	The logical name for the GGSN or the external packet world for the DCH PDP context	IA5String	"ABCDEF"	
px_AccessPtNameFACH	The logical name for the GGSN or the external packet world for the FACH PDP context	IA5String	"GHIJK"	
px_AuthAMF	Authentication Management Field (16 bits). The value shall be different from '1111 1111 1111 1111'B (AMFresynch).	BITSTRING	See note 2	
px_AuthK	Authentication Key (128 bits)	BITSTRING	'0101111001001 0101011001101 0110001001000 1001101110101 1101001010101 1101110100000 0100101110011 0011111000011 0000100110100 11000101001'B	
px_AuthN	Value of n to initialize tcv_Auth_n (length of extended response) min 31, max 127 (TS 34.108 cl. 8.1.2)	INTEGER	127	
px_AuthRAND	Random Challenge (128 bits)	BITSTRING	'01010101...01' B	
px_CC_CallDiallingDigits	Dialling digits used to initiate a CC MO call (used with the AT dial D command).	IA5String	"0123456902"	
px_Cg01	Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6	BITSTRING[4]	"Test_cg1"	
px_Cg02	Data to be sent in TC 7.4.2.1	BITSTRING[4]	"Test_cg2"	

Parameter Name	Description	Type	Default Value	Supported Value
px_CipheringOnOff	Security mode - TRUE if ciphering is applicable	BOOLEAN	TRUE	
px_CN_DomainTested	CN domain to be tested. This parameter is used in test cases that handle both PS and CS domains.	CN_DomainIdentity	cs_domain	
px_Code01	Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6	BITSTRING[4]	"Test_code01"	
px_Code02	Data to be sent in TC 7.4.2.1	BITSTRING[4]	"Test_code02"	
px_CRNTI	C RNTI	C_RNTI	'0000000000000001'B	
px_Delta_SS_DelayTime	T_{delta} SS delay time contributed to the small timer tolerance	INTEGER	55 (ms)	
px_DefaultDPCH_OffsetValue	Default DPCH offset value. Actual value = DefaultDPCH-OffsetValueFDD = IE value * 512	DefaultDPCH_OffsetValueFDD	459	
px_DL_TxPower_DPCH	Down link transmit power level of DPCH	DL_TxPower	-5	
px_DPCCH_PowerOffset	DPCCH power offset value.	DPCCH PowerOffset	-6	
px_FRESH	Value for FRESH	Fresh	See note 1	
px_IMEI_Def	Default IMEI value	HEXSTRING	See note 1	
px_IMEISV_Def	Default IMEISV value	HEXSTRING	See note 1	
px_IMSI_Def	Default IMSI value	HEXSTRING	'001010123456063'H	
px_IMSI_Diff	Different IMSI from the IMSI stored in the USIM	HEXSTRING	'001010654321063'H	
px_IntegrityOnOff	Integrity mode – Shall be set to TRUE, it is possible to set to FALSE in order to test several prototypes of UE which have not yet implemented the integrity function. Default value: TRUE	BOOLEAN	TRUE	
px_KeySeqDef	Default Key Sequence	Keyseq	'101'B	
px_MS_ClsmkA5_1	Default Algorithm A5/1 supported	B1	'0'B	
px_MS_ClsmkESIND	Default Early Sending Indication	B1	'0'B	
px_MS_ClsmkRevLvl	Default Revision Level	B2	'10'B	
px_MS_ClsmkRF_PwrCap	Default RF Power Capability	B3	'000'B	
px_PDP_IP_AddrInfoDCH	A string parameter that identifies the MT in the address space applicable to the PDP for DCH.	IA5String	"200.1.1.80"	
px_PDP_IP_AddrInfoFACH	A string parameter that identifies the MT in the address space applicable to the PDP for FACH.	IA5String	"200.1.1.90"	
px_PowerAICH	Transmission power level of AICH	DL_TxPower	-5	
px_PowerpCCPCH	Transmission power level of primary CCPCH	DL_TxPower	-2	
px_PowerpCPICH	Transmission power level of primary CPICH	DL_TxPower_PCPICH	-60	
px_PowerPICH	Transmission power level of PICH	DL_TxPower	-5	
px_PowerpSCH	Transmission power level of primary SCH	DL_TxPower	-5	
px_PowersCCPCH1	Transmission power level of secondary CCPCH1	DL_TxPower	-2	
px_PowersSCH	Transmission power level of secondary SCH	DL_TxPower	-5	
px_PriScrmCode	Primary scrambling code	PrimaryScramblingCode	100	
px_PTMSI_Def	default PTMSI	OCTETSTRING	'12345678'O	
px_PTMSI_SigDef	default PTMSI signature (3 octets, 3GPP TS 24.008 [Error! Reference source not found.], clause 10.5.5.8).	OCTETSTRING	'AB1234'O	
px_Punclimit	Puncturing limit for PRACH	PuncturingLimit	pl1	

Parameter Name	Description	Type	Default Value	Supported Value
px_RAT	This parameter is used to specify which radio access technology is being used for the current test execution. Valid values: fdd and tdd	RatType	fdd	
px_RB_Background_64	Data to be sent for RB test TC_14_2_26.	BITSTRING	INT_TO_BIT (173789874769874652133132650, 1344)	
px_RB_DataConversational_64	Data to be sent for RB test TC_14_2_13.	BITSTRING	INT_TO_BIT (8941203214580965478932211684654654, 2560)	
px_RB_DataSpeech_12_2	Data to be sent for RB test TC_14_2_4.	BITSTRING	INT_TO_BIT (15896423213132132, 103)	
px_RB_DataStreaming_57_6	Data to be sent for RB test TC_14_2_17.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 2304)	
px_RB_Interactive_64	Data to be sent for RB test TC_14_2_26.	BITSTRING	INT_TO_BIT (153589874569874652133132650, 1344)	
px_RRC_CS_ServTested	CS service to be tested for RRC test cases.	RRC_ServTested	Speech	
px_RRC_PS_ServTested	PS service to be tested for RRC test cases.	RRC_ServTested	Speech	
px_SFN_OffsetA	SFN offset values for cell A	INTEGER	0	
px_SFN_OffsetB	SFN offset values for cell B	INTEGER	0	
px_SFN_OffsetC	SFN offset values for cell C	INTEGER	0	
px_SFN_OffsetD	SFN offset values for cell D	INTEGER	15624	
px_SFN_OffsetE	SFN offset values for cell E	INTEGER	15624	
px_SFN_OffsetF	SFN offset values for cell F	INTEGER	678	
px_SFN_OffsetG	SFN offset values for cell G	INTEGER	1356	
px_SFN_OffsetH	SFN offset values for cell H	INTEGER	2034	
px_SlotFormatsCCPCH1	Channelization code for secondary CCPCH1 when spreading factor = 64	SCCPCHSlotFormat	8	
px_SRNC_Id	SRNC Id	SRNC_Identity	'0000 0000 0001'B	
px_SRNC_IdDiff	Different value for SRNC Id than in px_SRNCId	SRNC_Identity	'0000 0000 0010'B	
px_SRNTI	S RNTI	S_RNTI	'0000 0000 0000 0000 0001'B	
px_SRNTI_Diff	Different value for S RNTI than in px_SRNTI	S_RNTI	'0000 0000 0000 0000 0010'B	
px_TCellA	TCell value for cell A	Tcell	0	
px_TCellB	TCell value for cell B	Tcell	512	
px_TCellC	TCell value for cell C	Tcell	1536	
px_TCellD	TCell value for cell D	Tcell	321	
px_TCellE	TCell value for cell E	Tcell	833	
px_TCellF	TCell value for cell F	Tcell	6577	
px_TCellG	TCell value for cell G	Tcell	7253	
px_TCellH	TCell value for cell H	Tcell	4351	
px_TimingsCCPCH1	Timing offset for secondary CCPCH1	INTEGER	0	
px_TMSI_Def	Default TMSI	OCTETSTRING	'12345678'O	
px_UARFCN_D_High	High Range downlink UARFCN value	INTEGER	10837	
px_UARFCN_D_Low	Low Range downlink UARFCN value	INTEGER	10563	
px_UARFCN_D_Mid	Mid Range downlink UARFCN value	INTEGER	10700	
px_UARFCN_U_High	High Range uplink UARFCN value. This value shall be set based on the operation band supported.	INTEGER	9887	

Parameter Name	Description	Type	Default Value	Supported Value
px_UARFCN_U_Low	Low Range uplink UARFCN value. This value shall be set based on the operation band supported.	INTEGER	9613	
px_UARFCN_U_Mid	Mid Range uplink UARFCN value. This value shall be set based on the operation band supported.	INTEGER	9750	
px_UE_OpModeDef	Default UE operation mode (either opModeA or opModeC). (For most UEs this corresponds class-A or class-C, and can not be changed by the user)	UE_OperationMode	opModeA	
px_UL_ScramblingCode	UL scrambling code value to be used by UE.	UL_ScramblingCode	0	
px_UTRAN_GERAN	This parameter is used to specify for which environment region the system information blocks are broadcast in the test execution. Valid values: "UTRAN only" and "UTRAN and GERAN".	Region	"UTRAN and GERAN"	
NOTE 1: No default value can be proposed (Manufacturer defined value).				
NOTE 2: No default value can be proposed, because not enough information is available in 3GPP TS 34.109 [Error! Reference source not found.] clause 8.1.2.				

B.1.2 L3M Test Suite Parameters Declarations

The following parameters are commonly used in the RRC and NAS ATs.

Table B.2: L3M PIXIT

Parameter Name	Description	Type	Default Value	Supported Value
px_BcapDataCompression	Data compression supported (used in the Bearer Capability)	B1	'0'B	
px_BcapFNUR	Fixed Network User rate supported: '00001'B: FNUR 9.6 kbit/s '00010'B: FNUR 14.4 kbit/s '00011'B: FNUR 19.2 kbit/s '00100'B: FNUR 28.8 kbit/s '00101'B: FNUR 38.4 kbit/s '00110'B: FNUR 48.0 kbit/s '00111'B: FNUR 56.0 kbit/s '01000'B: FNUR 64.0 kbit/s '01001'B: FNUR 33.6 kbit/s '01010'B: FNUR 32.0 kbit/s	B5	'00001'B	
px_BcapITC	Information transfer capability supported (used for the generation of the Bearer Capability) 0 - UDI 1 - RDI 2 - 31 kHz Audio 3 - Other	Itclnt	2	
px_BcapModemType	Modem type supported (used in the Bearer Capability)	B5	'00110'B	
px_BcapNumberDataBits	Number of data bits supported (used in the Bearer Capability)	B1	'1'B	
px_BcapNumberStopBits	Number of Stops bits supported (used in the Bearer Capability)	B1	'1'B	
px_BcapOtherModemType	Other modem type supported (used in the Bearer Capability)	B2	'10'B	
px_BcapParity	Parity supported (used in the Bearer Capability)	B3	'011'B	
px_BcapSACP	Signalling access protocol supported (used in the Bearer Capability)	B3	'001'B	
px_BcapSyncAsync	Synchronous '0'B or Asynchronous '1'B mode supported by IUT	B1	'1'B	

Parameter Name	Description	Type	Default Value	Supported Value
px_BcapUeFlowControl	UE flow control. 0-outband, 1-inband, 2-no flow control. 3- X.25 4- X.75 Default: 0, outband flow control	FlowControl	0	
px_CC_Serv	Service selected for Mobile Originated calls and Mobile Terminated calls. The possible values are ("Telephony", "EmergencyCall", "31kHz", "V110", "V120", "PIAFS", "FTM", "X31", "BTM", "MmediaCall")	Services	"31kHz"	
px_MS_ClsmkA5_2	Default Algorithm A5/2 supported	B1	'0'B	
px_MS_ClsmkA5_3	Default Algorithm A5/3 supported	B1	'0'B	
px_MS_ClsmkCM3	Default Classmark 3 Indicator	B1	'0'B	
px_MS_ClsmkCMSP	Default CM Service Prompt Support	B1	'0'B	
px_MS_ClsmkFreqCap	Default Frequency Capability	B1	'0'B	
px_MS_ClsmkLCSVA_Cap	Default LCSVA Capabilities Support	B1	'0'B	
px_MS_ClsmkPS_Cap	Default Pseudo Synchronisation Capability	B1	'0'B	
px_MS_ClsmkSM_Cap	Default Short Message Capability	B1	'1'B	
px_MS_ClsmkSoLSA	Default SoLSA supported	B1	'0'B	
px_MS_ClsmkSSSI	Default SS Screen Indicator	B2	'01'B	
px_MS_ClsmkUCS2	Default UCS2 encoding supported	B1	'0'B	
px_MS_ClsmkVBS	Default VBS Capability	B1	'0'B	
px_MS_ClsmkVGCS	Default VGCS Capability	B1	'0'B	
px_NwOrgPDP_Support	This indicates if the UE implementation supports network originated PDP Context. TRUE indicates, supported FALSE indicate, not supported	BOOLEAN	FALSE	
px_PDP_TypeNo	Indicates IP v4 or IP v6	PDP_TypeNo	'2100100001'O	
px_PDP_TypeOrg	A string parameter which specifies the type of packet data protocol	B4	'0000'B	

B.1.3 NAS Test Suite Parameters Declarations

The following parameters are commonly used in the NAS ATS.

Table B.3: NAS PIXIT

Parameter Name	Description	Type	Default Value	Supported Value
px_AuthRAND_2	A second Random Challenge (128 bits)	BITSTRING	'1010101...10'B	
px_AutocallingBlacklistNumber	Number of B-party numbers that can be stored in the list of blacklisted numbers	INTEGER	20	
px_AutocallingCause1or2	Cause value of category 1 or 2 to be used in TC_17_1_3	INTEGER	18	
px_AutocallingNumber	Called number to be used for auto calling	IA5String	"0613454120"	
px_AutocallingRepeatCat1or2	Number of repeat attempt done for the category 1 or 2 to be used in TC_17_1_3	INTEGER	10	
px_CC_ServNotSupp	Not supported service selected for Mobile Originated calls and Mobile Terminated calls. The possible values are ("Telephony", "EmergencyCall", "31kHz", "V110", "V120", "PIAFS", "FTM", "X31", "BTM", "MmediaCall")	Services	"BTM"	

Parameter Name	Description	Type	Default Value	Supported Value
px_DTMF_BasicCharSet	TRUE if DTMF Chars 0-9, *, # supported	BOOLEAN	TRUE	
px_DTMF_OtherCharSet	TRUE if DTMF Chars A, B, C, D supported	BOOLEAN	TRUE	
px_DTMF_ToneInd	TRUE if UE support DTMF tone indication	BOOLEAN	TRUE	
px_EmergencyCallNumber	Emergency Number used by UE to initiate an emergency call	EmergencyNumber	"112"	
px_KeySeq2	Second key sequence	KeySeq	'000'B	
px_NoNwOrgPDP_ContextSupp	This indicates the number of network originated PDP context supported by the UE	INTEGER (0..7)	7	
px_SecPDP_Support	This indicates if the UE supports Secondary PDP Context or not.	BOOLEAN	TRUE	
px_SupportOpModeC	Parameter is TRUE if UE supports operation mode C. Operation mode C means UE offers PS services only (see 3GPP 23.060 clause 4.1 and 3GPP TS 24.008 [Error! Reference source not found.])	BOOLEAN	TRUE	
px_TMSI_2	Second TMSI value	OCTETSTRING	'09876543'O	
px_UuInfo	User-user information for TC 10_3	OCTETSTRING	'01020304'O	
px_Uupd	User-user protocol discriminator for TC 10_3	B8	'00000100'B	
px_PTMSI_2	Second PTMSI used for testing.	OCTETSTRING	'09876543'O	
px_PTMSI_Sig2	Second PTMSI signature used for testing.	OCTETSTRING	'AB1234'O	
px_VTS_AT_CommandSupport	TRUE if the AT command +VTS is supported	BOOLEAN	TRUE	

B.1.4 SMS Test Suite Parameters Declarations

These parameters are used in the SMS ATS.

Table B.4: SMS PIXIT

Parameter Name	Description	Type	Default Value	Supported Value
px_BMC_CB_RepPeriod01	CB repetition period for CB message 1	INTEGER	2	
px_BMC_CB_RepPeriod02	CB repetition period for CB message 2	INTEGER	2	
px_BMC_NoOfBC_Req01	No of broadcasts requested for CB message 1	INTEGER	2	
px_BMC_NoOfBC_Req02	No of broadcasts requested for CB message 2	INTEGER	2	
px_MaxCP_DataRetx	max. number of CP data retransmissions for SMS	INTEGER	3	
px_SMS_CB_Data01	Contents of the first Cell Broadcast Message sent will be converted to an OCTETSTRING	IA5String	"First Cell Broadcast Message"	
px_SMS_CB_Data02	Contents of the second Cell Broadcast Message sent will be converted to an OCTETSTRING	IA5String	"Second Cell Broadcast Message"	
px_SMS_CB_Msgld01	Message Id to be used for the first Cell Broadcast Message sent	B16	'000000000000001'B	
px_SMS_CB_Msgld02	Message Id to be used for the second Cell Broadcast Message sent	B16	'000000000000010'B	
px_TC1M	Value for timer TC1M, to be declared by the manufacturer	INTEGER	10000	

B.1.5 RRC_M Test Suite Parameters Declarations

These parameters are used in the RRC and RAB ATS.

Table B.5: RRC and RAB PIXIT

Parameter Name	Description	Type	Default Value	Supported Value
px_DL_MaxCC_TB_bits	Maximum sum of number of bits of all convolutionally coded transport blocks being received at an arbitrary time instant.	MaxNoBits	b163840	
px_DL_MaxCCTrCH	Maximum number of Simultaneous CCTrCH for downlink	MaxSimultaneousCCTrCH_Count	8	
px_DL_MaxTB_bits	Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant.	MaxNoBits	b163840	
px_DL_MaxTC_TB_bits	Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant.	MaxNoBits	b163840	
px_DL_MaxTF	Maximum number of TF for downlink	MaxNumberOfTF	tf1024	
px_DL_MaxTFS	Maximum number of TFC in the TFCS for downlink	MaxNumberOfTFC_DL	tfc1024	
px_DL_MaxTrCHs	Maximum number of simultaneous transport channels for downlink.	MaxSimultaneousTransChsDL	e32	
px_DL_MaxTTI_TB	Maximum total number of transport blocks received within TTIs that end within the same 10 ms interval.	MaxTransportBlocksDL	tb512	
px_DL_TC	Support for turbo decoding for downlink.	BOOLEAN	TRUE	
px_G_TimeSlot	time slot GSM 04.08, 10.5.2.5	B3	'000'B	

Parameter Name	Description	Type	Default Value	Supported Value
	BITSTRING [3] suitable for Single slot operation			
px_MaxAM_EntityNumberRLC_Cap	Maximum AM Entity Number for RLC.	MaximumAM_EntityNumberRLC_Cap	am30	
px_MaxHcContextSpace	MaxHcContextSpace if RFC 2507 [Error! Reference source not found.] is supported.	MaxHcContextSpace	by512	
px_MaxNoDPCH_PDSCH_Codes	Part of DL_PhysChCapabilityFDD. INTEGER (1..8).	INTEGER	8	
px_MaxNoDPDCH_BitsTransmitted	Part of UL_PhysChCapabilityFDD.	MaxNoDPDCH_BitsTransmitted	b57600	
px_MaxNoPhysChBitsReceived	Part of DL_PhysChCapabilityFDD.	MaxNoPhysChBitsReceived	b76800	
px_MaxNoSCCPCH_RL	Part of SimultaneousSCCPCH_DPCH_Reception.	MaxNoSCCPCH_RL	r1	
px_MaxRLC_WindowSize	Maximum RLC window size.	MaximumRLC_WindowSize	mws4095	
px_SupportOfGSM	GSM supported by UE	BOOLEAN	TRUE	
px_SupportOfMulticarrier	Part of MultiRAT_Capability.	BOOLEAN	TRUE	
px_TotalRLC_AM_BufferSize	Total RLC AM buffer size.	TotalRLC_AM_BufferSize	NA	
px_TxRxFrequencySeparation	TxRxFrequencySeparation value.	TxRxFrequencySeparation	mhz190	
px_UE_PowerClass	UE_PowerClass value.	UE_PowerClasses	1	
px_UL_MaxCC_TB_bits	Maximum sum of number of bits of all convolutionally coded transport blocks being transmitted at an arbitrary time instant.	MaxNoBits	b163840	
px_UL_MaxTB_bits	Maximum sum of number of bits of all transport blocks being transmitted at an arbitrary time instant.	MaxNoBits	b163840	
px_UL_MaxTC_TB_bits	Maximum sum of number of bits of all turbo coded transport blocks being transmitted at an arbitrary time instant.	MaxNoBits	b163840	
px_UL_MaxTF	Maximum number of TF for uplink.	MaxNumberOfTF	tf1024	
px_UL_MaxTFS	Maximum number of TFC in the TFCS for uplink.	MaxNumberOfTFC_DL	tfc1024	
px_UL_MaxTrCHs	Maximum number of simultaneous transport channels for uplink.	MaxSimultaneousTransChsUL	e32	
px_UL_MaxTTI_TB	Maximum total number of transport blocks transmitted within TTIs that start at the same time.	MaxTransportBlocksUL	tb512	
px_UL_TC	Support for turbo encoding for uplink.	BOOLEAN	TRUE	

Parameter Name	Description	Type	Default Value	Supported Value
px_UE_PositioningNetworkAssistedGPS_Sup	UE positioning capability: supports network assisted by GPS	NetworkAssistedGPS_Supported	networkBased	
px_UE_PositioningIPDL_Sup	UE positioning capability: support for IPDL	BOOLEAN	TRUE	
px_UE_PositioningGPS_TimingOfCellFramesSup	UE positioning capability: the UE supports the GPS timing of cell frames	BOOLEAN	TRUE	
px_UE_PositioningBasedOTDOA_Sup	UE positioning capability: the Based OTDOA is supporting by UE	BOOLEAN	TRUE	
px_UE_PositioningStandaloneLocMethodsSup	UE positioning capability: the standalone location method is supporting by UE	BOOLEAN	TRUE	

B.1.6 PDCP Test Suite Parameters Declarations

These parameters are used in the PDCP ATS.

Table B.6: PDCP PIXIT

Parameter Name	Description	Type	Default Value	Supported Value
px_PDCP_TcplpCompressedTcpNonDeltaPacket01	IP header compressed packet type (PID=3) of px_PDCP_TcplpUncompressedPacket01	IP_Packet	0000 0000 0000 0a00 0000 0050 1000 0026 3400 006a 6e6e 206a 6e6e 206a 6e6e	
px_PDCP_TcplpCompressedTcpNonDeltaPacket02	IP header compressed packet type (PID=3) of px_PDCP_TcplpUncompressedPacket02	IP_Packet	"Test_PDCP_TCPIP_Packet2_PID_Type3"	
px_PDCP_TcplpCompressedTcpPacket01	IP header compressed packet type (PID=2) of px_PDCP_TcplpUncompressedPacket01	IP_Packet	0028 2634 0a00 0000 6a6e 6e20 6a6e 6e	
px_PDCP_TcplpCompressedTcpPacket02	IP header compressed packet type (PID=2) of px_PDCP_TcplpUncompressedPacket02	IP_Packet	"Test_PDCP_TCPIP_Packet2_PID_Type2"	
px_PDCP_TcplpFullHeaderPacket01	IP header compressed packet type (PID=1) of px_PDCP_TcplpUncompressedPacket01	IP_Packet	c500 0000 0000 0000 4006 7ac6 0000 0000 0000 0000 0000 0000 0000 5010 0000 263e 0000 6a6e 6e20 6a6e 6e	
px_PDCP_TcplpFullHeaderPacket02	IP header compressed packet type (PID=1) of px_PDCP_TcplpUncompressedPacket02	IP_Packet	"Test_PDCP_TCPIP_Packet2_PID_Type1"	
px_PDCP_TcplpUncompressedPacket01	uncompressed TCP/IP Packet01	IP_Packet	4500 0033 0000 0000 4006 7ac6 0000 0000 0000 0000 0000 0000 0000 5010 0000 263e 0000 6a6e 6e20 6a6e 6e	
px_PDCP_TcplpUncompressedPacket02	uncompressed TCP/IP Packet02	IP_Packet	"Test_PDCP_TCPIP_Packet2"	
px_PDCP_UdplpCompressedTcpNonTcpPacket01	IP header compressed packet type (PID=4) of px_PDCP_UdplpUncompressedPacket01	IP_Packet	0001 0000 763c 6a6e 6e20 6a6e 6e20 6a6e 6e	

Parameter Name	Description	Type	Default Value	Supported Value
px_PDCP_UdplpCompressedTcpNonTcpPacket02	IP header compressed packet type (PID=4) of px_PDCP_UdplpUncompressedPacket02	IP_Packet	"Test_PDCP_U DPIP_Packet2_ PID_Type4"	
px_PDCP_UdplpFullHeaderPacket01	IP header compressed packet type (PID=1) of px_PDCP_UdplpUncompressedPacket01	IP_Packet	8500 0100 0000 0000 4011 7ac7 0000 0000 0000 0000 0000 0000 0013 763c 6a6e 6e20 6a6e 6e20 6a6e 6e	
px_PDCP_UdplpFullHeaderPacket02	IP header compressed packet type (PID=1) of px_PDCP_UdplpUncompressedPacket02	IP_Packet	"Test_PDCP_U DPIP_Packet2_ PID_Type1"	
px_PDCP_UdplpUncompressedPacket01	uncompressed UDP/IP Packet01	IP_Packet	4500 0027 0000 0000 4011 7ac7 0000 0000 0000 0000 0000 0000 0013 763c 6a6e 6e20 6a6e 6e20 6a6e 6e	
px_PDCP_UdplpUncompressedPacket02	uncompressed UDP/IP Packet02	IP_Packet	"Test_PDCP_U DPIP_Packet2"	

B.1.7 BMC Test Suite Parameters Declarations

These parameters are used in the BMC ATS.

Table B.7: BMC PIXIT

Parameter Name	Description	Type	Default Value	Supported Value
px_CB_Data1	Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6	IA5String [1..1246]	"CB Data1"	
px_CB_Data2	Data to be sent in TC 7.4.2.1	IA5String [1..1246]	"CB Data2"	
px_SMS_CB_Msgld01	Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6	HEXSTRING[4]	'0000'H	
px_SMS_CB_Msgld02	Data to be sent in TC 7.4.2.1	HEXSTRING[4]	'0000'H	
px_gS01	Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6	BITSTRING[2]	"Test_gS1"	
px_gS02	Data to be sent in TC 7.4.2.1	BITSTRING[2]	"Test_gS2"	
px_MsgCode01	Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6	BITSTRING[10]	"Test_msgCode01"	
px_MsgCode02	Data to be sent in TC 7.4.2.1	BITSTRING[10]	"Test_msgCode02"	
px_UpdateNumber01	Data to be sent for each PDCP test, except TC 7.4.1.4, 7.4.1.5 and 7.4.1.6	BITSTRING[4]	"Test_updateNumber01"	
px_UpdateNumber02	Data to be sent in TC 7.4.2.1	BITSTRING[4]	"Test_updateNumber02"	

B.1.8 RRC Test Suite Parameters Declarations

These parameters are used in the RRC ATS.

Table B.8: RRC PIXIT

Parameter Name	Description	Type	Default Value	Supported Value

Parameter Name	Description	Type	Default Value	Supported Value
px_Alpha	Power Control Parameters in Si13 rest Octets	B4	'0000'B	
px_CRNTI_Diff	different value for C RNTI than in px_CRNTI.	C_RNTI	'0000 0000 0000 0010'B	
px_G_HoRefA	Hand over reference, GSM 04.08, 10.5.2.15 BitString [8] For execution counterM=1 in GSM spec 51.010	HoRef	'10010101'B	
px_G_HoRefD	Hand over reference, GSM 04.08, 10.5.2.15 BitString [8] For execution counterM=4 in GSM spec 51.010	HoRef	'01100010'B	
px_G_HSN	Hopping sequence number value range: 0 - 63. 0=cyclic hopping. Refer to GSM 11.10 for the value to be used in a particular test case	INTEGER	2	
px_G_MAIO	mobile allocation index offset, value range: 0 - 63	INTEGER	5	
px_G_PwrLvl	?????	INTEGER (0..31)		
px_G_SDCCH_8SubA	TDMA offset of SDCCH/8 subchannel	B3	'010'B	
px_G_TCh_ARFCN	the value can be chosen arbitrarily from cell allocation of cell B (GSM), but not BCCH carrier. The value depends on the GSM Band selected 3GPP TS 51.010-1 [Error! Reference source not found.] clause 26.1.1	INTEGER		
px_G_TCH_H_SubA	TDMA offset of half rate subchannel	B1	'0'B	
px_G_TimeSlotMulti	time slot GSM 3GPP TS 04.108 , 10.5.2.5 BITSTRING [3], suitable for Multi Slot	B3		
px_G_TimeSlotMulti1	timeslot 3GPP TS 04.18, 10.5.2.5 BITSTRING [3], suitable for Multi Slot	B3		
px_G_TimeSlotMulti2	timeslot 3GPP TS 04.18, 10.5.2.5 BITSTRING [3], suitable for Multi Slot	B3		
px_G_TimeSlotMulti3	timeslot 3GPP TS 04.18, 10.5.2.5 BITSTRING [3], suitable for Multi Slot	B3		
px_N_AVG_I	Power Control Parameters in Si13 rest Octets	B4	'0000'B	
px_OperationBandSupp	Operating Band supported (1, 2 or 3).	INTEGER	1	
px_RB_DataStreaming_14_4	Data to be sent	BITSTRING	INT_TO_BIT (24733041598745 63214258, 576)	
px_RB_DataStreaming_28_8	Data to be sent.	BITSTRING	58966325147895 41144447788454 777, 1152)	
px_RB_InteractiveOrBackground	Data to be sent for RB test	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 1344)	
px_RxTxTimeDiffType1_max	This is to set the RXTX	INTEGER	1174	

Parameter Name	Description	Type	Default Value	Supported Value
	Time difference threshold max value 1174			
px_RxTxTimeDiffType1_min	This is to set the RXTX Time difference threshold min value 874	INTEGER	874	
px_T_AVG_T	Power Control Parameters in Si13 rest Octets	B5	'10101'B	
px_T_AVG_W	Power Control Parameters in Si13 rest Octets	B5	'10101'B	

B.1.9 RAB Test Suite Parameters Declarations

These parameters are used in the RAB ATS.

Table B.9: RAB PIXIT

Parameter Name	Description	Type	Default Value	Supported Value
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Parameter Name	Description	Type	Default Value	Supported Value
px_DSCH_RNTI	UE ID in the DSCH case	DSCH_RNTI	DSCH_RNTI. (Copied from C-RNTI) Default value: '0000 0000 0000 0010'B	
px_RB_Background_128	Data to be sent for RB test TC_14_2_28.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 2688)	
px_RB_Background_128_2048	Data to be sent for RB test TC_14_2_36.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 41984)	
px_RB_Background_128_384	Data to be sent for RB test TC_14_2_33.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 8064)	
px_RB_Background_144	Data to be sent for RB test TC_14_2_30.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 3024)	
px_RB_Background_16k	Data to be sent for RB test TC_14_2_23b.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 672)	
px_RB_Background_32	Data to be sent for RB test TC_14_2_23d.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 672)	
px_RB_Background_32_64	Data to be sent for RB test TC_14_2_25.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 1344)	
px_RB_Background_32_8	Data to be sent for RB test TC_14_2_23.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 672)	
px_RB_Background_384	Data to be sent for RB test TC_14_2_34.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 8064)	
px_RB_Background_384_2048	Data to be sent for RB test TC_14_2_37	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 41984)	
px_RB_Background_64_128	Data to be sent for RB test TC_14_2_27.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 2688)	
px_RB_Background_64_128_Stre amingUnknown_0k_128k	Data to be sent for RB test TC_14_2_55	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 5120)	
px_RB_Background_64_128_Stre amingUnknown_0k_64k	Data to be sent for RB test TC_14_2_54.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2688)	
px_RB_Background_64_144	Data to be sent for RB test TC_14_2_29.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 3024)	
px_RB_Background_64_2048	Data to be sent for RB test TC_14_2_35.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 41984)	
px_RB_Background_64_256	Data to be sent for RB test	BITSTRING	INT_TO_BIT (

Parameter Name	Description	Type	Default Value	Supported Value
	TC_14_2_31.		17378987476987 4652133132650, 5376)	
px_RB_Background_64_384	Data to be sent for RB test TC_14_2_32.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 8064)	
px_RB_Background_64_8	Data to be sent for RB test TC_14_2_24.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 1344)	
px_RB_Background_8_40	Data to be sent for RB test TC_14_2_56.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 340)	
px_RB_Background_8k	Data to be sent for RB test TC_14_2_23a.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 336)	
px_RB_ConvUnknown_64_Background_128_128	Data to be sent for RB test TC_14_2_53.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2688)	
px_RB_ConvUnknown_64_Background_16k_64k_20	Data to be sent for RB test TC_14_2_51b.1.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1280)	
px_RB_ConvUnknown_64_Background_16k_64k_40	Data to be sent for RB test TC_14_2_51b.2.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	
px_RB_ConvUnknown_64_Background_64	Data to be sent for RB test TC_14_2_51.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	
px_RB_ConvUnknown_64_Background_64_128	Data to be sent for RB test TC_14_2_52.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2688)	
px_RB_ConvUnknown_64_Background_64_20	Data to be sent for RB test TC_14_2_51.1.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1344)	
px_RB_ConvUnknown_64_Background_8k_20	Data to be sent for RB test TC_14_2_51a.1.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1280)	
px_RB_ConvUnknown_64_Background_8k_40	Data to be sent for RB test TC_14_2_51a.2.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	
px_RB_ConvUnknown_64_ConvUnknown_64	Data to be sent for RB test TC_14_2_50	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	
px_RB_ConvUnknown_64_Interactive_128_128	Data to be sent for RB test TC_14_2_53.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2688)	
px_RB_ConvUnknown_64_Interactive_16k_64k_20	Data to be sent for RB test TC_14_2_51b.1.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1280)	
px_RB_ConvUnknown_64_Interactive_16k_64k_40	Data to be sent for RB test TC_14_2_51b.2.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_ConvUnknown_64_Interactive_64	Data to be sent for RB test TC_14_2_51.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	
px_RB_ConvUnknown_64_Interactive_64_128	Data to be sent for RB test TC_14_2_52.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2688)	
px_RB_ConvUnknown_64_Interactive_64_20	Data to be sent for RB test TC_14_2_51.1.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1344)	
px_RB_ConvUnknown_64_Interactive_8k_20	Data to be sent for RB test TC_14_2_51a.1.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1280)	
px_RB_ConvUnknown_64_Interactive_8k_40	Data to be sent for RB test TC_14_2_51a.2.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	
px_RB_DataConversational_14_4	Data to be sent for RB test TC_14_2_15.	BITSTRING	INT_TO_BIT (24733041598745 63214258, 576)	
px_RB_DataConversational_28_8	Data to be sent for RB test TC_14_2_12.	BITSTRING	INT_TO_BIT (58966325147895 41144447788454 777, 1152)	
px_RB_DataConversational_32	Data to be sent for RB test TC_14_2_14.	BITSTRING	INT_TO_BIT (12457896325412 45554885123235 65565465, 1280)	
px_RB_DataSpeech_10_2	Data to be sent for RB test TC_14_2_5.	BITSTRING	INT_TO_BIT (123456789, 99)	
px_RB_DataSpeech_4_75	Data to be sent for RB test TC_14_2_11.	BITSTRING	INT_TO_BIT (9007195689745 888, 53)	
px_RB_DataSpeech_5_15	Data to be sent for RB test TC_14_2_10.	BITSTRING	INT_TO_BIT (15234025896321 04555, 54)	
px_RB_DataSpeech_5_9	Data to be sent for RB test TC_14_2_9.	BITSTRING	INT_TO_BIT (12345647879879 87901247, 64)	
px_RB_DataSpeech_6_7	Data to be sent for RB test TC_14_2_8.	BITSTRING	INT_TO_BIT (25896475896454 6546546, 76)	
px_RB_DataSpeech_7_4	Data to be sent for RB test TC_14_2_7.	BITSTRING	INT_TO_BIT (7894561234560 4, 87)	
px_RB_DataSpeech_7_95	Data to be sent for RB test TC_14_2_6.	BITSTRING	INT_TO_BIT (98765425698745 6987455, 84)	
px_RB_DataStreaming_0_128	Data to be sent for RB test TC_14_2_20.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 5120)	
px_RB_DataStreaming_0_384	Data to be sent for RB test TC_14_2_22.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 15360)	
px_RB_DataStreaming_0_64	Data to be sent for RB test TC_14_2_18.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	
px_RB_DataStreaming_128_0	Data to be sent for RB test TC_14_2_21	BITSTRING	INT_TO_BIT (12358987456987 4652132132650,	

Parameter Name	Description	Type	Default Value	Supported Value
			576)	
px_RB_DataStreaming_28_8	Data to be sent for RB test TC_14_2_16.	BITSTRING	INT_TO_BIT (12389745669541 02315468754654 654654654654, 1152)	
px_RB_DataStreaming_64_0	Data to be sent for RB test TC_14_2_19	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 576)	
px_RB Interact 8 40	Data to be sent for RB test TC 14 2 56.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 340)	
px_RB_Interactive_128	Data to be sent for RB test TC_14_2_28.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 2688)	
px_RB_Interactive_128_2048	Data to be sent for RB test TC_14_2_36.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 20992)	
px_RB_Interactive_128_384	Data to be sent for RB test TC_14_2_33.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 4032)	
px_RB_Interactive_144	Data to be sent for RB test TC_14_2_30.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 3024)	
px_RB_Interactive_16k	Data to be sent for RB test TC_14_2_23b.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 672)	
px_RB Interactive 32	Data to be sent for RB test TC 14 2 23d.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 672)	
px_RB_Interactive_32_64	Data to be sent for RB test TC_14_2_25.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 1344)	
px_RB_Interactive_32_8	Data to be sent for RB test TC_14_2_23.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 336)	
px_RB_Interactive_384	Data to be sent for RB test TC_14_2_34.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 4032)	
px_RB_Interactive_384_2048	Data to be sent for RB test TC_14_2_37	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 20992)	
px_RB_Interactive_64_128	Data to be sent for RB test TC_14_2_27.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 2688)	
px_RB_Interactive_64_128StreamingUnknown_0k_128k	Data to be sent for RB test TC_14_2_55.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 5120)	
px_RB_Interactive_64_128StreamingUnknown_0k_64k	Data to be sent for RB test TC_14_2_54.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2688)	
px_RB_Interactive_64_144	Data to be sent for RB test	BITSTRING	INT_TO_BIT (

Parameter Name	Description	Type	Default Value	Supported Value
	TC_14_2_29.		15358987456987 4652133132650, 3024)	
px_RB_Interactive_64_2048	Data to be sent for RB test TC_14_2_35.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 20992)	
px_RB_Interactive_64_256	Data to be sent for RB test TC_14_2_31.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 2688)	
px_RB_Interactive_64_384	Data to be sent for RB test TC_14_2_32.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 4032)	
px_RB_Interactive_64_8	Data to be sent for RB test TC_14_2_24.	BITSTRING	INT_TO_BIT (15358987456987 4652133132650, 1344)	
px_RB_Interactive_8k	Data to be sent for RB test TC_14_2_23a.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 336)	
px_RB_Speech_12_2_Background_128_2048	Data to be sent for RB test TC_14_2_44.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 41984)	
px_RB_Speech_12_2_Background_32_64	Data to be sent for RB test TC_14_2_39.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1344)	
px_RB_Speech_12_2_Background_32_8	Data to be sent for RB test TC_14_2_38.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 672)	
px_RB_Speech_12_2_Background_64	Data to be sent for RB test TC_14_2_38d.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1360)	
px_RB_Speech_12_2_Background_64_128	Data to be sent for RB test TC_14_2_41.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2688)	
px_RB_Speech_12_2_Background_64_256	Data to be sent for RB test TC_14_2_42.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 5376)	
px_RB_Speech_12_2_Background_64_384	Data to be sent for RB test TC_14_2_43.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 8064)	
px_RB_Speech_12_2_Background_64_64	Data to be sent for RB test TC_14_2_40.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1344)	
px_RB_Speech_12_2_ConvUnknown_64	Data to be sent for RB test TC_14_2_49.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	
px_RB_Speech_12_2_Interactive_128_2048	Data to be sent for RB test TC_14_2_44.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 41984)	
px_RB_Speech_12_2_Interactive_32_64	Data to be sent for RB test TC_14_2_39.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1344)	

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_Speech_12_2_Interactive_32_8	Data to be sent for RB test TC_14_2_38.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 672)	
px_RB_Speech_12_2_Interactive_64	Data to be sent for RB test TC_14_2_38d.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1360)	
px_RB_Speech_12_2_Interactive_64_128	Data to be sent for RB test TC_14_2_41.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2688)	
px_RB_Speech_12_2_Interactive_64_256	Data to be sent for RB test TC_14_2_42.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 5376)	
px_RB_Speech_12_2_Interactive_64_384	Data to be sent for RB test TC_14_2_43.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 8064)	
px_RB_Speech_12_2_Interactive_64_64	Data to be sent for RB test TC_14_2_40.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1344)	
px_RB_Speech_12_2_StreamUnknown_0_128	Data to be sent for RB test TC_14_2_47.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 5120)	
px_RB_Speech_12_2_StreamUnknown_0_384	Data to be sent for RB test TC_14_2_48.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 15360)	
px_RB_Speech_12_2_StreamUnknown_0_64	Data to be sent for RB test TC_14_2_46.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	
px_RB_Speech_12_2_StreamUnknown_57_6	Data to be sent for RB test TC_14_2_45.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2304)	
px_RB_Speech_12_2k_7_95k_5_9k_4_75k_Background_16k	Data to be sent for RB test TC_14_2_38g.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 672)	
px_RB_Speech_12_2k_7_95k_5_9k_4_75k_Background_32k	Data to be sent for RB test TC_14_2_38h.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1344)	
px_RB_Speech_12_2k_7_95k_5_9k_4_75k_Interactive_16k	Data to be sent for RB test TC_14_2_38g.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 672)	
px_RB_Speech_12_2k_7_95k_5_9k_4_75k_Interactive_32k	Data to be sent for RB test TC_14_2_38h.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 1344)	
px_RB_Speech_12_2k_Background_8k	Data to be sent for RB test TC_14_2_38b.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 336)	
px_RB_Speech_12_2k_Interactive_8k	Data to be sent for RB test TC_14_2_38b.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 336)	
px_RB_StreamingUnknown_16_64_Background_8	Data to be sent for RB test TC_14_2_58.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650,	

Parameter Name	Description	Type	Default Value	Supported Value
			2624)	
px_RB_StreamingUnknown_16_64_Interactive_8	Data to be sent for RB test TC_14_2_58.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 2624)	
px_TMSI_2	TMSI 2.	OCTETSTRING	'09876543'O	

B.1.10 MAC Test Suite Parameters Declarations

These parameters are used in the MAC ATS.

Table B.9a: MAC PIXIT

Parameter Name	Description	Type	Default Value	Supported Value
px_NumOfSegInPagResOrServReq	This Pixit is used in MAC test cases 7.1.1.2, 7.1.1.3, 7.1.1.4, 7.1.1.5 and 7.1.1.8 This indicates the number of RLC segments the Paging Response (CS Domain) or Service Request (PS domain) will be segmented in.	INTEGER	2	