Source: **T1**

Title: **CR's to TS 34.123-3 v3.1.0, 3.2.0 and 3.2.1 for approval**

Agenda item: **5.1.3**

Document for: **Approval**

This document contains the CRs to TS 34.123-3 v3.1.0, 3.2.0 and 3.2.1. These CRs have been agreed by T1 and are put forward to TSG T for approval.

34.123-3

Tdoc #	CR #	Rev	Phase	Title	cat	Version in	Version out	WI	
T1-031054	070	0	Rel-99	Corrections to Package 1 test cases in RRC ATS v3.2.1 for PS mode	F	3.2.1	3.3.0	TEI	Approved.
T1-031055	071	0	Rel-99	Corrections to Package 1 test cases in RRC ATS v3.2.1 for Integrity	F	3.2.1	3.3.0	TEI	Approved.
T1-031140	072	0	Rel-99	Corrections to Package 1 test cases in RRC ATS v3.2.1 for configuration of Radio Bearer -3	F	3.2.1	3.3.0	TEI	Approved.
T1-031242	073	0	Rel-99	CR to 34.123-3 R99, Moving baseline from March 02 to March 03 and error corrections	F	3.2.1	3.3.0	TEI	Approved.
T1-031278	074	0	Rel-99	CR to 34.123-3, R99, Update and remove unnecessary PIXIT parameters, so they are aligned with the 3GPP conformance TTCN	F	3.2.1	3.3.0	TEI	Approved.
T1-030405	079	0	Rel-99	Changes to TS34.123-3 V310 to introduce TC_8_1_1_5	F	3.1.0	3.3.0	TEI	Approved.
T1-030407	080	0	Rel-99	Changes to TS34.123-3 V310 to introduce TC_8_1_1_6	F	3.1.0	3.3.0	TEI	Approved.
T1-030423	084	0	Rel-99	Changes to TS34.123-3 V310 to introduce TC_12_2_1_1	F	3.1.0	3.3.0	TEI	Approved.
T1-030602	119	0	Rel-99	Changes to TS34.123-3 V310 to introduce TC_8_3_4_1	F	3.1.0	3.3.0	TEI	Approved.
T1-030604	120	0	Rel-99	Changes to TS34.123-3 V310 to introduce TC_8_3_4_2	F	3.1.0	3.3.0	TEI	Approved.
T1-030606	121	0	Rel-99	Changes to TS34.123-3 V310 to introduce TC_8_3_4_3	F	3.1.0	3.3.0	TEI	Approved.
T1-030608	122	0	Rel-99	Changes to TS34.123-3 V310 to introduce TC_8_4_1_1	F	3.1.0	3.3.0	TEI	Approved.
T1-030624	124	0	Rel-99	Changes to TS34.123-3 V310 to introduce TC_12_9_1	F	3.1.0	3.3.0	TEI	Approved.
T1-030657	127	0	Rel-99	CR to 34.123-3 V310 to introduce test case 7.2.3.19	B	3.1.0	3.3.0	TEI	Approved.
T1-030877	128	0	Rel-99	CR to 34.123-3 V320 to introduce test case 14.2.13.1	B	3.2.0	3.3.0	TEI	Approved.
T1-030879	129	0	Rel-99	CR to 34.123-3 V320 to introduce test case 7.2.2.2	B	3.2.0	3.3.0	TEI	Approved.
T1-030881	130	0	Rel-99	CR to 34.123-3 V320 to introduce test case 7.2.3.2	B	3.2.0	3.3.0	TEI	Approved.
T1-030896	131	0	Rel-99	Changes to TS34.123-3 V320 to introduce TC_8_2_3_9	B	3.2.0	3.3.0	TEI	Approved.
T1-030897	132	0	Rel-99	Changes to TS34.123-3 V320 to introduce TC_7_2_3_21	F	3.2.0	3.3.0	TEI	Approved.
T1-030898	133	0	Rel-99	Changes to TS34.123-3 V320 to introduce TC_7_2_3_22	F	3.2.0	3.3.0	TEI	Approved.
T1-030928	134	0	Rel-	CR to 34.123-3 V320 to introduce test case	F	3.2.1	3.3.0	TEI	Approved.

			99	TC_8_2_6_20					
T1-031016	135	0	Rel-99	CR to 34.123-3 V320 to introduce test case TC_9.2.1	B	3.2.1	3.3.0	TEI	Approved.
T1-031018	136	0	Rel-99	CR to 34.123-3 V320 to introduce test case TC_9.3.1	B	3.2.1	3.3.0	TEI	Approved.
T1-031020	137	0	Rel-99	CR to 34.123-3 V320 to introduce test case TC_9_4_5_2	B	3.2.1	3.3.0	TEI	Approved.
T1-031022	138	0	Rel-99	CR to 34.123-3 V320 to introduce test case TC_9.5.2	B	3.2.1	3.3.0	TEI	Approved.
T1-031141	139	0	Rel-99	Changes to TS34.123-3 V321 to introduce TC_8_1_1_7	F	3.2.1	3.3.0	TEI	Approved.

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 01 August 2003

Tdoc ⌘T1-031054

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3** **CR** ***070*** ⌘ **rev** **-** ⌘ Current version: **3.2.1** ⌘

*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:	⌘	Corrections to Package 1 test cases in RRC ATS v3.2.1 for PS mode.
Source:	⌘	T1
Work item code:	⌘	N/A
Date:	⌘	17/07/03
Category:	⌘	**F**
Release:	⌘	R99

Use one 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 one 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:	⌘	Incorrect constraint is being used for PS mode in test step ts_NAS_ConnRejectMO
Summary of change:	⌘	Change to use correct contraint
Consequences if not approved:	⌘	Test cases 8.1.2.1, 8.1.2.2, 8.1.2.7 and 8.1.2.9 will not work in PS mode.

Clauses affected:	⌘				
Other specs affected:	⌘	**Y**	**N**		
		☐	☐	Other core specifications	⌘
		☐	☐	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.

1)Change : In step ts_NAS_ConnRejectMO constraint car_PS_InitDirectTransfer should be used instead of car_InitDirectTransfer for PS Mode

Change from:

Test Step Name	ts_NAS_ConnRejectMO (p_CellId : INTEGER)
Group	L3M_General_NAS_Steps/
Objective	Allow NAS entity to send SERVICE REQUEST or CM SERVICE REQUEST but then reject it. This applies when the UE has been triggered for a Mobile Originated call establishment.
Default	NAS_OtherwiseFail
Comments	
Description	

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[tcv_CN_Domain = ps_domain]			
2		Dc ? RRC_DataInd	car_InitDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_ServiceRequest (c_ServiceType_v(?), c_MobileIdAny_lv, tcv_PS_KeySeq))		SERVICE REQUEST
3		……..			

To:

Test Step Name	ts_NAS_ConnRejectMO (p_CellId : INTEGER)
Group	L3M_General_NAS_Steps/
Objective	Allow NAS entity to send SERVICE REQUEST or CM SERVICE REQUEST but then reject it. This applies when the UE has been triggered for a Mobile Originated call establishment.
Default	NAS_OtherwiseFail
Comments	
Description	

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		tcv_CN_Domain = ps_domain]			
2		Dc ? RRC_DataInd	car_PS_InitDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_ServiceRequest (c_ServiceType_v(?), c_MobileIdAny_lv, tcv_PS_KeySeq))		SERVICE REQUEST
3		…….			

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 01 August 2003

Tdoc ⌘T1-031055

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3** **CR** ***071*** ⌘**rev** **-** ⌘ Current version: **3.2.1** ⌘

*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:	⌘	Corrections to Package 1 test cases in RRC ATS v3.2.1 for Integrity.
Source:	⌘	T1
Work item code:	⌘	N/A
Date:	⌘	17/07/03
Category:	⌘	**F**
Release:	⌘	R99

Use one 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 one 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:	⌘	IntegrityCheckInfo IE should not be omitted for any PDU where Integrity is activated.
Summary of change:	⌘	Change constraints to insert IntegrityCheckInfo
Consequences if not approved:	⌘	Test cases will not work with Integrity activated. As per 34.123-3 clause 8.5.3, TTCN should insert IntegrityCheckInfo IE with field values set to '0's and SS overrides those bits with calculated values.

Clauses affected:	⌘	test case 8.1.5.1, 8.1.5.4, 8.1.1.7 and 8.1.1.8

Other specs affected: ⌘	Y	N	
			Other core specifications
			Test specifications
			O&M Specifications

⌘

Other comments: ⌘

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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.

1) Change : This change affects test case 8.1.5.1 and 8.1.5.4

Change from:

Constraint Name	cs_InvalidUE_CapabilityInfoCnf (p_RRC_TI : RRC_TransactionIdentifier)
PDU Type	Invalid_DL_DCCH_Message
Derivation Path	
Comment	

	{
	integrityCheckInfo OMIT,
	message invalid_ueCapabilityInformationConfirm : later_than_r3 :
	{
	rrc_TransactionIdentifier p_RRC_TI ,
	criticalExtensions tsc_CriticalExtension1
	}
	}

To:

Constraint Name	cs_InvalidUE_CapabilityInfoCnf (p_RRC_TI : RRC_TransactionIdentifier; p_IntegrityCheckInfo : IntegrityCheckInfo)
PDU Type	Invalid_DL_DCCH_Message
Derivation Path	
Comment	

	{
	integrityCheckInfo p_IntegrityCheckInfo,
	message invalid_ueCapabilityInformationConfirm : later_than_r3 :
	{
	rrc_TransactionIdentifier p_RRC_TI ,
	criticalExtensions tsc_CriticalExtension1
	}
	}

Change from:

Test Case Name		tc_8_1_5_1			
Group		RRC/RRC_UE_Capability/			
Purpose		To confirm that the UE transmits a UE CAPABILITY INFORMATION message after it receives a UE CAPABILITY ENQUIRY message from the SS. To confirm that the UE indicate an invalid message reception when erroneous downlink UE CAPABILITY ENQUIRY and UE CAPABILITY INFORMATION CONFIRM messages are received. The UE shall transmit RRC STATUS message with the correct error cause value to SS.			
Configuration					
Default		RRC_Def1			
Comments					
Selection Ref					
Description		UE Capability in CELL_DCH state: Success			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
24		…….			
25		AM ! RLC_AM_DATA_REQ	cas_InvalidDCCH_Msg (tsc_CellDedicated , tsc_RB2, cs_InvalidUE_CapabilityInfoCnf (tcv_RRC_Ti))		step 9
26		…….			

To:

Test Case Name		tc_8_1_5_1			
Group		RRC/RRC_UE_Capability/			
Purpose		To confirm that the UE transmits a UE CAPABILITY INFORMATION message after it receives a UE CAPABILITY ENQUIRY message from the SS. To confirm that the UE indicate an invalid message reception when erroneous downlink UE CAPABILITY ENQUIRY and UE CAPABILITY INFORMATION CONFIRM messages are received. The UE shall transmit RRC STATUS message with the correct error cause value to SS.			
Configuration					
Default		RRC_Def1			
Comments					
Selection Ref					
Description		UE Capability in CELL_DCH state: Success			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
24		…….			
25		AM ! RLC_AM_DATA_REQ	cas_InvalidDCCH_Msg (tsc_CellDedicated , tsc_RB2, cs_InvalidUE_CapabilityInfoCnf (tcv_RRC_Ti, tcv_CellIndInfo.dl_IntegrityCheckInfo))		step 9
26		…….			

Change from:

Test Case Name		tc_8_1_5_4			
Group		RRC/RRC_UE_Capability/			
Purpose		To confirm that the UE transmits an UE CAPABILITY INFORMATION message after it receives a UE CAPABILITY ENQUIRY message from the SS. To confirm that the UE indicates an invalid message reception when erroneous downlink UE CAPABILITY ENQUIRY and UE CAPABILITY INFORMATION CONFIRM messages are received. The UE shall transmit RRC STATUS message with the correct error cause value to SS.			
Configuration					
Default		RRC_Def1			
Comments					
Selection Ref					
Description		UE Capability in CELL_FACH state: Success			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
21		…….			
22		AM ! RLC_AM_DATA_REQ	cas_InvalidDCCH_Msg (tsc_CellDedicated , tsc_RB2, cs_InvalidUE_CapabilityInfoCnf (tcv_RRC_Ti))		step 9
23		…….			

To:

Test Case Name		tc_8_1_5_4			
Group		RRC/RRC_UE_Capability/			
Purpose		To confirm that the UE transmits an UE CAPABILITY INFORMATION message after it receives a UE CAPABILITY ENQUIRY message from the SS. To confirm that the UE indicates an invalid message reception when erroneous downlink UE CAPABILITY ENQUIRY and UE CAPABILITY INFORMATION CONFIRM messages are received. The UE shall transmit RRC STATUS message with the correct error cause value to SS.			
Configuration					
Default		RRC_Def1			
Comments					
Selection Ref					
Description		UE Capability in CELL_FACH state: Success			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
21		…….			
22		AM ! RLC_AM_DATA_REQ	cas_InvalidDCCH_Msg (tsc_CellDedicated , tsc_RB2, cs_InvalidUE_CapabilityInfoCnf (tcv_RRC_Ti, tcv_CellIndInfo.dl_IntegrityCheckInfo))		step 9
23		…….			

2) Change: This change affects test case 8.1.1.8

Change from:

Constraint Name	cs_108_PagingType2 (p_RRC_Ti: RRC_TransactionIdentifier; p_Domain : CN_DomainIdentity; p_PagingCause : PagingCause)
PDU Type	DL_DCCH_Message
Derivation Path	
Comment	

	{
	message pagingType2: c_PagingType2(p_RRC_Ti, p_Domain, p_PagingCause)
	}

To:

Constraint Name	cs_108_PagingType2 (p_Integrityinfo : IntegrityCheckInfo; p_RRC_Ti: RRC_TransactionIdentifier; p_Domain : CN_DomainIdentity; p_PagingCause : PagingCause)
PDU Type	DL_DCCH_Message
Derivation Path	
Comment	

	{
	integrityCheckInfo p_Integrityinfo,
	message pagingType2: c_PagingType2(p_RRC_Ti, p_Domain, p_PagingCause)
	}

Change from:

Test Step Name		ts_RRC_PagType2(p_CellId: INTEGER; p_PagingCause : PagingCause)			
Group		BasicM_RRC_Steps/			
Objective		To send PAGING TYPE 2 with IMSI			
Default		RRC_Def1			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		cas_PagingType2(tsc_CellDedicated, tsc_RB2, cs_108_PagingType2(tcv_RRC_Ti, tcv_CN_Domain, p_PagingCause))			Send a correct Paging Type2 with a Paging Record Type Identifier set to IMSI

To:

Test Step Name		ts_RRC_PagType2(p_CellId: INTEGER; p_PagingCause : PagingCause)			
Group		BasicM_RRC_Steps/			
Objective		To send PAGING TYPE 2 with IMSI			
Default		RRC_Def1			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		cas_PagingType2(tsc_CellDedicated, tsc_RB2, cs_108_PagingType2(tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_CN_Domain, p_PagingCause))			Send a correct Paging Type2 with a Paging Record Type Identifier set to IMSI

3) Change: This change affects test case 8.1.1.7

Change from:

Constraint Name	cs_108_PagingType2_IMSI_GSM_MAP (p_RRC_Ti: RRC_TransactionIdentifier; p_Domain : CN_DomainIdentity; p_PagingCause : PagingCause)
PDU Type	DL_DCCH_Message
Derivation Path	
Comment	

	{
	message pagingType2: c_PagingType2(p_RRC_Ti, p_Domain, p_PagingCause)
	}

To:

Constraint Name	cs_108_PagingType2_IMSI_GSM_MAP (p_Integrityinfo : IntegrityCheckInfo; p_RRC_Ti: RRC_TransactionIdentifier; p_Domain : CN_DomainIdentity; p_PagingCause : PagingCause)
PDU Type	DL_DCCH_Message
Derivation Path	
Comment	

	{
	integrityCheckInfo p_Integrityinfo,
	message pagingType2: c_PagingType2(p_RRC_Ti, p_Domain, p_PagingCause)
	}

Change from:

Test Case Name	tc_8_1_1_7
Group	RRC/RRC_Paging/
Purpose	To confirm that the UE responds to a PAGING TYPE 2 message which includes IE "Paging Record Type Identifier" for the UE. To confirm that the UE responds with a RRC STATUS message after it received an invalid PAGING TYPE 2 message. To Page with the Paging Record Type Identifier set to "IMSI", in order to test the UEs behaviour to this situation which may occur when details of the temporary identity have been lost in the core network
Configuration	
Default	RRC_Def1
Comments	
Selection Ref	
Description	UE Capability in CELL_FACH state: Success

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
12		…….			
13		AM ! RLC_AM_DATA_REQ	cas_PagingType2(tsc_CellDedicated, tsc_RB2, cs_108_PagingType2_IMSI_GSM_MAP (tcv_RRC_Ti, tcv_CN_Domain, spare))		step 2 Send an invalid Paging Type2
14		…….			
17		AM ! RLC_AM_DATA_REQ	cas_PagingType2(tsc_CellDedicated, tsc_RB2, cs_108_PagingType2_IMSI_GSM_MAP (tcv_RRC_Ti, tcv_CN_Domain, spare))		step 2 Send an invalid Paging Type2
18		……..			

To:

Test Case Name	tc_8_1_1_7
Group	RRC/RRC_Paging/
Purpose	To confirm that the UE responds to a PAGING TYPE 2 message which includes IE "Paging Record Type Identifier" for the UE. To confirm that the UE responds with a RRC STATUS message after it received an invalid PAGING TYPE 2 message. To Page with the Paging Record Type Identifier set to "IMSI", in order to test the UEs behaviour to this situation which may occur when details of the temporary identity have been lost in the core network
Configuration	
Default	RRC_Def1
Comments	
Selection Ref	
Description	UE Capability in CELL_FACH state: Success

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
12		…….			
13		AM ! RLC_AM_DATA_REQ	cas_PagingType2(tsc_CellDedicated, tsc_RB2, cs_108_PagingType2_IMSI_GSM_MAP (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_CN_Domain, spare))		step 2 Send an invalid Paging Type2
14		…….			
17		AM ! RLC_AM_DATA_REQ	cas_PagingType2(tsc_CellDedicated, tsc_RB2, cs_108_PagingType2_IMSI_GSM_MAP (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_CN_Domain, spare))		step 2 Send an invalid Paging Type2
18		…….			

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 01 August 2003

Tdoc ⌘T1-031140

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3** **CR** **072** ⌘ **rev** **-** ⌘ Current version: **3.2.1** ⌘

*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:	⌘	Corrections to Package 1 test cases in RRC ATS v3.2.1 for configuration of Radio Bearer -3
Source:	⌘	T1
Work item code:	⌘	N/A
Date:	⌘	23/07/03
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
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A *(corresponds to a correction in an earlier release)*
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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:	⌘	Radio Bearer -3 is configured twice in test step ts_SetUpRAB_PS_DCH_ToFACH
Summary of change:	⌘	Change to remove the duplicated test step.
Consequences if not approved:	⌘	Test cases 8.2.1.8 and 8.2.1.9 will not work.

Clauses affected:	⌘	

Other specs affected: ⌘	Y	N		⌘
			Other core specifications	
			Test specifications	
			O&M Specifications	

Other comments: ⌘

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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.

1) Change : In step ts_SetUpRAB_PS_DCH_ToFACH line 5 is removed as RB -3 is already configured in test step ts_SS_2_FACH_1_RACH_Modify.

Change from:

Test Step Name	ts_SetUpRAB_PS_DCH_ToFACH (p_CellId: INTEGER; p_SetUp :DL_DCCH_Message)
Group	RRCM_RB_Establishment/
Objective	To setup a Radio Bearer from cell_DCH to FACH for PS 64k.
Default	RRC_Def1
Comments	
Description	

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
2		……..			
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)			

To:

Test Step Name	ts_SetUpRAB_PS_DCH_ToFACH (p_CellId: INTEGER; p_SetUp :DL_DCCH_Message)
Group	RRCM_RB_Establishment/
Objective	To setup a Radio Bearer from cell_DCH to FACH for PS 64k.
Default	RRC_Def1
Comments	
Description	

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
2		……..			
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)			

3GPP TSG-T WG1 Meeting #20
Munich, Germany, 28th July – 1st August 2003

Tdoc ⌘T1-031242(1126r)

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3** **CR** **073** ⌘ **rev** **-** ⌘ Current version: **3.2.1** ⌘

*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 to 34.123-3, R99, moving baseline from March 02 to March 03 & error corrections
Source:	⌘	T1
Work item code:	⌘	TEI
Date:	⌘	18/07/2003
Category:	⌘	F
Release:	⌘	R99

Use one 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 one 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. Moving baseline from March 02 to March 03.
2. Integrity checking is made mandatory.

3. Remove two test scenarios which are unlikely applied to the real networks, according to 25.413, 8.18.4. Once the security parameters (integrity and possibly ciphering status and algorithms) were set through the 1st SECURITY MODE COMMAND, they are not changed for this RRC connection.

4. The reference clause 4 needs to be updated.

5. The current SS PICH configuration does not have the indication to which SCCPCH it is associated. It is valid if a single SCCPCH is configured in the test. If more than one SCCPCH are required in the test, the PICH_info shall contain an SCCPCH id to which a PCH transport channel is mapped.

6. One of the parameter names in 7.3.2.2.31, CRLC_Suspend_CNF, is different from 25.322, 8.1 and could lead to misunderstanding.

7. Max bit rate in QoSmin is one of the UE capabilities. It has been set in 8.10 less than the max bit rate in the QoS requested. UE could reject the requested QoS in the PS test.

Summary of change: ⌘

1. Update the referred versions of the core specs and the prose test specs in AnnexA1 by changing TS 25.331, v3a0 to v3e0
   Note: update of the ATS list in A2-A8 will be done in a separate CR before T#21.

2. px_IntegrityOnOff in annex B1.1 and the description on its use in 8.5.3 are removed.

3. Remove 8.5.4.1.3 and 8.5.4.5.1.

		4.Update clause 4 References. 5.Add associated SCCPCH_id in PICH_info in 7.3.2.2.11. 6. Correction of the parameter name n to vt in CRLC_Suspend_CNF of 7.3.2.2.31 according to 25.322, 8.1. the clarifications are added. 7. Increase the max bit rate in QoSminDef- UL32kAM-DL32kAM from 32k to 64k.
Consequences if not approved:	⌘	The approved TTCN test cases would not on the correct baseline required by the test industry. The UE interoperability is not ensured.

Clauses affected:	⌘				
Other specs affected:	⌘	**Y** / **N** ☐ / ☐ ☐ / ☐ ☐ / ☐	Other core specifications 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.

2 References

The following documents contain provisions, which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 34.123-1: "User Equipment (UE) conformance specification; Part 1: Protocol conformance specification".

[2] 3GPP TS 34.123-2: "User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification".

[3] 3GPP TS 34.108: "Common test environments for User Equipment (UE) conformance testing".

[4] 3GPP TS 34.109: "Terminal logical test interface; Special conformance testing functions".

[5] 3GPP TR 21.905: "Vocabulary for 3GPP specifications".

[6] 3GPP TS 23.003: "Numbering, addressing and identification".

[7] 3GPP TS 23.101: "General UMTS architecture".

[8] 3GPP TS 24.007: "Mobile radio interface signalling layer 3; General aspects".

[9] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core network protocols; Stage 3".

[10] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on the mobile radio interface".

[11] 3GPP TS 24.012: "Short Message Service Cell Broadcast (SMSCB) support on the mobile radio interface".

[12] 3GPP TS 25.214: "Physical layer procedures (FDD)".

[13] 3GPP TS 25.224: "Physical layer procedures (TDD)".

[14] 3GPP TS 25.301: "Radio interface protocol architecture".

[15] 3GPP TS 25.303: "Interlayer procedures in connected mode".

[16] 3GPP TS 25.304: "UE procedures in idle mode and procedures for cell reselection in connected mode".

[17] 3GPP TS 25.321: "Medium Access Control (MAC) protocol specification".

[18] 3GPP TS 25.322: "Radio Link Control (RLC) protocol specification".

[19] 3GPP TS 25.323: "Packet Data Convergence Protocol (PDCP) specification".

[20] 3GPP TS 25.324: "Broadcast/Multicast Control (BMC)".

[21] 3GPP TS 25.331: "Radio Resource Control (RRC) protocol specification".

[22] 3GPP TS 27.005: "Use of Data Terminal Equipment - Data Circuit terminating Equipment (DTE-DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS)".

[23] 3GPP TS 27.007: "AT command set for 3G User Equipment (UE)".

[24] 3GPP TS 27.060: "Packet domain; Mobile Station (MS) supporting Packet Switched services".

[25] 3GPP TS 33.102: "3G security; Security architecture".

[26] 3GPP TS 51.010-1: "Mobile Station (MS) conformance specification; Part 1: Conformance specification".

[27] ETSI TR 101 666 (V1.0.0): "Information technology; Open Systems Interconnection Conformance testing methodology and framework; The Tree and Tabular Combined Notation (TTCN) (Ed. 2++)".

[28] ITU-T Recommendation X.691 (1997) "Information technology - ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)".

[29] ISO/IEC 8824: "Information technology - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1)".

[30] IETF RFC 2507: "IP Header Compression".

[31] 3GPP TS 45.002: "Multiplexing and multiple access on the radio path".
3GPP TS 05.02: "Digital cellular telecommunications system (Phase 2+); Multiplexing and multiple access on the radio path".

[32] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".
3GPP TS 04.60: "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".

[33] 3GPP TS 44.064: "Mobile Station - Serving GPRS Support Node (MS-SGSN) Logical Link Control (LLC) layer specification".

[34] 3GPP TS 23.038: "Alphabets and language-specific information".

[35] 3GPP TS 23.040: "Technical realization of Short Message Service (SMS)".

[36] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".

[37] ETSI ETR 141: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; The Tree and Tabular Combined Notation (TTCN) style guide".

[38] ETSI TR 101 101: "Methods for Testing and Specification (MTS); TTCN interim version including ASN.1 1994 support [ISO/IEC 9646-3] (Second Edition Mock-up for JTC1/SC21 Review)".

[39] ITU-T Recommendation X.680: "Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation".

[40] 3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".

[41] ISO/IEC 9646 (all parts): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework".

[42] 3GPP TS 44.006: "Mobile Station - Base Stations System (MS - BSS) Interface Data Link (DL) layer specification".

[43] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control ~~P~~protocol".
3GPP TS 04.18: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 specification; Radio Resource Control Protocol".

[44] 3GPP TR 25.925: "Radio interface for Broadcast/Multicast Services".

[45] ITU-T Recommendation O.153: "Basic parameters for the measurement of error performance at bit rates below the primary rate".

[46] IETF RFC 1144: "Compressing TCP/IP headers for low-speed serial links".

[47] ITU-T Recommendation V.42bis: "Data compression procedures for data circuit-terminating equipment (DCE) using error correction procedures".

[48] ITU-T Recommendation V.44: "Data compression procedures".

[49] 3GPP TS 44.008: "Mobile radio interface layer 3 specification".
3GPP TS 04.08: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 specification".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TS 34.123-1 [1] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TS 34.123-1 [1], 3GPP TS 24.008 [9], 3GPP TS 25.331 [21] and TR 101 666 [27] apply.

4 Requirements on the TTCN development

A number of requirements are identified for the development and production of TTCN specification for 3GPP UE at Uu interface.

1. Top-down design, following 3GPP TS 34.123-1 [1], 3GPP TS 34.108 [3] and 3GPP TS 34.109 [4].
2. A unique testing architecture and test method for testing all protocol layers of UE.
3. Uniform TTCN style and naming conventions.
4. Improve TTCN readability.
5. Using TTCN-2++ (TR 101 666 [27]) for R99, avoid the use of the TTCN 2 features TTCN 3 does not support.
6. TTCN specification feasible, implementable and compilable.
7. Test cases shall be designed in a way for easily adaptable, upwards compatible with the evolution of the 3GPP core specifications and the future Releases.
8. The test declarations, data structures and data values shall be largely reusable.
9. Modularity and modular working method.
10. NAS ATS should be designed being independent from the radio access technologies.
11. Minimizing the requirements of intelligence on the emulators of the lower testers. Especially the functionality of the RRC emulator in the TTCN tester should be reduced and simplified, the behaviours should be standardized as the TTCN RRC test steps in the TTCN modular library.
12. Giving enough design freedom to the test equipment manufacturers.
13. Maximizing reuse of ASN.1 definitions from the relevant core specifications.

In order to fulfil these requirements and to ensure the investment of the test equipment manufacturers having a stable testing architecture for a relatively long period, a unique testing architecture and test method are applied to the 3GPP UE protocol tests.

5 ATS structure

The total TTCN specification for the UE testing is structured in a number of separate layered ATSs. The number of ATS being produced corresponds to the number of the 3GPP core specifications referred. The separation of ATSs reduces the size of ATSs. The layer-specific test preambles and test data can be confined to one test suite and parallel development of test suites can be facilitated. The separation of ATSs enables also easily to follow the evolution of the core specifications.

- NAS ATSs:
  1) GSM MAP L3 ATS including MM, CC, GMM, SM test groups;
  2) SMS ATS.
- AS ATSs:
  1) RRC ATS including Singlecell and multicell test group;
  2) RLC ATS;
  3) MAC ATS;
  4) BMC ATS;
  5) PDCP ATS;
  6) RAB ATS.

5.1 Modularity

The modular TTCN approach is used for the development of the 3GPP ATS specification work. Three modules, BasicM, RRC_M and L3M are installed.

5.1.1 Module structure

The working area is shown in figure 1.

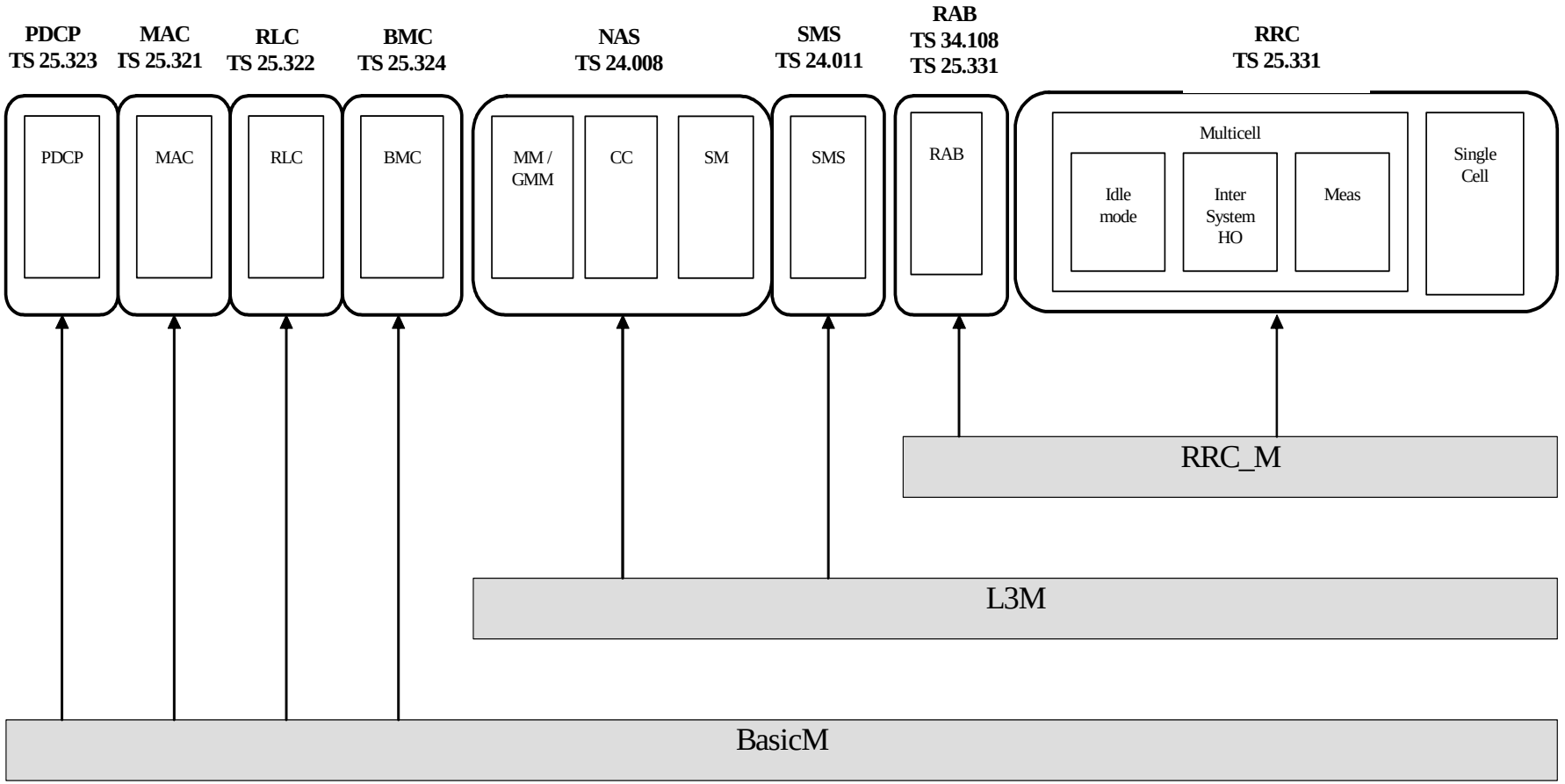

Figure 1: The proposed working area

The BasicM (**Basic M**odule) is a minimum module commonly for the layer 2 and layer 3 testing. The L3M (**L**ayer **3 M**odule) contains all the items to be shared by the RRC, NAS and SMS ATSs. The RRC_M is a module containing common object for RRC and RAB ATSs.

5.1.2 Contents of the modules

The BasicM module includes objects related to the RRC, the layer 2 and the physical layer. It includes also all test steps needed by the layer 2 and layer 3 test cases for configurations and all objects related to the definition of the steps:

- Common test steps and default test steps defined as generic procedures in 3GPP TS 34.108 [3];
- RRC declarations related to the steps: types, timers, PDU types, ASP type, PCOs, TSOs, constants;
- Related ICS and IXIT parameters needed for testing and respectively defined in 3GPP TS 34.123-2 [2] and the present document;
- Defaults constraints based on the default message contents defined in 3GPP TS 34.108 [3];
- MMI PCO and ASPs;
- All TTCN objects related to the SS configuration, e.g. PCOs, declaration of the components.

The L3M module includes the NAS configuration steps and all related TTCN objects:

- Common test steps and default test steps defined as generic procedures in 3GPP TS 34.108 [3];
- NAS declarations related to these steps: types, PDU, ASP, PCOs, TSOs, constants;
- Related ICS and IXIT parameters needed for testing and respectively defined in 3GPP TS 34.123-2 [2] and the present document;
- Default constraints based on the default message contents defined in 3GPP TS 34.108 [3].

The RRC_M module includes the RRC steps common to RRC and Rab test cases and all related TTCN objects.

5.1.3 Example of a working platform

The figure 2 shows the working platform for the user that is writing the SMS test cases.

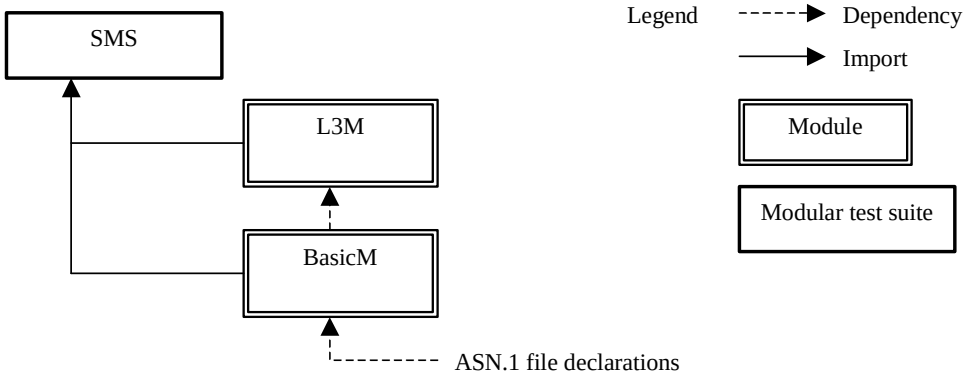

Figure 2: An example of working platform for SMS

6 Test method and testing architecture

6.1 Test method

The distributed single party test method is used for the UE testing. The lower tester configures the emulator and communicates with the UE under test via the emulator. An upper tester interfaces UE as (E)MMI.

All common parts in 3GPP TS 34.108 [3], 3GPP TS 34.109 [4] and 3GPP TS 34.123-2 [2] are developed in a TTCN library including the declarations, default constraints, preambles and postambles. They have the following characteristics:

- Very complex;
- Worked in different layers;
- Including data representing the radio parameters for SS setting and the data representing the UE capabilities (PICS parameters);
- Including the generic procedures to bring the UE into certain test states or a test mode (C-plane);
- Setting RABs at U-plane and SRBs in C-plane;
- Being used by every test cases no matter which layer the test case belongs to;
- No affect on the test verdict of PASS or FAIL.

The layer-specific test cases have the characteristics:

- relatively simple and straight forward;
- having narrow test scope and test purposes;
- test scenarios in a single layer (one PCO);
- assigning the test verdict.

6.2 Testing architecture

A unique testing architecture is shown in figure 3.

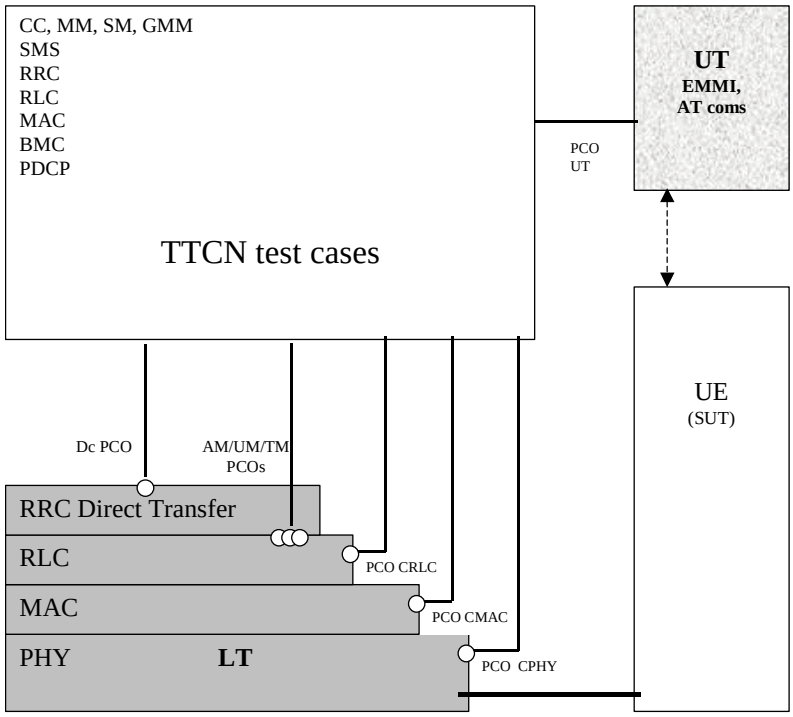

Figure 3: A unique testing architecture

6.2.1 Lower Tester (LT)

The Lower Tester (LT) provides the test means for the execution of the test cases for CC, SM, MM, GMM, SMS, RRC, RLC, MAC, PDCP or BMC. The LT provides also the RLC, MAC and PHY emulators to communicate with the UE. The configuration and initialization of the emulators are control by the TTCN via ASPs.

6.2.2 Configuration and initialization

A number of TTCN test steps are designed for the generic setting.

- 1) Configuration of L1 of the tester, such as the cells, Physical channels and common transport channels via CPHY-PCO, configuration of MAC via CMAC-PCO and configuration of RLC layer via CRLC-PCO.
- 2) Sending system information via TR-PCO.
- 3) Establishment RRC connection via AM or UM-PCO.
- 4) Assigning a radio bearer via AM-PCO.
- 5) MM /GMM registration via Dc-PCO.
- 6) Establishment of a CS call or a PDP context via Dc-PCO.
- 7) Setting security parameters and control of integrity via CRLC- and ciphering via CRLC- and CMAC-PCO.

6.2.3 Upper Tester (UT)

An Upper Tester (UT) exists in the test system. The UT interfaces toward UE with any optional EMMI (3GPP TS 34.109 [4], clause 7). TTCN communicates with the UT by passing coordination primitives via a Ut PCO. The primitives can either contain AT commands aiming at the automatic tests, or some informal commands as MMI, in order to request the UE for certain actions and to provide simple means for observations of UE.

6.2.4 TTCN

TTCN is used as specification language based on TR 101 666 [27] (TTCN 2++). The importation of ASN.1 modules and modular TTCN are two of the most important features used in the design of the ATSs.

The TTCN test suites have been designed to maximize the portability from the language TTCN 2 to TTCN 3.

6.2.5 Model extension

If a test case needs to handle a concurrent situation two or more LTs can be configured at the same time. The following test scenarios identified may require multiple testers in the test configuration.

6.2.6 Multiplexing of RLC services

For the RRC and NAS testing, the TTCN RRC test steps (on RB1 and RB2) and the RRC emulator (on RB3 and RB4 for the NAS messages) share the same service access point (AM SAP). The RLC emulator shall provide separate message queues (buffers) for the TTCN RRC test steps and the RRC emulator for the TTCN NAS test cases, according to the signalling radio bearer identities.

6.3 NAS test method and architecture

6.3.1 Test configuration

The NAS test method is shown in figure 4.

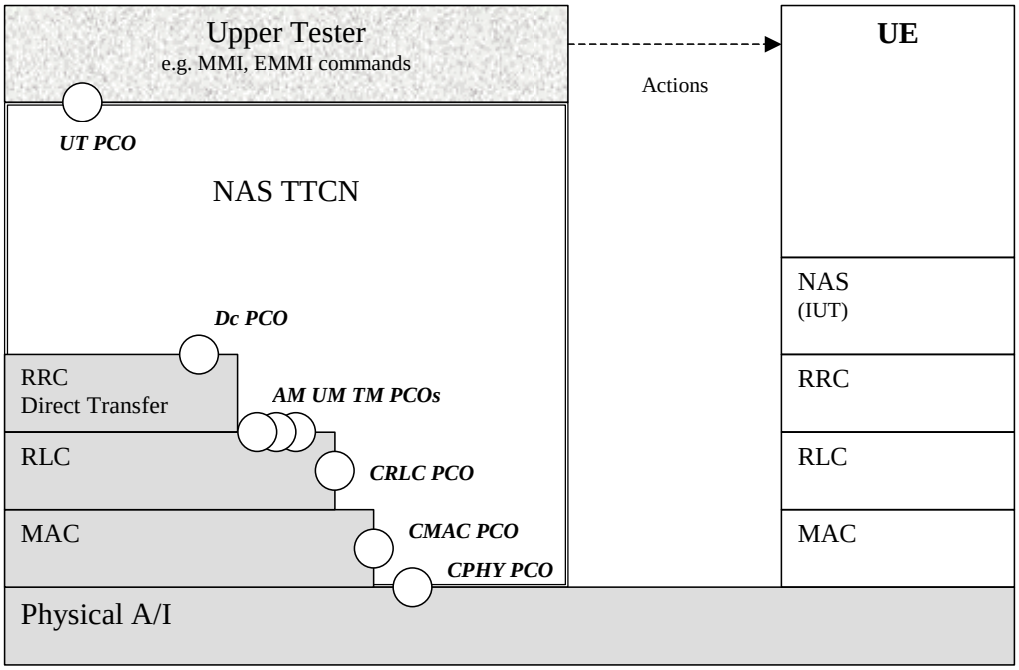

Figure 4: NAS testing architecture

The single layer distributed test method is used.

The Point of Control and Observation (PCO) are defined as the Dc (Dedicated control) SAP. The NAS test verdicts are assigned depending on the behaviours observed at the PCO.

The TTCN tester provides the NAS TTCN test cases and steps with a simple RRC direct transfer function which buffers the NAS PDU data, converts the data from the NAS TTCN table format into ASN.1, or in reverse way, and delivers all lower layer services of AM-SAP for RB3 and RB4.

The NAS TTCN test cases make also intensively use of the RRC TTCN test steps, in order to:

- Configure, initialize and control the L2 emulator;
- Initialize the UE for testing.

The RRC test steps, which are called by the NAS test cases or steps, interface with the RLC PCOs (UM, AM and TR), the control PCOs CRLC, CMAC and CPHY.

The General control (Gc) SAP and the Notification (Nt) SAP are not applied. Messages exchanged via these SAPs will be replaced with the corresponding RRC TTCN test steps.

The Ut PCO (so called logical interface [4]) is served as the interface to the UE EMMI to allow a remote control of operations, which have to be performed during execution of a test case such as to switch the UE on/off, initiate a call, etc.

6.3.2 Routing UL NAS massages in SS

The UL NAS messages are embedded in RRC messages INITIAL / UL DIRECT TRANSFER. In the UE test, the received UL NAS messages can either be routed to the Dc PCO and verified at the NAS message level, or routed to AM PCO and verified at the RRC message level.

- 1. RBid =3 at the SS side indicates that the UL NAS high priority messages to be routed to Dc PCO. RB3 applies to RRC_DataInd/Req.
- 2. RBid= -16 at the SS side indicates the received messages to be routed to RLC AM PCO. RB-16 applies to RLC_DataInd/Req.

The RB3 and RB-16 do not coexist. The TTCN writer uses the MAC and RLC reconfigurations to re-map the RB and the corresponding logical channels. If RB3 has been configured, but a test case needs to re-map the logical channel from RB3 to RB-16 the following way is to replace RB3 with RB-16.

- CMAC_CONFIG_REQ (reconfiguration, RB-16).

Re-mapping on RB-16 which appears in the transport channel and logical channel mapping list.

- CRLC_CONFIG_REQ (reconfiguration, RB-16).

RB-16 appears in the routing info, in order to replace the original mapping on RB3.

Mapping from RB-16 to RB3 is done in the reverse way.

6.4 RRC and RAB test method and architecture

6.4.1 Test configuration

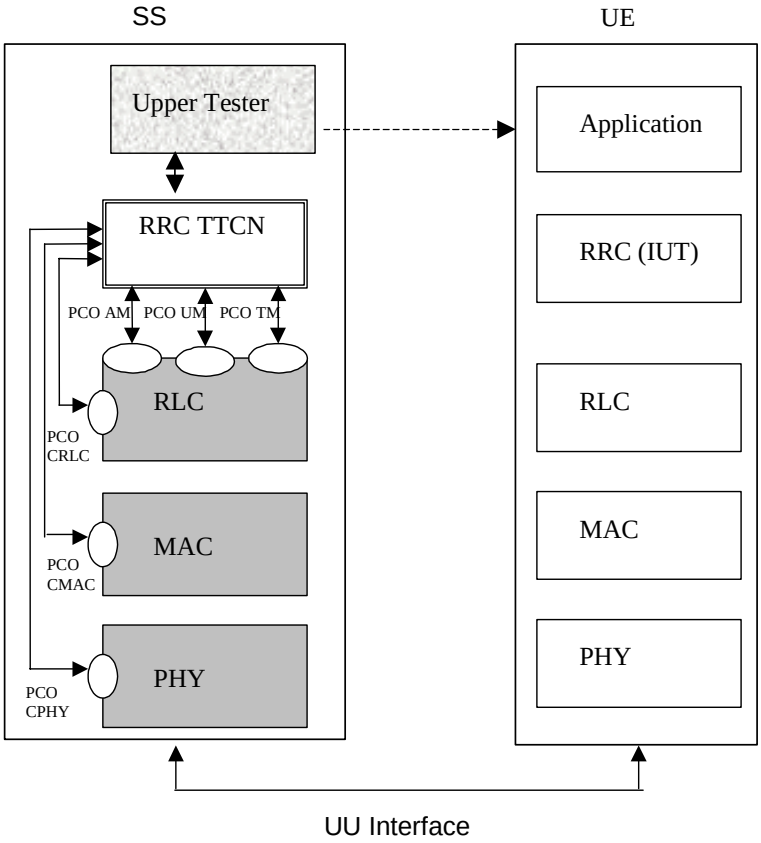

Figure 5: RRC testing architecture

The single layer distributed test method is used.

The PCOs are defined as the AM (Acknowledged Mode), UM (Unacknowledged Mode) and TM (Transparent Mode) SAPs. The RRC test verdicts are assigned depending on the behaviours observed at the PCO. The RRC TTCN interface also with the control PCOs CRLC, CMAC and CPHY, for the configuration, initialization and control of the System Simulator.

The RRC TTCN test cases also make use of the NAS TTCN test steps in order to:

- Bring UE to Idle state;
- Bring UE to state U10.

The NAS test steps, which are called by the RRC test cases or steps, interface with the Dc PCO.

The Ut PCO (so called logical interface [4]) is served as the interface to the UE EMMI to allow a remote control of operations, which have to be performed during execution of a test case such as to switch the UE on/off, initiate a call, etc.

According to 3GPP TS 25.331 [21] clause 12.1.1, the encoding of RRC PDUs is obtained by applying UNALIGNED PER to the abstract syntax value as specified in ITU-T Recommendation X.691 [28]. The two tables below show the declaration of the encoding rule and an example of the use in the definition of an RRC PDU.

Table 1: PER_Unaligned Encoding Rule

Encoding Rule Name	PER_Unaligned
Reference	ITU-T Recommendation X.691 [28]
Default	
Comments	Packet encoding rules (ITU-T Recommendation X.691 [28]) unaligned and with adapted padding

Table 2: Definition of the RRC ASN.1 DL_DCCH_Message type by reference

PDU Name	DL_DCCH_Message
PCO Type	DSAP
Type Reference	DL-DCCH-Message
Module Identifier	Class-definitions
Enc Rule	PER_Unaligned
Enc Variation	

6.4.2 RAB test method

6.4.2.1 Sending data on the same TTI

The RAB test requires a specific test method to send the test data on the same TTI. The TFC restriction method is used in this case. A specific TFC subset is allowed to ensure the test data are sent on different RBs on the same TTI. 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. 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.

6.4.2.2 Sending continuous data on consecutive TTIs

The RBS ATS is developed using the tabular TTCN notation. In order to test of multiple-RB combinations and simultaneous signalling, the SS shall be capable of sending continues test data in every TTI using the downlink transport format combination under test. A specific TSO is designed to request the SS sending continuous data. The information about the number of RLC SDUs and their sizes for each RAB will be provided to the system simulator through TSO.

6.5 RLC test method and architecture

6.5.1 Testing architecture

Figure 6 illustrates a typical realization of the RLC ATS.

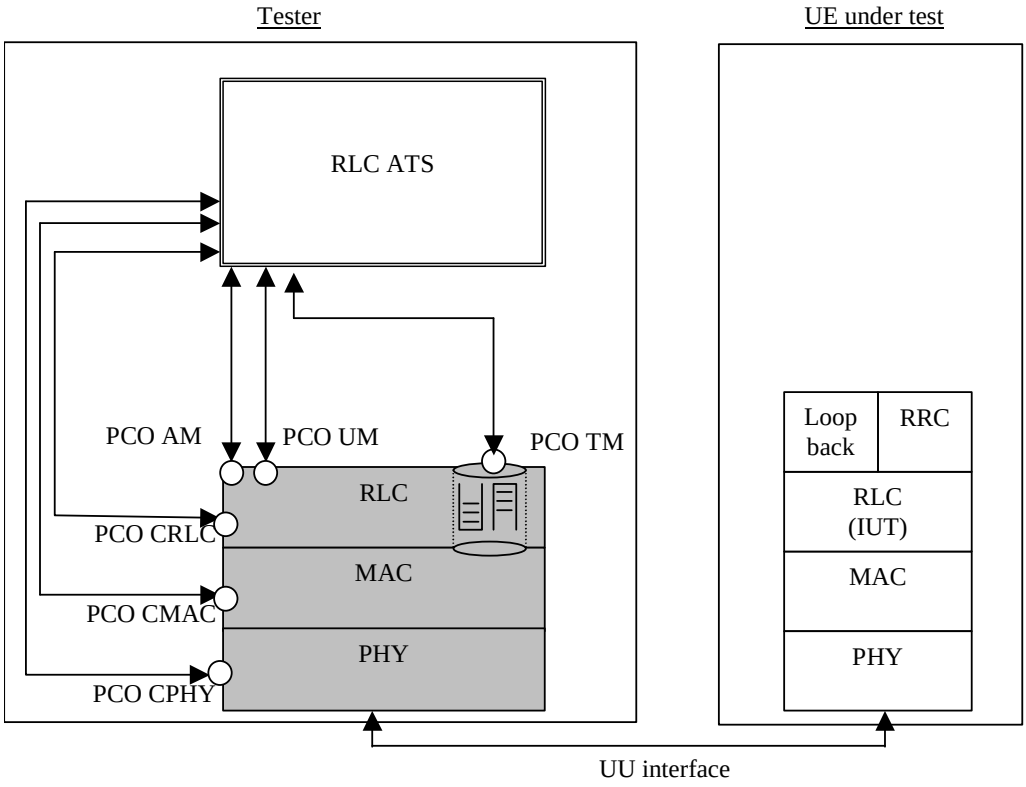

Figure 6: RLC ATS single party test method

The single party test method is used for RLC testing.

Separation of TTCN test cases from the configuration of the tester and initialization of the UE is achieved by using test steps. For each RLC test case, common test steps will be used to perform the configuration of the tester and the appropriate generic setup procedures as described in 3GPP TS 34.108 [3]. These test steps will make use of PCOs AM, UM, TM, CRLC, CMAC, and CPHY.

Three PCOs are provided at the top of the RLC emulation in the tester, one corresponding to each of the available RLC modes: acknowledged, unacknowledged, and transparent. Routing information for different radio bearers used at these PCOs will be provided in ASP parameters.

The queues shown in the RLC emulation in figure 6 indicate that normal RLC transmit and receive buffering will be used to isolate the TTCN test suite from the real time issues involved if messages are sent directly to the MAC layer.

The RLC TTCN test cases make also use of the NAS TTCN test steps in order to bring UE to Idle state. The NAS test steps, which are called by the RLC test cases or steps, interface with the Dc PCO.

6.5.2 Test method

Figure 7 illustrates an example configuration for downlink UM testing. Uplink and AM tests will use similar configurations. A Tr-Entity is established on the tester side using a CRLC-CONFIG-REQ. A corresponding UM-Entity is created in the UE by sending a Radio Bearer Setup PDU. RLC PDUs are specified in the TTCN test suite, and sent to TM PCO. These PDUs shall be carefully designed so that the Tr-Entity will not perform any segmentation. The system simulator is responsible for direct encoding the abstract representation of transmitted PDUs into a bitstring to be sent by the Transmitting Tr entity. Direct encoding is performed by concatenation of all of the present fields in the abstract representation. It is the TTCN author's responsibility to ensure that the PDU is valid. To test reassembly in the UE side, the segmentation must be explicitly coded in TTCN. To test various aspects of the RLC header (e.g. sequence numbering, length indications etc), the RLC header must be explicitly coded in TTCN. Ciphering will not be tested using this approach, and will be disabled in the UE UM Entity.

The segmentation block in the SS Tr-entity is shown in grey to indicate that the functionality is present in the SS, but the test cases shall be carefully designed to ensure that segmentation is not used in the SS Tr-entity for RLC testing.

The deciphering block in the UE UM-entity is shown in grey to indicate that the functionality may be present in the UE, but shall be disabled for RLC testing.

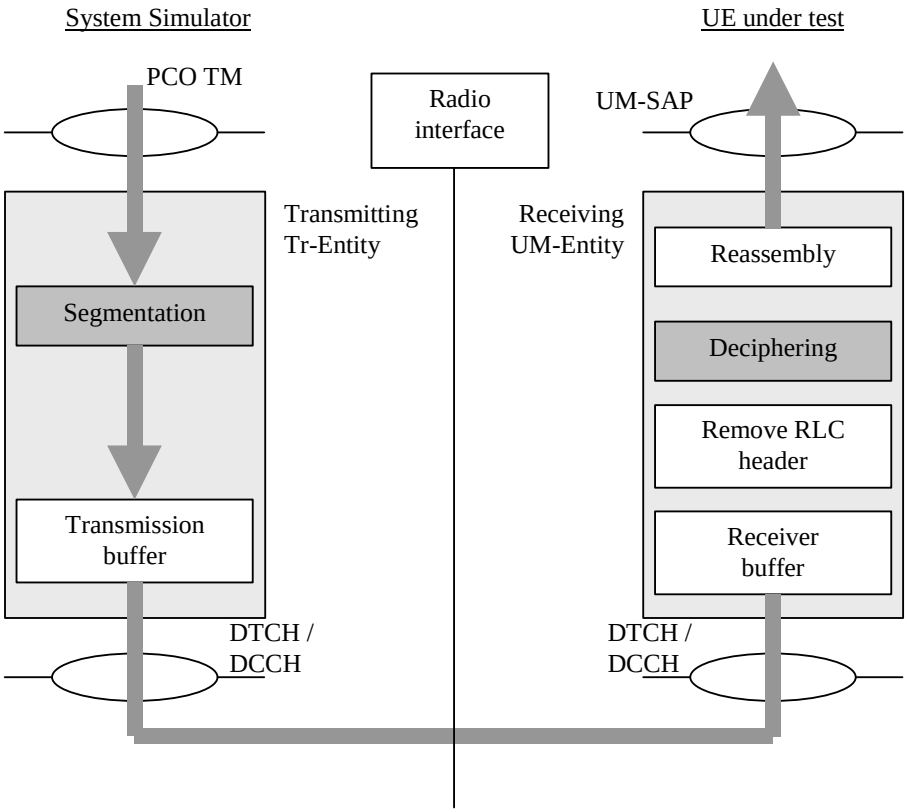

Figure 7: Example configuration for downlink RLC UM testing

The TFCS used for RLC testing must guarantee that Tr mode segmentation will not occur. This is to prevent transmission of more than one Tr PDU per TTI.

All RLC tests that require uplink data will make use of the UE test loop mode 1 defined in 3GPP TS 34.109 [4]. The UE test loop mode 1 function provides all upper tester (UT) functionality required, so an UT PCO is not required for RLC tests. Test Loop mode 1 is only available in the user plane, so all RLC tests will be performed in the user plane, using DTCH and DCCH logical channels mapped to DCH transport channels.

Ciphering will be disabled for all RLC test cases. Ciphering will be tested implicitly by other test cases that have ciphering enabled.

Figure 8 illustrates an example configuration for uplink UM testing, and reception of an example UMD PDU. Figure 9 illustrates an example configuration for uplink AM testing, reception of an example STATUS_PDU, and the use of the superFields and superFieldsRec fields.

The ciphering and deciphering blocks in the UE RLC entities are shown in grey to indicate that the functionality may be present in the UE, but shall be disabled for RLC testing.

The reassembly blocks in the SS Tr-entities are shown in grey to indicate that the functionality is present in the SS, but the test cases shall be carefully designed to ensure that reassembly is not used in the SS Tr-entity for RLC testing.

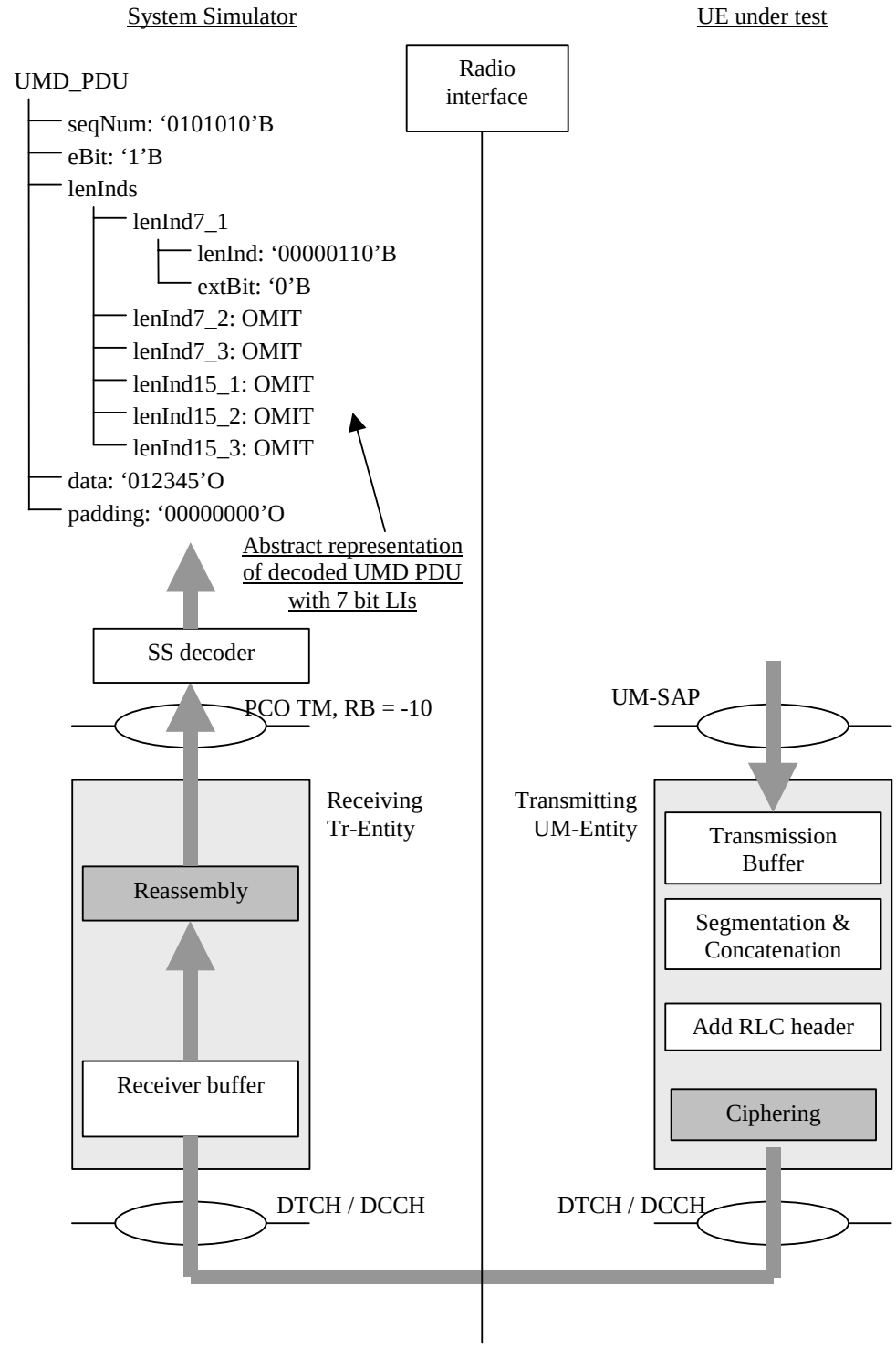

Figure 8: Example configuration for uplink RLC UM testing

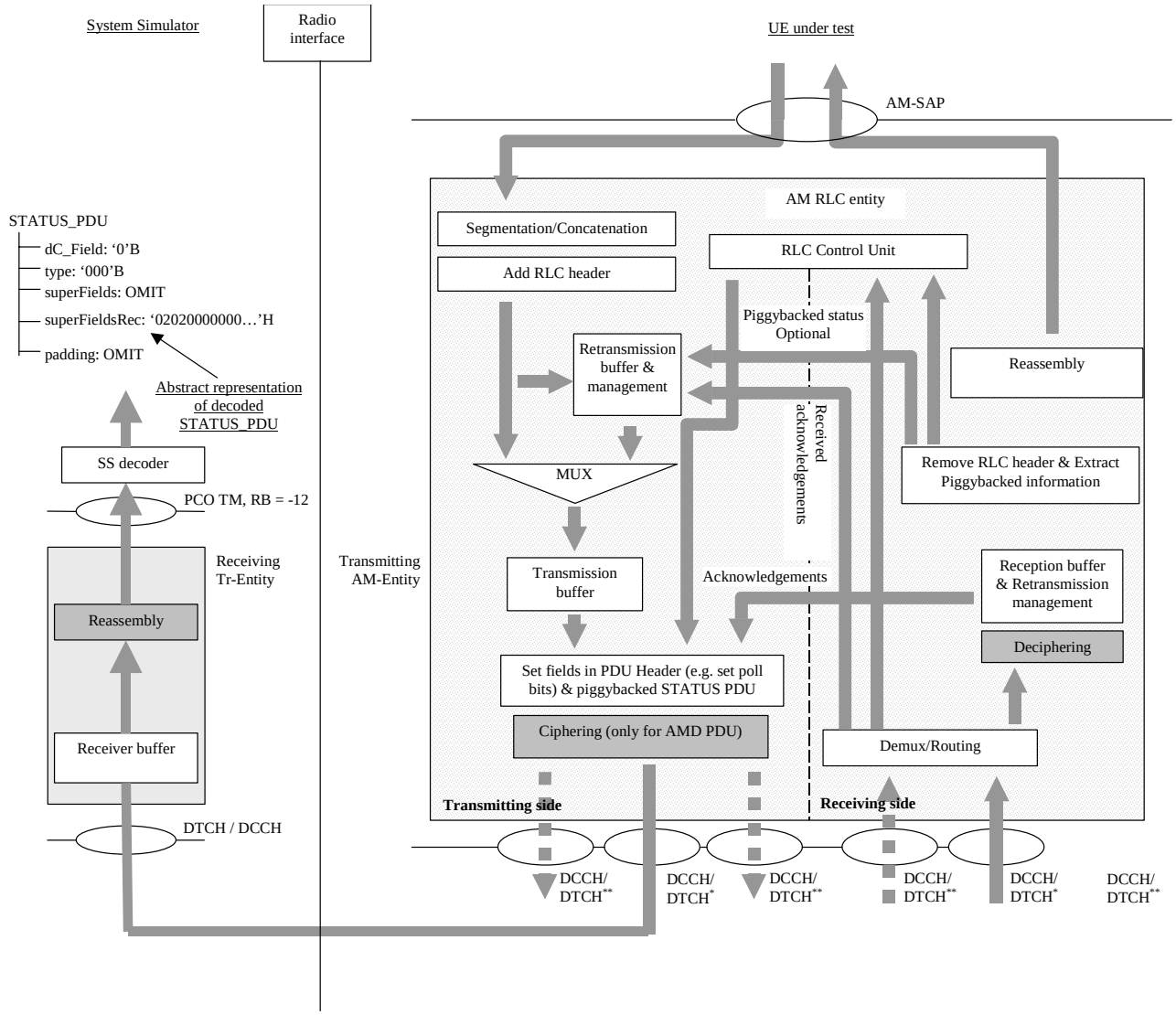

Figure 9: Example configuration for uplink RLC AM testing

Uplink data uses a similar approach to downlink, but the received data must be decoded in the correct way, depending on the current UE configuration. In the example in figure 8, the SS must decode the data received at the TM PCO into an abstract representation of the structure defined in the TTCN for a UMD_PDU, using 7 bit length indicators. This structure is then compared with an abstract representation of the expected data to see if the receive event is successful. Refer to TR 101 666 [27], clause B.5.2.10 for more information.

For RLC testing, the following RB Ids are used within the system simulator, depending on the RLC mode, and length indicator size being simulated.

RLC mode	LI Size	RB Id
UM	7	-10
UM	15	-11
AM	7	-12
AM	15	-13

The SS decoder can use the RB Id to determine which abstract structure to create during the decode process. The SS decoder must also understand the RLC peer-to-peer protocol enough to determine which fields are present.

EXAMPLE 1: The semantics of LI extension bits must be known to determine how many LIs are present.

EXAMPLE 2: The contents of the LIs must be interpreted to determine how many octets of data, and how many octets of padding are present.

The SUFI list and any subsequent padding in a received STATUS_PDU or PiggyBackedSTATUS_PDU shall be decoded as a HEXSTRING, and put in the 'superFieldsRec' field of the abstract representation of the STATUS PDU. The 'superFields' and 'padding' fields shall be omitted for received STATUS PDUs. This is illustrated in figure 9.

As in downlink testing, the TFCS must be defined to guarantee that the Tr entity does not perform any reassembly. This is to prevent reception of more than one Tr PDU per TTI so that the TTCN does not need to manage possible interleaving problems due to multiple PDUs received at the same time (i.e. they may be placed on the PCO queue in any order).

6.5.2.1 Handling SUFIs in TTCN

The SUFIs are a very flexible set of information elements contained in the RLC protocol. The order of the fields varies, the existance of a field may depend upon the presence of another one. A field can be present multiple times. For matching received SUFIs, it is convenient to define the SUFIs as a HEXSTRING which is treated by a TSO **o_SUFI_Handler**.

Depending upon which SUFIs and which aspects of SUFIs are to be checked, the TSO is provided with the information (**SUFI_Params**) on what checking it is expected to perform. If the check is successful the result TRUE will be returned, otherwise FALSE. Additionally the TSO will return an object which is structured as the SUFIs used in transmission (SuperFields). This will allow to make use of information received and needed to establish SUFIs to be transmitted.

The input parameters to **o_SUFI_Handler** to be used as checking criteria are collected in tabular data structure **SUFI_Params** which is filled each time before the TSO is called. These data are to allow the checking of the presence and the value of SUFIs. All entries shall be set to well-defined values if these are to be used by **o_SUFI_Handler**. As a principle values specifically set are used as criteria for checking, values omitted are used as AnyOrOmit values. The resulting SUFI list is established by **o_SUFI_Handler** and can be retrieved in the data structure returned by the TSO. Details have to be defined in the TSO itself.

Tasks **o_SUFI_Handler** has to perform:

- Transfer the SUFIs received into the structure of SuperFields; this is the SUFI list structure existing today.
- If multiple occurrences of SUFI are found then use the **last** one to fill the SuperFields structure.
- Check for all parameters in SUFI_Params set to a specific expected value that one of the SUFIs using this value is present and that the value received matches the specific expected value.
- Check that if SUFIs are received for which an expected value of Any is specified, the SUFI is consistent if that SUFI is received.
- Check that if SUFIs are received for the presence of which no entry is specified in SUFI_Params, the SUFI is consistent.
- Check that sequence numbers are in the range between LB and UB if specific values are set.

Entries in **SUFI_Params**.

Element Name	Sigificance	Comment
LB	Lower bound of sequence number range	Lowest SN for checking SNs acknowledged
UB	Upper bound of sequence number range	Highest SN for checking SNs acknowledged
WSN_presence	Window Size SUFI present	To check the presence of the Window Size SUFI
MRW_presence	Move Receive Window SUFI present	To check the presence of the MRW SUFI
Nack1	SN of 1st PDU negatively acknowledged	For the NackList to check SN to be negatively acknowledged
Nack2	SN of 2nd PDU negatively acknowledged	For the NackList to check SN to be negatively acknowledged
Nack3	SN of 3rdPDU negatively acknowledged	For the NackList to check SN to be negatively acknowledged

More entries may be required in the future if specific SUFI field values are to be checked. The concept allows to add more fields easily.

6.6 SMS test method and architecture

6.6.1 SMS CS test method and architecture

The test method used for SMS CS tests is the same as the NAS test method, see clause 6.3, and the same ASPs, see clause 7.1.2.

6.6.2 SMS PS test method and architecture

The test method used for SMS PS tests is the same as the NAS test method, see clause 6.3, and the same ASPs, see clause 7.1.2.

6.6.3 SMS Cell broadcasting test method and architecture

The test method used for SMS CB tests is the same as the BMC test method, see clause 6.8, and the same ASPs, see clause 7.1.2.

6.7 MAC test method and architecture

6.7.1 Testing architecture

Figure 10 illustrates a typical realization of the MAC ATS.

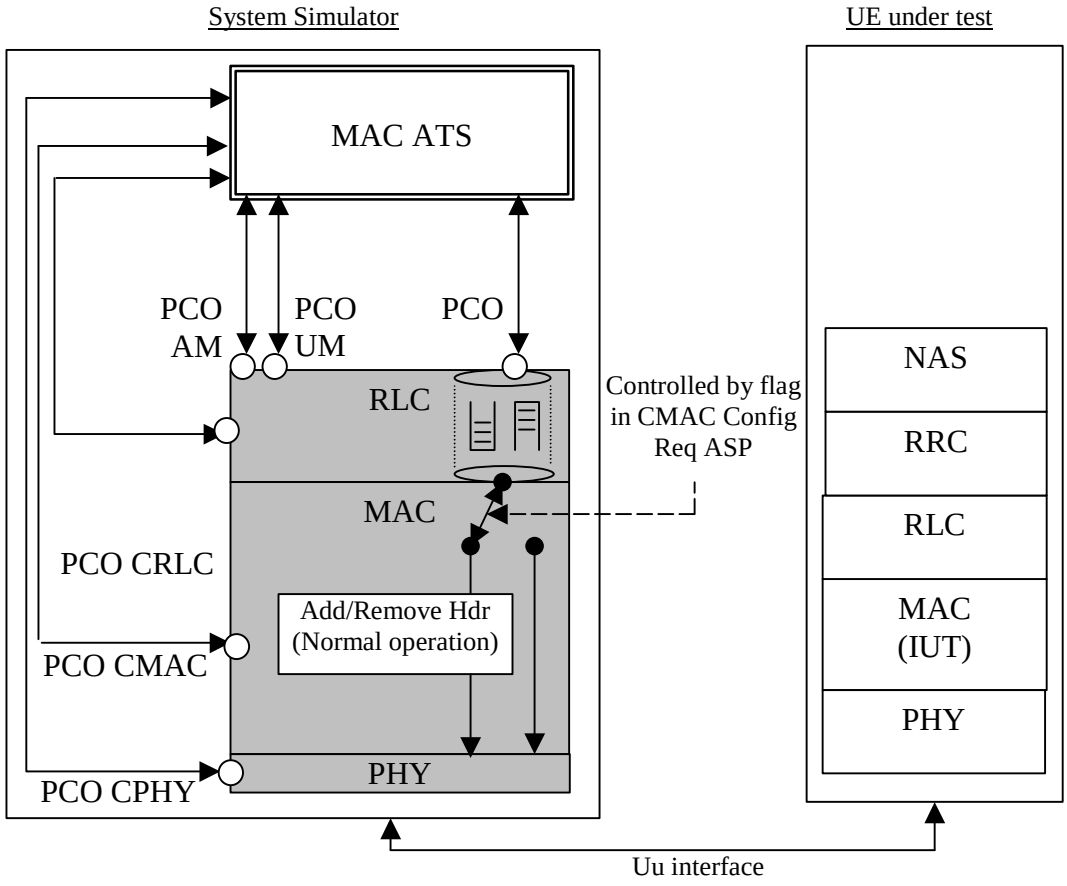

Figure 10: MAC ATS single party test method

6.7.2 Test method

The single party test method is used for MAC testing.

Separation of TTCN test cases from the configuration of the tester and initialization of the UE is achieved by using test steps. For each MAC test case, common test steps will be used to perform the configuration of the tester and the appropriate generic setup procedures as described in 3GPP TS 34.108 [3]. These test steps will make use of PCOs AM, UM, TM, CRLC, CMAC, and CPHY.

Three PCOs are provided at the top of the RLC emulation in the tester, one corresponding to each of the available RLC modes: acknowledged, unacknowledged, and transparent. Routing information for different radio bearers used at these PCOs will be provided in ASP parameters.

The queues shown in the RLC emulation in figure 8 indicate that normal RLC transmit and receive buffering will be used to isolate the TTCN test suite from the real time issues involved if messages are sent directly to the MAC layer.

A flag is required within the CMAC Config Req to indicate that the SS MAC emulation must not add or remove any MAC header information, even if header fields should be present according to the configured channels. This flag shall allow control of the MAC header on a per logical channel basis. For example, it shall be possible to configure 4 DCCHs and a DTCH mapped to a DCH, such that the MAC will add / remove header information for the DCCHs, but not for the DTCH.

The MAC TTCN test cases make also use of the NAS TTCN test steps in order to bring UE to Idle state. The NAS test steps, which are called by the MAC test cases or steps, interface with the Dc PCO.

For MAC testing, the following RB Ids are used for the high priority NAS RB within the system simulator depending on the MAC configuration being simulated.

RB Id	Simulated configuration
-14	DCCH mapped to FACH
-15	DCCH mapped to DCH
-18	CCCH mapped to FACH

The SS decoder can use the RB Id to determine which MAC header fields are present, and create the appropriate abstract structure during the decode process. The SS decoder must understand enough of the MAC peer-to-peer protocol to determine which fields are present.

For example, the semantics of the UE Id Type field must be known to determine how many bits should be present in the UE Id field.

The MAC PDUs for MAC testing will always contain an AM RLC PDU (data or status) using 7 bit length indicators. See the RLC test method for further information on the SS decoder requirements for RLC PDUs.

6.7.2.1 Abnormal decoding situations

If the SS decoder cannot convert the received data into the supported structure, the SS shall terminate the test case immediately and indicate that a test case error has occurred.

6.8 BMC test method and architecture

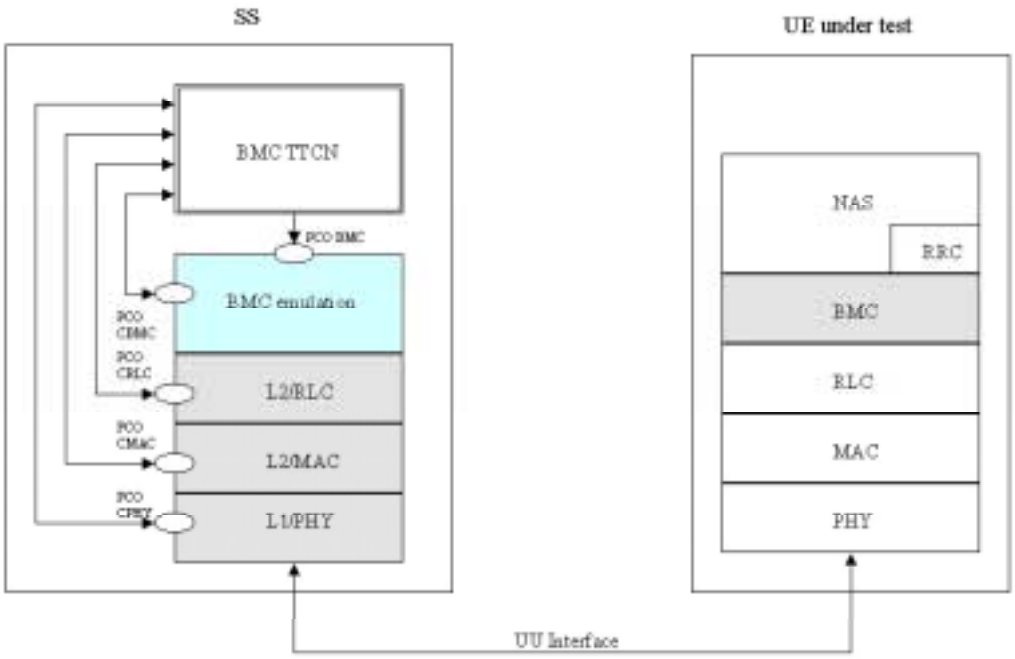

Figure 11: BMC testing architecture single party method

6.8.1 BMC test architecture

The single party test method is used for BMC testing, i.e. it does not exist an Upper Tester. BMC emulation is used as shown in figure 12. The BMC emulation makes use of two PCOs. The CBMC PCO is defined, to pass configuration information for a BMC entity. The BMC PCO is defined for BMC message data transfer.

Separation of TTCN test cases from the configuration of the tester and initialization of the UE is achieved by using test steps. For BMC test cases, common test steps and newly defined test steps for BMC configuration will be used to perform the configuration of the tester and on UE side. These test steps make use of PCOs, CRLC, CMAC, and CPHY.

The UE shall be able to activate and deactivate a certain CB MessageID according CB data to be sent while testing.

BMC messages are sent in BMC message blocks on the CTCH. For sending BMC messages (BMC Scheduling Message (Level 2, DRX) and BMC CBS Message) a configuration in downlink direction shall be performed to map the CTCH (RB#30) onto the FACH - S-CCPCH.

6.8.2 BMC test method

For BMC testing, only PS Cell Broadcast Service as distributed BMC service is applied. CBS Messages and BMC Schedule Messages are only sent in downlink direction. No uplink is used for BMC testing. The BMC test data with necessary CBS information shall be given by PIXIT parameter with a description of the indication on the display.

This test method uses BMC primitives as defined in 3GPP TS 25.324 [20]. There are two level of BMC scheduling, Level 1 for CTCH configuration and Level 2 for DRX. The BMC scheduling information is conveyed to both BMC and MAC layer.

Level 1 scheduling is used configure the CTCH on the S-CCPCH. For BMC testing Release 99 (FDD), the Level 1 scheduling parameter M_{TTI} contains one radio frame in the TTI of the FACH used for CTCH. Therefore, only Level 1 scheduling information N (period of CTCH allocation on S-CCPCH) and K (CBS frame offset to synchronize to the SFN cycle (0 to 4 095 frames per cycle)) are necessary to configure the CTCH onto the S-CCPCH.

The Level 1 scheduling is done in the SS MAC layer, therefore this information is given by using the primitive "CMAC_BMCscheduling_REQ" to inform the MAC on SS side about K and N. The Level 1 scheduling information, K and N, is broadcast as system information in SIB 5 and SIB 6. After having performed the CTCH configuration as Level 1 scheduling, the SS is configured to send BMC messages and the UE has to listen to each CTCH for a BMC message.

Segmentation of BMC messages is performed by RLC in UM. A RLC segment shall contain BMC message payload as configured in RB#30 with a maximum number of 57 octets. The 57 octets payload is used to calculate the BMC inband scheduling Level 2 in the BMC TTCN (TSO).

If only one CB data as BMC CBS message is sent and repeated for a BMC test case, Level 1 scheduling is adequate, i.e. no BMC Scheduling Message (Level 2) is needed. Therefore, no level 2 scheduling information are included in the "CMAC_BMCscheduling_REQ" primitive. If more then one BMC CBS message are transmitted and repeated, BMC scheduling Level 2 message shall be performed.

Level 2 scheduling is used to predict the sent event of the next BMC message blocks and the BS index contents.

BMC scheduling Level 2 predicts exactly, which information is contained on a certain CTCH block set with an aligned Block Set index number and how many spare CTCH blocks are given as offset, before the next BMC message block will be sent. Figure 12 shows an example, how the message flow shall be done for BMC scheduling Level 2.

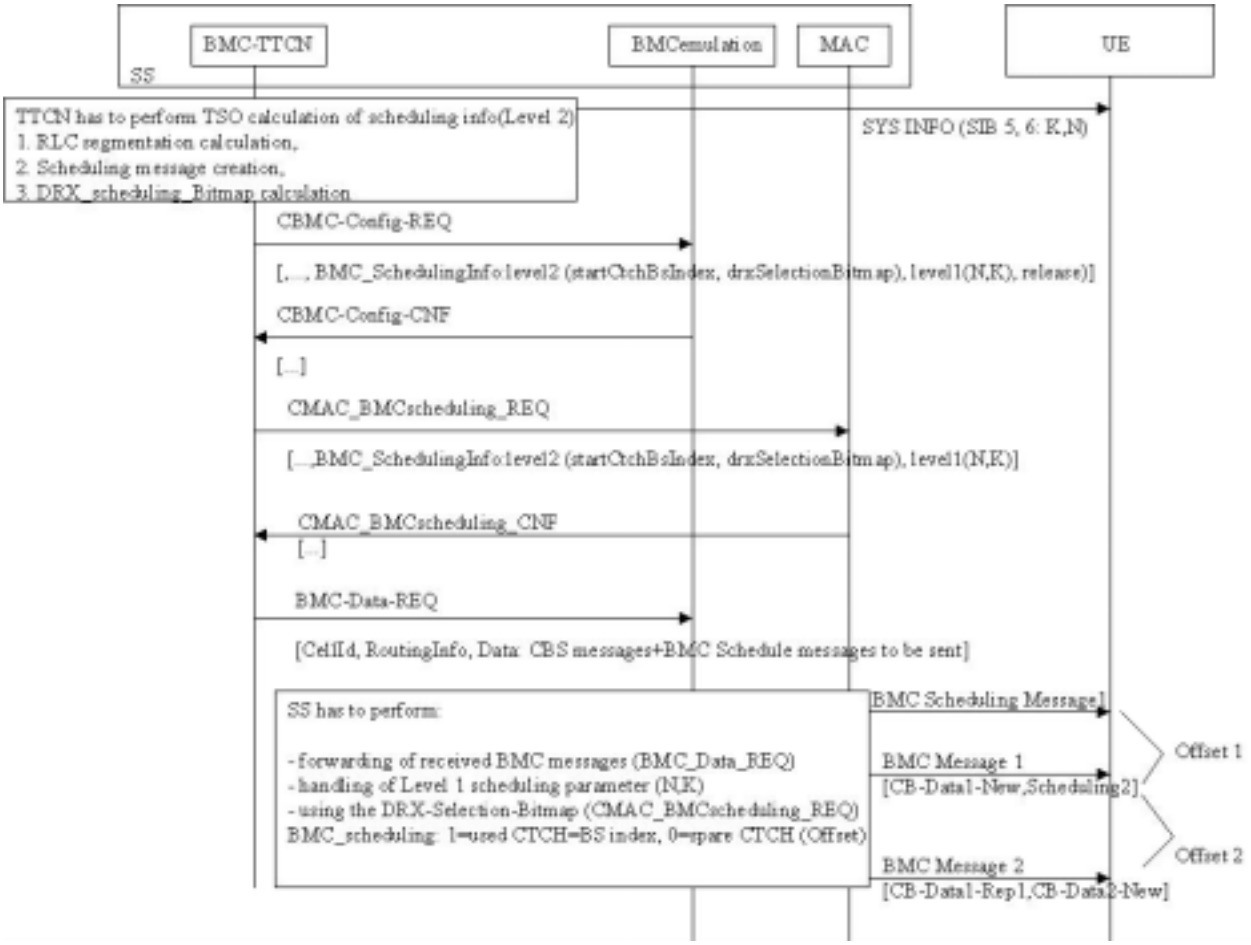

Figure 12: BMC Scheduling

The BMC test method makes use of the primitive: "BMC-Data-REQ" to transmit the BMC Messages to RLC. If BMC Scheduling Level 2 is used, an entire BMC message, including BMC CBS PDUs and a BMC Schedule PDU, to be transmitted is created by the BMC TTCN and forwarded to the BMC emulation. The transmission of BMC PDU is confirmed through the primitive BMC-Data-CNF. The segmentation of the BMC PDU is done at the RLC layer.

According to the K and N value, the MAC layer at SS side determines the CTCH blocks for the BMC use. The CTCH blocks are indexed (i = 1 ... 256). If BMC DRX is needed, the BMC scheduling Level 2 information figures out the occupancy / spare of the available CTCH blocks by using a DRX_Selection_Bitmap. In the bitmap each bit, set to '1', corresponds to an actually available CTCH block belonging to the DRX period for the SS transmission. The all occupied consecutive CTCH blocks constitutes a BMC DRX period, whilst the consecutive spared blocks indicate the DRX offset as spare CTCH slot.

Following the DRX_Selection_Bitmap, the segmented BMC messages are transmitted. Each "BMC-Data-REQ" primitive has its own aligned "CMAC_BMCscheduling _REQ" primitive, where all BMC scheduling information is predicted. An initial CTCH block index is given (startCtchBsIndex) as a start index offset.

An octet string is defined whereas each bit describes one assigned CTCH block, i.e. one BS index on the S-CCPCH.

Bitmap value:

1 (binary) = indicates a used/occupied BS index (CTCH frame, with a payload size of 57 octets) to send BMC message segments for a message block.

0 (binary) = indicates a spare BS index, i.e. unused CTCH frame, to give an UE supporting DRX the necessary information.

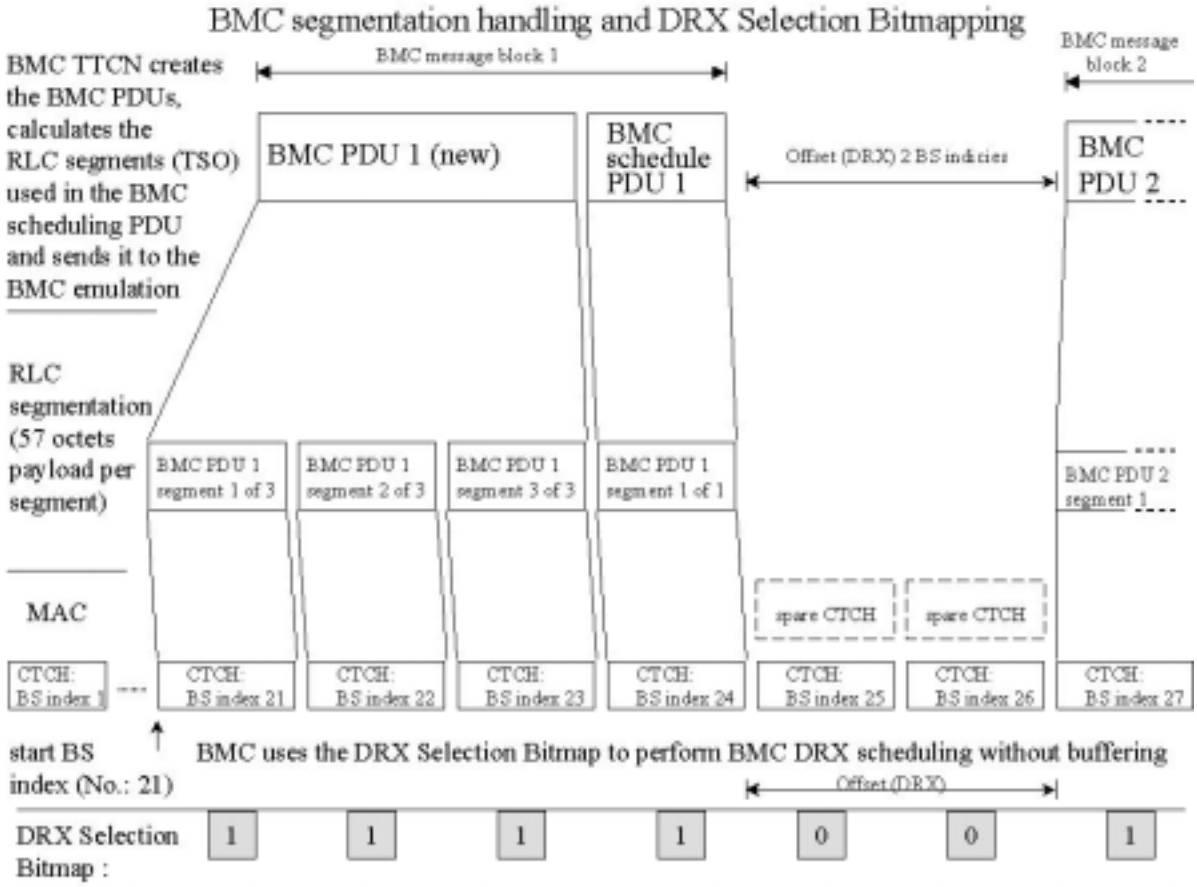

Figure 13: BMC DRX scheduling: segmentation handling

6.9 PDCP test

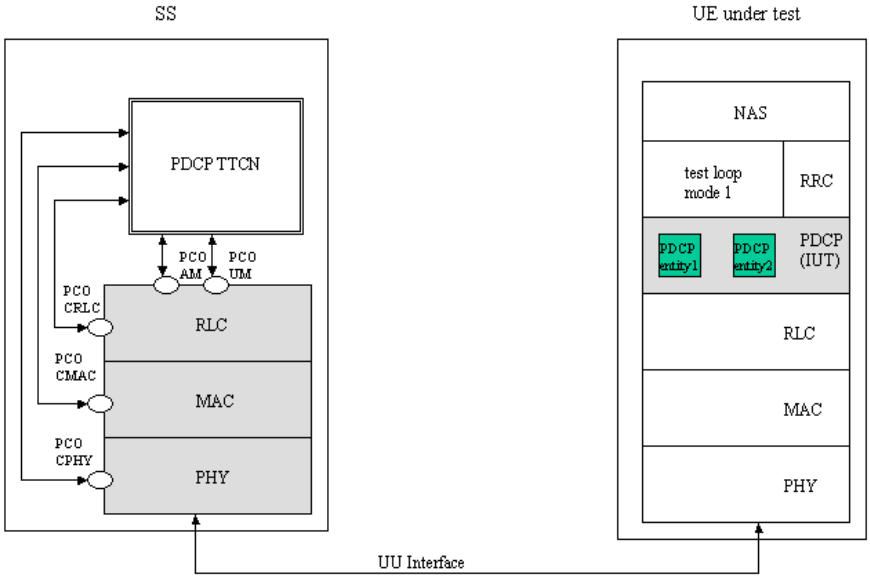

Figure 14: PDCP testing architecture 1: single party test method, with test loop mode 1

6.9.1 PDCP test architecture

The single party test method is used for PDCP testing. All PDCP tests that require uplink data will make use of the UE test loop mode 1 defined in 3GPP TS 34.109 [4]. Test Loop mode 1 is only available in the user plane, so all PDCP tests will be performed in the user plane, using the same logical channels mapped to transport channels as defined in RLC test cases, except for test case, clause 7.3.2.2.4, where a configuration of combined radio bearers used only for this test case is defined.

Separation of TTCN test cases from the configuration of the tester and initialization of the UE is achieved by using test steps. For PDCP test cases, common test steps and newly defined test steps for PDCP configuration will be used to perform the configuration of the tester and the appropriate generic setup procedures as described in 3GPP TS 34.108 [3] and in clause 7.4 of 3GPP TS 34.123-1 [1]. These test steps will make use of PCOs RLC AM, RLC UM, CRLC, CMAC, and CPHY.

The PDCP TTCN test cases make also use of the NAS TTCN test steps in order to setup a PS session.

For PDCP testing, the IP Header Compression protocol as described in RFC 2507 [30] is used as optimization method. The IP header compression and decompression mechanisms as described in RFC 2507 [30] is not part of PDCP TTCN. PDCP testing make use of uncompressed, compressed and decompressed TCP/IP header packets of a certain packet stream and uncompressed, compressed and decompressed UDP/IP header packets of a certain generation. This parameters are given as test parameter (PIXIT information).

PDCP testing includes transmission/reception of compressed/decompressed IP header packets, PDCP sequence numbering while lossless SRNS relocation and PID assignment rules as well as PDCP configuration tests as described in 3GPP TS 25.323 [19], Release 99. It does not test optimization specific protocol behaviour as error recovery and packet reordering as described in RFC 2507 [30].

6.9.2 PDCP test method

For PDCP testing, the RB test mode is used with test loop mode 1. After establishing a PS session with RB in RLC UM or/and AM, the UE is configured to support a negotiated PDCP configuration. UDP/IP header packets are used as Non-TCP/IP header packets as PDCP test data.

There are different input parameter as PIXIT values necessary for PDCP testing.

For TCP/IP header packets, uncompressed TCP/IP header packets shall be defined as PIXIT input parameter. In addition, there are the corresponding RFC 2507 [30] FULL_HEADER packet, COMPRESSED_TCP packet and COMPRESSED_TCP_NONDELTA packet given for each TCP/IP header packet as PIXIT information.

For UDP/IP header packets, uncompressed UDP/IP header packets shall be defined as PIXIT input parameter. In addition, there are the corresponding RFC 2507 [30] FULL_HEADER packet and COMPRESSED_NON_TCP packet given for each UDP/IP header packet as PIXIT information.

To check the use of certain PID values assigned to IP compressed header types, a given IP header packet (PIXIT) will be sent to the UE. The UE shall return a appropriate valid IP header packet type, which corresponds to the previous sent IP header packet. The usage of valid compressed/uncompressed IP header packets shall be checked by comparing the given PIXIT IP header packet types for each IP header packet previously sent.

The IP header packet order as described in RFC 2507 [30] shall be applied within a test case.

If for example an TCP/IP header packet of type "COMPRESSED_TCP" shall be sent, the TTCN uses the given TCP/IP header packet (PIXIT) for transmission to the UE. The UE shall decompress the received packets appropriate, afterwards it will be returned by the loop back entity and it shall be sent by applying IP header compression rules as described in RFC 2507 [30] and as configured. Then, the SS receives returned IP header packets and compares it with all valid IP header packets given as PIXIT parameter corresponding to the previously sent IP header packet. It is checked, whether or not the IP header packet with assigned PID is valid and a configured PDCP PDU where used for transmission. In this way, it is checked, that the UE performs IP header compression as configured and is able to assign the correct PID values.

6.10 Multi-RAT Handover Test Model

6.10.1 Overview

The test model is shown in figure 15. The SS in the model consists of UTRAN emulation part and GERAN emulation part, GERAN emulation part includes protocol emulation modules for GSM CS services and protocol emulation modules for GPRS service. Protocol stack L1 (GERAN), L2 is for GSM CS service function emulation, protocol stack L1, RLC/MAC, LLC, SNDCP is for GPRS service function emulation. SNDCP emulation model and relevant PCO's can be removed if "traffic channel gets through" is not tested.

L1 (GERAN) provides necessary physical layer functionality for both GSM and GPRS. A control PCO and a set of ASP's are defined for configuring and controlling its protocol behaviour required in the test cases. L1 (GERAN) provides services to L2 and RLC/MAC emulation modules, the interfaces between them are not specified in this test model, it is implementation dependent and shall follow the relevant GSM and GPRS specifications.

L2 emulates necessary GSM L2 protocol functionality used in testing. A data PCO and a set of ASP's are defined for this module and used for transmitting and receiving layer 3 signalling messages and use data. The definition of the PCO and these ASP's are based on the logical channel concept of GSM specification. A control PCO and related ASP's are also defined for L2, they are used to introduce abnormal layer 2 behaviour required by the test purposes.

RLC/MAC is emulation module for GPRS Radio Link Control/Medium Access Control protocol. Two PCO's and related ASP's are defined for the module. Control PCO is used to set TBF and assign physical resources to it, actual physical resources (packet channels) are created by L1 (GERAN) ASP's beforehand. Data PCO is for transmitting and receiving RLC control messages (RLC control block). Before any RLC data or control block, except RLC control block on PCCCH or PRACH, or PBCCH, is sent (or received) a proper TBF shall be configured. In addition RLC/MAC module provides service to LLC emulation module, the interface between them is determined by implementation and shall be compliant with relevant core specification.

LLC performs GPRS Logical Link Control protocol emulation. Its data PCO and ASP's are used for exchange GMM signalling messages between TTCN and the UE under test. The current defined ASP's on control PCO are subset of the primitives defined in core specification, they are used to assign, un-assign TLLI and ciphering parameters, or get status report.

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: 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
- sunChannel = 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 channelCombanition 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.

According to the test model creation of a multislot configuration for circuit switched connection needs two ASP calls. Firstly, G_L1_CreatedBasicPhyCh_REQ is called to establish the main channel, then 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.

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.

6.10.2.4.2 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 [31] clause 6.3.1.3. SYSTEM INFORMATION message newly delivered shall override the same type SYSTEM IFORMATION 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 3GPP TS 45.002 [31] 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".

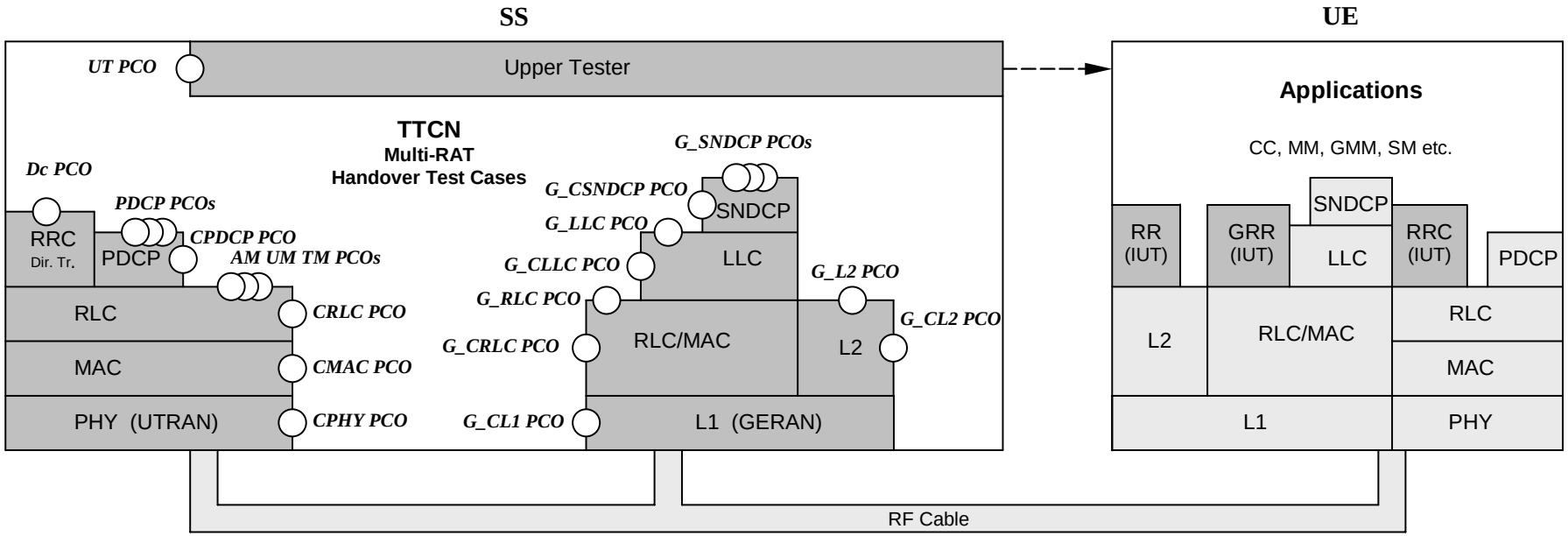

Figure 15: The model of multi-RAT handover testing

6.11 DCH-DSCH model

The model illustrates the relationship between various channels from logical channel to physical channels. DCH are associated with DSCH.

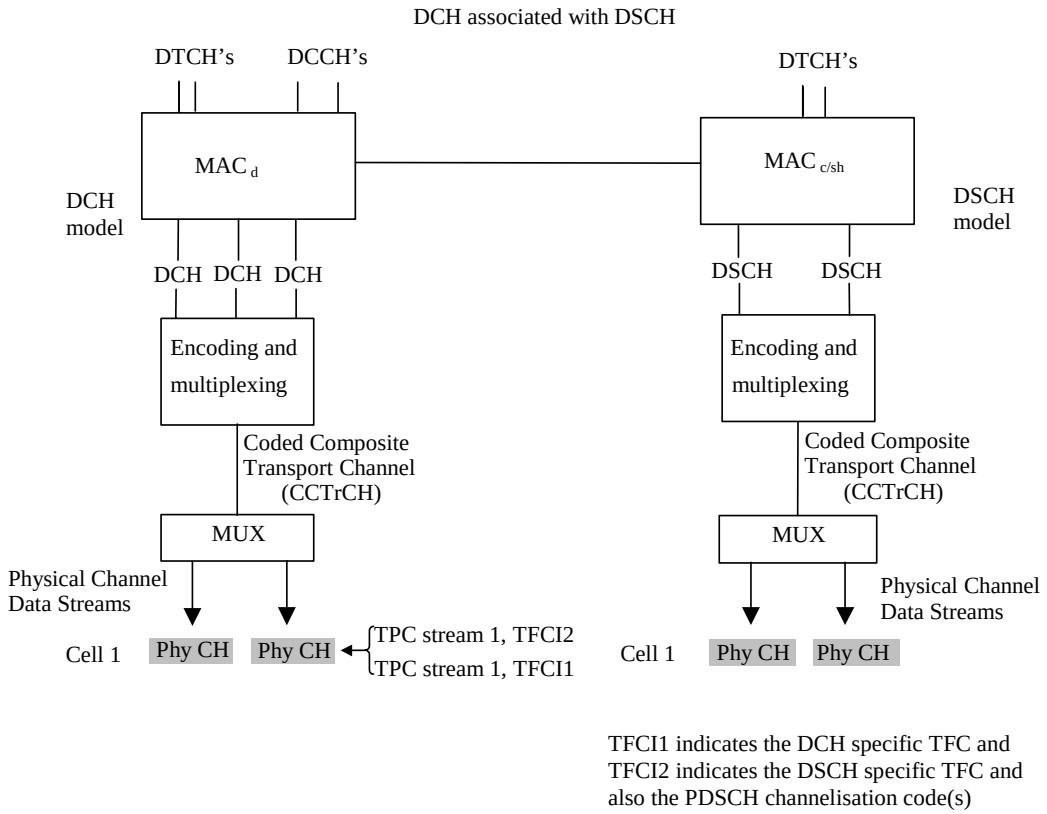

Figure 16: Associated DCH-DSCH model

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

7.1 NAS PCO and ASP definitions

7.1.1 NAS PCO Definitions

Table 3: Dc PCO Type Declarations

PCO Type Declarations	
PCO Type	Dc_SAP
Role	LT
Comments	The PCO type for NAS testing

Table 4: Dc PCO Declarations

PCO Declarations	
PCO Name	Dc
PCO Type	Dc_SAP
Role	LT
Comments	Carry transmission and reception of NAS messages

7.1.2 Primitives used at Dc PCO

The Dc PCO is used to transmit and receive NAS (MM, CC, SM, SS) messages. Two categories of primitives are operated at the Dc PCO:

- RRC_DataReq for transmission of a NAS PDU;
- RRC_DataInd for reception of a NAS PDU.

These primitives are declared in TTCN tabular form, see table 5.

Table 5: Primitives used at the Dc PCO

Primitive	Parameters	Use
RRC_DataInd	Cell identity INTEGER (-31..32) LogicChGSM SapId CN domain id START NAS message	The ASP is used to indicate the receipt of a NAS message using acknowledged operation
RRC_DataReq	Cell identity INTEGER (-31..32) LogicChGSM SapId CN domain id NAS message	The ASP is used to request the transmission of a NAS message using acknowledged operation.

The RB Identity and CN domain parameters defined in the primitives are mandatory for UTRAN and not applicable for GERAN.

The START parameter is mandatory in INITIAL DIRECT TRANSFER; each time when it is received the new START shall be downloaded to the SS to reinitialize counters-C and counters-I.

The LogicChGSM and SapId parameters are mandatory for GERAN and not applicable for UTRAN. They are defined because they may be used for future TTCN test cases.

Except the initial, uplink and downlink direct transfer procedures, the NAS TTCN specification uses the TTCN test steps to realize all RRC functions for testing. The single layer test concept is kept for the NAS tests.

A simple RRC emulation shall be maintained for the NAS tests. It has four functions:

- Emulate the three direct transfer procedures;
- Convert the NAS downlink messages defined in 3GPP TS 24.008 [9] in table format to the NAS message in ASN.1 octet string specified in 3GPP TS 25.331 [21]. Convert the NAS uplink message in the reverse way;
- PER encoding and decoding;
- Have the integrity protection.

RB3 and RB4 are specifically used for the NAS signalling. When an uplink message entered the receiving buffer at AM-SAP from the RLC emulation, either an RRC test step if running will take it out; or the RRC emulation if running will pick the received message from the buffer. Activation of any RRC test steps and activation of any NAS test steps at the same time shall be excluded in TTCN (no concurrency between them).

7.2 Ut PCO and ASP definitions

7.2.1 Ut PCO Declarations

The Ut PCO is served as the interface to the UE EMMI for remote control of operations, which have to be performed during execution of a test case such as to switch the UE on/off, initiate a call, etc.

Table 6: Declaration of the uppertester PCO type

PCO Type Declarations	
PCO Type	MMI
Role	UT
Comments	The PCO type for MMI or EMMI of the upper tester

Table 7: Declaration of the Ut PCO

PCO Declarations	
PCO Name	Ut
PCO Type	MMI
Role	UT
Comments	Carry transmission commands and reception of results for the upper tester

7.2.2 Primitives used at Ut PCO

The Ut PCO is used to indicate to the upper tester actions and to receive the acknowledgement of these actions. The AT commands are used wherever the suitable commands exist within 3GPP TS 27.007 [23], 3GPP TS 27.005 [22] and 3GPP TS 27 060 [24]. An MMI command is used, when AT commands does not exit for the action to performed. The primitives used at the Ut PCO, are declared in TTCN tabular form, see the table 8.

Table 8: Primitives used at the Ut PCO

Primitive	Parameters	Use
AT_CmdReq	Command: IA5String SMS_BlockMode: HEXSTRING	Request an AT command to the upper tester.
AT_CmdInd	Command: IA5String SMS_BlockMode: HEXSTRING	Indication of a result from the upper tester.
AT_CmdCnf	Result: BOOLEAN ResultString: IA5String SMS_BlockMode: HEXSTRING	Return a positive or negative result from the command previously sent. Both the boolean result and String parameter are optional.
MMI_CmdReq	Command: IA5String	Request a command to the upper tester.
MMI_CmdCnf	Result: BOOLEAN ResultString: IA5String	Return a positive or negative result from the command previously sent. The String parameter is optional.

The AT_CmdReq primitive for sending AT commands is mostly used to trigger electronically an uplink access, such as initiating of a call, attaching or detaching, starting packet data transfer etc. The MMI_ primitive is defined mainly for observation of some test events via a test operator, such as checking DTMF tone or checking called party number, etc.

The AT_CmdInd primitive for receiving AT commands is mostly used to transfer unsolicited result codes from the UE to the lower tester.

The SMS_BlockMode parameter is used to control and observe the Block mode procedure for SMS. This parameter is not yet used; it is defined for future development. The Command and SMS_BlockMode parameters are mutually exclusive

For the Command in the AT_CmdReq and AT_CmdInd primitives, the verbose format is used as defined in 3GPP TS 27.007 [23]. For the Command in MMI_CmdReq, just a descriptive IA5 string line, like "Check DTMF tone" is used.

7.3 RRC PCO and ASP definitions

7.3.1 AM/UM/TM PCO and ASP definitions

7.3.1.1 SAP and PCO for data transmission and reception

Table 9: Declaration of the RRC PCO Type

PCO Type Definition	
PCO Type	DSAP
Role	LT
Comment	DATA transmission and reception

Table 10: PCO TM declaration

PCO Type Definition	
PCO Name	TM
PCO Type	DSAP
Role	LT
Comment	Carry Transparent Mode RLC PDU

Table 11: PCO AM declaration

PCO Type Definition	
PCO Name	AM
PCO Type	DSAP
Role	LT
Comment	Carry Acknowledged Mode RLC PDU

Table 12: PCO UM declaration

PCO Type Definition	
PCO Name	UM
PCO Type	DSAP
Role	LT
Comment	Carry Unacknowledged Mode RLC PDU

Table 13: PCO BMC declaration

PCO Type Definition	
PCO Name	BMC
PCO Type	DSAP
Role	LT
Comment	Provide Unacknowledged Mode BMC data transmission service

7.3.2 Control PCO and ASP

7.3.2.1 SAP and PCO for control primitives transmission and reception

Table 14: SAP declaration

PCO Type Definition	
PCO Type	CSAP
Role	LT
Comment	Control primitives transmission and reception

Table 15: PCO CPHY

PCO Definition	
PCO Name	CPHY
PCO Type	CSAP
Role	LT
Comment	Control Physical Layer

Table 16: PCO CRLC

PCO Type Definition	
PCO Name	CRLC
PCO Type	CSAP
Role	LT
Comment	Control RLC Layer

Table 17: PCO CMAC

PCO Type Definition	
PCO Name	CMAC
PCO Type	CSAP
Role	LT
Comment	Control MAC Layer

Table 18: PCO CBMC

PCO Type Definition	
PCO Name	CBMC
PCO Type	CSAP
Role	LT
Comment	Control BMC Layer

7.3.2.2 Control ASP Type Definition

7.3.2.2.1 CPHY_AICH_AckModeSet

ASN.1 ASP Type Definition	
Type Name	CPHY_AICH_AckModeSet_REQ
PCO Type	CSAP
Comment	To request for setting of AICH Acknowledge Mode
Type Definition	

```
SEQUENCE    {
            cellId              INTEGER(0..63),
            routingInfo         RoutingInfo,
            ratType             RatType,
            aICH_Mode           AICH_Mode
}
```

ASN.1 ASP Type Definition	
Type Name	CPHY_AICH_AckModeSet_CNF
PCO Type	CSAP
Comment	To confirm setting of AICH Acknowledge Mode
Type Definition	

```
SEQUENCE    {
                cellId                  INTEGER(0..63),
                routingInfo             RoutingInfo
}
```

ASN.1 Type Definition	
Type Name	AICH_Mode
Comment	Normal operation: The AICH will operate as normal, and will acknowledge or negatively acknowledge on all UE RACH transmission attempts, appropriately. No Acknowledge: The AICH shall not transmit acknowledge or Negative Acknowledge on all UE RACH transmission attempts. Negative Acknowledge: The AICH shall transmit Negative Acknowledge on all UE RACH transmission attempts
Type Definition	
ENUMERATED {	
Normal (0),	
noAck (1),	
negACK (2)	
}	

7.3.2.2.2 CPHY_Cell_Config

ASN.1 ASP Type Definition	
Type Name	CPHY_Cell_Config_CNF
PCO Type	CSAP
Comment	To confirm to setup the cell parameter
Type Definition	
SEQUENCE {	
cellId	INTEGER(0..63)
}	

ASN.1 ASP Type Definition	
Type Name	CPHY_Cell_Config_REQ
PCO Type	CSAP
Comment	To request to setup the cell parameter. The unit of tcell is chip; the unit of sfnOffset is frame number; the primary scambling code number of the cell is 16*primaryScramblingCode_SS; the unit of dLTxAttenuationLevel is dB.
Type Definition	
SEQUENCE {	
cellId	INTEGER(0..63),
tcell	INTEGER(0..38399),
sfnOffset	INTEGER(0..4095),
frequencyInfo	FrequencyInfo,
primaryScramblingCode_SS	INTEGER(0..511),
cellTxPowerLevel	CellTxPowerLevel,
dLTxAttenuationLevel	INTEGER(0..30)
}	

ASN.1 Type Definition	
Type Name	CellTxPowerLevel
Comment	The defaultCellTxPowerLvl is a default setting and is used for the most signalling tests. The real total cell DL Tx power level equals to the sum of the DL Tx power of the individual physical channels configured. The totalCellTxPowerLvl applies to e.g. the idle mode tests in a non-default multi-cell radio environment.
Type Definition	
CHOICE {	
defaultCellTxPowerLvl	NULL,
totalCellTxPowerLvl	DL_TxPower
}	

7.3.2.2.3 CPHY_Cell_Config

ASN.1 ASP Type Definition	
Type Name	CPHY_Cell_Release_CNF
PCO Type	CSAP
Comment	The confirmation to the CPHY_Cell_Release_Req
Type Definition	

```
SEQUENCE {
            soft_Reset          BOOLEAN,
            cell_ID_List        SEQUENCE (SIZE (1..8)) OF INTEGER(0..63)    -- cell IDs
}
```

ASN.1 ASP Type Definition	
Type Name	CPHY_Cell_Release_REQ
PCO Type	CSAP
Comment	1. This Primitive with "Soft_Reset" flag ON gives a common known starting point/state of SS for a test case. The SS performs the following whenever it receives this primitive with "Soft_Reset" flag ON:Releases all configured Channels and cells (if any) irrespective of Cell ID list IE. 2. Releases the associated Memory Buffers (if any). 3. Cancels all active timers (if any) With "Soft_Reset" flag OFF: 1. Releases cells listed in IE Cell_ID_List and associated configured Channels (if any) 2. Releases the Memory Buffers(if any) associated with Cells listed in IE Cell_ID_List 3. Cancels all active timers (if any) associated with Cells listed in IE Cell_ID_List.
Type Definition	

```
SEQUENCE {
            soft_Reset          BOOLEAN,
            cell_ID_List        SEQUENCE (SIZE (1..8)) OF INTEGER(0..63)    -- cell IDs
}
```

7.3.2.2.4 CPHY_Ini

ASN.1 ASP Type Definition	
Type Name	CPHY_Ini_REQ
PCO Type	CSAP
Comment	Request to initialize the test
Type Definition	

```
ENUMERATED {
            defaultRadioEnvironment(0),
            nonDefaultMultiCell(1)
}
```

ASN.1 ASP Type Definition	
Type Name	CPHY_Ini_CNF
PCO Type	CSAP
Comment	Confirm the test initialization
Type Definition	

```
SEQUENCE    {
            confirmation        NULL
}
```

7.3.2.2.5 CPHY_Cell_TxPower_Modify

ASN.1 ASP Type Definition	
Type Name	CPHY_Cell_TxPower_Modify_CNF
PCO Type	CSAP
Comment	To confirm to change the DL power
Type Definition	

```
SEQUENCE    {
            cellId              INTEGER(0..63)
}
```

ASN.1 ASP Type Definition	
Type Name	CPHY_Cell_TxPower_Modify_REQ
PCO Type	CSAP
Comment	To request to change the DL power
Type Definition	

```
SEQUENCE    {
            cellId                      INTEGER(0..63),
            dLTxAttenuationLevel        INTEGER(0..30)
}
```

7.3.2.2.6 CPHY_Frame_Number

ASN.1 ASP Type Definition	
Type Name	CPHY_Frame_Number_CNF
PCO Type	CSAP
Comment	To return the requested connection frame number. The routingInfo indicates a physical channel.
Type Definition	

```
SEQUENCE    {
            cellId                      INTEGER(0..63),
            routingInfo                 RoutingInfo,
            frameNumber                 INTEGER (0..255)
}
```

ASN.1 ASP Type Definition	
Type Name	CPHY_Frame_Number_REQ
PCO Type	CSAP
Comment	To request the physical layer to return a connection frame number on which the next message can be sent at the specified PCO on the specified logical channel. The return frame number shall leave time from current frame number in order to leave some execution time for TTCN preparing next message. The routingInfo indicates a physical channel
Type Definition	

```
SEQUENCE    {
            cellId                  INTEGER(0..63),
            routingInfo             RoutingInfo
}
```

7.3.2.2.7 CPHY_Out_of_Sync

ASN.1 ASP Type Definition	
Type Name	CPHY_Out_of_Sync_IND
PCO Type	CSAP
Comment	To report that the physical channel synchronization (in FDD mode, sync with uplink DPCCH) was lost as detected by the SS receiver.
Type Definition	

```
SEQUENCE    {
            cellId                      INTEGER(0..63),
            routingInfo                 RoutingInfo
}
```

7.3.2.2.8 CPHY_PRACH_Measurement

ASN.1 ASP Type Definition	
Type Name	CPHY_PRACH_Measurement_CNF
PCO Type	CSAP
Comment	To Confirm PRACH Measurement Req
Type Definition	

```
SEQUENCE    {
            cellId              INTEGER(0..63),
            routingInfo         RoutingInfo
}
```

ASN.1 ASP Type Definition	
Type Name	CPHY_PRACH_Measurement_REQ
PCO Type	CSAP
Comment	To request for Start or Stop of PRACH Measurements to be done every PRACH PREAMBLE or MESSAGE received.
Type Definition	

```
SEQUENCE    {
            cellId                  INTEGER(0..63),
            routingInfo             RoutingInfo,
            ratType                 RatType,
            pRACH_MeasurementInd    PRACH_MeasurementInd
}
```

ASN.1 Type Definition	
Type Name	PRACH_MeasurementInd
Comment	1. Start : The SS shall start the sending PRACH parameters Measurement report on CPHY PCO, for each PRACH Preamble or MESSAGE received from the UE by primitive CPHY_PRACH_Measurement_Report_IND on CPHY PCO. 2. Stop : The SS shall stop sending of PRACH parameters Measurement report on CPHY PCO, for each PRACH Preamble or MESSAGE received from the UE by primitive CPHY_PRACH_Measurement_Report_IND on CPHY PCO.
Type Definition	

```
ENUMERATED  {
            start (0),
            stop  (1)
}
```

ASN.1 ASP Type Definition	
Type Name	CPHY_PRACH_Measurement_Report_IND
PCO Type	CSAP
Comment	SS indicates a PRACH parameters measurement report for each PRACH Preambles or MESSAGE received from the UE
Type Definition	

```
SEQUENCE     {
            cellId                      INTEGER(0..63),
            routingInfo                 RoutingInfo,
            ratType                     RatType,
            measurementReport           PRACH_MeasurementReport
}
```

ASN.1 Type Definition	
Type Name	PRACH_MeasurementReport
Comment	
Type Definition	

```
SEQUENCE    {
            usedPRACH_AcessSlot         INTEGER (0..14),
            usedPRACH_Signature         INTEGER (0..15) OPTIONAL
}
```

7.3.2.2.9 CPHY_RL_Modify

ASN.1 ASP Type Definition	
Type Name	CPHY_RL_Modify_CNF
PCO Type	CSAP
Comment	To confirm to modify the Radio Link
Type Definition	

```
SEQUENCE    {
            cellId                      INTEGER(0..63),
            routingInfo                 RoutingInfo
}
```

ASN.1 ASP Type Definition	
Type Name	CPHY_RL_Modify_REQ
PCO Type	CSAP
Comment	To request to modify the Radio Link HardHandover (PhysicalChannelReconfig) ChannelizationCodeChange FrequencyChange PhysicalChannelModifyForTrCHReconfig CompressedMode(PhysicalChannelReconfig) Re_Synchronized HardHandover Softhandover
Type Definition	

```
SEQUENCE        {
                cellId                  INTEGER(0..63),
                routingInfo             RoutingInfo,
                ratType                 RatType,
                modifyMessage           CphyRlModifyReq
}
```

ASN.1 Type Definition	
Type Name	CphyRlModifyReq
Comment	
Type Definition	

```
SEQUENCE    {
        activationTime                  SS_ActivationTime,
        physicalChannelInfo
            CHOICE    {         dpch_CompressedModeStatusInfo
    Dpch_CompressedModeStatusInfo,
                secondaryCCPCHInfo          SecondaryCCPCHInfo,
                pRACHInfo                   PRACHInfo,
                dPCHInfo                    DPCHInfo,
            }
}
```

ASN.1 Type Definition	
Type Name	SS_ActivationTime
Comment	
Type Definition	

```
CHOICE {
        activationCFN                   ActivationTime,
        activateNow                     NULL
}
```

7.3.2.2.10 CPHY_RL_Release

ASN.1 ASP Type Definition	
Type Name	CPHY_ RL_Release_CNF
PCO Type	CSAP
Comment	PHY emulator confirms that a specified physical channel has been released.
Type Definition	

```
SEQUENCE    {
            cellId                      INTEGER(0..63),
            routingInfo                 RoutingInfo
}
```

ASN.1 ASP Type Definition	
Type Name	CPHY_RL_Release_REQ
PCO Type	CSAP
Comment	To request to release the Radio Link
Type Definition	

```
SEQUENCE    {
            cellId                      INTEGER(0..63),
            routingInfo                 RoutingInfo
}
```

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..15),
            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,
            sccpchId_associated         INTEGER {0..31}
}
```

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 TS25.211 [40]
Type Definition	

```
INTEGER (0..17)
```

ASN.1 Type Definition	
Type Name	PDSCHInfo
Comment	
Type Definition	

```
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
}
```

7.3.2.2.12 CPHY_Sync

ASN.1 ASP Type Definition	
Type Name	CPHY_Sync_IND
PCO Type	CSAP
Comment	To indicate that physical channel synchronization (in FDD mode, sync with DPCCH) has been achieved.

Type Definition

```
SEQUENCE    {
                cellId                      INTEGER(0..63),
                routingInfo                 RoutingInfo
}
```

7.3.2.2.13 CPHY_TrCH_Config

ASN.1 ASP Type Definition	
Type Name	CPHY_TrCH_Config_CNF
PCO Type	CSAP
Comment	To confirm to configure the transport channel

Type Definition

```
SEQUENCE    {
            cellId                      INTEGER(0..63),
            routingInfo                 RoutingInfo
}
```

ASN.1 ASP Type Definition	
Type Name	CPHY_TrCH_Config_REQ
PCO Type	CSAP
Comment	To request to configure the transport channel

Type Definition

```
SEQUENCE    {
            cellId                      INTEGER(0..63),
            routingInfo                 RoutingInfo,
            ratType                     RatType,
            configMessage               CphyTrchConfigReq
}
```

ASN.1 Type Definition	
Type Name	CphyTrchConfigReq
Comment	To request to configure the transport channel. The same TFCS information should be provided to the PHY and MAC layers at all times. When a CPHY_TrCH_Config_REQ is used to configure the PHY layer, a corresponding CMAC_Config_REQ should be sent to the MAC layer to ensure that the configuration is consistent.

Type Definition

```
SEQUENCE    {
        activationTime      SS_ActivationTime,
        ulconnectedTrCHList     SEQUENCE (SIZE (0..maxTrCH)) OF SEQUENCE {
                trchid                  TransportChannelIdentity,
                ul_TransportChannelType SS_UL_TransportChannelType,
                transportChannelInfo    CommonOrDedicatedTFS
                                                            }   OPTIONAL,
        ulTFCS              TFCS    OPTIONAL,
        dlconnectedTrCHList     SEQUENCE (SIZE (0..maxTrCH)) OF SEQUENCE {
                trchid                  TransportChannelIdentity,
                dl_TransportChannelType SS_DL_TransportChannelType,
                transportChannelInfo    CommonOrDedicatedTFS
                                                            }   OPTIONAL,
        dlTFCS              TFCS    OPTIONAL
}
```

ASN.1 Type Definition	
Type Name	RoutingInfo
Comment	To route between each channels.
Type Definition	

```
CHOICE     {
        physicalChannelIdentity         INTEGER                 {0..31},
        transportChannelIdentity        TransportChannelIdentity,
        logicalChannelIdentity          LogicalChannelIdentity,
        rB_Identity                     INTEGER                 {-31..32},
        cn-DomainIdentity               CN-DomainIdentity
}
```

ASN.1 Type Definition	
Type Name	RatType
Comment	To select route between each channels.
Type Definition	

```
ENUMERATED  {
            fdd (0), tdd (1)
}
```

ASN.1 Type Definition	
Type Name	CommonOrDedicatedTFS
Comment	Transport Format Set
Type Definition	

```
SEQUENCE {
    tti                                 CHOICE {
        tti10                               CommonOrDedicatedTF_InfoList,
        tti20                               CommonOrDedicatedTF_InfoList,
        tti40                               CommonOrDedicatedTF_InfoList,
        tti80                               CommonOrDedicatedTF_InfoList,
        dynamic                         CommonOrDedicatedTF_InfoList_DynamicTTI
    },
    semistaticTF_Information            SemistaticTF_Information
}
```

ASN.1 Type Definition	
Type Name	CommonOrDedicatedTF_InfoList
Comment	Transport Format Set
Type Definition	

```
SEQUENCE (SIZE (1..maxTF)) OF CommonOrDedicatedTF_Info
```

ASN.1 Type Definition	
Type Name	CommonOrDedicatedTF_Info
Comment	Transport Format Set
Type Definition	

```
SEQUENCE {
    tb_Size                 INTEGER (0..5035),
    numberOfTbSizeList      SEQUENCE (SIZE (1..maxTF)) OF NumberOfTransportBlocks,
    logicalChannelList      LogicalChannelList
}
```

ASN.1 Type Definition	
Type Name	CommonOrDedicatedTF_InfoList_DynamicTTI
Comment	Transport Format Set for TDD mode
Type Definition	

```
SEQUENCE {
    tb_Size                 INTEGER (0..5035),
    numberOfTbSizeList      SEQUENCE (SIZE (1..maxTF)) OF NumberOfTransportBlocks,
    logicalChannelList      LogicalChannelList
}
```

7.3.2.2.14 CPHY_TrCH_Release

ASN.1 ASP Type Definition	
Type Name	CPHY_TrCH_Release_REQ
PCO Type	CSAP
Comment	To request to release the Radio Link
Type Definition	

```
SEQUENCE    {
        cellId                  INTEGER(0..63),
        routingInfo             RoutingInfo
}
```

ASN.1 ASP Type Definition	
Type Name	CPHY_TrCH_Release_CNF
PCO Type	CSAP
Comment	To confirm to release the Radio Link
Type Definition	

```
SEQUENCE    {
            cellId                  INTEGER(0..63),
            routingInfo             RoutingInfo
}
```

7.3.2.2.15 CMAC_BMC_Scheduling

ASN.1 ASP Type Definition	
Type Name	CMAC_BMC_Scheduling_CNF
PCO Type	CSAP
Comment	To confirm the BMC scheduling.
Type Definition	

```
SEQUENCE    {
            cellId                  INTEGER(0..63),
            routingInfo             RoutingInfo
}
```

ASN.1 ASP Type Definition	
Type Name	CMAC_BMC_Scheduling_REQ
PCO Type	CSAP
Comment	Send the BMC scheduling information to the MAC.
Type Definition	

```
SEQUENCE     {
               cellId                   INTEGER(0..63),
               routingInfo              RoutingInfo,
               ratType                  RatType,
               schedulingInfo           BMC_SchedulingInfo
}
```

ASN.1 Type Definition	
Type Name	BMC_SchedulingInfo
Comment	
Type Definition	

```
SEQUENCE    {
            level1Info              BMC_SchedulingLevel1Info,
            level2Info              BMC_SchedulingLevel2Info    OPTIONAL

}
```

ASN.1 Type Definition	
Type Name	BMC_SchedulingLevel2Info
Comment	
Type Definition	

```
SEQUENCE    {
            starCtchBsIndex         INTEGER (1..256)        DEFAULT 1,
            drxSelectionBitmap      OCTET STRING
}
```

ASN.1 Type Definition	
Type Name	BMC_SchedulingLevel1Info
Comment	0 ≤ K ≤ N-1 (3GPP TS 25.331 [21], clause 8.5.16)
Type Definition	

```
SEQUENCE    {
            ctchAllocationPeriod        INTEGER (1..256),       -- N
            cbsFrameOffset              INTEGER (0..255)        -- K
}
```

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 or restart downlink ciphering or uplink deciphering. The physicalChannelIdentity of DPCH applies to routingInfo. Do not increment HFN part of COUNT-C if the value of incrementCOUNT_C_Ind is "NotIncr". If valueForLSBsOfHFN is present the SS initialize the LSBs of HFN component in COUNT-C accordingly. If it is absent the SS initialize the LSBs of HFN component in COUNT-C to zero.
Type Definition	

```
SEQUENCE {
            cellId                      INTEGER(-1..63),
            routingInfo                 RoutingInfo,
            ratType                     RatType,
            cn_DomainIdentity           CN_DomainIdentity,
            cipheringModeInfo           CipheringModeInfo,
            incrementCOUNT_C_Ind        ENUMERATED {Incr(0), NotIncr(1)}
            valueForLSBsOfHFN           INTEGER(0..15)  OPTIONAL
}
```

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
            -- RACHTrasmissionCtrolElements     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 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

```
ENUMELATED {
    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

```
ENUMELATED {
    dch     (0),
    fach    (1),
    bch     (2),
    pch     (3),
    dsch    (4)
}
```

ASN.1 Type Definition	
Type Name	LogicalChannelType
Comment	

Type Definition

```
ENUMERATED {
    BCCH    (0),
    PCCH    (1),
    CCCH    (2),
    CTCH    (3),
    DCCH    (4),
    DTCH    (5),
    SHCCH   (6)
}
```

ASN.1 Type Definition	
Type Name	MAC_HeaderManipulation
Comment	
Type Definition	

```
ENUMERATED  {
            NormalMacHeader (0),
            OmitMacHeader   (1)
}
```

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	

```
SEQUENCE    {
            cellId                      INTEGER(0..63),
            routingInfo                 RoutingInfo
}
```

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	

```
SEQUENCE     {
               cellId                       INTEGER(0..63),
               routingInfo                  RoutingInfo,
               ratType                      RatType,
               configMessage                CmacPagingConfigReq
}
```

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                      INTEGER (-1..63),
        routingInfo                 RoutingInfo,
        ratType                     RatType,
        restrictAllowedTFCs         TFC_Restriction
}
```

ASN.1 Type Definition	
Type Name	TFC_Restriction
Comment	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. 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. 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.
Type Definition	

```
SEQUENCE {
        ulTFCI_Restriction          TFC_Subset OPTIONAL,
        dlTFCI_Restriction          TFC_Subset OPTIONAL
}
```

Detailed Comments	SS requirements for downlink. 1. The SS MAC layer shall not use a restrictednon-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 [18]) 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: 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. NB: The TTCN author is responsible for ensuring: 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 minimize the number of 'no data' TFCs used by the MAC layer, and the amount of buffering that must be performed by the RLC layer. SS requirements for uplink: The SS shall discard all data received using a restricted non-allowed TFC.

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	

```
SEQUENCE    {
            cellId                  INTEGER(-1..63)
}
```

ASN.1 ASP Type Definition	
Type Name	CMAC_SecurityMode_Config_REQ
PCO Type	CSAP
Comment	To request to configure the MAC security mode. 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.
Type Definition	

SEQUENCE {
cellId INTEGER(-1..63),
macCipheringInfo SecurityInfo
}	

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 orrestart 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 initialize the LSBs of HFN component in UM COUNT-C accordingly. If it is absent the SS initialize 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 and the ciphering configuration keeps unchanged 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	

```
CHOICE  {
        setup                           RBInfo,
        reconfigure                     RBInfo,
        release                         NULL,
        stop                            NULL,
        continue                        NULL
}
```

ASN.1 Type Definition	
Type Name	RBInfo
Comment	
Type Definition	

```
SEQUENCE (
              sS_rlc_Info               SS_RLC_Info         OPTIONAL,
              rB_LogCH_Mapping          RB_LogCH_Mapping
}
```

ASN.1 Type Definition	
Type Name	RB_LogCH_Mapping
Comment	Provide mapping information between RB, logical channel and CN domain.
Type Definition	

```
SEQUENCE {
    uLlogicalChannelIdentity                LogicalChannelIdentity  OPTIONAL,
    dLlogicalChannelIdentity                LogicalChannelIdentity  OPTIONAL,
    logicalChannelType                      LogicalChannelType      OPTIONAL,
    cn-DomainIdentity                       CN-DomainIdentity       OPTIONAL
}
```

ASN.1 Type Definition	
Type Name	SS_RLC_Info
Comment	UL and DL have been swapped intentionally in this type definition. This is to maximize re-use of the type definitions in 3GPP TS 25.331 [21] 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. For 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	

SEQUENCE {
sS_ul_RLC_Mode DL_RLC_Mode OPTIONAL,
sS_dl_RLC_Mode SS_DL_RLC_Mode OPTIONAL
}	

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 modifythe 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_Integ~~rity~~ProtActivationInfo the SS shall initialize 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 initialization 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	

ASN.1 Type Definition	
Type Name	SS_IntegrityProtActivationTimeInfo
Comment	Omitting rrc_MessageSequenceNumber means activation time set to "now".
Type Definition	

SEQUENCE {
rb_Identity INTEGER (-31..32),
rrc_MessageSequenceNumber RRC_MessageSequenceNumber OPTIONAL
}	

7.3.2.2.26 CRLC_Integrity_Failure

ASN.1 ASP Type Definition	
Type Name	CRLC_Integrity_Failure_IND
PCO Type	CSAP
Comment	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.
Type Definition	

SEQUENCE {
cellId INTEGER(-1..63),
routingInfo RoutingInfo,
failureCause ENUMERATED { codeNotMatched(0) }
-- the enumerated types of failure cause field is ffs
}	

7.3.2.2.26a CRLC_MAC_I_Mode

ASN.1 ASP Type Definition	
Type Name	CRLC_MAC_I_Mode_CNF
PCO Type	CSAP
Comment	Confirm a previous CRLC_MAC_I_Mode_REQ being successful.
Type Definition	

SEQUENCE {
cellId INTEGER(-1..63),
srbId INTEGER(0..4)
}	

ASN.1 ASP Type Definition	
Type Name	CRLC_MAC_I_Mode_REQ
PCO Type	CSAP
Comment	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.
Type Definition	

```
SEQUENCE    {
            cellId              INTEGER(-1..63),
            srbId               INTEGER (0..4),
            mode                ENUMERATED {normal(0), erroneous(1)}
}
```

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,
            gsmCipheringKey             BITSTRING(64)       OPTIONAL
}
```

Detailed Comments	When the SS receives SecurityInfo, the SS first stores the contents. The SecurityInfo contents is not activated ~~ion of the contents follows~~ until receiving 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. EXAMPLE: Omitting of startValue indicates not to re-initialize the relevant COUNT-C or COUNT-I, omitting of cipheringKey indicates that the current ciphering key is valid.

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
}
```

ASN.1 ASP Type Definition	
Type Name	CRLC_SetRRC_MessageSN_REQ
PCO Type	CSAP
Comment	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 initialize SS RRC SN.
Type Definition	

```
SEQUENCE    {
            cellId                  INTEGER(-1..63),
            routingInfo             RoutingInfo,
            count_I_LSB_UL          RRC_SequenceNumber      OPTIONAL,
            count_I_LSB_DL          RRC_SequenceNumber      OPTIONAL
}
```

7.3.2.2.29 CRLC_SequenceNumber

ASN.1 ASP Type Definition	
Type Name	CRLC_Sequence_Number_CNF
PCO Type	CSAP
Comment	To return the requested counter sequence number
Type Definition	

```
SEQUENCE    {
            cellId                  INTEGER(-1..63),
            routingInfo             RoutingInfo,
            count_C_MSB_UL          COUNT_C_MSB,
            count_C_LSB_UL          RLC_SequenceNumber,
            count_C_MSB_DL          COUNT_C_MSB,
            count_C_LSB_DL          RLC_SequenceNumber
}
```

ASN.1 ASP Type Definition	
Type Name	CRLC_SequenceNumber_REQ
PCO Type	CSAP
Comment	To request the RLC layer to return current counter sequence numbers
Type Definition	

```
SEQUENCE    {
            cellId                  INTEGER(-1..63),
            routingInfo             RoutingInfo
}
```

7.3.2.2.30 CRLC_Status

ASN.1 ASP Type Definition	
Type Name	CRLC_Status_IND
PCO Type	CSAP
Comment	To report the occurrence of certain events to RRC. Note: the possible event types to be defined for this ASP is FFS.
Type Definition	

```
SEQUENCE    {
            cellId              INTEGER(-1..63),
            routingInfo         RoutingInfo,
            ratType             RatType,
            statusInd           CrlcStatusInd
}
```

ASN.1 Type Definition	
Type Name	CrlcStatusInd
Comment	
Type Definition	

```
ENUMERATED  {
            DataLinkFailure (0)
            MaxRESET        (1),
            SDUDiscarded    (2)
            -- __ More event types are to be added here
}
```

7.3.2.2.31 CRLC_Suspend

ASN.1 ASP Type Definition	
Type Name	CRLC_Suspend_CNF
PCO Type	CSAP
Comment	To confirm the~~o~~ suspension~~d~~ of data transmission. The parameter vt indicates either the value of the Send State Variable VT(S) for AM, or the value of Data State Varialble VT(US) for UM.
Type Definition	

```
SEQUENCE    {
            cellId                  INTEGER(-1..63),
            routingInfo             RoutingInfo,
            ~~n~~vt                     RLC_SequenceNumber
}
```

ASN.1 ASP Type Definition	
Type Name	CRLC_Suspend_REQ
PCO Type	CSAP
Comment	To request the~~o~~ suspension~~d~~ of data transmission. The parameter n indicates that an RLC entity will not send a PDU with "Sequence Number">=VT(S)+N for AM and "Sequence Number">=VT(US)+N for UM, where N is a non-negative integer.
Type Definition	

```
SEQUENCE    {
            cellId                  INTEGER(-1..63),
            routingInfo             RoutingInfo,
            n                       RLC_SequenceNumber
}
```

7.3.2.2.32 CBMC_Config

ASN.1 ASP Type Definition	
Type Name	CBMC_Config_CNF
PCO Type	CSAP
Comment	To confirm the BMC configuration, reconfiguration or release.
Type Definition	

```
SEQUENCE    {
            cellId                      INTEGER(0..63),
            routingInfo                 RoutingInfo         -- RBid
}
```

ASN.1 ASP Type Definition	
Type Name	CBMC_Config_REQ
PCO Type	CSAP
Comment	To request the configuration, reconfiguration or release of BMC.
Type Definition	

```
SEQUENCE    {
        cellId                      INTEGER(0..63),
        routingInfo                 RoutingInfo,            -- RBid
        configMessage               CHOICE {
            setup                       BMC_SchedulingInfo,
            release                     NULL}
}
```

7.3.2.2.33 RLC_TR_DATA

ASN.1 ASP Type Definition	
Type Name	RLC_TR_DATA_REQ
PCO Type	DSAP
Comment	To request to transmit DATA using transparent mode.

Type Definition

```
SEQUENCE    {
                cellId                  INTEGER(-1..63),
                routingInfo             RoutingInfo,
                tM_Message              CHOICE  {
                        dL_DCCH_Message             DL_DCCH_Message,
                        dL_CCCH_Message             DL_CCCH_Message,
                        pCCH_Message                PCCH_Message,
                        dL_SHCCH_Message            DL_SHCCH_Message,
                        bCCH_FACH_Message           BCCH_FACH_Message,
                        bCCH_BCH_Message            BCCH_BCH_Message,
                        invalid_dL_DCCH_Message     Invalid_DL_DCCH_Message,
                        invalid_dL_CCCH_Message     Invalid_DL_CCCH_Message,
                        invalid_dL_SHCCH_Message    Invalid_DL_SHCCH_Message}
}
```

ASN.1 ASP Type Definition	
Type Name	RLC_TR_DATA_IND
PCO Type	DSAP
Comment	To indicate to receive DATA using transparent mode.

Type Definition

```
SEQUENCE    {
            cellId                      INTEGER(-1..63),
            routingInfo                 RoutingInfo,
            tM_Message                  CHOICE  {
                        uL_DCCH_Message             UL_DCCH_Message,
                        uL_CCCH_Message             UL_CCCH_Message,
                        uL_SHCCH_Message            UL_SHCCH_Message}
}
```

7.3.2.2.34 RLC_AM_DATA

ASN.1 ASP Type Definition	
Type Name	RLC_AM_DATA_REQ
PCO Type	DSAP
Comment	To request to transmit DATA using acknowledged mode.

Type Definition

```
SEQUENCE    {
            cellId                  INTEGER (-1..63),
            routingInfo         RoutingInfo,
            confirmationRequest     AmConfirmationRequest,
            aM_Message              CHOICE  {
                        dL_DCCH_Message             DL_DCCH_Message,
                        dL_CCCH_Message             DL_CCCH_Message,
                        pCCH_Message                PCCH_Message,
                        dL_SHCCH_Message            DL_SHCCH_Message,
                        bCCH_FACH_Message           BCCH_FACH_Message,
                        bCCH_BCH_Message            BCCH_BCH_Message,
                        invalid_dL_DCCH_Message     Invalid_DL_DCCH_Message,
                        invalid_dL_CCCH_Message     Invalid_DL_CCCH_Message,
                        invalid_dL_SHCCH_Message    Invalid_DL_SHCCH_Message}
}
```

ASN.1 Type Definition	
Type Name	AmConfirmationRequest
Comment	If the noConfirmationRequested option is used, then an RLC_AM_DATA_CNF is not expected from the RLC AM entity. If the confirmationRequested option is used, then the RLC AM entity is being requested to provide an RLC_AM_DATA_CNF primitive containing the same Mui value.
Type Definition	

```
CHOICE {
            noConfirmationRequest       NULL,
            confirmationRequested       Mui
}
```

ASN.1 Type Definition	
Type Name	Mui
Comment	
Type Definition	

```
INTEGER {0..4095}
```

ASN.1 ASP Type Definition	
Type Name	RLC_AM_DATA_IND
PCO Type	DSAP
Comment	To indicate to receive DATA using acknowledged mode.
Type Definition	

```
SEQUENCE    {
            cellId                      INTEGER(-1..63),
            routingInfo                 RoutingInfo,
            integrityResult             IntegrityResult,
            aM_Message                  CHOICE  {
                        uL_DCCH_Message             UL_DCCH_Message,
                        uL_CCCH_Message             UL_CCCH_Message,
                        uL_SHCCH_Message            UL_SHCCH_Message}
}
```

ASN.1 Type Definition	
Type Name	IntegrityResult
Comment	
Type Definition	

```
CHOICE  {
            integrityNotUsed        NULL,
            integrityUsed           IntegrityStatus
}
```

ASN.1 Type Definition	
Type Name	IntegrityStatus
Comment	
Type Definition	

```
ENUMERATED {
            i_pass(0), i_fail(1)
}
```

ASN.1 ASP Type Definition	
Type Name	RLC_AM_DATA_CNF
PCO Type	DSAP
Comment	For RLC emulator to report to the upper layer that a previously transmitted SDU has been acknowledged correctly by the UE
Type Definition	

```
SEQUENCE    {
        cellId              INTEGER(-1..63),
        routingInfo         RoutingInfo,
        mui                 Mui
}
```

7.3.2.2.35 RLC_UM_DATA

ASN.1 ASP Type Definition	
Type Name	RLC_UM_DATA_REQ
PCO Type	DSAP
Comment	To request to transmit DATA using unacknowledged mode.

Type Definition

```
SEQUENCE    {
            cellId                  INTEGER(-1..63),
            routingInfo             RoutingInfo,
            uM_Message               CHOICE {
                        dL_DCCH_Message             DL_DCCH_Message,
                        dL_CCCH_Message             DL_CCCH_Message,
                        pCCH_Message                PCCH_Message,
                        dL_SHCCH_Message            DL_SHCCH_Message,
                        bCCH_FACH_Message           BCCH_FACH_Message,
                        bCCH_BCH_Message            BCCH_BCH_Message,
                        invalid_dL_DCCH_Message     Invalid_DL_DCCH_Message,
                        invalid_dL_CCCH_Message     Invalid_DL_CCCH_Message,
                        invalid_dL_SHCCH_Message    Invalid_DL_SHCCH_Message}
}
```

ASN.1 ASP Type Definition	
Type Name	RLC_UM_DATA_IND
PCO Type	DSAP
Comment	To indicate to receive DATA using unacknowledged mode.

Type Definition

```
SEQUENCE    {
            cellId                  INTEGER(-1..63),
            routingInfo             RoutingInfo,
            integrityResult         IntegrityResult,
            uM_Message               CHOICE {
                        uL_DCCH_Message             UL_DCCH_Message,
                        uL_CCCH_Message             UL_CCCH_Message,
                        uL_SHCCH_Message            UL_SHCCH_Message}
}
```

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 19: 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. 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 20: 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 21: 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 22: 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 23: 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 24: 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 SNDCP

Table 25: Declaration of SNDCP PCO

PCO Type Definition	
PCO Name	G_SNDCP
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 L1control primitives transmission and reception

Table 26: 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 27: 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 28: 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 29: 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 SNDCP control primitives transmission and reception

Table 30: Declaration of G_CSNDCP PCO

PCO Type Definition	
PCO Name	G_CSNDCP
PCO Type	G_CSAP
Role	LT
Comment	Control GPRS SNDCP 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 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]	
rfn		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 clause 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.
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 fn 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.
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_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.
rfn		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, 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.		
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	The SS is required to send valid layer 3 messages continuously on all paging subchannels on CCCH where paging can appear. 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; For "paging reorganization" the SS send the paging message in all paging subchannels. The required 51-multiframe occurs when: pagingGroup div (N div BS_PA_MFRMS) = (FN div 51) mod (BS_PA_MFRMS) The index to the required paging block in the 51-multiframe determined above: Paging block index = pagingGroup mod (N div BS_PA_MFRMS) N = (9-BS_AG_BLKS_RES) * BS_PA_MFRMS CCCH not combined or N = (3-BS_AG_BLKS_RES) * BS_PA_MFRMS CCCH + SDCCH combined		

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, when the UE/MS supporting SPLIT_PG_CYCLE on CCCH is in GPRS attached mode and PCCCH absent.		
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	The SS is required to send valid layer 3 messages continuously on all paging subchannels on CCCH where paging can appear. 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; For "paging reorganization" the SS send the paging message in all paging subchannels. The required 51-multiframe occurs when: pagingGroup div (M div 64) = (FN div 51) mod 64 The index to the required paging block in the 51-multiframe determined above: Paging block index = pagingGroup mod (M div 64) M = (9-BS_AG_BLKS_RES) × 64 CCCH not combined or M = (3-BS_AG_BLKS_RES) × 64 CCCH + SDCCH combined		
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_LogicChType
Type Definition	INTEGER
Type Encoding	
Comments	GERAN logical channel type: 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	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).

Type Name	PAGING_GROUP
Type Definition	INTEGER
Type Encoding	
Comments	3GPP TS 05.02 or 3GPP TS 45.002 [31] 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
t32	BITSTRING[65]		FN mod 5126
t23	BITSTRING[56]		FN mod 2651
Detailed Comments	see 3GPP TS 04.18 or 3GPP TS 44.018 [43] clause 10.5.2.38. The reduced frame number, FN modulo 42432 can be calculated in the following formula: 51 × ((t3 - t2) 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 [43] 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 3GPP TS 45.002 [31]. 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 3GPP TS 44.060 [32] 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 [31]. 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 3GPP TS 45.002 [31] 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	
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 if sending PACKET PAGING REQUEST. The required 52-multiframe occurs when: pagingGroup div (M div 64) = (FN div 52) mod 64 The index to the required paging block in the 51-multiframe determined above: Paging block index = pagingGroup mod (M div 64) M = (12 - BS_PAG_BLKS_RES - BS_PBCCH_BLKS) × 64		

Type Name	PAYLOAD_TYPE
Type Definition	BITSTRING[2]
Type Encoding	
Comments	3GPP TS 04.60 or 3GPP TS 44.060 [32] clause 10.4.7

Type Name	RRBP
Type Definition	BITSTRING[2]
Type Encoding	
Comments	3GPP TS 04.60 or 3GPP TS 44.060 [32] 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
rfn		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 MEARSUREMENT 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 channe
rfn		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**
lLMEId		LLMEId	
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 3GPP TS 44.064 [33] 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
lLMEId		LLMEId	
tLLI		TLLI	
sAPI		SAPI	
msg		PDU	L3 PDU
Detailed Comments	3GPP TS 04.64 or 3GPP TS 44.064 [33] clause 8.4.2		

7.3.4.3.1.4 ASPs for data transmission and reception through GERAN SNDCP

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
sNDCPId		SNDCPId	
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
sNDCPId		SNDCPId	
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
sNDCPId		SNDCPId	
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
sNDCPId		SNDCPId	
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	Comments
sNDCPId		SNDCPId	
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	Comments
sNDCPId		SNDCPId	
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	Comments
sNDCPId		SNDCPId	
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	Comments
sNDCPId		SNDCPId	
xID_Info		XID_Info	The negotiated XID parameters agreed by the SS
Detailed Comments			

Type Name	SNDCPId
Type Definition	INTEGER
Type Encoding	
Comments	The identifier of the SNDCP 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	Comments
cellId		CellId	
baseId		BITSTRING[6]	base transceiver station identity code = NCC+BCC. see 3GPP TS 23.003 [6]
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	Comments
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**	**Comments**
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**	**Comments**
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**	**Comments**
cellId		CellId	The cell which the channel to be created belongs to
physicalChId		PhysicalChId	identifier of the physical channel in the SS.
channelCombination		ChannelCombination	Logical channels combined onto the basic physical channel.
frqInfo		FrqInfo	Parameters for Description of the physical channel in frequency domain
timeSlot		TN	The timeslot number of the physical channel
tsc		TSC	Training sequence code. For common control and broadcast channels the value of tsc must be equal to BCC (base station colour code)
channelSpecificInfo		ChannelSpecificInfo	Specific parameters related to individual channel
txPower		TX_Power	The transmission power level in dBµVemf()
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**	**Comments**
cellId		CellId	The cell which the created channel belongs to
physicalChId		PhysicalChId	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 44.018 [43] or 3GPP TS 04.18, clause 10.5.2.13
Detailed Comments			

Type Name	ChannelSpecificInfo		
Encoding Variation			
Comments	Parameters for individual channel		
Element Name	**Type Definition**	**Field Encoding**	**Comments**
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 3GPP TS 44.018 [43] clause 10.5.2.6
cipherMode	CPHMS		Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [43] 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 3GPP TS 44.018 [43] clause 10.5.2.11
bS_AG_BLKS_RES	BITSTRING[3]		the number of blocks on each common control channel reserved for access grant messages. Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [43] clause 10.5.2.11
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 3GPP TS 44.060 [32] clause 12.25
bS_PAG_BLKS_RES	BITSTRING[4]		3GPP TS 04.60 or 3GPP TS 44.060 [32] clause 12.25
bS_PRACH_BLKS	BITSTRING[4]		3GPP TS 04.60 or 3GPP TS 44.060 [32] 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]		The repeat period of packet system information Type 1. See 3GPP TS 04.60 or 3GPP TS 44.060 [32] clause 11.2.18
pSI_COUNT_HR	BITSTRING[4]		The number of PSI message instances sent with high repetition rate. See 3GPP TS 04.60 or 3GPP TS 44.060 [32] clause 11.2.18
pSI_COUNT_LR	BITSTRING[6]		The number of PSI message instances sent with low repetition rate. See 3GPP TS 04.60 or 3GPP TS 44.060 [32] 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 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 3GPP TS 45.002 [31] clause 6.4.2.		

ASP Name	G_CL1_CreateMultiSlotConfig_CNF		
PCO Type	G_CSAP		
Comments	The ASP is used to get the confirmation of a G_CL1_CreateMultiSlotConfig_REQ		
Parameter Name		**Parameter Type**	**Comments**
cellId		CellId	The cell which the created multi-slot configuration belongs to
physicalChId		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
channelCombination0	ChannelCombination		Channel combination fortime slot 0; not applicable if tN0 = FALSE
tN1	BOOLEAN		TRUE - time slot 1 is allocated; FALSE -- not allocated
channelCombination 1	ChannelCombination		Channel Combination fortime slot 1; not applicable if tN1 = FALSE
tN2	BOOLEAN		TRUE - time slot 2 is allocated; FALSE -- not allocated
channelCombination 2	ChannelCombination		Channel Combination fortime slot 2; not applicable if tN2 = FALSE
tN3	BOOLEAN		TRUE - time slot 3 is allocated; FALSE -- not allocated
channelCombination 3	ChannelCombination		Channel Combination fortime slot 3; not applicable if tN3 = FALSE
tN4	BOOLEAN		TRUE - time slot 4 is allocated; FALSE -- not allocated
channelCombination 4	ChannelCombination		Channel Combination for time slot 4; not applicable if tN4 = FALSE
tN5	BOOLEAN		TRUE - time slot 5 is allocated; FALSE -- not allocated
channelCombination 5	ChannelCombination		Channel Combination fortime slot 5; not applicable if tN5 = FALSE
tN6	BOOLEAN		TRUE - time slot 6 is allocated; FALSE -- not allocated
channelCombination 6	ChannelCombination		Channel Combination fortime slot 6; not applicable if tN6 = FALSE
tN7	BOOLEAN		TRUE - time slot 7 is allocated; FALSE -- not allocated
channelCombination 7	ChannelCombination		Channel Combination for 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**	**Comments**
cellId	CellId	
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_ComingFN_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to receive the result of G_CL1_ComingFN_REQ.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
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 (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**	**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.
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 3GPP TS 44.018 [43] 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 3GPP TS 44.018 [43] 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 dBµVemf()
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 3GPP TS 44.018 [43] 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
tN1	BOOLEAN		TRUE - time slot 1 is allocated; FALSE -- not allocated
uSF_TN1	BITSTRING[3]		USF value for slot 1
tN2	BOOLEAN		TRUE - time slot 2 is allocated; FALSE -- not allocated
uSF_TN2	BITSTRING[3]		USF value for slot 2
tN3	BOOLEAN		TRUE - time slot 3 is allocated; FALSE -- not allocated
uSF_TN3	BITSTRING[3]		USF value for slot 3
tN4	BOOLEAN		TRUE - time slot 4 is allocated; FALSE -- not allocated
uSF_TN4	BITSTRING[3]		USF value for slot 4
tN5	BOOLEAN		TRUE - time slot 5 is allocated; FALSE -- not allocated
uSF_TN5	BITSTRING[3]		USF value for slot 5
tN6	BOOLEAN		TRUE - time slot 6 is allocated; FALSE -- not allocated
uSF_TN6	BITSTRING[3]		USF value for slot 6
tN7	BOOLEAN		TRUE - time slot 7 is allocated; FALSE -- not allocated
uSF_TN7	BITSTRING[3]		USF value for slot 7
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 3GPP TS 44.060 [32] 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.
tN1	BOOLEAN		Timeslot 1; TRUE - allocated; FALSE - not allocated.
tN2	BOOLEAN		Timeslot 2; TRUE - allocated; FALSE - not allocated.
tN3	BOOLEAN		Timeslot 3; TRUE - allocated; FALSE - not allocated.
tN4	BOOLEAN		Timeslot 4; TRUE - allocated; FALSE - not allocated.
tN5	BOOLEAN		Timeslot 5; TRUE - allocated; FALSE - not allocated.
tN6	BOOLEAN		Timeslot 6; TRUE - allocated; FALSE - not allocated.
tN7	BOOLEAN		Timeslot 7; TRUE - allocated; FALSE - not allocated.
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**
lLMEId		LLMEId	Logical Layer Management Entity Id
rlcMacEntityId		RlcMacEntityId	The identifier of the RLC /MAC entity to couple this lLMEId.
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**
lLMEId		LLMEId	The identifier of the cell Logical Layer Management Entity Id
rlcMacEntityId		RlcMacEntityId	The identifier of the RLC /MAC entity this lLMEId 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**
lLMEId		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**
lLMEId		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**
lLMEId		LLMEId	Logical Layer Management Entity Id
oldTLLI		TLLI	OCTETSTRING[4]
newTLLI		TLLI	
cipherKey		BITSTRING[64]	
cipherAlgorithm		GPRS_CipherAlg	BITSTRING[3], see 3GPP TS 24.008 [9] 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**	**Comments**
lLMEId		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**	**Comments**
lLMEId		LLMEId	Logical Layer Management Entity Id
rlcMacEntityId		RlcMacEntityId	The identifier of the RLC /MAC entity to couple this lLMEId.
tLLI		TLLI	
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**	**Comments**
lLMEId		LLMEId	Logical Layer Management Entity Id
rlcMacEntityId		RlcMacEntityId	The identifier of the RLC /MAC entity to couple this lLMEId.
Detailed Comments			

7.3.4.3.2.5 ASPs for configuration and control of GERAN SNDCP

ASP Name	G_CSNDCP_Activate_REQ		
PCO Type	G_CSAP		
Comments	The ASP is used to activate the SNDC entity		
Parameter Name		**Parameter Type**	**Comments**
sNDCPId		SNDCPId	The SNDCP entity identifier of the cell
lLMEId		LLMEId	Logical link management entity Id
nSAPI		NSAPI	The Network Service Access Point Identifier
sAPI		SAPI	LLC SAPI
PCI_Compression		INTEGER	0 - RFC 1144 [46] compress; 1 - RFC 2507 [30] compression; 32 - no compression
dataCompression		INTEGER	0 - V.42bis [47] compression; 1 - V.44 [48] compression; 32 - no compression
nPDUNumberSync		INTEGER	0 - Asynchronous 1 - Synchronous
Detailed Comments			

ASP Name	G_CSNDCP_Activate_CNF		
PCO Type	G_CSAP		
Comments	The ASP is used to get the confirmation of a G_CSNDCP_Activate_REQ		
Parameter Name		**Parameter Type**	**Comments**
sNDCPId		SNDCPId	SNDCPentity identifier
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		SNDCPId	The SNDCP entity identifier
tLLI		TLLI	Temperory 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 SNDCP emulator that an NSAPI has been deactivated and cannot be used anymore. Upon reception of this ASP the SNDCP emulator shall release acknowledged peer-to-peer LLC operation for the associated SAPI.		
Parameter Name		**Parameter Type**	**Comments**
sNDCPId		SNDCPId	The SNDCP entity identifier
tLLI		TLLI	Temperory Logical Link Entity
nSAPI		NSAPI	The Network Service Access Point Identifier
lLCReleaseIndicator		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		SNDCPId	The SNDCP entity identifier
tLLI		TLLI	Temperory 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 SNDCP cannot continue its operation due to errors in the lower layers of the protocol stack.		
Parameter Name		**Parameter Type**	**Comments**
sNDCPId		SNDCPId	The SNDCP entity identifier
tLLI		TLLI	Temperory 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 SNDCP 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		SNDCPId	The SNDCP entity identifier
tLLI		TLLI	Temperory Logical Link Entity
nSAPI		NSAPI	The Network Service Access Point Identifier
qos		OCTETSTRING[4]	Quality of Service, defined 3GPP TS 04.08 or 3GPP TS 44.008 [49] clause 10.5.6.5
sAPI		SAPI	
send_NPDU_Number		INTEGER	
received_NPDU_Number		INTEGER	
Detailed Comments			

ASP Name	G_CSNDCP_SNSM_Modify_RES		
PCO Type	G_CSAP		
Comments	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		
Parameter Name		**Parameter Type**	**Comments**
sNDCPId		SNDCPId	The SNDCP entity identifier
tLLI		TLLI	Temperory Logical Link Entity
nSAPI		NSAPI	The Network Service Access Point Identifier
Detailed Comments			

8 Design Considerations

8.1 Channel mapping

Figure 18 shows the channel type mapping that is used for the configuration of the SS.

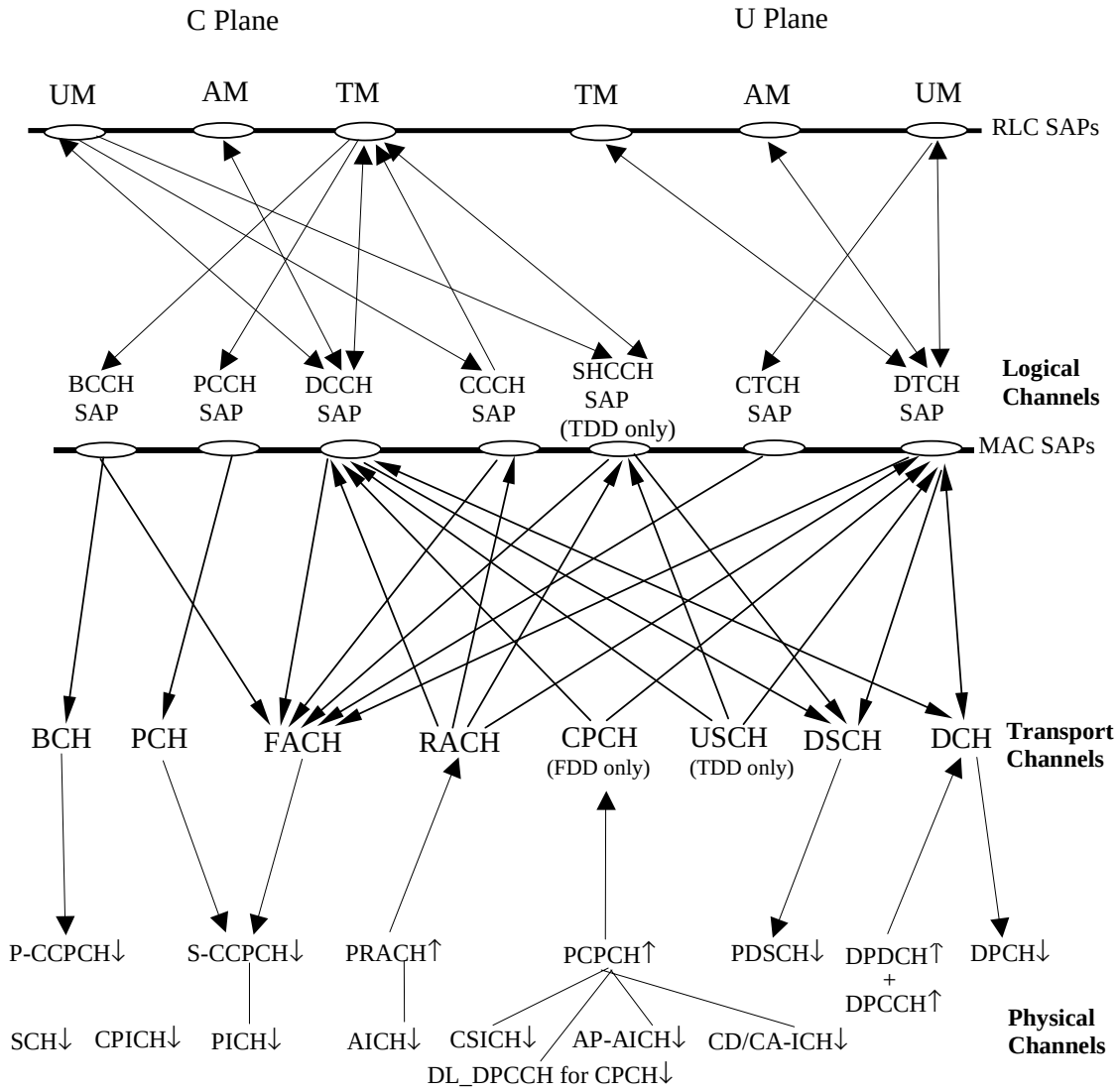

Figure 18: Channel mapping in SS

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 [1] including TDD channels;
- the scheme can apply to all radio bearer configurations in 3GPP TS 34.108 [3], 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 [3], clause 6.10.

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 31: Primitives and the associated channel identity type

Primitive name	Channel Idientity
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
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

Primitive name	Channel Idientity
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 32: 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 Synchronization Channel
S-SCH	1	1	tsc_S_SCH (2)	downlink	Secondary Synchronization 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: - Aquisition 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.
DPDCH	1	1	tsc_UL_DPCH1 (20) tsc_UL_DPCH2 (21)	uplink	Uplink Dedicated Physical Channel. A single DPCCH associated with all the DPDCHs used for Layer 1 signalling.

Type	Min. No.	Current Config.	Identities (value assigned)	Direction	Comment
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 33: 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 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 34: 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 RAB 1, tsc_UL_DTCH2 for RAB1-2 or RAB 2, 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_DTCH1for RAB1-1 or RAB 1, tsc_DL_DTCH2 for RAB1-2 or RAB 2, 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 35: 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 donwlink SRB0 on TM
tsc_RB_BCCH_FACH_RAB (-19)	downlink		TM	NA	BCCH FACH

Identities (value assigned)	Direction	Type	RLC mode	Service domain	Comments
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.

Table36: Primary/seondary 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)) mod 512	NA	tsc_P_CCPCH_ChC (256:1)
P-CPICH	tsc_P_CPICH (0)	(px_PrimaryScramblingCode + 50 × (cell No -1)) mod 512	NA	tsc_P_CPICH_ChC (256:0)
S-CCPCH	tsc_S_CCPCH1 (5)	(px_PrimaryScramblingCode + 50 × (cell No -1)) mod 512	NA (carrying PCH)	tsc_S_CCPCH1_ChC (64:1)
	tsc_S_CCPCH2 (10)	(px_PrimaryScramblingCode + 50 × (cell No -1)) mod 512	NA (carrying PCH)	tsc_S_CCPCH2_ChC (64:2)
PICH	tsc_PICH1 (6)	(px_PrimaryScramblingCode + 50 × (cell No -1)) mod 512	NA	tsc_PICH1_ChC (256:2)
	tsc_PICH2 (11)	(px_PrimaryScramblingCode + 50 × (cell No -1)) mod 512	NA	tsc_PICH2_ChC (256:12)
AICH	tsc_AICH1 (7)	(px_PrimaryScramblingCode + 50 × (cell No -1)) mod 512	NA	tsc_AICH1_ChC (256:3)
	tsc_AICH2 (12)	(px_PrimaryScramblingCode + 50 × (cell No -1)) mod 512	NA	tsc_AICH2_ChC (256:13)
DPCH	tsc_DL_DPCH1 (26)	(px_PrimaryScramblingCode + 50 × (cell No -1)) mod 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)) mod 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 37: 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)) 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 + 1 000 × (cell No -1)) MOD 16 777 216	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 ('0000000011111111'B)	tsc_PRACH1_SF (64)
	tsc_PRACH2 (9)	tsc_PRACH2_ScrC (1)	tsc_PRACH2_Signatures ('0000000011111111'B)	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 independent (-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 configuaration of the compressed mode for the UE.

a) DPCH_CompressedModeInfo.

b) DPCH_CompressedModeStatusInfo.

Compressed mode initiation at UE side can be devided 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 configuartaion at SS side shall be maintained the same status as that on the UE side. So there are 3 different types of compressed mode configuaration 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 "CphyRlSetupReq. PhysicalChannelInfo" which is of choice, chosen to dPCHInfo shall be called. The procedue is used to pre-configure all comepressed 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 "CphyRlModifyReq. PhysicalChannelInfo" which is of choice, chosen to dPCHInfo shall be called. This procedure in 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 "CphyRlModifyReq. 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 38: cRNTI and uRNTI in CMAC-Config_REQ

	P-CCPCH	S-CCPCH with mapped DL-DCCH/DTCH (UE in cell_FACH)	S-CCPCH without mapped DL-DCCH/DTCH (UE in cell_DCH)	PRACH with mapped DL-DCCH/DTCH (UE in cell_FACH)	PRACH without mapped DL-DCCH/DTCH (UE in cell_DCH)	DPCH
uRNTI	-	Included	-	Omit	-	-
cRNTI	-	Included	-	Included	-	-
CMAC-Config_REQ	OMIT both	Download cRNTI and uRNTI	OMIT both	Download cRNTI	OMIT both	OMIT both

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 configurted, 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 repectively).

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 indetity information. In this case the CELL UPDATE CONFIRM or URA UPDATE CONFIRM is sent on CCCH at the test.

Table 39: Relationship between cell update cause, UE state and RLC size reconfiguration

Cell update cause	UE State (before cell update)	CELL UPDATE CONFIRM	CRLC_Reconf RLC_Size Needed	Valid UE ID
Cell reselection	CELL_PCH / CELL_FACH	DCCH	Y	U_RNTI
Periodical cell update	CELL_PCH	DCCH or CCCH	Y (for DCCH)	U_RNTI
Periodical cell update	CELL_FACH	DCCH or CCCH	N	C_RNTI
Uplink data transmission	CELL_PCH / URA _PCH	DCCH	Y	U_RNTI
UTRAN paging response	CELL_PCH / URA_PCH	DCCH	Y	U_RNTI
Re-entered service area	CELL_PCH / URA_PCH	DCCH	Y	U_RNTI
Re-entered service area	CELL_FACH	DCCH	N	C_RNTI
Radio Link failure	CELL_DCH	DCCH	Y	U_RNTI
RLC_unrecoverable error	CELL_DCH / CELL_FACH	DCCH	Y N (selceted the same cell in CELL_FACH)	U_RNTI C_RNTI

8.3 Channels configurations

8.3.1 Configuration of Cell_FACH

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 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 RRC tests related in the states CELL_FACH, CELL_PCH and URA_PCH. They need a minimum radio configuration for testing.

Table 40: 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 41: 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_BCCH_FACH (-3)	tsc_RB_PCCH (-2)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	BCCH	PCCH
LogCh Identity	tsc_DL_DTCH1 (7)	tsc_DL_CCCH5 (5)	tsc_DL_DCCH1 (1)	tsc_DL_DCCH2 (2)	tsc_DL_DCCH3 (3)	tsc_DL_DCCH4 (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)							

8.3.2 Configuration of Cell_DCH_StandAloneSRB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.2. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to the RRC and NAS signalling tests in the DCH state without RAB.

Table 42: Uplink configuration of Cell_DCH_StandAloneSRB

RB Identity	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB3 (3)	tsc_RB4 (4)	tsc_RB0 (0)	
LogCh Type	DCCH	DCCH	DCCH	DCCH	CCCH	
LogCh Identity	tsc_UL_DCCH1 (1)	tsc_UL_DCCH2 (2)	tsc_UL_DCCH3 (3)	tsc_UL_DCCH4 (4)	tsc_UL_CCCH5 (5)	
RLC mode	UM	AM	AM	AM	TM	AM
TrCH Type	DCH				RACH	
TrCH identity	tsc_UL_DCH5 (5)				tsc_RACH1 (15)	
PhyCh Type	DPDCH				PRACH	
PhyCH identity	tsc_UL_DPCH1 (20)				tsc_PRACH1 (8)	

Table 43: Downlink configuration of Cell_DCH_StandAloneSRB

RB Identity	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB3 (3)	tsc_RB4 (4)	tsc_RB0 (0)	tsc_RB_PCCH (-2)	
LogCh Type	DCCH	DCCH	DCCH	DCCH	CCCH	PCCH	
LogCh Identity	tsc_DL_DCCH1 (1)	tsc_DL_DCCH2 (2)	tsc_DL_DCCH3 (3)	tsc_DL_DCCH4 (4)	tsc_DL_CCCH5 (5)	tsc_PCCH1 (1)	
RLC mode	UM	AM	AM	AM	UM	TM	AM
MAC priority	1	2	3	4	1	1	1
TrCH Type	DCH				FACH	PCH	FACH
TrCH identity	tsc_DL_DCH5 (10)				tsc_FACH1 (13)	tsc_PCH1 (12)	tsc_FACH2 (14)
PhyCh Type	DPCH				Secondary CCPCH		
PhyCH identity	tsc_DL_DPCH1 (26)				tsc_S_CCPCH1 (5)		

8.3.3 Configuration of Cell_DCH_Speech

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.4 and 6.10.2.4.1.5. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those RRC and NAS signalling tests in the DCH state where a CS voice service, such as narrowband speech, emergency speech call or TS 61 for speech, is established.

Table 44: Uplink configuration of Cell_DCH_Speech

RB Identity	tsc_RB10 (10)	tsc_RB11 (11)	tsc_RB12 (12)	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		
LogCh Identity	tsc_UL_DTCH1 (7)	tsc_UL_DTCH2 (8)	tsc_UL_DTCH3 (9)		
RLC mode	TM	TM	TM		
TrCH Type	DCH	DCH	DCH		
TrCH identity	tsc_UL_DCH1 (1)	tsc_UL_DCH2 (2)	tsc_UL_DCH3 (3)		
PhyCh Type	DPDCH				PRACH
PhyCH identity	tsc_UL_DPCH1 (20)				tsc_PRACH1 (8)

Table 45: Downlink configuration of Cell_DCH_Speech

RB Identity	tsc_RB10 (10)	tsc_RB11 (11)	tsc_RB12 (12)	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		
LogCh Identity	tsc_DL_DTCH1 (7)	tsc_DL_DTCH2 (8)	tsc_DL_DTCH3 (9)		
RLC mode	TM	TM	TM		
MAC priority	1	1	1		
TrCH Type	DCH	DCH	DCH		
TrCH identity	tsc_DL_DCH1 (6)	tsc_DL_DCH2 (7)	tsc_DL_DCH3 (8)		
PhyCh Type	DPCH				Secondary CCPCH
PhyCH identity	tsc_DL_DPCH1 (26)				tsc_S_CCPCH1 (5)

8.3.4 Configuration of Cell_DCH_64kCS_RAB_SRB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.13 for the conversational unknown quality class. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those RRC and NAS signalling tests in the DCH state where one of the following CS transparent data services is established:

- Multimedia call 28,8 kbit/s, 3,1 kHz Audio;
- Multimedia call 32 kbit/s, UDI;
- Multimedia call 33,6 kbit/s, 3,1 kHz Audio;
- Multimedia call 56 kbit/s, RDI;
- Multimedia call 64 kbit/s, UDI;
- Asynchronous 3,1 kHz Audio 28,8 kbit/s;
- Synchronous 3,1 kHz Audio 28,8 kbit/s;

- Synchronous V.110 UDI up to 56 kbit/s;
- BTM RDI 56 kbit/s;
- BTM UDI 64 bit/s.

Table 46: Uplink configuration of Cell_DCH_64kCS_RAB_SRB

RB Identity	tsc_RB10 (10)	Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH
LogCh Type	DTCH		
LogCh Identity	tsc_UL_DTCH1 (7)		
RLC mode	TM		
TrCH Type	DCH		
TrCH identity	tsc_UL_DCH1 (1)		
PhyCh Type	DPDCH		PRACH
PhyCH identity	tsc_UL_DPCH1 (20)		tsc_PRACH1 (8)

Table 47: Downlink configuration of Cell_DCH_64kCS_RAB_SRB

RB Identity	tsc_RB10 (10)	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_DTCH1 (7)		
RLC mode	TM		
MAC priority	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)

8.3.5 Configuration of Cell_DCH_57_6kCS_RAB_SRB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.17 for the streaming unknown quality class. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those RRC and NAS signalling tests in the DCH state where one of the following CS non-transparent data services is established:

- Asynchronous 3,1 kHz Audio up to 19,2 kbit/s;
- Asynchronous 3,1 kHz Audio modem auto-bauding;
- Asynchronous V.110 UDI up to 38,4 kbit/s, except 28,8 kbit/s;
- Asynchronous V.120 up to 56 kbit/s;
- Asynchronous PIAFS up to 64 kbit/s;
- Asynchronous FTM up to 64 kbit/s;
- Synchronous 3,1 kHz Audio up to 19,2 kbit/s;

- Synchronous V.110 UDI up to 56 kbit/s, except 28,8 kbit/s;
- Synchronous X.31 Flags Stuffing UDI up to 56 kbit/s;
- Synchronous V.120 up to 56 kbit/s;
- Synchronous BTM up to 64 kbit/s;
- TS61 FAX.

Table 48: Uplink configuration of Cell_DCH_57_6kCS_RAB_SRB

RB Identity	tsc_RB10 (10)	Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH
LogCh Type	DTCH		
LogCh Identity	tsc_UL_DTCH1 (7)		
RLC mode	TM		
TrCH Type	DCH		
TrCH identity	tsc_UL_DCH1 (1)		
PhyCh Type	DPDCH		PRACH
PhyCH identity	tsc_UL_DPCH1 (20)		tsc_PRACH1 (8)

Table 49: Downlink configuration of Cell_DCH_57_6kCS_RAB_SRB

RB Identity	tsc_RB10 (10)	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_DTCH1 (7)		
RLC mode	TM		
MAC priority	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)

8.3.6 Configuration of Cell_RLC_DCH_ RAB

The configuration is based on 3GPP TS 34.108 [3], clauses 6.11.1, 6.11.2, 6.11.3, and 6.11.4 for the RLC AM and UM tests with 7 and 15 bit length indicators. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1.

The RB Ids used for the DTCH depend on the RLC mode and length indicator size being simulated (reference clause 6.5.2, RLC test method). Table 50 shows the test suite constants used for each RLC mode, and length indicator size.

Table 50: RB Ids used for DTCH depending on RLC mode and LI size

RLC mode	LI Size	TSC	RB Id
UM	7	tsc_RB_UM_7_RLC	-10
UM	15	tsc_RB_UM_15_RLC	-11
AM	7	tsc_RB_AM_7_RLC	-12
AM	15	tsc_RB_AM_15_RLC	-13

Table 51: Uplink configuration of Cell_RLC_DCH_RAB

RB Identity	See table 50	Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH
LogCh Type	DTCH		
LogCh Identity	tsc_UL_DTCH1 (7)		
RLC mode	TM		
TrCH Type	DCH		
TrCH identity	tsc_UL_DCH1 (1)		
PhyCh Type	DPDCH		PRACH
PhyCH identity	tsc_UL_DPCH1 (20)		tsc_PRACH1 (8)

Table 52: Downlink configuration of Cell_RLC_DCH_RAB

RB Identity	See table 50	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_DTCH1 (7)		
RLC mode	TM		
MAC priority	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)

8.3.7 Configuration of Cell_FACH_BMC

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 without RAB/DTCH for uplink. A RB30/CTCH is configured. The configuration is applied to the BMC and CBSMS tests.

The uplink configuration of Cell_FACH_BMC is the same as the uplink configuration of Cell_FACH.

Table 53: Downlink configuration of Cell_FACH_BMC

RB Identity		tsc_RB0 (0)	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB3 (3)	tsc_RB4 (4)	tsc_RB_BCCH_FACH (-3)	Tsc_RB30 (30)	tsc_RB_PCCH (-2)
LogCh Type		CCCH	DCCH	DCCH	DCCH	DCCH	BCCH	CTCH	PCCH
LogCh Identity		tsc_DL_CCCH5 (5)	tsc_DL_DCCH1 (1)	tsc_DL_DCCH2 (2)	tsc_DL_DCCH3 (3)	tsc_DL_DCCH4 (4)	tsc_BCCH6 (6)	Tsc_CTCH (11)	tsc_PCCH1 (1)
RLC mode	AM	UM	UM	AM	AM	AM	TM	UM	TM
MAC priority	1	1	2	3	4	5	6	7	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)								

8.3.8 Configuration of PS Cell_DCH_64kPS_RAB_SRB and Cell_PDCP_AM_RAB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.26. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to those RRC and NAS signalling tests in the DCH state where a PS RAB on DTCH is setup for the interactive or background service class. The configuration is applied to PDCP test cases in acknowledge mode.

Table 54: Uplink configuration of PS Cell_DCH_64kPS_RAB_SRB SRB and Cell_PDCP_AM_RAB

RB Identity	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		
LogCh Identity	tsc_UL_DTCH1 (7)		
RLC mode	AM		
TrCH Type	DCH		
TrCH identity	tsc_UL_DCH1 (1)		
PhyCh Type	DPDCH		PRACH
PhyCH identity	tsc_UL_DPCH1 (20)		tsc_PRACH1 (8)

Table 55: Downlink configuration of PS Cell_DCH_64kPS_RAB_SRB SRB and Cell_PDCP_AM_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_DTCH1 (7)		
RLC mode	AM		
MAC priority	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)

8.3.9 Configuration of Cell_Two_DTCH

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.6 to 6.10.2.4.1.11. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

Table 56: Uplink configuration of Cell_Two_DTCH

RB Identity	tsc_RB10 (10)	tsc_RB11 (11)	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	TM		
TrCH Type	DCH	DCH		
TrCH identity	tsc_UL_DCH1 (1)	tsc_UL_DCH2 (2)		
PhyCh Type	DPCH			PRACH
PhyCH identity	tsc_UL_DPDCH1 (20)			tsc_PRACH1 (8)

Table 57: Downlink configuration of Cell_Two_DTCH

RB Identity	tsc_RB10 (10)	tsc_RB11 (11)	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	TM		
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)

8.3.10 Configuration of Cell_Single_DTCH (CS)

The configuration is based on 3GPP TS 34.108 [3], clauses 6.10.2.4.1.12 to 6.10.2.4.1.22. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

Table 58: Uplink configuration of Cell_Single_DTCH (CS)

RB Identity	tsc_RB10 (10)	Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH
LogCh Type	DTCH		
LogCh Identity	tsc_UL_DTCH1 (7)		
RLC mode	TM		
TrCH Type	DCH		
TrCH identity	tsc_UL_DCH1 (1)		
PhyCh Type	DPDCH		PRACH
PhyCH identity	tsc_UL_DPCH1 (20)		tsc_PRACH1 (8)

Table 59: Downlink configuration of Cell_Single_DTCH (CS)

RB Identity	tsc_RB10 (10)	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_DTCH1 (7)		
RLC mode	TM		
MAC priority	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)

8.3.11 Configuration of PS Cell_PDCP_UM_RAB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.26. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to PDCP test cases in unacknowledge mode.

Table 60: Uplink configuration of PS Cell_PDCP_UM_RAB

RB Identity	tsc_RB21 (21)	Same as uplink configuration of Cell_DCH_StandAloneSRB on DPCH	Same as uplink configuration of Cell_DCH_StandAloneSRB on PRACH
LogCh Type	DTCH		
LogCh Identity	tsc_UL_DTCH1 (7)		
RLC mode	UM		
TrCH Type	DCH		
TrCH identity	tsc_UL_DCH1 (1)		
PhyCh Type	DPDCH		PRACH
PhyCH identity	tsc_UL_DPCH1 (20)		tsc_PRACH1 (8)

Table 61: Downlink configuration of PS Cell_PDCP_UM_RAB

RB Identity	tsc_RB21 (21)	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_DTCH1 (7)		
RLC mode	UM		
MAC priority	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)

8.3.12 Configuration of PS Cell_PDCP_AM_UM_RAB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.26. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to PDCP test cases using both the acknowledged and unacknowledged mode.

Table 62: Uplink configuration of PS Cell_PDCP_AM_UM_RAB

RB Identity	tsc_RB20 (20)	tsc_RB21 (21)	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	AM	UM		
TrCH Type	DCH			
TrCH identity	tsc_UL_DCH1 (1)			
PhyCh Type	DPDCH			PRACH
PhyCH identity	tsc_UL_DPCH1 (20)			tsc_PRACH1 (8)

Table 63: Downlink configuration of PS Cell_PDCP_AM_UM_RAB

RB Identity	tsc_RB20 (20)	tsc_RB21 (21)	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	AM	UM		
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)

8.3.13 Configuration of Cell_2SCCPCH_BMC

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 without RAB/DTCH for uplink. RB30/CTCH and RB31/CTCH as well as two PCCH are configured. The configuration is applied to the BMC and CBSMS tests.

Table 64: Uplink configuration of Cell_2SCCPCH_BMC

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 65: Downlink configuration of Cell_2SCCPCH_BMC: second S-CCPCH

RB Identity	Tsc_RB31 (31)	tsc_RB_2ndPCCH (-4)
LogCh Type	CTCH	PCCH
LogCh Identity	Tsc_CTCH2 (12)	tsc_PCCH2 (2)
RLC mode	UM	TM
MAC priority	1	1
TrCH Type	FACH	PCH
TrCH identity	tsc_FACH1 (13)	tsc_PCH2 (30)
PhyCh Type	Secondary CCPCH	
PhyCH identity	tsc_S_CCPCH2 (10)	

Table 66: Downlink configuration of Cell_2SCCPCH_BMC: first S-CCPCCH

RB Identity	tsc_RB20 (20)	tsc_RB0 (0)	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB3 (3)	tsc_RB4 (4)	tsc_RB_BCCH_FACH (-3)	Tsc_RB30 (30)	tsc_RB_PCCH (-2)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	BCCH	CTCH	PCCH
LogCh Identity	tsc_DL_DTCH1 (6)	tsc_DL_CCCH5 (5)	tsc_DL_DCCH1 (1)	tsc_DL_DCCH2 (2)	tsc_DL_DCCH3 (3)	tsc_DL_DCCH4 (4)	tsc_BCCH6 (6)	Tsc_CTCH1 (11)	tsc_PCCH1 (1)
RLC mode	AM	UM	UM	AM	AM	AM	TM	UM	TM
MAC priority	1	1	2	3	4	5	6	7	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 [3], clauses 6.10.2.4.1.40. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

Table 67: 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_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	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 68: 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_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	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 [3], 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 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

Table 69: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 70: 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 [3], clauses 6.10.2.4.1.49. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

Table 71: 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_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	TM		
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 72: 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_StandAloneSRB 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_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)

8.3.17 Configuration of Cell_DCH_MAC_SRB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.1.2. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1; except that RB3 is mapped on TM mode.

The configuration is applied to the MAC tests.

Table 73: Uplink configuration of Cell_DCH_MAC_SRB

RB Identity	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB_DCCH_DCH_MAC (-15)	tsc_RB4 (4)	tsc_RB0 (0)	
LogCh Type	DCCH	DCCH	DCCH	DCCH	CCCH	
LogCh Identity	tsc_UL_DCCH1 (1)	tsc_UL_DCCH2 (2)	tsc_UL_DCCH3 (3)	tsc_UL_DCCH4 (4)	tsc_UL_CCCH5 (5)	
RLC mode	UM	AM	TM	AM	TM	AM
TrCH Type	DCH				RACH	
TrCH identity	tsc_UL_DCH5 (5)				tsc_RACH1 (15)	
PhyCh Type	DPDCH				PRACH	
PhyCH identity	tsc_UL_DPCH1 (20)				tsc_PRACH1 (8)	

Table 74: Downlink configuration of Cell_DCH_MAC_SRB

RB Identity	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB_DCCH_DCH_MAC (-15)	tsc_RB4 (4)	tsc_RB0 (0)	tsc_RB_PCCH (-2)	
LogCh Type	DCCH	DCCH	DCCH	DCCH	CCCH	PCCH	
LogCh Identity	tsc_DL_DCCH 1 (1)	tsc_DL_DCCH 2 (2)	tsc_DL_DCCH 3 (3)	tsc_DL_DCCH 4 (4)	tsc_DL_CCCH 5 (5)	tsc_PCCH1 (1)	
RLC mode	UM	AM	TM	AM	UM	TM	AM
MAC priority	1	2	3	4	1	1	1
TrCH Type	DCH				FACH	PCH	FACH
TrCH identity	tsc_DL_DCH5 (10)				tsc_FACH1 (13)	tsc_PCH1 (12)	tsc_FACH2 (14)
PhyCh Type	DPCH				Secondary CCPCH		
PhyCH identity	tsc_DL_DPCH1 (26)				tsc_S_CCPCH1 (5)		

8.3.18 Configuration of Cell_FACH_MAC_SRB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink; except that RB3 is mapped on TM mode.

The configuration is applied to the MAC tests.

Table 75: Uplink configuration of Cell_FACH_MAC_SRB

RB Identity	tsc_RB20 (20)	tsc_RB0 (0)	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB_DCCH_FACH_MAC (-14)	tsc_RB4 (4)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH
LogCh Identity	Tsc_UL_DTCH 1 (7)	tsc_UL_CCCH 5 (5)	tsc_UL_DCCH 1 (1)	tsc_UL_DCCH 2 (2)	tsc_UL_DCCH3 (3)	tsc_UL_DCCH 4 (4)
RLC mode	AM	TM	UM	AM	TM	AM
TrCH Type	RACH					
TrCH identity	tsc_RACH1 (15)					
PhyCh Type	PRACH					
PhyCH identity	tsc_PRACH1 (8)					

Table 76: Downlink configuration of Cell_FACH_MAC_SRB

RB Identity	tsc_RB20 (20)	tsc_RB0 (0)	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB_DCCH_FACH_MAC (-14)	tsc_RB4 (4)	tsc_RB_BCCH_FACH (-3)	tsc_RB_PCCH (-2)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	BCCH	PCCH
LogCh Identity	tsc_DL_DTCH1 (6)	tsc_DL_CCCH5 (5)	tsc_DL_DCCH1 (1)	tsc_DL_DCCH2 (2)	tsc_DL_DCCH3 (3)	tsc_DL_DCCH4 (4)	tsc_BCCH6 (6)	tsc_PCCH1 (1)
RLC mode	AM	UM	UM	AM	TM	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)							

8.3.19 Configuration of Cell_FACH_MAC_SRB0

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1 for uplink; except that the downlink SRB0 is mapped on TM mode.

The configuration is applied to the MAC tests.

The uplink configuration of Cell_FACH_MAC_SRB0 is the same as the uplink configuration of Cell_FACH.

Table 77: Downlink configuration of Cell_FACH_MAC_SRB0

RB Identity	tsc_RB20 (20)	tsc_RB_CCCH_FACH_MAC (-18)	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB3 (3)	tsc_RB4 (4)	tsc_RB_BCCH_FACH (-3)	tsc_RB_PCCH (-2)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	BCCH	PCCH
LogCh Identity	tsc_DL_DTCH1 (6)	tsc_DL_CCCH5 (5)	tsc_DL_DCCH1 (1)	tsc_DL_DCCH2 (2)	tsc_DL_DCCH3 (3)	tsc_DL_DCCH4 (4)	tsc_BCCH6 (6)	tsc_PCCH1 (1)
RLC mode	AM	TM	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)							

8.3.20 Configuration of Cell_FACH_2_SCCPCH_StandAlonePCH

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 for downlink and 3GPP TS 34.108 [3] except the mapping of PCH, 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_2_SCCPCH_StandAlonePCH is the same as the uplink configuration of Cell_FACH.

Table 78: Downlink configuration of Cell_FACH_2_SCCPCH_StandAlonePCH

RB Identity	tsc_RB20 (20)	tsc_RB0 (0)	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB3 (3)	tsc_RB4 (4)	tsc_RB_BCCH_FACH (-3)	tsc_RB_PCCH2 (-19)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	BCCH	PCCH
LogCh Identity	tsc_DL_DTCH1 (6)	tsc_DL_CCCH5 (5)	tsc_DL_DCCH1 (1)	tsc_DL_DCCH2 (2)	tsc_DL_DCCH3 (3)	tsc_DL_DCCH4 (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							Secondary CCPCH
PhyCH identity	tsc_S_CCPCH2 (10)							tsc_S_CCPCH1 (5)

8.3.21 Configuration of PS Cell_DCH_ 2AM_PS

The configuration is based on 3GPP TS 34.108 [3], 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 [3], clause 6.10.2.4.3.2.1.2 with 2 AM RAB and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to MAC and RAB test cases.

Table 79: Uplink configuration of Cell_DCH_ 2AM_PS

RB Identity	tsc_RB20 (20)	tsc_RB22 (22)	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	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 80: Downlink configuration of Cell_DCH_2AM_PS

RB Identity	tsc_RB20 (20)	tsc_RB22 (22)	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 [3], 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 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.4.1.1.1. The configuration is applied to RB tests.

Table 81: Uplink configuration of Cell_DCH_2_PS_Call

RB Identity	tsc_RB20 (20)	tsc_RB22 (22)	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 82: Downlink configuration of Cell_DCH_2_PS_Call

RB Identity	tsc_RB20 (20)	tsc_RB22 (22)	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 83: Downlink configuration of Cell_FACH_3_SCCPCH_4_FACH_Cnfg1: 1st & 2nd S-CCPCH

RB Identity	tsc_RB22 (22)	tsc_RB0 (0)	tsc_RB_BCCH_FACH (-3)	tsc_RB_PCCH (-2)
LogCh Type	DTCH	CCCH	BCCH	PCCH
LogCh Identity	tsc_DL_DTCH1 (7)	tsc_DL_CCCH5 (5)	tsc_BCCH6 (6)	tsc_PCCH1 (1)
RLC mode	AM	UM	TM	TM
MAC priority	1	1	6	1
TrCH Type	FACH	FACH		PCH
TrCH identity	tsc_FACH2 (14)	tsc_FACH1 (13)		tsc_PCH1 (12)
PhyCh Type	Secondary CCPCH			Secondary CCPCH
PhyCH identity	tsc_S_CCPCH2 (10)			tsc_S_CCPCH1 (5)

Table 84: Downlink configuration of Cell_FACH_3_SCCPCH_4_FACH_Cnfg1: 3rd S-CCPCH

RB Identity	tsc_RB20 (20)	tsc_RB29 (29)	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB3 (3)	tsc_RB4 (4)	tsc_RB_BCCH_FACH_RAB (-19)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	BCCH
LogCh Identity	tsc_DL_DTCH1 (7)	tsc_DL_CCCH6 (6)	tsc_DL_DCCH1 (1)	tsc_DL_DCCH2 (2)	tsc_DL_DCCH3 (3)	tsc_DL_DCCH4 (4)	tsc_BCCH7 (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	tsc_FACH4 (17)	tsc_FACH3 (16)					
PhyCh Type	Secondary CCPCH						
PhyCH identity	tsc_S_CCPCH3 (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 85: Downlink configuration of Cell_FACH_3_SCCPCH_4_FACH_Cnfg2: 2nd S-CCPCH

RB Identity	tsc_RB20 (20)	tsc_RB29 (29)	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB3 (3)	tsc_RB4 (4)	tsc_RB_BCCH_FACH_RAB (-19)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	BCCH
LogCh Identity	tsc_DL_DTCH1 (7)	tsc_DL_CCCH6 (6)	tsc_DL_DCCH1 (1)	tsc_DL_DCCH2 (2)	tsc_DL_DCCH3 (3)	tsc_DL_DCCH4 (4)	tsc_BCCH7 (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	tsc_FACH2 (14)	tsc_FACH1 (13)					
PhyCh Type	Secondary CCPCH						
PhyCH identity	tsc_S_CCPCH2 (10)						

Table 86: Downlink configuration of Cell_FACH_3_SCCPCH_4_FACH_Cnfg2: 1st & 3rd S-CCPCH

RB Identity	tsc_RB22 (22)	tsc_RB0 (0)	tsc_RB_BCCH_FACH (-3)	tsc_RB_PCCH (-2)
LogCh Type	DTCH	CCCH	BCCH	PCCH
LogCh Identity	tsc_DL_DTCH1 (7)	tsc_DL_CCCH5 (5)	tsc_BCCH6 (6)	tsc_PCCH1 (1)
RLC mode	AM	UM	TM	TM
MAC priority	1	1	6	1
TrCH Type	FACH	FACH		PCH
TrCH identity	tsc_FACH4 (17)	tsc_FACH3 (16)		tsc_PCH1 (12)
PhyCh Type	Secondary CCPCH			Secondary CCPCH
PhyCH identity	tsc_S_CCPCH3 (13)			tsc_S_CCPCH1 (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 87: Downlink configuration of Cell_FACH_3_SCCPCH_3_FACH_CTCH : 1st & 2nd S-CCPCH

RB Identity	tsc_RB30 (30)	tsc_RB0 (0)	tsc_RB_BCCH_FACH (-3)	tsc_RB_PCCH (-2)
LogCh Type	CTCH	CCCH	BCCH	PCCH
LogCh Identity	tsc_CTCH1 (11)	tsc_DL_CCCH5 (5)	tsc_BCCH6 (6)	tsc_PCCH1 (1)
RLC mode	UM	UM	TM	TM
MAC priority	7	1	6	1
TrCH Type	FACH	FACH		PCH
TrCH identity	tsc_FACH2 (14)	tsc_FACH1 (13)		tsc_PCH1 (12)
PhyCh Type	Secondary CCPCH			Secondary CCPCH
PhyCH identity	tsc_S_CCPCH2 (10)			tsc_S_CCPCH1 (5)

Table 88: Downlink configuration of Cell_FACH_3_SCCPCH_3_FACH_CTCH: 3rd S-CCPCH

RB Identity	tsc_RB20 (20)	tsc_RB29 (29)	tsc_RB1 (1)	tsc_RB2 (2)	tsc_RB3 (3)	tsc_RB4 (4)	tsc_RB_BCCH_FACH_RAB (-19)
LogCh Type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	BCCH
LogCh Identity	tsc_DL_DTCH1 (7)	tsc_DL_CCCH6 (6)	tsc_DL_DCCH1 (1)	tsc_DL_DCCH2 (2)	tsc_DL_DCCH3 (3)	tsc_DL_DCCH4 (5)	tsc_BCCH7 (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	tsc_FACH4 (17)	tsc_FACH3 (16)					
PhyCh Type	Secondary CCPCH						
PhyCH identity	tsc_S_CCPCH3 (13)						

8.3.26 Configuration of PS Cell_DCH_DSCH_PS_RAB

The configuration is based on 3GPP TS 34.108 [3], clause 6.10.2.4.2.1. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], 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 88a: 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_DTCH1 (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_PDSCH1 (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 [3], clauses 6.10.2.4.2.4. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [3], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [3], 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 88b: 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_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	DSCH		
TrCH identity	tsc_DL_DCH1 (6)	tsc_DL_DCH2 (7)	Tsc_DL_DCH3 (8)	tsc_DL_DSCH1 (19)		
PhyCh Type	DPCH			PDSCH	DPCH	Secondary CCPCH
PhyCH identity	tsc_DL_DPCH1 (20)			tsc_DL_PDSCH1 (16)	tsc_DL_DPCH1 (20)	tsc_S_CCPCH1 (5)

8.4 System information blocks scheduling

All SIBs specified in 3GPP TS 34.108 [3] are broadcast for all test cases in the present document. The repeat period of broadcasting of a complete SIB configuration is 64 frames (0,64 s) as the default configuration.

Except MIB and SB1, they have the highest scheduling rates, SIB 7 has also a higher scheduling rate.

According to the default SIB contents in 3GPP TS 34.108 [3], SIB 11 and SIB12 have 3 segments. SIB 5 and SIB 6 have 4 segments. MIB, SB1, SIB1, SIB 2, SIB 3, SIB 4, SIB 7 and SIB18 are not segmented, i.e. one segment for each. For the PDCP tests, SIB16 has 7 segments.

Use CMAC_SYSINFO_CONFIG_REQ, CMAC_SYSINFO_CONFIG_CNF and RLC_TR_DATA_REQ as interface to SS for broadcasting.

Two TSOs are defined, one for PER encoding function, the other for segmentation function. The TSOs shall be implemented in the tester.

8.4.1 Grouping SIBs for testing

Mandatory in 3GPP TS 34.108 [3]	**Used in Idle Mode**	MIB, SB1, (SB2), SIB1, SIB2, SIB3, SIB5, SIB7, SIB11
	Used in Connected Mode	SIB4, SIB6, SIB12
Mandatory for FDD CPCH		SIB8, SIB9
Mandatory for FDD DRAC		SIB10
Mandatory for TDD		SIB14, SIB17
Mandatory for LCS		SIB15, SIB15.1, SIB15.2, SIB15.3
Mandatory for ANSI-41 system		SIB13, SIB13.1, SIB13.2, SIB13.3, SIB13.4
Mandatory for InterSys HO		SIB16
Mandatory for Cell reselection		SIB18

8.4.2 SIB configurations

Currently the ATS contains three SIB configurations, Configuration 1 is default for both UTRAN/FDD SYSTEM and UTRAN/FDD. Configuration 2 is for test cases which need two S_CCPCH or two PRACH. Configuration 3 is for inter-RAT handover test cases.

Configuration 1	MIB, SB1, SIB1, SIB2, SIB3, SIB4, SIB5, SIB6, SIB7, SIB11, SIB12, SIB18
Configuration 2	MIB, SB1, SIB1, SIB2, SIB3, SIB4, SIB5, SIB7, SIB11, SIB12, SIB18
Configuration 3	MIB, SB1, SIB1, SIB2, SIB3, SIB4, SIB5, SIB7, SIB11, SIB16, SIB18

8.4.3 Test SIB default schedule

Frame No.	0	2	4	6	8	10	12	14
REP-POS	0	1	2	3	4	5	6	7
Block Type	MIB	SB1	SIB7	SIB6	MIB	SIB6	SIB6	SIB6

Frame No.	16	18	20	22	24	26	28	30
REP-POS	8	9	10	11	12	13	14	15
Block Type	MIB	SB1	SIB7/SIB3	SIB1/SIB 2	MIB	SIB12	SIB12	SIB12

Frame No.	32	34	36	38	40	42	44	46
REP-POS	16	17	18	19	20	21	22	23
Block Type	MIB	SB1	SIB7/SIB1 8	SIB5	MIB	SIB5	SIB5	SIB5

Frame No.	48	50	52	54	56	58	60	62
REP-POS	24	25	26	27	28	29	30	31
Block Type	MIB	SB1	SIB7/SIB4		MIB	SIB11	SIB11	SIB11

SIB-repeat period (in frame)

Block Type	MIB	SB1	SIB1	SIB2	SIB3	SIB4	SIB5	SIB6	SIB7	SIB11	SIB12	SIB18
SIB Rep	8	16	64	64	64	64	64	64	16	64	64	64
Max. No of seg.	1	1	1	1	1	1	4	4	1	3	3	1

8.4.3.1 Test SIB schedule for idle mode and measurment

Frame No.	0	2	4	6	8	10	12	14
REP-POS	0	1	2	3	4	5	6	7
Block Type	MIB	SB1	SIB6	SIB6	MIB	SIB6	SIB6	SIB7/SIB 3

Frame No.	16	18	20	22	24	26	28	30
REP-POS	8	9	10	11	12	13	14	15
Block Type	MIB	SB1	SIB1/SIB 2	SIB12	MIB	SIB12	SIB12	SIB7/SIB 12

Frame No.	32	34	36	38	40	42	44	46
REP-POS	16	17	18	19	20	21	22	23
Block Type	MIB	SB1	SIB5	SIB5	MIB	SIB5	SIB5	SIB7/SIB 18

Frame No.	48	50	52	54	56	58	60	62
REP-POS	24	25	26	27	28	29	30	31
Block Type	MIB	SB1	SIB11	SIB11	MIB	SIB11	SIB11	SIB7/SIB 4

SIB-repeat period (in frame)

Block Type	MIB	SB1	SIB1	SIB2	SIB3	SIB4	SIB5	SIB6	SIB7	SIB11	SIB12	SIB18
SIB Rep	8	16	64	64	64	64	64	64	16	64	64	64
Max. No of seg.	1	1	1	1	1	1	4	4	1	4	4	1

8.4.4 Test SIB special schedule

8.4.4.1 Test SIB schedule for two S-CCPCH or two PRACH

Frame No.	0	2	4	6	8	10	12	14
REP-POS	0	1	2	3	4	5	6	7
Block Type	MIB	SB1	SB1		MIB	SIB1	SIB18	SIB2

Frame No.	16	18	20	22	24	26	28	30
REP-POS	8	9	10	11	12	13	14	15
Block Type	MIB	SB1	SB1	SIB7	MIB	SIB3		SIB4

Frame No.	32	34	36	38	40	42	44	46
REP-POS	16	17	18	19	20	21	22	23
Block Type	MIB	SB1	SB1	SIB5	MIB	SIB5	SIB5	SIB5

Frame No.	48	50	52	54	56	58	60	62
REP-POS	24	25	26	27	28	29	30	31
Block Type	MIB	SB1	SB1	SIB7	MIB	SIB11	SIB11	SIB11

Frame No.	64	66	68	70	72	74	76	78
REP-POS	32	33	34	35	36	37	38	39
Block Type	MIB	SB1	SB1	SIB5	MIB	SIB5	SIB5	SIB5

Frame No.	80	82	84	86	88	90	92	94
REP-POS	40	41	42	43	44	45	46	47
Block Type	MIB	SB1	SB1	SIB7	MIB	SIB3		SIB4

Frame No.	96	98	100	102	104	106	108	110
REP-POS	48	49	50	51	52	53	54	55
Block Type	MIB	SB1	SB1		MIB			

Frame No.	112	114	116	118	120	122	124	126
REP-POS	56	57	58	59	60	61	62	63
Block Type	MIB	SB1	SB1	SIB7	MIB	SIB12	SIB12	SIB12

SIB-repeat period (in frame)

Block Type	MIB	SB1	SIB1	SIB2	SIB3	SIB4	SIB5	SIB7	SIB11	SIB12	SIB18
SIB Rep	8	16	128	128	64	64	128	32	128	128	128
Max. No of seg.	1	2	1	1	1	1	8	1	3	3	1

8.4.4.2 Test SIB schedule for Inter-Rat Handover Test

Frame No.	0	2	4	6	8	10	12	14
REP-POS	0	1	2	3	4	5	6	7
Block Type	MIB	SB1	SB1		MIB	SIB1	SIB18	SIB2

Frame No.	16	18	20	22	24	26	28	30
REP-POS	8	9	10	11	12	13	14	15
Block Type	MIB	SB1	SB1	SIB7	MIB	SIB3		SIB4

Frame No.	32	34	36	38	40	42	44	46
REP-POS	16	17	18	19	20	21	22	23
Block Type	MIB	SB1	SB1	SIB5	MIB	SIB5	SIB5	SIB5

Frame No.	48	50	52	54	56	58	60	62
REP-POS	24	25	26	27	28	29	30	31
Block Type	MIB	SB1	SB1	SIB7	MIB	SIB11	SIB11	SIB11

Frame No.	64	66	68	70	72	74	76	78
REP-POS	32	33	34	35	36	37	38	39
Block Type	MIB	SB1	SB1	SIB16	MIB	SIB16	SIB16	SIB16

Frame No.	80	82	84	86	88	90	92	94
REP-POS	40	41	42	43	44	45	46	47
Block Type	MIB	SB1	SB1	SIB7	MIB	SIB3		SIB4

Frame No.	96	98	100	102	104	106	108	110
REP-POS	48	49	50	51	52	53	54	55
Block Type	MIB	SB1	SB1	SIB16	MIB	SIB16	SIB16	SIB16

Frame No.	112	114	116	118	120	122	124	126
REP-POS	56	57	58	59	60	61	62	63
Block Type	MIB	SB1	SB1	SIB7	MIB			

SIB-repeat period (in frame)

Block Type	MIB	SB1	SIB1	SIB2	SIB3	SIB4	SIB5	SIB7	SIB11	SIB16	SIB18
SIB Rep	8	16	128	128	64	64	128	32	128	128	128
Max. No of seg.	1	2	1	1	1	1	4	1	3	8	1

8.4.5 Handling the transmission of SIB

According to the SIB repeat periods, SIBs need to be transmitted on a very regular basis during the operation of a test case. This transmission usually has no direct bearing on the operation of the test case, although the carried information ensures the correct configuration and operation of the UE during the test case.

To send this information repeatedly directly from each test case would make the test cases very complex to implement, difficult to understand and place real-time requirements upon them that are beyond the capabilities of most TTCN driven test engines.

Management of scheduling of System Information messages is performed by the system simulator. The SIB contents, usually determined in part by the individual tests, come from the TTCN test cases.

8.4.5.1 Delivery of System Information content

The content of the System Information messages is delivered as a fully encoded bit string to the TM-RLC SAP from the message content defined in the TTCN test case.

The IE 'SFNprime' in the SI messages is set to 0 by the TTCN, and the correct value of 'SFNprime' shall be inserted by the System Simulator prior to transmission of a SI message.

SI messages are ASN.1 packed encoded through a TTCN TSO and segmented another TTCN TSO into SIBs in the TTCN and sent only once to the TM-RLC SAP. Repetition of the SIB is the responsibility of the System Simulator lower layers.

SIBs are considered to be cached. That is, sending a SIB to the TM-RLC SAP will cause a previously sent copy of the SIB to be lost, and all future transmissions of the SIB will be the most recently sent version. This allows for the updating of System Information during the operation of a test case.

8.4.5.2 Scheduling of System Information Blocks

The schedule for the transmission of SIBs is provided by the TTCN test case. It is sent using the CMAC_SYSINFO_CONFIG_REQ primitive sent to the CMAC SAP (CMAC_PCO).

Each CMAC_SYSINFO_CONFIG_REQ primitive carries scheduling information for the next SIB sent from the TTCN. Each primitive is followed by an associated SIB. Sending two CMAC_SYSINFO_CONFIG_REQ primitives in succession may cause an unspecified result.

8.4.5.3 Example of usage

The following example shows how the MIB, SB1 and all SIBs in subclause 8.4.3 are sent to the System Simulator lower layers for broadcasting. The 1st parameter in CMAC_SYSINFO_CONFIG_REQ represents the repeat period in power of 2. The 2nd parameter represents the repetition position. Two consecutive frames represent an available repetition position.

CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (3, 0)
TM_PCO:	MIB
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (4, 1)
TM_PCO:	SB1
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 2)
TM_PCO:	SIB7
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 3)
TM_PCO:	SIB6 (segment 1 of 4)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 5)
TM_PCO:	SIB6 (segment 2 of 4)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 6)
TM_PCO:	SIB6 (segment 3 of 4)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 7)
TM_PCO:	SIB6 (segment 4 of 4)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 10)
TM_PCO:	SIB7 + SIB3 (concatenation)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 11)
TM_PCO:	SIB1 + SIB2 (concatenation)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 13)
TM_PCO:	SIB12 (segment 1 of 3)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 14)
TM_PCO:	SIB12 (segment 2 of 3)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 15)
TM_PCO:	SIB12 (segment 3 of 3)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 18)
TM_PCO:	SIB7 + SIB18 (concatenation)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 19)
TM_PCO:	SIB5 (segment 1 of 4)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 21)
TM_PCO:	SIB5 (segment 2 of 4)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 22)
TM_PCO:	SIB5 (segment 3 of 4)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 23)
TM_PCO:	SIB5 (segment 4 of 4)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 26)
TM_PCO:	SIB7 + SIB4 (concatenation)
CMAC_PCO:	CMAC_SYSINFO_CONFIG_REQ (6, 27)
TM_PCO:	No segment

CMAC_PCO: CMAC_SYSINFO_CONFIG_REQ (6, 29)
TM_PCO: SIB11 (segment 1 of 3)
CMAC_PCO: CMAC_SYSINFO_CONFIG_REQ (6, 30)
TM_PCO: SIB11 (segment 3 of 3)
CMAC_PCO: CMAC_SYSINFO_CONFIG_REQ (6, 31)
TM_PCO: SIB11 (segment 3 of 3)

8.5 Security in testing

The security functions at the SS side are implemented in RLC and MAC layers. When the AM or UM RLC entities and a MAC(d) entity are created, the TTCN will download a security context for each CN domain used. The two ASPs CMAC_SecurityMode_Config_REQ & CRLC_SecurityMode_Config_REQ configues the SS security contexts and associate the contexts to the created entities. The SS sahll support one activate security contexts and one context pending activation for each CN domain.

A security context at the SS consists of the security parameter START, 20 bits long and a pair of integrity key and a ciphering key, each 128 bits long. All these security parameters belong to a CS or a PS domain. The SS shall have the ability to store these values till the new vlaues are downloaded and activated. $START_{cs}$ is used for intitialization of all counters-C and counters-I (32 bits long each) of all DL and UL radio bearers for ciphering and intergrity protection in the CS domain. The same is for $START_{ps}$ in the PS domain. The TTCN downloads the new START value whenever it is received from the UE. In the case of a succeeded authentication procedure, the START value is reset to zero by the TTCN.

Once the START is downloaded the SS will, according to the activation time, inialize the 20 most significant bits of the RRC HFN (for integrity protection), the RLC HFN (for ciphering) and the MAC-d HFN (for ciphering) to the START value of the corresponding service domain; the remaining bits are initialized to 0.

Upon the concerned RLC entities and the MAC(d) entity release in the SS, the associated security contexts are no longer used and shall be removed as well. The RLC and the MAC(d) entities are addressed by the TTCN with the cell id = -1.

8.5.1 Authentication

A GMM or MM authentication test step makes use of a number of TSOs to generate an authentication vector:

AV := {RAND, XRES, CK, IK, AUTN}

8.5.2 Ciphering

The ciphering in the SS is activated through the ASP CRLC_Ciphering_Activate_REQ for the AM or UM mode and through CMAC_Ciphering_Activate_REQ for the TM mode.

A PIXIT parameter px_CipheringOnOff indicates whether all the tests are performed under ciphering activated or not. If ciphering should be off at the test execution, the ciphering algorithm in IE ciphering ModeInfo is set to uea0 (no encryption). The UE under test is informed about the SS ciphering capability via IE cipheringAlgorithmCap set to uea0.

The following table gives the mapping of the RB id and the bearer value used in the ciphering calculation at the SS side.

Table 89: Mapping between RB identity in ASP and BEARER value in the ciphering calculation

RB identity (TTCN constant)	Direction	RLC mode	BEARER value	Type	Comments
-1 (tsc_RB_BCCH)	downlink	TM	N/A		No ciphering applicable
-2 (tsc_RB_PCCH)	downlink	TM	N/A		No ciphering applicable
-3 (tsc_RB_BCCH_FACH)	downlink	TM	N/A		No ciphering applicable
-4 (tsc_RB_2ndPCCH)	downlink	TM	N/A		No ciphering applicable
-5 (tsc_RB_2ndCCCH)	uplink	TM	N/A		No ciphering applicable
-10 (tsc_RB_UM_7_RLC)	downlink	TM	N/A	RAB	For UM RLC tests using 7 bit Lis, no ciphering used
-10 (tsc_RB_UM_7_RLC)	uplink	TM	N/A	RAB	For UM RLC tests using 7 bit LIs, no ciphering used
-11 (tsc_RB_UM_15_RLC)	downlink	TM	N/A	RAB	For UM RLC tests using 15 bit LIs, no ciphering used
-11 (tsc_RB_UM_15_RLC)	uplink	TM	N/A	RAB	For UM RLC tests using 15 bit LIs, no ciphering used
-12 (tsc_RB_AM_7_RLC)	downlink	TM	N/A	RAB	For AM RLC tests using 15 bit LIs, no ciphering used

RB identity (TTCN constant)	Direction	RLC mode	BEARER value	Type	Comments
-12 (tsc_RB_AM_7_RLC)	uplink	TM	N/A	RAB	For AM RLC tests using 7 bit LIs, no ciphering used
-13 (tsc_RB_AM_15_RLC)	downlink	TM	N/A	RAB	For AM RLC tests using 15 bit LIs, no ciphering used
-13 (tsc_RB_AM_15_RLC)	uplink	TM	N/A	RAB	For AM RLC tests using 15 bit LIs, no ciphering used
-14 tsc_RB_DCCH_FACH_MAC)	downlink	TM	N/A	SRB3	MAC testing no ciphering used
-14 (tsc_RB_DCCH_FACH_MAC)	uplink	TM	N/A	SRB3	MAC testing no ciphering used
-15 (tsc_RB_DCCH_DCH_MAC)	downlink	TM	N/A	SRB3	MAC testing no ciphering used
-15 (tsc_RB_DCCH_FACH_MAC)	uplink	TM	N/A	SRB3	MAC testing no ciphering used
-16 (tsc_RB3_DCCH_RRC)	uplink	AM	2	SRB3	
-18 (tsc_RB_CCCH_FACH_MAC)	downlink	TM	N/A	SRB0	No ciphering applicable
0 (tsc_RB0)	uplink	TM	N/A	SRB0	No ciphering applicable
0 (tsc_RB0)	downlink	UM	N/A	SRB0	No ciphering applicable
1 (tsc_RB1)	uplink	UM	0	SRB1	
1 (tsc_RB1)	downlink	UM	0	SRB1	
2 (tsc_RB2)	uplink	AM	1	SRB2	
2 (tsc_RB2)	downlink	AM	1	SRB2	
3 (tsc_RB3)	uplink	AM	2	SRB3	
3 (tsc_RB3)	downlink	AM	2	SRB3	
4 (tsc_RB4)	uplink	AM	3	SRB4	
4 (tsc_RB4)	downlink	AM	3	SRB4	
5 (tsc_RB5)	uplink	TM	4	SRB	DCCH
5 (tsc_RB5)	downlink	TM	4	SRB	DCCH
6	uplink		5		Not used currently
6	downlink		5		Not used currently
7	uplink		6		Not used currently
7	downlink		6		Not used currently
8	uplink		7		Not used currently
8	downlink		7		Not used currently
9	uplink		8		Not used currently
9	downlink		8		Not used currently
10 (tsc_RB10)	uplink	TM	9	RAB#1-1	or RAB1
10 (tsc_RB10)	downlink	TM	9	RAB#1-1	or RAB1
11 (tsc_RB11)	uplink	TM	10	RAB#1-2	or RAB2
11 (tsc_RB11)	downlink	TM	10	RAB#1-2	or RAB2
12 (tsc_RB12)	uplink	TM	11	RAB#1-3	
12 (tsc_RB12)	downlink	TM	11	RAB#1-3	
13 (tsc_RB13)	uplink	TM	12	RAB#2	
13 (tsc_RB13)	downlink	TM	12	RAB#2	
14	uplink		13		Not used currently
14	downlink		13		Not used currently
15	uplink		14		Not used currently
15	downlink		14		Not used currently
16	uplink		15		Not used currently
16	downlink		15		Not used currently
17	uplink		16		Not used currently
17	downlink		16		Not used currently
18	uplink		17		Not used currently
18	downlink		17		Not used currently
19	uplink		18		Not used currently
19	downlink		18		Not used currently
20 (tsc_RB20)	uplink	AM	19	RAB#1	
20 (tsc_RB20)	downlink	AM	19	RAB#1	
21 (tsc_RB21)	uplink	UM	20	RAB#2	
21 (tsc_RB21)	downlink	UM	20	RAB#2	
22 (tsc_RB22)	uplink	AM	21	RAB#2	
22 (tsc_RB22)	downlink	AM	21	RAB#2	
23	uplink		22		Not used yet currently
23	downlink		22		Not used yet currently
24	uplink		23		Not used yet currently
24	downlink		23		Not used yet currently
25	uplink		24		Not used yet currently
25	downlink		24		Not used yet currently
26	uplink		25		Not used yet currently
26	downlink		25		Not used yet currently
27	uplink		26		Not used yet currently
27	downlink		26		Not used yet currently
28	uplink		27		Not used yet currently
28	downlink		27		Not used yet currently
29	uplink		28		Not used yet currently
29	downlink		28		Not used yet currently
30 (tsc_RB30)	downlink	UM	N/A		CTCH FACH no ciphering used
30	uplink		29		Not used yet currently

RB identity (TTCN constant)	Direction	RLC mode	BEARER value	Type	Comments
31 (tsc_RB31)	downlink	UM	N/A		CTCH FACH no ciphering used
31	uplink		30		Not used yet currently
32	downlink		31		Not used yet currently
32	uplink		31		Not used yet currently

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 yet 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 initialization and calculation on SRBs.

Once integrity is started, the SS initializes 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 shall check~~s~~ the received MessageAuthenticationCode. If it is wrong, the ASP CRLC_Integrity_Failure_IND will report having received an UL message with integrity error. If it is correct SS forwards the received messages to the TTCN.

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.

8.5.4 Test security scenarios

Five basic test scenarios are presented in the present document. The corresponding core spec references are found in 3GPP TS 25.331 [21] clauses 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 of all SRB for calculating suitable down link activation time
    CRLC_Suspend_REQ
        -- Suspend all signalling radio bearers except RB2
    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~~Void

~~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, changeing AM RB RLC size, is inculded in
    CELL UPDATE CONFIRM,
    RADIO REARER RECONFIGURATION,
    RADIO BEARER RELEASE
```

8.5.4.3.1 "RB mapping info" in CELL UPDATE CONFIRM

After sending the CELL UPDATE CONFIRM message, re-establish the RB and re-configure the RB with new RLC size and re-initialize 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-initialize 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

```
Simulataneous SRNS relocation will take place
either "Downlink count synchronization info" IE is received in
    CELL UPDATE CONFIRM,
    PHYSICAL CHANNEL RECONFIGURATION,
    RADIO REARER RECONFIGURATION,
    RADIO BEARER RELEASE,
    TRANSPORT CHANNEL RECONFIGURATION,
    URA UPDATE CONFIRM,
    UTRAN MOBILITY INFROMATION,
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"~~Void

~~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-initialize 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-initialize 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-initialization)
        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-initialize 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-initialize 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 messages

3 Re-establish RB2 and re-initialize 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 message

5 Re-establish all RBs and SRBs (except RB2) and re-initialize 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-initialize 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-initialization)
        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-initialize 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-initialize 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-initialize 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-initialization)
        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-initialize 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-initialize 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-initialize 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-initialize 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-initialize 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-initialization)
        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-initialize 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-initialize 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-initialize 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 HANDOVER TO UTRAN COMMAND in a RAT different from UTRAN

2. After receiving HANDOVER TO UTRAN COMPLETE message

```
    CMAC_SecurityMode_Config_REQ
            startValue = value received in HANDOVER 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 HANDOVER 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 HANDOVER 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 HANDOVER TO UTRAN COMMAND

```
    CRLC_SecurityMode_Config_REQ
            startValue = "START" value included in the IE "UE security information" in the variable
"INTER_RAT_HANDOVER_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 HANDOVER 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_HANDOVER_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 maitained 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-initialized 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 maitained 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 maitained 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 [3]. 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 [1], table 6.2. Clause numbers refer to 3GPP TS 34.123-1 [1].

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	
$EF_{HPLMNwAcT}$	1st	PLMN 2	UTRAN
$EF_{PLMNwAcT}$	1st	PLMN 3	UTRAN
	2nd	PLMN 4	UTRAN
$EF_{OPLMNwAcT}$	1st	PLMN 5	UTRAN
	2nd	PLMN 6	UTRAN
EF_{FPLMN}	PLMN 3		

Test USIM is configured as bellow for PLMN selection of 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	
$EF_{HPLMNwAcT}$	1st	PLMN 2	UTRAN
$EF_{PLMNwAcT}$	1st	PLMN 3	UTRAN
	2nd	PLMN 4	UTRAN
$EF_{OPLMNwAcT}$	1st	PLMN 5	UTRAN
	2nd	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}			
$EF_{HPLMNwAcT}$	1st	PLMN 1	UTRAN
$EF_{PLMNwAcT}$	1st	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 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}			
$EF_{HPLMNwAcT}$	1st	PLMN 1	GSM
	2nd		UTRAN

USIM B:

USIM field	Priority	PLMN	Access Technology Identifier
EF_{LOCI}			
$EF_{HPLMNwAcT}$	1st	PLMN 2	UTRAN
	2nd		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	
$EF_{HPLMNwAcT}$	1st	PLMN 2	UTRAN
	2nd		GSM

USIM B:

USIM field	Priority	PLMN	Access Technology Identifier
EF_{LOCI}		PLMN 1	
$EF_{HPLMNwAcT}$	1st	PLMN 2	UTRAN
	2nd		

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	
$EF_{HPLMNwAcT}$	1st	PLMN 2	UTRAN
	2nd		GSM
$EF_{PLMNwAcT}$	1st	PLMN 3	UTRAN
	2nd	PLMN 4	GSM
$EF_{OPLMNwAcT}$	1st	PLMN 5	UTRAN
	2nd	PLMN 6	GSM

Test USIM are 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	
$EF_{HPLMNwAcT}$	1st	PLMN 2	UTRAN
	2nd		GSM
$EF_{PLMNwAcT}$	1st	PLMN 3	UTRAN
	2nd	PLMN 4	GSM
$EF_{OPLMNwAcT}$	1st	PLMN 5	UTRAN
	2nd	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 [3] clause 6.1.5.

8.7 Test suite operation definitions

8.7.1 Test suite operation definitions in the module BasicM

Table 90: TSO definitions in BasicM

TSO Name	Description

o_AuthRspChk	**Type of the result:** BOOLEAN
	Parameters:
	p_AuthRsp : AuthRsp
	p_AuthRspExt : AuthRspExt
	p_K : BITSTRING
	p_RAND : BITSTRING
	p_Ext : BOOLEAN
	
	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 [3] clause 8.1.2.
	If not the parameter p_AuthRspExt is not to be used.
	
	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.
	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.
	EvaluateAuthRspExt:
	==========
	/* As AuthRespExt 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 */
	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

TSO Name	Description
o_BCD_ToInt	**Type of the result:** INTEGER **Parameters:** p_bcdstring:HEXSTRING **Description** The operation OC_BCDtoInt converts an HEXSTRING containing BCD coded digits to an integer representation of these relevant digits. EXAMPLE: OC_BCDtoInt('12345'H) := 12345
o_BitstringChange	**Type of the result:** BITSTRING **Parameters:** P_Str: BITSTRING p_Len: INTEGER p_Offset: INTEGER **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. EXAMPLE 1: o_BitstringChange('010101'B, 6, 5) produces '010100'B. EXAMPLE 2: o_BitstringChange('010101'B, 6, 0) produces '110101'B.
o_BitstringConcat	**Type of the result:** BITSTRING **Parameters:** P_Str1: BITSTRING p_Str2: BITSTRING p_Len1: INTEGER p_Len2: INTEGER **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. EXAMPLE: o_BitstringConcat('010101'B,'11'B) produces '01010111'B of length 6 + 2 = 8.
o_BitstringXOR	**Type of the result:** BITSTRING **Parameters:** P_Str1: BITSTRING p_Str2: BITSTRING p_Len: INTEGER **Description** Performs an XOR operation using 2 bitstrings of the same length (p_Len). Returns a resulting Bitstring of length p_Len. EXAMPLE: o_BitstringXOR('0011'B, '0101'B, 4) produces '0110'B.
o_BitstringXtract	**Type of the result**: BITSTRING **Parameters:** P_Str: BITSTRING p_SrcLen: INTEGER p_TargetLen: INTEGER p_Offset: INTEGER **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. Returns a resulting bitstring of length p_TargetLen. 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.

TSO Name	Description
o_BitToOct	**Type of the result**: OCTETSTRING **Parameters:** p_Str: BITSTRING **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.
o_BMC_DrxScheduling	**Type of the result**: BMC_ResultOfSchedulingLevel2 **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 **Description** This TSO shall calculate all BMC CBS schedule Messages for the CBS messages as described in 3GPP TS 34.123-1, 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. The TSO shall consider the BMC CBS Scheduling Level2 as described in 3GPP TS 25.324 [20], 3GPP TR 21.925 [44] and the description of BMC test architecture and test method in the present document, clause 6.8. 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. 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. The TSO shall consider the following aspects to calculate the DRX Selection Bitmap and to create the BMC CBS Schedule messages: 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. output parameter: DrxSelectionBitmap: The TSO creates a Bitmap as Octetstring for scheduled CTCH allocated TTI as described in 3GPP TS 34.123-3: clause 6.8.2 BMC test method and architecture. 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.
o_CheckStringStartWith	**Type of the result:**BOOLEAN **Parameters:** p_SourceString: IA5String p_StartString : IA5String **Description** o_CheckStringStartWith returns TRUE if the p_sourceString start with the p_StartString. Otherwise it returns FALSE. EXAMPLE: o_CheckStringStartWith ("+CLCC:1,0,0,2,0;", "+CLCC:1,0,0")=TRUE */.

TSO Name	Description
o_ComputeSM_Contents	**Type of the result:** OCTETSTRING **Parameters:** p_NumOfChars: INTEGER **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 [34], clause 6.1.2.1.1. max. 160 characters, i.e. 140 octets.
o_ComputeSM_ContentsSpec	**Type of the result:** OCTETSTRING **Parameters:** p_NumOfChars: INTEGER p_Text: IA5String **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 [34], clause 6.1.2.1.1. max. 160 characters, i.e. 140 octets.
o_ConcatStrg	**Type of the result:** IA5String **Parameters:** P_String1: IA5String p_String2: IA5String **Description** o_ConcatString concatenates 'p_String1' and 'p_String2' and returns the resulting string. EXAMPLE: o_ConcatString ("AT+CBST=0" , ",0") = "AT+CBST=0,0"
o_ConvertIMSI	**Type of the result:** IMSI_GSM_MAP **Parameters:** P_Imsi : HEXSTRING The input parameter `p_Imsi` is a BCD string (subset of HEXSTRING), the result is of type IMSI_GSM_MAP.
o_ConvertTMSI	**Type of the result:**TMSI_GSM_MAP **Parameters:** p_Tmsi : OCTETSTRING **Description** The input parameter 'p_Tmsi' is an OCTETSTRING; the result is of type TMSI_GSM_MAP.
o_ConvertPTMSI	**Type of the result:** P_TMSI_GSM_MAP **Parameters:** p_PTMSI : OCTETSTRING **Description** The input parameter `PTMSI` is a OCTETSTRING, the result is of type P_TMSI_GSM_MAP.

TSO Name	Description
o_ConvtPLMN	**Type of the result:**TMSI_GSM_MAP **Parameters:** OCTETSTRING p_MCC, p_MNC : HEXSTRING **Description** the functions of o_ConvtPLMN are as following: 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 siginificant 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. EXAMPLE 1: o_ConvtPLMN('123'H, '456'H) = '216354'O. EXAMPLE 2: o_ConvtPLMN ('234'H, '01F'H) = '32F410'O.
o_ConvtAndConcatStr	**Type of the result:**OCTETSTRING **Parameters:** p_MCC, p_MNC : HEXSTRING; p_LAC : OCTETSTRING; p_RAC : OCTETSTRING **Description** functions of o_ConvtAndConcatStr are as following: 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 siginificant 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. 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). 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.
o_DrawRandomNo	**Type of the result:** INTEGER **Parameters:** p_LowerBound, p_UpperBound: INTEGER **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.
o_FirstDigit	**Type of the result:** B4 **Parameters:** p_BCDdigits : HEXSTRING **Description** The input parameter p_BCDdigits shall be a BCD string (subset of HEXSTRING), the resut 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'. EXAMPLE 1: o_FirstDigit('12345') = '0001'B. EXAMPLE 2: o_FirstDigit('012345678') = '0000'B.
o_GetBit	**Type of the result:** BITSTRING **Parameters:** p_Source: BITSTRING p_DataLength:INTEGER **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).

TSO Name	Description
o_GetN_OctetsFromPRBS	**Type of the result:**OCTETSTRING **Parameters:** p_Start, p_N: INTEGER **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 [45] 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. Requirements p_Start ≥ 0 p_N ≥ 1 Definition Define the 2 047 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 This sequence is defined recursively as: b(i) = 1 , i = 0,1,...,10 b(i) = b(i - 2) + b(i - 11) modulo 2 , i = 11,16,...,2046 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) 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), 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
o_GetPI	**Type of the result:** BITSTRING **Parameters:** p_Imsi : **HEXSTRING** p_Np: INTEGER **Description** The PI is calculated as following: PI = drx_index mod np The drx_index is calculated as described hereafter: drx_index = (p_Imsi / 8192) This calculation is defined in 3GPP TS 25.304 [16] clause 8.3. NOTE: The IMSI is passed as HEXSTRING, the relevant conversion shall be done.
o_GetSC_TimeStamp	**Type of the result:** TP_ServCentreTimeSt **Parameters:** p_timezone : TZONES This operation provides the hexstring containing the service center time stamp (SCTS) according to 3GPP TS 23.040 [35], 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. Example: 2002 April 18, 15:32:46, timezone=4 o_GetSC_TimeStamp returns 20408151236440 TPSCTS is HEXSTRING[14]

TSO Name	Description
o_HexToDigitsMCC	**Type of the result:**MCC **Parameters:** p_BCDdigits : HEXSTRING **Description** The input parameter p_BCDdigits shall be a BCD string (subset of HEXSTRING), the result is a SEQUENCE (SIZE(3)) OF digit (MCC). NOTE: The length of p_BCDdigits shall be 3. User shall take the responsibility of fulfilling this requirement. EXAMPLE 1: o_HexToDigitsMCC('111'H) = {1, 1, 1}. EXAMPLE 2: o_HexToDigitsMCC('123'H) = {1, 2, 3}.
o_HexToDigitsMNC	**Type of the result:**MNC **Parameters:** p_BCDdigits : HEXSTRING **Description** The function of this operation is: 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. EXAMPLE 1: o_HexToDigitsMNC('123'H) = {1, 2, 3}. EXAMPLE 2: o_HexToDigitsMNC('13F'H) = {1, 3}.
o_HexToIA5	**Type of the result:** IA5String **Parameters:** p_String: HEXSTRING **Description** o_HEX_TO_IA5 converts hexadecimal string 'p_String' to an IA5 String EXAMPLE: o_HEX_TO_IA5 ('15A'H) = "15A".
o_IA5_ToOct	**Type of the result:**OCTETSTRING **Parameters:** p_String : IA5String **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 3GPP TS 24008, clause 10.5.6.1 EXAMPLE: o_IA5_ToOct ("15A") = '313541'O.

TSO Name	Description
o_IA5_BMC_ToOct	**Type of the result:**OCTETSTRING **Parameters:** p_String :IA5String_BMC p_DCS: TP_DataCodingScheme **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 [34] clause 5). If a 7 bit packing is to be applied then proceed as described in 3GPP TS 23.038 [34] 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 [34] clause 6.2.2. If UCS2is to be used then proceed as described in 3GPP TS 23.038 [34] 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 [36], 3GPP TS 23.038 [34], 3GPP TS 25.324 [20]) 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).
o_IA5_IP_ToOct	**Type of the result:**OCTETSTRING **Parameters:** p_String: IA5String p_IP_V4: BOOLEAN **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 [9], clause 10.5.6.4. 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.
o_IA5_DigitsToOct	**Type of the result:**OCTETSTRING **Parameters:** p_String: IA5String **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 [9], clause 10.5.4.7. 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.

TSO Name	Description
o_IntToOct	**Type of the result:**OCTETSTRING **Parameters:** p_N : INTEGER p_L: INTEGER **Description** o_IntToOct converts the INTEGER `p_N` into OCTETSTRING with length = 'p_L'. EXAMPLE 1: o_IntToOct(14,1) = '0E'O. EXAMPLE 2: o_IntToOct(18,1) = '12'O. EXAMPLE 3: o_IntToOct(18,2) = '0012'O.
o_IntToIA5	**Type of the result:**IA5String **Parameters:** p_N : INTEGER; p_L: INTEGER **Description** o_IntToIA5 converts the INTEGER `p_N` into IA5 String with length = 'p_L'. EXAMPLE 1: o_IntToIA5(160,3) = "160"; EXAMPLE 2: o_IntToIA5(160,4) = " 160"; EXAMPLE 3: o_IntToIA5(160,2) = "60".
o_OctetstringConcat	**Type of the result:**OCTETSTRING **Parameters:** p_Str1, p_Str2: OCTETSTRING **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. EXAMPLE: o_OctetstringConcat('135'O, '9A38'O) = '1359A38'O.
o_OctToBit	**Type of the result:** BITSTRING **Parameters:** p_OctetStr: OCTETSTRING **Description** Converts an OCTETSTRING into a BITSTRING. The size of the resulting BITSTRING is 8 times the size of the input OCTETSTRING.
o_OctToInt	**Type of the result:** INTEGER **Parameters:** p_oct : OCTETSTRING **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.
o_OctToIA5	**Type of the result:** IA5String **Parameters:** p_String: OCTETSTRING **Description** o_OctToIA5 converts hexadecimal string 'p_String' to an IA5 String EXAMPLE: o_OctToIA5 ('2A15AF'O) = "2A15AF".

TSO Name	Description
o_OeBit	**Type of the result:**BITSTRING **Parameters:** p_BCDdigits: HEXSTRING **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: 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. EXAMPLE 1: o_OeBit('12583') = '1'B. EXAMPLE 2: o_OeBit('87259957') ='0'B.
o_OtherDigits	**Type of the result:**OCTETSTRING **Parameters:** p_BCDdigits : HEXSTRING **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. */ The function of the o_OtherDigits is as the follows: 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 `bcddigits` with 'F'H, then removes the most significant digit, and then reverses the order of each pair of digits. EXAMPLE 1: o_OtherDigi('12345') = '3254', EXAMPLE 2: o_OtherDigi('12345678') ='325476F8'. See o_FirstDigit for the handling of the first digit.
o_RoutingParameterIMSIResponsePaging	**Type of the result**: RoutingParameter **Parameters:** p_IMSI : HEXSTRING **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.
o_SendInSameFrame	**Type of the result:** BOOLEAN **Parameters:** p_NumberMsg : INTEGER **Description** o_SendInSameFrame is called to request SS to send the p_NumberMsg messages in the same frame. Then it returns TRUE.

TSO Name	Description
o_SIB_PER_Encoding	**Type of the result:**BITSTRING **Parameters:** p_SIB : SIB **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: SysInfoType1 ::= { cn-CommonGSM-MAP-NAS-SysInfo '32F4100001'H, cn-DomainSysInfoList { { cn-DomainIdentity ps-domain, cn-Type gsm-MAP : '0000'H, 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 { } } The operation returns BITSTRING: "1000011001011110100000100000000000000000001011000100000000000000000100 0010000000000000001010000110011000001111100000111001111111111111111111 00101111010011"
o_SIB_Segmentation	**Type of the result:** SegmentsOfSysInfoBlock **Parameters:** p_SIBBitString : BITSTRING **Description** The function of the o_SIB_Segmentation is as following: 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.

TSO Name	Description
o_SIB_SegmentationFirstSpecial	**Type of the result:** SegmentsOfSysInfoBlock **Parameters:** p_SIB_BitString : BITSTRING p_FirstSegLength : INTEGER **Description** The function of the o_SIB_Segmentation_FirstShort is as following: 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. 5. The value of parameter p_FirstSegLength shall be less than 197.
o_CheckPDUsAcknowledged	**Type of the result:** BOOLEAN **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_FSN: INTEGER Contains an integer representing the first SN expected to be acknowledged. p_LSN: INTEGER Contains an integer representing the last SN expected to be acknowledged. p_SUFI_List: SuperFields This parameter contains the received SUFI list to be checked. **Description:** This TSO is used to check that the given SUFI list contains any combination of SUFIs that fulfils the following requirements: 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 thatn or equal to p_FSN, and less than or equal to p_LSN. **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.

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 ATSs.

Table 91: TSO definitions for RLC SUFI handling

TSO Name	Description
o_SUFI_Handler	**Type of the result:** ResAndSUFIs **Parameters:** p_SUFI_Params: SUFI_Params p_SUFI_String: HEXSTRING **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

Table 92: 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 herafter 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 section. 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 STRUCUTRE */
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 */
}

/* 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 == Any) OR (WSN_presence == TRUE) OR (WSN_presence == FALSE)) AND NOT
Exists_SUFI(WINDOW)
RESULT := FALSE;                               /* WINDOW not ex. but should -> Result is FALSE */
if ((MRW_presence == Any) OR (MRW_presence == TRUE) OR (MRW_presence == FALSE)) 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 receivd 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 93: TSO definitions for Multi RAT handover

TSO Name	Description
o_GetEstCauRandomRef	**Type of the result:** B_8 **Parameters:** p_msg : CHANNELREQUEST **Description** Returns the Eight bits of the EstCauRandomRef of the PDU CHANNELREQUEST
o_PagingGroupCalculate	**Type of the result:** INTEGER **Parameters:** p_IMSI : HEXSTRING p_CCCH_Conf : B_3 p_N : INTEGER **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 [6]. mod = Modulo. div = Integer division.
o_SecondDigit	**Type of the result:** B4 **Parameters:** p_digits : HEXSTRING **Description** The input parameter bcddigits 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. EXAMPLE 1: o_G_FirstDigit('123') = '0010'B. EXAMPLE 2: o_G_FirstDigit('01F') = '0001'B.

TSO Name	Description
o_ThirdDigit	**Type of the result:** B4 **Parameters:** p_digits : HEXSTRING **Description** The input parameter bcddigits 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. EXAMPLE 1: o_G_FirstDigit('123') = '0011'B. EXAMPLE 2: o_G_FirstDigit('01F') = '1111'B.
o_TTCN_HO_CommandTo Bitstring	**Type of the result:** BITSTRING **Parameters:** p_PDU : PDU Description The function of the o_TTCN_HOCommandToBitstring is as the follows: - It returns the bitstring representation of the input HANDOVERCOMMAND p_PDU.

8.7.3 Specific test suite operation for Multi RAB testing

Table 94: TSO definitions for Multi RAB testing

TSO Name	Description
o_SendContinuousData	**Type of the result:** BOOLEAN **Parameters:** p_RAB_Tx_Info : RAB_Tx_Info **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 **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. **Description** 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. Starting from the beginning of the raw data buffer given in the TSO: Data to be sent on a particular RbId is the first (number of SDUs * SDU_Size) bits All calls to TSO o_sendContinuosData in a test will always specify the exact same set of RbIds.

Table 95: 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 96: 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 97: TSO definitions for InterSystem testing

TSO Name	Description
o_GSM_ToUTRANHO_PER_Encoding	**Type of the result:** OCTETSTRING **Parameters:** p_Msg : HandoverToUTRANCommand p_Len : O1 **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.
o_LengthofHO_Cmd	**Type of the result:** INTEGER **Parameters:** p_Msg : HandoverToUTRANCommand **Description:** it returns the no. of octets of the input downlink message p_Msg

8.8 AT commands

The following table shows a list of AT commands. By using these commands the ATSs communicate with the SS for an automatic execution. The column 'ATS' indicates in which ATS the command is used.

Table 98: AT commands used in 3GPP ATSs

Command	Reference	ATS
+CGACT	3GPP TS 27.007 [23]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGATT	3GPP TS 27.007 [23]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGCMOD	3GPP TS 27.007 [23]	NAS
+CGDCONT	3GPP TS 27.007 [23]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGDSCONT	3GPP TS 27.007 [23]	NAS
+CGEQREQ	3GPP TS 27.007 [23]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGEQMIN	3GPP TS 27.007 [23]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CLCC	3GPP TS 27.007 [23]	NAS
+VTS	3GPP TS 27.007 [23]	NAS
H	3GPP TS 27.007 [23]	NAS, RAB, RRC, SMS
+CBST	3GPP TS 27.007 [23]	NAS, RAB, RRC, SMS
+CMOD	3GPP TS 27.007 [23]	NAS, RAB, RRC, SMS
A	3GPP TS 27.007 [23]	NAS, RAB, RRC, SMS
D	3GPP TS 27.007 [23]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGMD	3GPP TS 27.005 [22]	SMS
+CGMF	3GPP TS 27.005 [22]	SMS
+CGMR	3GPP TS 27.005 [22]	SMS
+CMGW	3GPP TS 27.005 [22]	SMS
+CMSS	3GPP TS 27.005 [22]	NAS, RAB, RRC, SMS
+CPMS	3GPP TS 27.005 [22]	SMS
+CSCA	3GPP TS 27.005 [22]	SMS
+CSCS	3GPP TS 27.005 [22]	SMS
+CSMS	3GPP TS 27.005 [22]	SMS

8.9 Bit padding

Three different kinds of bit padding at the RRC layer are defined in 3GPP TS 25.331 [21].

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 lengh is between 215 - 211.

No bit padding shall be generated by the PER encoder. Contrary to ITU-T Recommendation X.691 [28], 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 octed 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.1shall 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 [21], 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 tables defines test PDP contexts used in the generic procedures for the PS establishment and other SM tests. The test PDP contextDch1 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 contextFach 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 99: Test PDP contexts

	PDP ContextDch	**PDP ContextFach**	**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	QoSDch-UL64kAM-DL64kAM	QoSFach- 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 100: Test QoS

	QoSDch-UL64kAM-DL64kAM	QoSFach- UL32kAM-DL32kAM	QoS- UL8kAM-DL8kAM
Reliability class	'011'B Unacknowledged GTP, LLC, and acknowledged RLC; Protected data	'011'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:'011'B Class 3	UL:'000'B, Subscribed DL:'011'B Class 3	'100' Normal Class
Peak throughput	'0100'B 8 000 Octets/s	'0011' Up to 4 000 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 / Background	'011' B / '100'B Interactive / Background	'011' B Interactive class
Maximum SDU size	'20' O 320 bits]	'20'O 320 bits	'20'O 320 bits
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	'0111' 1X10E-5	'0111' 1X10E-5	'1001' 6X10E-3
SDU error ratio	'0100'B 1X10E-4	'0100'B 1X10E-4	'0011' 1X10E-3
Traffic Handling priority	UL: '00'B for ~~i~~Interactive, Any for Background DL: '11' B (for Interactive, for Background to be neglected by UE)	UL: '00'B for ~~i~~Interactive, Any for Background DL: '11' B (for Interactive, for Background 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: '10' O 16 kbps	UL: Any DL: '10'O 32 kbps	'08'O 32 kbps
Guaranteed bit rate for downlink	UL: Any DL: '10' O 16 kbps	UL: Any DL: '10'O 16 kbps	'08'O 8 kbps
NOTE: Residual BER 1X10E-5 corresponds to CRC 16.			

Table 101: 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	'420'O ~~32~~ 64 kbps		
Maximum bit rate for downlink	'420'O ~~32~~ 64 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 channelization
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 CCTrCH 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 A (normative): Abstract Test Suites (ATS)

This annex contains the approved ATSs.

The ATSs have been produced using the Tree and Tabular Combined Notation (TTCN) according to TR 101 666 [27].

The ATSs were developed on a separate TTCN software tool and therefore the TTCN tables are not completely referenced in the table of contents. Each ATS contains a test suite overview part which provides additional information and references.

A.1 Version of specifications

Table A.1 shows the version of the test specifications which the delivered ATSs are referred to.

Table A.1: Versions of the test and Core specifications

Core specifications	3GPP TS 25.331 [21] (V3.e~~a~~.0)
Test specifications	3GPP TS 34.123-1 [1] (V5.4~~3~~.0)
	3GPP TS 34.123-2 [2] (V5.4~~3~~.0)
	3GPP TS 34.108 [3] (V3.c~~b~~.0)
	3GPP TS 34.109 [4] (V3.9.0)

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_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_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 (3GPP TS 34.108 [3] clause 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"	
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	DefaultDPCH_OffsetValue	459	

Parameter Name	Description	Type	Default Value	Supported Value
	value * 512	FDD		
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 protoypes 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_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 24.008 [9], clause 10.5.5.8).	OCTETSTRING	'AB1234'O	
px_PuncLimit	Puncturing limit for PRACH	PuncturingLimit	pl1	
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 (1737898747698746521331326500, 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 (158964232131321322, 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)	

Parameter Name	Description	Type	Default Value	Supported Value
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_Mid	Mid Range downlink UARFCN value	INTEGER	10700	
px_UARFCN_D_Low	Low Range downlink UARFCN value	INTEGER	10563	
px_UARFCN_D_High	High Range downlink UARFCN value	INTEGER	10837	
px_UARFCN_U_High	High Range uplink UARFCN value. This value shall be set based on the operation band supported.	INTEGER	9887	
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 [4] clause 8.1.2.

B.1.2 L3M Test Suite Parameters Declarations

The following parameters are commonly used in the RRC and NAS ATSs.

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	ItcInt	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	
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 Synchronization 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	

Parameter Name	Description	Type	Default Value	Supported Value
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	'21'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"	
px_DTMF_BasicCharSet	TRUE if DMTF Chars 0-9, *, # supported	BOOLEAN	TRUE	
px_DTMF_OtherCharSet	TRUE if DMTF 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	Paramter 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 24.008 [9])	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	OCTETSTRI	'AB1234'O	

Parameter Name	Description	Type	Default Value	Supported Value
	testing.	NG		
px_VTS_AT_CommandSupp	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_MsgId01	Message Id to be used for the first Cell Broadcast Message sent	B16	'0000000000000001'B	
px_SMS_CB_MsgId02	Message Id to be used for the second Cell Broadcast Message sent	B16	'0000000000000010'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.	MaxSimultaneousTransChsD	e32	

Parameter Name	Description	Type	Default Value	Supported Value
		L		
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 BITSTRING [3] suitable for Single slot operation	B3	'000'B	
px_MaxAM_EntityNumberRLC_Cap	Maximum AM Entity Number for RLC.	MaximumAM_EntityNumberRLC_Cap	am30	
px_MaxHcContextSpace	MaxHcContextSpace if RFC 2507 [30] 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	rl1	
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_PowerClass	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	

Parameter Name	Description	Type	Default Value	Supported Value
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	
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_TcpIpCompressedTcpNonDeltaPacket01	IP header compressed packet type (PID=3) of px_PDCP_TcpIpUncompressedPacket01	IP_Packet	0000 0000 0000 0a00 0000 0050 1000 0026 3400 006a 6e6e 206a 6e6e 206a 6e6e	
px_PDCP_TcpIpCompressedTcpNonDeltaPacket02	IP header compressed packet type (PID=3) of px_PDCP_TcpIpUncompressedPacket02	IP_Packet	"Test_PDCP_TCPIP_Packet2_PID_Type3"	
px_PDCP_TcpIpCompressedTcpPacket01	IP header compressed packet type (PID=2) of px_PDCP_TcpIpUncompressedPacket01	IP_Packet	0028 2634 0a00 0000 6a6e 6e20 6a6e 6e	
px_PDCP_TcpIpCompressedTcpPacket02	IP header compressed packet type (PID=2) of px_PDCP_TcpIpUncompressedPacket02	IP_Packet	"Test_PDCP_TCPIP_Packet2_PID_Type2"	
px_PDCP_TcpIpFullHeaderPacket01	IP header compressed packet type (PID=1) of px_PDCP_TcpIpUncompressedPacket01	IP_Packet	c500 0000 0000 0000 4006 7ac6 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 5010 0000 263e 0000 6a6e 6e20 6a6e 6e	
px_PDCP_TcpIpFullHeaderPacket02	IP header compressed packet type (PID=1) of px_PDCP_TcpIpUncompressedPacket02	IP_Packet	"Test_PDCP_TCPIP_Packet2_PID_Type1"	

Parameter Name	Description	Type	Default Value	Supported Value
px_PDCP_TcpIpUncompressedPacket01	uncompressed TCP/IP Packet01	IP_Packet	4500 0033 0000 0000 4006 7ac6 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 5010 0000 263e 0000 6a6e 6e20 6a6e 6e	
px_PDCP_TcpIpUncompressedPacket02	uncompressed TCP/IP Packet02	IP_Packet	"Test_PDCP_TCPIP_Packet2"	
px_PDCP_UdpIpCompressedTcpNonTcpPacket01	IP header compressed packet type (PID=4) of px_PDCP_UdpIpUncompressedPacket01	IP_Packet	0001 0000 763c 6a6e 6e20 6a6e 6e20 6a6e 6e	
px_PDCP_UdpIpCompressedTcpNonTcpPacket02	IP header compressed packet type (PID=4) of px_PDCP_UdpIpUncompressedPacket02	IP_Packet	"Test_PDCP_UDPIP_Packet2_PID_Type4"	
px_PDCP_UdpIpFullHeaderPacket01	IP header compressed packet type (PID=1) of px_PDCP_UdpIpUncompressedPacket01	IP_Packet	8500 0100 0000 0000 4011 7ac7 0000 0000 0000 0000 0000 0000 0000 0013 763c 6a6e 6e20 6a6e 6e20 6a6e 6e	
px_PDCP_UdpIpFullHeaderPacket02	IP header compressed packet type (PID=1) of px_PDCP_UdpIpUncompressedPacket02	IP_Packet	"Test_PDCP_UDPIP_Packet2_PID_Type1"	
px_PDCP_UdpIpUncompressedPacket01	uncompressed UDP/IP Packet01	IP_Packet	4500 0027 0000 0000 4011 7ac7 0000 0000 0000 0000 0000 0000 0000 0013 763c 6a6e 6e20 6a6e 6e20 6a6e 6e	
px_PDCP_UdpIpUncompressedPacket02	uncompressed UDP/IP Packet02	IP_Packet	"Test_PDCP_UDPIP_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_MsgId01	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_MsgId02	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_ggS02	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_msgCode 01"	
px_MsgCode02	Data to be sent in TC 7.4.2.1	BITSTRING[10]	"Test_msgCode 02"	
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_ updateNumber0 1"	
px_UpdateNumber02	Data to be sent in TC 7.4.2.1	BITSTRING[4]	"Test_ updateNumber0 2"	

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
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	

Parameter Name	Description	Type	Default Value	Supported Value
px_G_TCh_ARFCN	the value can be choosen arbitrarily from cell allocation of cell B (GSM), but not BCCH carrier. The value depends on the GSM Band selected Ref 51.010-1 sec 26.1.1	INTEGER		
px_G_TCH_H_SubA	TDMA offset of half rate subchannel	B1	‘0'B	
px_G_TimeSlotMulti	time slot 3GPP TS 04.18, 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 Time difference threshold max value 1174	INTEGER	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	
px_TSC	Training sequence code for traffic channels.	B_3	'011'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
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)	

Parameter Name	Description	Type	Default Value	Supported Value
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_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 TC_14_2_31.	BITSTRING	INT_TO_BIT (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)	

Parameter Name	Description	Type	Default Value	Supported Value
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_ConvUnknown_64	Data to be sent for RB test TC_14_2_50	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_128_0	Data to be sent for RB test TC_14_2_21	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 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)	

Parameter Name	Description	Type	Default Value	Supported Value
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_144	Data to be sent for RB test TC_14_2_29.	BITSTRING	INT_TO_BIT (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_ConvUnknown_64	Data to be sent for RB test TC_14_2_49.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_Speech_12_2_StreamUnknown_57_6	Data to be sent for RB test TC_14_2_45.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 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 (123589874569874652132132650, 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 (123589874569874652132132650, 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 (123589874569874652132132650, 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 (123589874569874652132132650, 1344)	
px_RB_Speech_12_2k_Background_8k	Data to be sent for RB test TC_14_2_38b.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 336)	
px_RB_Speech_12_2k_Interactive_8k	Data to be sent for RB test TC_14_2_38b.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 336)	
px_RB_StreamingUnknown_16_64_Background_8	Data to be sent for RB test TC_14_2_58.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 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	
px_RB_DataStreaming_0_64	Data to be sent for RB test TC_14_2_18.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 2560)	
px_RB_DataStreaming_0_128	Data to be sent for RB test TC_14_2_20.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 5120)	
px_RB_DataStreaming_0_384	Data to be sent for RB test TC_14_2_22.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 15360)	
px_RB_Speech_12_2_Interactive_32_8	Data to be sent for RB test TC_14_2_38.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 672)	
px_RB_Speech_12_2_Interactive_64	Data to be sent for RB test TC_14_2_38d.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 1360)	
px_RB_Speech_12_2_Background_32_8	Data to be sent for RB test TC_14_2_38.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 672)	
px_RB_Speech_12_2_Background_64	Data to be sent for RB test TC_14_2_38d.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 1360)	

Parameter Name	Description	Type	Default Value	Supported Value
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)	
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_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_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_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_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_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_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_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_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_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_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_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_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_ConvUnknown_64_Interactive_64	Data to be sent for RB test TC_14_2_51.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	

Parameter Name	Description	Type	Default Value	Supported Value
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_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_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_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)	
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_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_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_Background_128_128	Data to be sent for RB test TC_14_2_53.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2688)	
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)	

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_Background_64_128_StreamingUnknown_0k_64k	Data to be sent for RB test TC_14_2_54.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 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_Background_64_128_StreamingUnknown_0k_128k	Data to be sent for RB test TC_14_2_55	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 5120)	

B.1.10 MAC Test Suite Parameters Declarations

These parameters are used in the MAC ATS.

Table B.10: 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	

B.1.11 MMI questions

Table B.11 requests additional information needed for the excution of the MMI commands used in the ATSs, the column 'ATS' indicates in which ATS the question is used.

Table B.11: MMI questions

Required information for MMI question	ATS
How to switch the PLMN selection mode of the UE to automatic selection?	All ATSs
How to switch the PLMN selection mode of the UE to manual selection?	All ATSs
How to select a given PLMN manually?	All ATSs
How to power off the UE?	All ATSs
How to power on the UE?	All ATSs
How to switch off the UE?	All ATSs
How to switch on the UE?	All ATSs
How to insert the USIM card into the UE?	All ATSs
How to remove the USIM card from the UE?	All ATSs
How to check that DTCH is trough connected ?	RRC, SMS, NAS
How to configure UE for a MO telephony call?	RRC, SMS, NAS
How to configure UE for an emergency call?	RRC, SMS, NAS
How to configure UE for a MT telephony call?	RRC, SMS, NAS
How to send any NAS message in order for RRC to receive data?	RRC, SMS, NAS
How to initiate a non call related supplementary service which is supported by the UE?	NAS
How to initiate sending of a mobile originated short message from the UE?	NAS
How to insert 2nd SIM card with short IMSI?	NAS
How to initiate an autocalling call with a given number?	NAS
How to initiate an autocalling call for a number that will be put in the blacklisted list?	NAS
How to reset the autocalling list of blacklisted numbers?	NAS
How to check that the DTMF tone indication has been generated?	NAS
How to enable call refusal on the UE?	NAS
How to check the contents of the received CBS?	SMS
How to check that the Memory Capacity Exceeded Flag has been set to the USIM simulator?	SMS
How to check if the Memory Capacity Exceeded Flag has been unset on the USIM simulator?	SMS
How to check the length and the contents of a given received Short Message ?	SMS
How to check whether the USIM simulator indicated an attempt made by the ME to store the short message in the USIM and return the status response 'Memory Problem'('92 40')?	SMS
How to check whether the USIM simulator indicates an attempt made by the ME to store the short message in the USIM and returns the status response 'OK' ('90 00')?	SMS
How to connect the USIM simulator to the UE?	SMS
How to send an SMS COMMAND message containing a request to delete the previously submitted Short Message?	SMS
How to send an SMS COMMAND message containing an enquiry about the previously submitted SM?	SMS
How to check that NO recalled short Message is displayed?	SMS
How to reply to a short Message with a given length?	SMS
How to insert a USIM card of type B into the UE?	MAC

3GPP TSG-T WG1 Meeting #20
Munich, Germany, 28th July – 1st August 2003

Tdoc ⌘T1-031278

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 074** ⌘ **rev -** ⌘ Current version: **3.2.1** ⌘

*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 to 34.123-3, R99, Update and remove unnecessary PIXIT parameters, so they are aligned with the 3GPP conformance TTCN
Source:	⌘	MCC task 160 and Nokia
Work item code:	⌘	TEI
Date:	⌘	05/09/2003
Category:	⌘	F
Release:	⌘	R99

Use one 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 one 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:	⌘	Remove unnecessary PIXIT parameters, to avoid back door workarounds.
Summary of change:	⌘	At T1/SIG meeting #27 in San Antonio, Nokia presented a proposal to remove unnecessary PIXIT parameters. At the T1/SIG meeting #27 it was also agreed that when T1 moved to package 2 test cases, that Integrity would be enabled and that the PIXIT parameters would be reduced. Nokia agreed to work with ETSI MCC 160 to reduce the PIXIT parameters and come to the T1#20 meeting with the new proposal. As a side issue, it was also discussed that there maybe some concerns that by reducing the various parameters in the PIXIT file may reduced the test coverage, if this is the case, then maybe T1 need to think about writing some more test cases to cover these shortages.
Consequences if not approved:	⌘	At the moment UE/SS manufacturers can/could change values in the PIXIT file to suite either their purposes or possible lack of full implementation or even provide a back door for a workaround. In other words, it is providing too much flexibility and could cause problems in the future.

Clauses affected:	⌘	None

Other specs affected:	⌘	Y	N		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	Please note ETSI MCC 160's CR T1031242 (which was approved at T1#20

meeting) is included in this document.

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.

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_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_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	'01011110010010101011001101100010010001001101110101110100101010111011101000000100101100111100111110000110000100110100110001010011'B	
px_AuthN	Value of n to initialize tcv_Auth_n (length of extended response) min 31, max 127 (3GPP TS 34.108 [**Error! Reference source not found.**] clause 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"~~	
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~~	

Parameter Name	Description	Type	Default Value	Supported Value
~~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_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 24.008 [**Error! Reference source not found.**], clause 10.5.5.8).	OCTETSTRING	'AB1234'O	
~~px_PuncLimit~~	~~Puncturing limit for PRACH~~	~~PuncturingLimit~~	~~pl1~~	
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 (17378987476987465213313265 0, 1344)	
px_RB_DataConversational_64	Data to be sent for RB test TC_14_2_13.	BITSTRING	INT_TO_BIT (89412032145809654789322116 84654654, 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 (12358987456987465213213265 0, 2304)	
px_RB_Interactive_64	Data to be sent for RB test TC_14_2_26.	BITSTRING	INT_TO_BIT (15358987456987465213313265 0, 1344)	

Parameter Name	Description	Type	Default Value	Supported Value
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_Mid	Mid Range downlink UARFCN value	INTEGER	10700	
px_UARFCN_D_Low	Low Range downlink UARFCN value	INTEGER	10563	
px_UARFCN_D_High	High Range downlink UARFCN value	INTEGER	10837	
px_UARFCN_U_High	High Range uplink UARFCN value. This value shall be set based on the operation band supported.	INTEGER	9887	
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"	
px_DeltaSS_DelayTime	Tdelta value (refer to 34.108 clause 4.2.3) in ms.	INTEGER	55ms	

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 ATSs.

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~~	~~ItcInt~~	~~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~~	
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 Synchronization 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~~	

Parameter Name	Description	Type	Default Value	Supported Value
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~~	~~'21'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"	
px_DTMF_BasicCharSet	TRUE if DMTF Chars 0-9, *, # supported	BOOLEAN	TRUE	
px_DTMF_OtherCharSet	TRUE if DMTF 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	Paramter 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 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	

Parameter Name	Description	Type	Default Value	Supported Value
px_PTMSI_Sig2	Second PTMSI signature used for testing.	OCTETSTRING	'AB1234'O	
px_VTS_AT_CommandSupp	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_MsgId01	Message Id to be used for the first Cell Broadcast Message sent	B16	'0000000000000001'B	
px_SMS_CB_MsgId02	Message Id to be used for the second Cell Broadcast Message sent	B16	'0000000000000010'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	MaxSimultane	e32	

Parameter Name	Description	Type	Default Value	Supported Value
	transport channels for downlink.	ousTransChsDL		
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 BITSTRING [3] suitable for Single slot operation~~	~~B3~~	~~'000'B~~	
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	rl1	
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_PowerClass	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	

Parameter Name	Description	Type	Default Value	Supported Value
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	
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_TcpIpCompressedTcpNonDeltaPacket01	IP header compressed packet type (PID=3) of px_PDCP_TcpIpUncompressedPacket01	IP_Packet	0000 0000 0000 0a00 0000 0050 1000 0026 3400 006a 6e6e 206a 6e6e 206a 6e6e	
px_PDCP_TcpIpCompressedTcpNonDeltaPacket02	IP header compressed packet type (PID=3) of px_PDCP_TcpIpUncompressedPacket02	IP_Packet	"Test_PDCP_TCPIP_Packet2_PID_Type3"	
px_PDCP_TcpIpCompressedTcpPacket01	IP header compressed packet type (PID=2) of px_PDCP_TcpIpUncompressedPacket01	IP_Packet	0028 2634 0a00 0000 6a6e 6e20 6a6e 6e	
px_PDCP_TcpIpCompressedTcpPacket02	IP header compressed packet type (PID=2) of px_PDCP_TcpIpUncompressedPacket02	IP_Packet	"Test_PDCP_TCPIP_Packet2_PID_Type2"	
px_PDCP_TcpIpFullHeaderPacket01	IP header compressed packet type (PID=1) of px_PDCP_TcpIpUncompressedPacket01	IP_Packet	c500 0000 0000 0000 4006 7ac6 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 5010 0000 263e 0000 6a6e 6e20 6a6e 6e	
px_PDCP_TcpIpFullHeaderPacket02	IP header compressed packet type (PID=1) of px_PDCP_TcpIpUncompressedPacket02	IP_Packet	"Test_PDCP_TCPIP_Packet2_PID_Type1"	

Parameter Name	Description	Type	Default Value	Supported Value
px_PDCP_TcpIpUncompressedPacket01	uncompressed TCP/IP Packet01	IP_Packet	4500 0033 0000 0000 4006 7ac6 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 5010 0000 263e 0000 6a6e 6e20 6a6e 6e	
px_PDCP_TcpIpUncompressedPacket02	uncompressed TCP/IP Packet02	IP_Packet	"Test_PDCP_TCPIP_Packet2"	
px_PDCP_UdpIpCompressedTcpNonTcpPacket01	IP header compressed packet type (PID=4) of px_PDCP_UdpIpUncompressedPacket01	IP_Packet	0001 0000 763c 6a6e 6e20 6a6e 6e20 6a6e 6e	
px_PDCP_UdpIpCompressedTcpNonTcpPacket02	IP header compressed packet type (PID=4) of px_PDCP_UdpIpUncompressedPacket02	IP_Packet	"Test_PDCP_UDPIP_Packet2_PID_Type4"	
px_PDCP_UdpIpFullHeaderPacket01	IP header compressed packet type (PID=1) of px_PDCP_UdpIpUncompressedPacket01	IP_Packet	8500 0100 0000 0000 4011 7ac7 0000 0000 0000 0000 0000 0000 0000 0013 763c 6a6e 6e20 6a6e 6e20 6a6e 6e	
px_PDCP_UdpIpFullHeaderPacket02	IP header compressed packet type (PID=1) of px_PDCP_UdpIpUncompressedPacket02	IP_Packet	"Test_PDCP_UDPIP_Packet2_PID_Type1"	
px_PDCP_UdpIpUncompressedPacket01	uncompressed UDP/IP Packet01	IP_Packet	4500 0027 0000 0000 4011 7ac7 0000 0000 0000 0000 0000 0000 0000 0013 763c 6a6e 6e20 6a6e 6e20 6a6e 6e	
px_PDCP_UdpIpUncompressedPacket02	uncompressed UDP/IP Packet02	IP_Packet	"Test_PDCP_UDPIP_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_MsgId01	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_MsgId02	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_ggS02	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_msgCode 01"	
px_MsgCode02	Data to be sent in TC 7.4.2.1	BITSTRING[10]	"Test_msgCode 02"	
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_ updateNumber0 1"	
px_UpdateNumber02	Data to be sent in TC 7.4.2.1	BITSTRING[4]	"Test_ updateNumber0 2"	

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
~~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~~	

Parameter Name	Description	Type	Default Value	Supported Value
~~px_G_TCh_ARFCN~~	~~the value can be choosen arbitrarily from cell allocation of cell B (GSM), but not BCCH carrier. The value depends on the GSM Band selected Ref 51.010-1 sec 26.1.1~~	~~INTEGER~~		
~~px_G_TCH_H_SubA~~	~~TDMA offset of half rate subchannel~~	~~B1~~	~~'0'B~~	
~~px_G_TimeSlotMulti~~	~~time slot 3GPP TS 04.18, 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 (2473304159874563214258, 576)	
px_RB_DataStreaming_28_8	Data to be sent.	BITSTRING	5896632514789541144447788454777, 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 Time difference threshold max value 1174~~	~~INTEGER~~	~~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~~	
~~px_TSC~~	~~Training sequence code for traffic channels.~~	~~B_3~~	~~'011'B~~	
Px_CipherAlg	Cipher algorithm.	B3	Default value: (A5/1) '000'B	
Px_CipherKey	Cipher key (64 bits)	B64	Default value: '01011110010010 10101100110101 10001001000100 11011101011101 00101010'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
~~px_DSCH_RNTI~~	~~UE ID in the DSCH case~~	~~DSCH_RNTI~~	~~DSCH RNTI. (Copied from C-~~	

Parameter Name	Description	Type	Default Value	Supported Value
			~~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_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 TC_14_2_31.	BITSTRING	INT_TO_BIT (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,	

Parameter Name	Description	Type	Default Value	Supported Value
			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_ConvUnknown_64	Data to be sent for RB test TC_14_2_50	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_128_0	Data to be sent for RB test TC_14_2_21	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 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)	

Parameter Name	Description	Type	Default Value	Supported Value
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_144	Data to be sent for RB test TC_14_2_29.	BITSTRING	INT_TO_BIT (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_ConvUnknown_64	Data to be sent for RB test TC_14_2_49.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650,	

Parameter Name	Description	Type	Default Value	Supported Value
			2560)	
px_RB_Speech_12_2_StreamUnknown_57_6	Data to be sent for RB test TC_14_2_45.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 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 (123589874569874652132132650, 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 (123589874569874652132132650, 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 (123589874569874652132132650, 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 (123589874569874652132132650, 1344)	
px_RB_Speech_12_2k_Background_8k	Data to be sent for RB test TC_14_2_38b.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 336)	
px_RB_Speech_12_2k_Interactive_8k	Data to be sent for RB test TC_14_2_38b.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 336)	
px_RB_StreamingUnknown_16_64_Background_8	Data to be sent for RB test TC_14_2_58.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 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	
px_RB_DataStreaming_0_64	Data to be sent for RB test TC_14_2_18.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 2560)	
px_RB_DataStreaming_0_128	Data to be sent for RB test TC_14_2_20.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 5120)	
px_RB_DataStreaming_0_384	Data to be sent for RB test TC_14_2_22.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 15360)	
px_RB_Speech_12_2_Interactive_32_8	Data to be sent for RB test TC_14_2_38.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 672)	
px_RB_Speech_12_2_Interactive_64	Data to be sent for RB test TC_14_2_38d.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 1360)	
px_RB_Speech_12_2_Background_32_8	Data to be sent for RB test TC_14_2_38.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 672)	
px_RB_Speech_12_2_Background_64	Data to be sent for RB test TC_14_2_38d.	BITSTRING	INT_TO_BIT (123589874569874652132132650, 1360)	

Parameter Name	Description	Type	Default Value	Supported Value
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)	
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_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_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_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_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_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_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_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_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_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_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_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_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_ConvUnknown_64_Interactive_64	Data to be sent for RB test TC_14_2_51.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2560)	

Parameter Name	Description	Type	Default Value	Supported Value
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_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_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_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)	
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_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_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_Background_128_128	Data to be sent for RB test TC_14_2_53.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 2688)	
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)	

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_Background_64_128_StreamingUnknown_0k_64k	Data to be sent for RB test TC_14_2_54.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 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_Background_64_128_StreamingUnknown_0k_128k	Data to be sent for RB test TC_14_2_55	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 5120)	
Px_RB_Background_64k_64k_20	Data to be sent for RB test TC_14_2_57	BITSTRING	INT_TO_BIT(123 45678987456987 4652132132650, 2560)	

B.1.10 MAC Test Suite Parameters Declarations

These parameters are used in the MAC ATS.

Table B.10: 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	

B.1.11 MMI questions

Table B.11 requests additional information needed for the excution of the MMI commands used in the ATSs, the column 'ATS' indicates in which ATS the question is used.

Table B.11: MMI questions

Required information for MMI question	ATS
How to switch the PLMN selection mode of the UE to automatic selection?	All ATSs
How to switch the PLMN selection mode of the UE to manual selection?	All ATSs
How to select a given PLMN manually?	All ATSs
How to power off the UE?	All ATSs
How to power on the UE?	All ATSs
How to switch off the UE?	All ATSs
How to switch on the UE?	All ATSs
How to insert the USIM card into the UE?	All ATSs
How to remove the USIM card from the UE?	All ATSs
How to check that DTCH is trough connected ?	RRC, SMS, NAS
How to configure UE for a MO telephony call?	RRC, SMS, NAS
How to configure UE for an emergency call?	RRC, SMS, NAS
How to configure UE for a MT telephony call?	RRC, SMS, NAS
How to send any NAS message in order for RRC to receive data?	RRC, SMS, NAS
How to initiate a non call related supplementary service which is supported by the UE?	NAS
How to initiate sending of a mobile originated short message from the UE?	NAS
How to insert 2nd SIM card with short IMSI?	NAS
How to initiate an autocalling call with a given number?	NAS
How to initiate an autocalling call for a number that will be put in the blacklisted list?	NAS
How to reset the autocalling list of blacklisted numbers?	NAS
How to check that the DTMF tone indication has been generated?	NAS
How to enable call refusal on the UE?	NAS
How to check the contents of the received CBS?	SMS
How to check that the Memory Capacity Exceeded Flag has been set to the USIM simulator?	SMS
How to check if the Memory Capacity Exceeded Flag has been unset on the USIM simulator?	SMS
How to check the length and the contents of a given received Short Message ?	SMS
How to check whether the USIM simulator indicated an attempt made by the ME to store the short message in the USIM and return the status response 'Memory Problem'('92 40')?	SMS
How to check whether the USIM simulator indicates an attempt made by the ME to store the short message in the USIM and returns the status response 'OK' ('90 00')?	SMS
How to connect the USIM simulator to the UE?	SMS
How to send an SMS COMMAND message containing a request to delete the previously submitted Short Message?	SMS
How to send an SMS COMMAND message containing an enquiry about the previously submitted SM?	SMS
How to check that NO recalled short Message is displayed?	SMS
How to reply to a short Message with a given length?	SMS
How to insert a USIM card of type B into the UE?	MAC

3GPP TSG-T1~~/SIC~~ Meeting #20

Munich, Germany, 28 July – 1 August 2003

T1~~S~~ ⌘ 030405~~03xxxx~~

CR-Form-v7

CHANGE REQUEST

⌘	~~RRC~~ ~~ATS~~TS34.123-3	CR	405~~03xx xx~~	⌘ rev	1 ~~1~~	⌘	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 8.1.1.5
Source:	⌘	T1
Work item code:	⌘	***Date:*** ⌘ 19~~25~~/05/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one 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 one 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 8.1.1.5 to RRCv310
Summary of change:	⌘	- 0 table deleted from RRCv310, - ~~14~~25 tables modified in RRCv310, - 6~~3~~ tables added from RRCv143, - 6~~6~~ new tables created. For more details see below.
Consequences if not approved:	⌘	Test case 8.1.1.5 will not be added

Clauses affected:	⌘	N/A			
Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	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.

Anritsu
ANRITSU LIMITED

TSG-T W~~orking~~ G~~roup~~ 1 ~~SWG SIG~~ E-mail Approval

T1-03~~2~~0405~~(8.1.1.8)~~

Munich, Germany 28 July – 1 August 2003

Title	~~Changes to~~ Introducing test case 8.1.1.5~~8 required for approval~~to RRCv310
Source	Anritsu
Agenda Item	N/A
Document for	Approval
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1 Overview

This document details the changes needed ~~to fix problems in the TTCN implementation of~~ introduce test case 8.1.1.5~~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 8.1.1.5~~8~~.

2 Changes required for test-case 8.1.1.5~~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 .

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_lv

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 ~~& 2.2.14~~.

Summary of Change: Rename the constraint to cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv, 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_lv (p_trafficClass : 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	'100'B		Best effort
	relabilityClass	'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		
	relabilityClass	'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_lv

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_lv, 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_lv (p_trafficClass : 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	'100'B		Best effort
	relabilityClass	'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	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	relabilityClass	'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

~~2.2.3~~2.2.4 cs_QoS_InteractiveMT_CellFACH_lv

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_~~InteractiveOrBackgroundMO~~InteractiveOrBackgroundMT_CellFACH_lv, 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_lv (p_trafficClass : B3)			
Structured Type	QualityOfService_lv			
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
	relabilityClass	'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'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	relabilityClass	'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 cs_QoS_InteractiveMT_lv

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_lv, 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_lv (p_trafficClass : B3)
Structured Type	QualityOfService_lv
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
	relabilityClass	'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		
	deliveryOrder	'01'B		
	deliveryErrorSDU	'010'B		
	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	cs_QoS_InteractiveOrBackgroundMT_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		
	relabilityClass	'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~~2.2.6 cr_ActPDP_ContextReqFACH_MO

Reason for change: To provide a means for selecting the requested Quality of Service ~~& 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			
PDU Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Rule Name				
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)			
PDU Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Rule Name				
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)		
	….			

2.2.7 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			
PDU Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Rule Name				
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_AddrInfoDCH)		
	….			

To:

Constraint Name	cr_ActPDP_ContextReqMO(p_RequestedQoS : QualityOfService_lv)			
PDU Type	ACTIVATEPDPCONTEXTREQUESTul			
Derivation Path				
Encoding Rule Name				
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)		
	….			

~~2.2.5~~2.2.8 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_lv; 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_lv; 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	*		
	….			

2.2.9 cbs_108_CellUpdateCnfCCCH

Reason for change: The U_RNTI used in identifying the target UE for this message needs to be the existing U_RNTI, not the new one.

Summary of Change: Use parameter p_U_RNTIold rather than p_U_RNTI for the u_RNTI field.

Change ASN.1 PDU Constraint Declaration from:

Constraint Name	cbs_108_CellUpdateCnfCCCH (p_IntegrityCheckInfo : IntegrityCheckInfo; p_U_RNTIold : U_RNTI; 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; p_DRX_CycleLengthCoeff : UTRAN_DRX_CycleLengthCoefficient)
PDU Type	DL_CCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	

Constraint Value

```
{
integrityCheckInfo    p_IntegrityCheckInfo,
message cellUpdateConfirm: r3:{
u_RNTI p_U_RNTI,
cellUpdateConfirm_r3  {      --CellUpdateConfirm_r3_IEs
    rrc_TransactionIdentifier p_RRC_TI,
    integrityProtectionModeInfo   OMIT,
    cipheringModeInfo   OMIT,
    activationTime OMIT,
    new_U_RNTI  p_U_RNTI ,
    new_C_RNTI   p_C_RNTI,
    rrc_StateIndicator   p_State_Ind,
    utran_DRX_CycleLengthCoeff   p_DRX_CycleLengthCoeff,
    rlc_Re_establishIndicatorRb2_3or4   FALSE,
    rlc_Re_establishIndicatorRb5orAbove  FALSE,
    cn_InformationInfo   OMIT,
    ura_Identity   '0000000000000001'B,
    rb_InformationReleaseList  OMIT,
    rb_InformationReconfigList OMIT,
    rb_InformationAffectedList OMIT,
    ul_CommonTransChInfo     OMIT,
    ul_deletedTransChInfoList  OMIT,
    ul_AddReconfTransChInfoList  OMIT,
    modeSpecificTransChInfo fdd: {
       cpch_SetID OMIT,
       addReconfTransChDRAC_Info OMIT
    },
   dl_CommonTransChInfo OMIT,
   dl_DeletedTransChInfoList OMIT,
   dl_AddReconfTransChInfoList OMIT,
   frequencyInfo OMIT,
   maxAllowedUL_TX_Power OMIT,
   ul_ChannelRequirement   p_UL_ChannelRequirement,
   modeSpecificPhysChInfo fdd : {
   dl_PDSCH_Information OMIT
                                    } ,
  dl_CommonInformation p_DL_CommonInformation ,
  dl_InformationPerRL_List p_DL_InformationPerRL_List
 },
nonCriticalExtensions OMIT
}
}
```

To:

Constraint Name	cbs_108_CellUpdateCnfCCCH (p_IntegrityCheckInfo : IntegrityCheckInfo; p_U_RNTIold : U_RNTI; 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; p_DRX_CycleLengthCoeff : UTRAN_DRX_CycleLengthCoefficient)
PDU Type	DL_CCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	

Constraint Value

```
{
integrityCheckInfo     p_IntegrityCheckInfo,
message cellUpdateConfirm: r3:{
u_RNTI p_U_RNTIold,
cellUpdateConfirm_r3   {       --CellUpdateConfirm_r3_IEs
     rrc_TransactionIdentifier p_RRC_TI,
     integrityProtectionModeInfo    OMIT,
     cipheringModeInfo    OMIT,
     activationTime OMIT,
     new_U_RNTI  p_U_RNTI ,
     new_C_RNTI   p_C_RNTI,
     rrc_StateIndicator    p_State_Ind,
     utran_DRX_CycleLengthCoeff   p_DRX_CycleLengthCoeff,
     rlc_Re_establishIndicatorRb2_3or4   FALSE,
     rlc_Re_establishIndicatorRb5orAbove  FALSE,
     cn_InformationInfo    OMIT,
     ura_Identity   '0000000000000001'B,
     rb_InformationReleaseList  OMIT,
     rb_InformationReconfigList OMIT,
     rb_InformationAffectedList OMIT,
     ul_CommonTransChInfo      OMIT,
     ul_deletedTransChInfoList  OMIT,
     ul_AddReconfTransChInfoList  OMIT,
     modeSpecificTransChInfo fdd: {
        cpch_SetID OMIT,
        addReconfTransChDRAC_Info OMIT
     },
    dl_CommonTransChInfo OMIT,
    dl_DeletedTransChInfoList OMIT,
    dl_AddReconfTransChInfoList OMIT,
    frequencyInfo OMIT,
    maxAllowedUL_TX_Power OMIT,
    ul_ChannelRequirement   p_UL_ChannelRequirement,
    modeSpecificPhysChInfo fdd : {
    dl_PDSCH_Information OMIT
                                    } ,
  dl_CommonInformation p_DL_CommonInformation ,
  dl_InformationPerRL_List p_DL_InformationPerRL_List
 },
nonCriticalExtensions OMIT
}
}
```

2.2.10 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 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 Rule Name	
Encoding Variation	
Comments	

Constraint Value

```
{
integrityCheckInfo     p_IntegrityCheckInfo,
message cellUpdateConfirm: r3:{
cellUpdateConfirm_r3  {       --CellUpdateConfirm_r3_IEs
     rrc_TransactionIdentifier p_RRC_TI,
     integrityProtectionModeInfo    OMIT,
     cipheringModeInfo    OMIT,
     activationTime OMIT,
     new_U_RNTI  p_U_RNTI ,
     new_C_RNTI   p_C_RNTI,
     rrc_StateIndicator    p_State_Ind,
     utran_DRX_CycleLengthCoeff    OMIT,
     rlc_Re_establishIndicatorRb2_3or4   FALSE,
     rlc_Re_establishIndicatorRb5orAbove  FALSE,
     cn_InformationInfo    OMIT,
     ura_Identity   '0000000000000001'B,
     rb_InformationReleaseList  OMIT,
     rb_InformationReconfigList OMIT,
     rb_InformationAffectedList OMIT,
     ul_CommonTransChInfo      OMIT,
     ul_deletedTransChInfoList  OMIT,
     ul_AddReconfTransChInfoList  OMIT,
     modeSpecificTransChInfo fdd: {
        cpch_SetID OMIT,
        addReconfTransChDRAC_Info OMIT
     },
    dl_CommonTransChInfo OMIT,
    dl_DeletedTransChInfoList OMIT,
    dl_AddReconfTransChInfoList OMIT,
    frequencyInfo OMIT,
    maxAllowedUL_TX_Power OMIT,
    ul_ChannelRequirement   p_UL_ChannelRequirement,
    modeSpecificPhysChInfo fdd : {
    dl_PDSCH_Information OMIT
                                        } ,
   dl_CommonInformation p_DL_CommonInformation ,
   dl_InformationPerRL_List p_DL_InformationPerRL_List
  },
v3a0NonCriticalExtensions OMIT
}
}
```

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 Rule Name	
Encoding Variation	
Comments	

Constraint Value

```
{
integrityCheckInfo     p_IntegrityCheckInfo,
message cellUpdateConfirm: r3:{
cellUpdateConfirm_r3  {       --CellUpdateConfirm_r3_IEs
     rrc_TransactionIdentifier p_RRC_TI,
     integrityProtectionModeInfo    OMIT,
     cipheringModeInfo    OMIT,
     activationTime OMIT,
     new_U_RNTI  p_U_RNTI ,
     new_C_RNTI   p_C_RNTI,
     rrc_StateIndicator    p_State_Ind,
     utran_DRX_CycleLengthCoeff    OMIT,
     rlc_Re_establishIndicatorRb2_3or4   FALSE,
     rlc_Re_establishIndicatorRb5orAbove  FALSE,
     cn_InformationInfo    OMIT,
     ura_Identity    OMIT,
     rb_InformationReleaseList  OMIT,
     rb_InformationReconfigList OMIT,
     rb_InformationAffectedList OMIT,
     ul_CommonTransChInfo      OMIT,
     ul_deletedTransChInfoList  OMIT,
     ul_AddReconfTransChInfoList  OMIT,
     modeSpecificTransChInfo fdd: {
        cpch_SetID OMIT,
        addReconfTransChDRAC_Info OMIT
     },
    dl_CommonTransChInfo OMIT,
    dl_DeletedTransChInfoList OMIT,
    dl_AddReconfTransChInfoList OMIT,
    frequencyInfo OMIT,
    maxAllowedUL_TX_Power OMIT,
    ul_ChannelRequirement   p_UL_ChannelRequirement,
    modeSpecificPhysChInfo fdd : {
    dl_PDSCH_Information OMIT
                                        } ,
  dl_CommonInformation p_DL_CommonInformation ,
  dl_InformationPerRL_List p_DL_InformationPerRL_List
 },
v3a0NonCriticalExtensions OMIT
}
}
```

2.2.11 cs_PS_PagingType1_URNTI

Reason for change: The prose for test case 8.1.1.5 calls for the IE cn_OriginatedPage_connectedMode_UE to be omitted from the Paging Type 1 message sent as step 4.

Summary of Change: Omit the IE.

Change ASN.1 PDU Constraint Declaration from:

Constraint Name	cs_PS_PagingType1_URNTI(p_U_RNTI : U_RNTI)
PDU Type	PCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	

Constraint Value

```
{
   message    pagingType1: { --PagingType1
   pagingRecordList    {
      utran_Identity: {
         u_RNTI    p_U_RNTI ,
         cn_OriginatedPage_connectedMode_UE {
            pagingCause    terminatingInteractiveCall,
            cn_DomainIdentity   ps_domain ,
            pagingRecordTypeID imsi_GSM_MAP
         }
      }
   },
   bcch_ModificationInfo    OMIT,
   nonCriticalExtensions    OMIT
}
}
```

To:

Constraint Name	cs_PS_PagingType1_URNTI(p_U_RNTI : U_RNTI)
PDU Type	PCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	

Constraint Value

```
{
   message    pagingType1: { --PagingType1
   pagingRecordList    {
      utran_Identity: {
         u_RNTI    p_U_RNTI ,
         cn_OriginatedPage_connectedMode_UE  OMIT
      }
   },
   bcch_ModificationInfo    OMIT,
   nonCriticalExtensions    OMIT
}
}
```

2.2.12 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 constriant. Set the UTRAN DRX Cycle 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

```
{
   integrityCheckInfo p_IntegrityInfo,
   message physicalChannelReconfiguration : r3:{
     physicalChannelReconfiguration_r3   {   --PhysicalChannelReconfiguration_r3_IEs
         rrc_TransactionIdentifier   p_RRC_Ti,
         integrityProtectionModeInfo   OMIT,
         cipheringModeInfo   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
   }
}
```

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

```
{
   integrityCheckInfo p_IntegrityInfo,
   message physicalChannelReconfiguration : r3:{
     physicalChannelReconfiguration_r3   {   --PhysicalChannelReconfiguration_r3_IEs
         rrc_TransactionIdentifier   p_RRC_Ti,
         integrityProtectionModeInfo   OMIT,
         cipheringModeInfo   OMIT,
         activationTime   p_ActTime,
         new_U_RNTI   OMIT,
         new_C_RNTI   p_CRNTI_New,
         rrc_StateIndicator   cell_PCH,
         utran_DRX_CycleLengthCoeff   7,
         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
   }
}
```

~~2.2.6~~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 Authenticatioin 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.
		…..			

~~2.2.7~~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 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).
		…..			

~~2.2.8~~2.2.15 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~~2.2.16 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~~2.2.17 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

2.2.18 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)			
...		.....			

~~2.2.11~~2.2.19 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_lv (tcv_TrafficClass , tcv_DlyClass)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...		.....			

2.2.20 ts_ReceiveActivatePDP_Accept_DCH

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 2.2.5. Omit the Packet Data Protocol Address from the Activate PDP Context Accept message.

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_lv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		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_lv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		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_lv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		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_lv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2			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_Iv(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_Iv(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_Iv(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_Iv(tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2			I	Parameter_error

~~2.2.12~~2.2.21 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_Iv(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_Iv(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_Iv(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_Iv(tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

2.2.22 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_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
		.....			
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_InteractiveOrBackgroundMO_lv (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_ContextReqFACH_MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv(tcv_TrafficClass , tcv_DlyClass)))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

~~2.2.13~~2.2.23 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~~O~~_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.nSAPI_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.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_InteractiveOrBackgroundMO_CellFACH_Iv(tcv_TrafficClass , tcv_DlyClass)))		

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.nSAPI_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.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO (cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv(tcv_TrafficClass , tcv_DlyClass)))		

~~2.2.8~~2.2.24 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)			

~~2.2.7~~2.2.25 ts_RRC_BringUE_ToCellFACH_DCH

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_RRC_BringUE_ToCellFACH_DCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		+ ts_CMAC_Pag1_CfgConnMode (p_CellId)			
5		[tcv_TmpCellInfo.cellConfig = cell_FACH_PS]			
6		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdateCnfDCCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI, cell_FACH, OMIT, OMIT, OMIT))		
7		[(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)]			
8		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdateCnfDCCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI, cell_DCH, OMIT, OMIT, OMIT))		

To:

Test Step Name		ts_RRC_BringUE_ToCellFACH_DCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		+ts_CMAC_NewU_RNTI_Reconf_No_TmpCell_Update (tsc_CellA, tcv_CellInfoA.uRNTI, OMIT)			re-configuration of SS with the new C-RNTI
3		+ ts_CMAC_Pag1_CfgConnMode (p_CellId)			
6		[tcv_TmpCellInfo.cellConfig = cell_FACH_PS]			
7		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdateCnfDCCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, OMIT, tcv_TmpCellInfo.cRNTI, cell_FACH, OMIT, OMIT, OMIT))		
8		+ts_CMAC_NewU_RNTI_Reconf (tsc_CellA, tcv_CellInfoA.uRNTI, tsc_CRNTI_1)			
9		AM ? RLC_AM_DATA_IND	car_UTRAN_MobilityInfoCnfInd (tsc_CellDedicated, tsc_RB2, cr_UTRAN_MobilityInfoCnf(tcv_RRC_Ti))		
10		[(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)]			
11		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdateCnfDCCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI, cell_DCH, OMIT, OMIT, OMIT))		
12		AM ? RLC_AM_DATA_IND	car_UTRAN_MobilityInfoCnfInd (tsc_CellDedicated, tsc_RB2, cr_UTRAN_MobilityInfoCnf(tcv_RRC_Ti))		

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_5
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
	iei	'00101001'B		
	iel	?		
	rES	?		

~~2.4.6~~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/				
Objsctive					
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	

2.4.6 ts_CMAC_NewU_RNTI_Reconf_No_TmpCell_Update

Reason for change: To provide an alternative version of ts_CMAC_NewU_RNTI_Reconf which does not alter tcv_TmpCellInfo.

Summary of Change: Table added to suite.

Add test step:

Test Step Name	ts_CMAC_NewU_RNTI_Reconf_No_TmpCell_Update (p_CellId : INTEGER; p_U_RNTI : U_RNTI; p_C_RNTI : BITSTRING)
Group	BasicM_SS_Configuration_Steps/
Objective	Reconfigure MAC when a new U_RNTI or C_RNTI is assigned to UE.
Default	SS_Def
Comments	U-RNTI and C-RNTI are not required on DPCH. U-RNTI and C-RNTI is necessary when DCCH/DTCH mapped on S-CCPCH. C-RNTI is necessary when DCCH/DTCH mapped on PRACH.
Description	

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		+ lt_CMAC_Reconf			
3		+ ts_SaveCellInfo (p_CellId)			
		lt_CMAC_Reconf			
4		[(tcv_TmpCellInfo.cellConfig = cell_FACH) OR (tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
5		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfoActNow (p_CellId , tsc_PRACH1, c_UE_Info (OMIT , p_C_RNTI), cb_TrChInfoRACH1, c_TrLogMappingRACH_DTCH)		Only C-RNTI is required on PRACH
6		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf (p_CellId , tsc_PRACH1)		
7		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfoActNow (p_CellId , tsc_S_CCPCH1, c_UE_Info(p_U_RNTI, p_C_RNTI), c_TrChInfoPCH_FACH_PS, c_TrLogMappingPCH_FACH_PS)		
8		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf (p_CellId , tsc_S_CCPCH1)		
9		[TRUE]			

2.5 Modifications to tables added from RRCv143

~~2.2.7~~2.5.1 tc_8_1_1_5

Reason for change: The timer t_WaitMS cannot be used to implement the 45 second delay as it is also used within test step ts_RRC_ReceiveCellUpdate. The Cell Update Confirm message sent in step 2b needs to specify a new C_RNTI for the UE to use. A step needs to be added to handle the returned UTRAN Mobility Info Confirm message.

Summary of Change: Use t_WaitS(45) instead of t_WaitMS(45000). Use tcv_CellInfoA.cRNTI in the Cell Update Confirm message. Add new test step for UTRAN Mobility Info Confirm message.

Change test case from:

Test Case Name		tc_8_1_1_5			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		…			
12		+ ts_CMAC_Pag1_CfgConnMode (tsc_CellA)			
13		TM ! RLC_TR_DATA_REQ START t_WaitMS(45000)	cas_PagingType1 (tsc_CellA, tsc_RB_PCCH, cs_RRC_PagingType1_NotifyConnMode (tsc_SFN_123, tcv_CellInfoA.uRNTI, tcv_MIB.mib_ValueTag + 1))		step 2 The UE is paged by using an arbitrarily choosen SFN No. to get an initial SFN value. Then, a timer is started for approx. one SFN frame cycle (4095 ms -> 41s + 10 %), by taking the value of 45 s to have an defined SFN value in the same range for the next paging event in step 4
14		(tcv_CellInfoA.dRX_CycleLength.uTRAN_DRX_CycleLength := 3)			
17		+ ts_SysInfoModifySIB5_And6_RRC (tsc_CellA, cd_SIB5_Signature(tcv_CellInfoA), cb_SIB6_Def(tcv_CellInfoA), tsc_SFN_123)			step 3 Sending of new MIB and SIB 5/6 information by using the choosen SFN No. has to be done before the next message is sent out.
18		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnfCCCH(tsc_CellA, tsc_RB0, cbs_108_CellUpdateCnfCCCH(tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_CellInfoA.uRNTI,tcv_RRC_Ti , OMIT, OMIT, cell_PCH, OMIT,OMIT,OMIT, tcv_CellInfoA.dRX_CycleLength.uTRAN_DRX_CycleLength))		step 2b
19		?TIMEOUT t_WaitMS		(P)	
20		+ts_ConnectedModePaging Type1 (tsc_CellA)			Step 4 Send a Paging Type1 with a matched Identifier and with originator UTRAN

To:

Test Case Name		tc_8_1_1_5			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		…			
12		+ ts_CMAC_Pag1_CfgConnMode (tsc_CellA)			
13		TM ! RLC_TR_DATA_REQ START t_WaitS(45)	cas_PagingType1 (tsc_CellA, tsc_RB_PCCH, cs_RRC_PagingType1_NotifyConMode (tsc_SFN_123, tcv_CellInfoA.uRNTI, tcv_MIB.mib_ValueTag + 1))		step 2 The UE is paged by using an arbitrarily choosen SFN No. to get an initial SFN value. Then, a timer is started for approx. one SFN frame cycle (4095 ms -> 41s + 10 %), by taking the value of 45 s to have an defined SFN value in the same range for the next paging event in step 4
14		(tcv_CellInfoA.dRX_CycleLength.uTRAN_DRX_CycleLength := 3)			
17		+ ts_SysInfoModifySIB5_And6_RRC (tsc_CellA, cd_SIB5_Signature(tcv_CellInfoA), cb_SIB6_Def(tcv_CellInfoA), tsc_SFN_123)			step 3 Sending of new MIB and SIB 5/6 information by using the choosen SFN No. has to be done before the next message is sent out.
18		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnfCCCH(tsc_CellA, tsc_RB0, cbs_108_CellUpdateCnfCCCH(tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_CellInfoA.uRNTI,tcv_RRC_Ti , OMIT, tcv_CellInfoA.cRNTI, cell_PCH, OMIT,OMIT,OMIT, tcv_CellInfoA.dRX_CycleLength.uTRAN_DRX_CycleLength))		step 2b
19		AM ? RLC_AM_DATA_IND	car_UTRAN_MobilityInfoCnfInd (tsc_CellDedicated, tsc_RB2, cr_UTRAN_MobilityInfoCnf(tcv_RRC_Ti))		
20		?TIMEOUT t_WaitS		(P)	
21		+ts_ConnectedModePagingType1 (tsc_CellA)			Step 4 Send a Paging Type1 with a matched Identifier and with originator UTRAN

~~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:~~

~~To:~~

3GPP TSG-T1~~/SIC~~ Meeting #20

Munich, Germany, 28 July – 1 August 2003

T1S ⌘ ***030407~~03xxxx~~***

CR-Form-v7

CHANGE REQUEST

⌘ ~~RRC~~ ATS~~TS~~34.123-3 **CR** 080~~03xx xx~~ ⌘ **rev** 1~~1~~ ⌘ 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 8.1.1.6
Source:	⌘	F
Work item code:	⌘	***Date:*** ⌘ 15~~25~~/05/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one 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 one 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 8.1.1.6 to RRCv310
Summary of change:	⌘	- 0 table deleted from RRCv310, - 24~~14~~ tables modified in RRCv310, - 6~~3~~ tables added from RRCv143, - 6~~6~~ new tables created. For more details see below.
Consequences if not approved:	⌘	Test case 8.1.1.6 will not be added

Clauses affected:	⌘	N/A			
Other specs affected:	⌘	**Y**	**N**		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	
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.

Anritsu
ANRITSU LIMITED

TSG-T W~~orking~~ G~~roup~~ 1 ~~SWG SIG~~ E-mail Approval T1-0320~~2~~407 ~~(8.1.1.8)~~

~~Luton, UK~~Munich, Germany ~~19/3/2003~~28 July – 1 August 2003

Title	~~Changes to~~ Introducing test case 8.1.1.6~~8 required for approval~~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 fix problems in the TTCN implementation of~~ introduce test case 8.1.1.6~~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 8.1.1.6~~8~~.

2 Changes required for test-case 8.1.1.6~~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 .

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_lv

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 ~~& 2.2.14~~.

Summary of Change: Rename the constraint to cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv, 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_lv (p_trafficClass : 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	'100'B		Best effort
	relabilityClass	'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 The QoS for interactive/ Background 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		
	relabilityClass	'100'B		Unacknowledged GTP, LLC and 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_lv

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_lv, 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_lv (p_trafficClass : 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	'100'B		Best effort
	relabilityClass	'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 The QoS for interactive/ Background 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		
	relabilityClass	'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 (-3)
	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~~2.2.4 cs_QoS_InteractiveMT_CellFACH_lv

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_~~InteractiveOrBackgroundMO~~InteractiveOrBackgroundMT_CellFACH_lv, 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_lv (p_trafficClass : B3)			
Structured Type	QualityOfService_lv			
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
	relabilityClass	'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'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	relabilityClass	'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 cs_QoS_InteractiveMT_lv

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_lv, 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_lv (p_trafficClass : B3)
Structured Type	QualityOfService_lv
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
	relabilityClass	'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		
	deliveryOrder	'01'B		
	deliveryErrorSDU	'010'B		
	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	cs_QoS_InteractiveOrBackgroundMT_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		
	relabilityClass	'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~~2.2.6 cr_ActPDP_ContextReqFACH_MO

Reason for change: To provide a means for selecting the requested Quality of Service ~~& 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)		
	….			

2.2.7 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_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)		
	....			

~~2.2.5~~2.2.8 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_lv; 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_lv; 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	*		
	….			

2.2.9 cbs_108_CellUpdateCnfCCCH

Reason for change: The U_RNTI used in identifying the target UE for this message needs to be the existing U_RNTI, not the new one.

Summary of Change: Use parameter p_U_RNTIold rather than p_U_RNTI for the u_RNTI field.

Change ASN.1 PDU Constraint Declaration from:

Constraint Name	cbs_108_CellUpdateCnfCCCH (p_IntegrityCheckInfo : IntegrityCheckInfo; p_U_RNTIold : U_RNTI; 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; p_DRX_CycleLengthCoeff : UTRAN_DRX_CycleLengthCoefficient)
PDU Type	DL_CCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	

Constraint Value

```
{
integrityCheckInfo    p_IntegrityCheckInfo,
message cellUpdateConfirm: r3:{
u_RNTI p_U_RNTI,
cellUpdateConfirm_r3  {      --CellUpdateConfirm_r3_IEs
    rrc_TransactionIdentifier p_RRC_TI,
    integrityProtectionModeInfo   OMIT,
    cipheringModeInfo   OMIT,
    activationTime OMIT,
    new_U_RNTI  p_U_RNTI ,
    new_C_RNTI   p_C_RNTI,
    rrc_StateIndicator   p_State_Ind,
    utran_DRX_CycleLengthCoeff   p_DRX_CycleLengthCoeff,
    rlc_Re_establishIndicatorRb2_3or4   FALSE,
    rlc_Re_establishIndicatorRb5orAbove  FALSE,
    cn_InformationInfo   OMIT,
    ura_Identity   '0000000000000001'B,
    rb_InformationReleaseList  OMIT,
    rb_InformationReconfigList OMIT,
    rb_InformationAffectedList OMIT,
    ul_CommonTransChInfo     OMIT,
    ul_deletedTransChInfoList  OMIT,
    ul_AddReconfTransChInfoList  OMIT,
    modeSpecificTransChInfo fdd: {
       cpch_SetID OMIT,
       addReconfTransChDRAC_Info OMIT
    },
   dl_CommonTransChInfo OMIT,
   dl_DeletedTransChInfoList OMIT,
   dl_AddReconfTransChInfoList OMIT,
   frequencyInfo OMIT,
   maxAllowedUL_TX_Power OMIT,
   ul_ChannelRequirement   p_UL_ChannelRequirement,
   modeSpecificPhysChInfo fdd : {
   dl_PDSCH_Information OMIT
                                    } ,
  dl_CommonInformation p_DL_CommonInformation ,
  dl_InformationPerRL_List p_DL_InformationPerRL_List
 },
nonCriticalExtensions OMIT
}
}
```

To:

Constraint Name	cbs_108_CellUpdateCnfCCCH (p_IntegrityCheckInfo : IntegrityCheckInfo; p_U_RNTIold : U_RNTI; 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; p_DRX_CycleLengthCoeff : UTRAN_DRX_CycleLengthCoefficient)
PDU Type	DL_CCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	

Constraint Value

```
{
integrityCheckInfo     p_IntegrityCheckInfo,
message cellUpdateConfirm: r3:{
u_RNTI p_U_RNTIold,
cellUpdateConfirm_r3   {       --CellUpdateConfirm_r3_IEs
     rrc_TransactionIdentifier p_RRC_TI,
     integrityProtectionModeInfo    OMIT,
     cipheringModeInfo    OMIT,
     activationTime OMIT,
     new_U_RNTI  p_U_RNTI ,
     new_C_RNTI   p_C_RNTI,
     rrc_StateIndicator    p_State_Ind,
     utran_DRX_CycleLengthCoeff   p_DRX_CycleLengthCoeff,
     rlc_Re_establishIndicatorRb2_3or4   FALSE,
     rlc_Re_establishIndicatorRb5orAbove  FALSE,
     cn_InformationInfo    OMIT,
     ura_Identity   '0000000000000001'B,
     rb_InformationReleaseList  OMIT,
     rb_InformationReconfigList OMIT,
     rb_InformationAffectedList OMIT,
     ul_CommonTransChInfo      OMIT,
     ul_deletedTransChInfoList  OMIT,
     ul_AddReconfTransChInfoList  OMIT,
     modeSpecificTransChInfo fdd: {
        cpch_SetID OMIT,
        addReconfTransChDRAC_Info OMIT
     },
    dl_CommonTransChInfo OMIT,
    dl_DeletedTransChInfoList OMIT,
    dl_AddReconfTransChInfoList OMIT,
    frequencyInfo OMIT,
    maxAllowedUL_TX_Power OMIT,
    ul_ChannelRequirement   p_UL_ChannelRequirement,
    modeSpecificPhysChInfo fdd : {
    dl_PDSCH_Information OMIT
                                    } ,
  dl_CommonInformation p_DL_CommonInformation ,
  dl_InformationPerRL_List p_DL_InformationPerRL_List
 },
nonCriticalExtensions OMIT
}
}
```

2.2.10 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 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 Rule Name	
Encoding Variation	
Comments	

Constraint Value

```
{
integrityCheckInfo     p_IntegrityCheckInfo,
message cellUpdateConfirm: r3:{
cellUpdateConfirm_r3  {       --CellUpdateConfirm_r3_IEs
     rrc_TransactionIdentifier p_RRC_TI,
     integrityProtectionModeInfo    OMIT,
     cipheringModeInfo    OMIT,
     activationTime OMIT,
     new_U_RNTI  p_U_RNTI ,
     new_C_RNTI   p_C_RNTI,
     rrc_StateIndicator    p_State_Ind,
     utran_DRX_CycleLengthCoeff    OMIT,
     rlc_Re_establishIndicatorRb2_3or4   FALSE,
     rlc_Re_establishIndicatorRb5orAbove  FALSE,
     cn_InformationInfo    OMIT,
     ura_Identity   '0000000000000001'B,
     rb_InformationReleaseList  OMIT,
     rb_InformationReconfigList OMIT,
     rb_InformationAffectedList OMIT,
     ul_CommonTransChInfo      OMIT,
     ul_deletedTransChInfoList  OMIT,
     ul_AddReconfTransChInfoList  OMIT,
     modeSpecificTransChInfo fdd: {
        cpch_SetID OMIT,
        addReconfTransChDRAC_Info OMIT
     },
    dl_CommonTransChInfo OMIT,
    dl_DeletedTransChInfoList OMIT,
    dl_AddReconfTransChInfoList OMIT,
    frequencyInfo OMIT,
    maxAllowedUL_TX_Power OMIT,
    ul_ChannelRequirement   p_UL_ChannelRequirement,
    modeSpecificPhysChInfo fdd : {
    dl_PDSCH_Information OMIT
                                        } ,
   dl_CommonInformation p_DL_CommonInformation ,
   dl_InformationPerRL_List p_DL_InformationPerRL_List
  },
v3a0NonCriticalExtensions OMIT
}
}
```

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 Rule Name	
Encoding Variation	
Comments	

Constraint Value

```
{
integrityCheckInfo     p_IntegrityCheckInfo,
message cellUpdateConfirm: r3:{
cellUpdateConfirm_r3  {       --CellUpdateConfirm_r3_IEs
     rrc_TransactionIdentifier p_RRC_TI,
     integrityProtectionModeInfo    OMIT,
     cipheringModeInfo    OMIT,
     activationTime OMIT,
     new_U_RNTI  p_U_RNTI ,
     new_C_RNTI   p_C_RNTI,
     rrc_StateIndicator    p_State_Ind,
     utran_DRX_CycleLengthCoeff    OMIT,
     rlc_Re_establishIndicatorRb2_3or4   FALSE,
     rlc_Re_establishIndicatorRb5orAbove  FALSE,
     cn_InformationInfo    OMIT,
     ura_Identity    OMIT,
     rb_InformationReleaseList  OMIT,
     rb_InformationReconfigList OMIT,
     rb_InformationAffectedList OMIT,
     ul_CommonTransChInfo      OMIT,
     ul_deletedTransChInfoList  OMIT,
     ul_AddReconfTransChInfoList  OMIT,
     modeSpecificTransChInfo fdd: {
        cpch_SetID OMIT,
        addReconfTransChDRAC_Info OMIT
     },
    dl_CommonTransChInfo OMIT,
    dl_DeletedTransChInfoList OMIT,
    dl_AddReconfTransChInfoList OMIT,
    frequencyInfo OMIT,
    maxAllowedUL_TX_Power OMIT,
    ul_ChannelRequirement   p_UL_ChannelRequirement,
    modeSpecificPhysChInfo fdd : {
    dl_PDSCH_Information OMIT
                                        } ,
  dl_CommonInformation p_DL_CommonInformation ,
  dl_InformationPerRL_List p_DL_InformationPerRL_List
 },
v3a0NonCriticalExtensions OMIT
}
}
```

2.2.11 cs_PhyChReconfURA_PCH

Reason for change: A new C_RNTI, UTRAN DRX Cycle Length Coefficient and URA Identity need to be provided to the UE when entering URA PCH.

Summary of Change: Add data for the mising fields.

Change ASN.1 PDU Constraint Declaration from:

Constraint Name	cs_PhyChReconfURA_PCH (p_IntegrityInfo: IntegrityCheckInfo ; p_RRC_Ti: RRC_TransactionIdentifier; p_ActTime: ActivationTime)
PDU 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

```
{
  integrityCheckInfo p_IntegrityInfo,
  message physicalChannelReconfiguration : r3 :{
    physicalChannelReconfiguration_r3  {  --PhysicalChannelReconfiguration_r3_IEs
      rrc_TransactionIdentifier  p_RRC_Ti,
      integrityProtectionModeInfo  OMIT,
      cipheringModeInfo  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
  }
}
```

To:

Constraint Name	cs_PhyChReconfURA_PCH (p_IntegrityInfo: IntegrityCheckInfo ; p_RRC_Ti: RRC_TransactionIdentifier; p_ActTime: ActivationTime; p_C_RNTI_New: C_RNTI)
PDU 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

```
{
   integrityCheckInfo p_IntegrityInfo,
   message physicalChannelReconfiguration : r3 :{
     physicalChannelReconfiguration_r3   {   --PhysicalChannelReconfiguration_r3_IEs
         rrc_TransactionIdentifier   p_RRC_Ti,
         integrityProtectionModeInfo   OMIT,
         cipheringModeInfo   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 '0000000000000001'B,
         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
   }
}
```

~~2.2.6~~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 Authenticatioin 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.
		…..			

~~2.2.7~~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 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).
		…..			

~~2.2.7~~2.2.14 ts_TransitToURA_PCH_P17_P18

Reason for change: The C_RNTI in use in the cell needs to be included in the Physical Channel Reconfiguration URA PCH message sent to the UE.

Summary of Change: Add tcv_TmpCellInfo_cRNTI to the parameter list for the constraint cs_PhyChReconfURA_PCH.

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)			

~~2.2.8~~2.2.15 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~~2.2.16 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~~2.2.17 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

2.2.18 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)			
...		.....			

~~2.2.11~~2.2.19 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_lv (tcv_TrafficClass , tcv_DlyClass)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...		…..			

2.2.20 ts_ReceiveActivatePDP_Accept_DCH

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 2.2.5. Omit the Packet Data Protocol Address from the Activate PDP Context Accept message.

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_lv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		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_lv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		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_lv('011'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		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_lv('100'B), cs_PktDataProtoAddrMT (tcv_LenBit, px_PDP_IP_AddrInfoDCH)))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2			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_Iv(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_Iv(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_Iv(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_Iv(tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2			I	Parameter_error

~~2.2.12~~2.2.21 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_lv('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_lv('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_lv('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_lv('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_Iv(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_Iv(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_Iv(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_Iv(tcv_TrafficClass , tcv_DlyClass), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

2.2.22 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_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
		.....			
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_InteractiveOrBackgroundMO_lv (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_ContextReqFACH_MO(cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv(tcv_TrafficClass , tcv_DlyClass)))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

~~2.2.13~~2.2.23 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~~O~~_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.nSAPI_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.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_InteractiveOrBackgroundMO_CellFACH_Iv(tcv_TrafficClass , tcv_DlyClass)))		

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.nSAPI_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.nSAPI_Value), 8))	car_PS_UplinkDirectTransfer (tsc_CellDedicated, tsc_RB3, cr_ActPDP_ContextReqFACH_MO (cr_QoS_InteractiveOrBackgroundMO_CellFACH_Iv(tcv_TrafficClass , tcv_DlyClass)))		

~~2.2.7~~2.2.24 ts_RRC_BringUE_ToCellFACH_DCH

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_RRC_BringUE_ToCellFACH_DCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		+ ts_CMAC_Pag1_CfgConnMode (p_CellId)			
5		[tcv_TmpCellInfo.cellConfig = cell_FACH_PS]			
6		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdateCnfDCCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI, cell_FACH, OMIT, OMIT, OMIT))		
7		[(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)]			
8		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdateCnfDCCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI, cell_DCH, OMIT, OMIT, OMIT))		

To:

Test Step Name		ts_RRC_BringUE_ToCellFACH_DCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		+ts_CMAC_NewU_RNTI_Reconf_No_TmpCell_Update (tsc_CellA, tcv_CellInfoA.uRNTI, OMIT)			
3		+ ts_CMAC_Pag1_CfgConnMode (p_CellId)			
6		[tcv_TmpCellInfo.cellConfig = cell_FACH_PS]			
7		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdateCnfDCCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, OMIT, tcv_TmpCellInfo.cRNTI, cell_FACH, OMIT, OMIT, OMIT))		
8		+ts_CMAC_NewU_RNTI_Reconf (tsc_CellA, tcv_CellInfoA.uRNTI, tsc_CRNTI_1)			
9		AM ? RLC_AM_DATA_IND	car_UTRAN_MobilityInfoCnfInd (tsc_CellDedicated, tsc_RB2, cr_UTRAN_MobilityInfoCnf(tcv_RRC_Ti))		
10		[(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)]			
11		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cbs_108_CellUpdateCnfDCCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI, cell_DCH, OMIT, OMIT, OMIT))		
12		AM ? RLC_AM_DATA_IND	car_UTRAN_MobilityInfoCnfInd (tsc_CellDedicated, tsc_RB2, cr_UTRAN_MobilityInfoCnf(tcv_RRC_Ti))		

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_6
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
	Iei	'00101001'B		
	Iel	?		
	rES	?		

~~2.4.6~~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/				
Objsctive					
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	

2.4.6 ts_CMAC_NewU_RNTI_Reconf_No_TmpCell_Update

Reason for change: To provide an alternative version of ts_CMAC_NewU_RNTI_Reconf which does not alter tcv_TmpCellInfo.

Summary of Change: Table added to suite.

Add test step:

Test Step Name	ts_CMAC_NewU_RNTI_Reconf_No_TmpCell_Update (p_CellId : INTEGER; p_U_RNTI : U_RNTI; p_C_RNTI : BITSTRING)
Group	BasicM_SS_Configuration_Steps/
Objsctive	Reconfigure MAC when a new U_RNTI or C_RNTI is assigned to UE.
Default	SS_Def
Comments	U-RNTI and C-RNTI are not required on DPCH. U-RNTI and C-RNTI is necessary when DCCH/DTCH mapped on S-CCPCH. C-RNTI is necessary when DCCH/DTCH mapped on PRACH.
Description	

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		+ lt_CMAC_Reconf			
3		+ ts_SaveCellInfo (p_CellId)			
		lt_CMAC_Reconf			
4		[(tcv_TmpCellInfo.cellConfig = cell_FACH) OR (tcv_TmpCellInfo.cellConfig = cell_FACH_PS) OR (tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
5		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfoActNow (p_CellId , tsc_PRACH1, c_UE_Info (OMIT , p_C_RNTI), cb_TrChInfoRACH1, c_TrLogMappingRACH_DTCH)		Only C-RNTI is required on PRACH
6		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf (p_CellId , tsc_PRACH1)		
7		CMAC ! CMAC_Config_REQ	ca_CMAC_ReconfigInfoActNow (p_CellId , tsc_S_CCPCH1, c_UE_Info(p_U_RNTI, p_C_RNTI), c_TrChInfoPCH_FACH_PS, c_TrLogMappingPCH_FACH_PS)		
8		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf (p_CellId , tsc_S_CCPCH1)		
9		[TRUE]			

2.5 Modifications to tables added from RRCv143

None.

~~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:~~

~~To:~~

3GPP TSG-T1 Meeting #20
Munich, Germany 28 July – 1 August 2003

T1 ⌘030423

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-3 CR 084** ⌘ **rev 1** ⌘ 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 12.2.1.1
Source:	⌘	F
Work item code:	⌘	***Date:*** ⌘ 15/05/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one 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 one 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 12.2.1.1 to RRCv310
Summary of change:	⌘	- 0 table(s) deleted from RRCv310 - 5 table(s) modified in RRCv310 - 23 table(s) added from RRCv143 of which - 7 table(s) have been modified - 3 new table(s) added For more details see below.
Consequences if not approved:	⌘	Test case 12.2.1.1 will not be added

Clauses affected:	⌘	N/A

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	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.

Anritsu

ANRITSU LIMITED

TSG-T Working Group1 SWG SIG E-mail Approval T1-030423

Seoul, Korea 12 – 15th May, 2003

Title	The introduction of test case 12.2.1.1 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 12.2.1.1 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 (V5.3.0) clause 12.2.1.1.

2 Changes required for test-case 12.2.1.1

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 2.3.2.2.

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 cr_AttachReq

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

Summary of Change:
1. 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_lv; 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_lv; 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 Authenticatioin 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 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(			Verify that the

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

2.2.4 ts_GMM_AttachReject

Reason for Change(s)
1. The test step does not allow for the UE to automatically perform a CS attach on power up.
2. The cell used by initial direct transfers is incorrect.
3. RRC should use news keys after authentication.

Summary of Change(s)
1. TTCN modified to allow the UE to automatically perform a CS attach on power up.
2. Initial direct transfers modified to use the correct cell.
3. Call to ts_RRC_Security modified to cause new keys to be used.

Change test step from:

Test Step Name		ts_GMM_AttachReject (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ts_MMI_UE_SwitchOnTriggerGMM_Attach			
2		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
		lt_RegistrationOnCS_IfOpModeA			
9		+ts_SetTmpCellInfo (p_CellId)			
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(?))		
12		+ ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			
13		+ts_MM_Authentication(p_CellId)			
14		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, FALSE, cs_domain)			
15		Dc!RRC_DataReq	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdAcpTMSI(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac))		
16		Dc?RRC_DataInd	car_UplinkDirectTransfer(p_CellId, tsc_RB3, c_TMSI_ReallocCmpl)		
17		[TRUE]			

To:

Test Step Name		ts_GMM_AttachReject (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_MMI_UE_SwitchOn			
2		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
		lt_RegistrationOnCS_IfOpModeA			
9		+ts_SetTmpCellInfo (p_CellId)			
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(?))		
12		+ ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			
13		+ts_MM_Authentication(p_CellId)			

14		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, TRUE, cs_domain)			
15		Dc!RRC_DataReq	ca_DataReq(tsc_CellDedicated, tsc_RB3, c_LocUpdAcpTMSI(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac))		
16		Dc?RRC_DataInd	car_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, c_TMSI_ReallocCmpl)		
17		+ ts_RRC_ConnRel (p_CellId, cell_Dch)			
18		+ts_AT_TriggerGMM_Attach			
19		+ts_RRC_ConnEst(p_CellId, est_Reg, registration)			
20		[TRUE]			

2.2.5 ts_GMM_ DetachOnSwitchOff

Reason for Change(s)
1. Test step always assumed that a PS detach would occur before a CS detach.
2. Test step always assumed that a PTMSI signature would always be present in a Detach Request. There is an occasion in this test case when the network does not send the UE a new PTMSI or PTMSI signature during the attach procedure.

Summary of Change(s)
1. If the UE supports Operation mode C, allow it to make detach from the CS and PS domains in either order. If the UE only supports mode A, only expect a PS detach.
2. Only expect a PTSMI signature in the detach request if one was assigned to the UE during the attach procedure. This is signified using tcv_Assigned_PTMSI_Sig. If this string is empty, the PTSMI signature should be omitted. If this test case variable is not empty, the received PTMSI signature should match it exactly.

PLEASE NOTE: Although this table still retains a lot in common with the original, it has been widely changed. Therefore, in order to avoid confusion, only the new table, in its entirety, has been included here. In addition, to clarify the level of indenting used, an extra column (Indent) has been included.

Test Step Name			ts_GMM_ DetachOnSwitchOff (p_CellId : INTEGER)			
Nr	Indent	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	0		[pc_SwitchOnOff]			
2	1		+ts_MMI_UE_SwitchOff			
3	2		+ts_SetTmpCellInfo (p_CellId)			
4	3		+ts_RRC_ConnEst(p_CellId, est_MO, detach)			
5	4		+lt_Detach			
6	5		+ts_RRC_ConnRel(p_CellId, cell_Dch)			
7	0		[TRUE]			
8	1		+ts_MMI_UE_PwrOff			
			lt_Detach			
9	0		[(tcv_UE_OpMode = opModeA) AND (tcv_TmpCellInfo.nmo = tsc_NMO_II) AND (tcv_TmpCellInfo.attFlag = tsc_AttOn)]			
10	1		+lt_GMM_and_TMSI_Detach			
11	0		[TRUE]			
12	1		+lt_GMM_Detach			
			lt_GMM_Detach			
13	0		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('1'B, '0?1'B), c_MobileIdPTMSI (tcv_AssignedPTMSI), OMIT))	(P)	
14	1		+ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
15	0		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('1'B, '0?1'B), c_MobileIdPTMSI (tcv_AssignedPTMSI), c_PTMSI_Signature_tlv (tcv_Assigned_PTMSI_Sig)))	(P)	
16	1		+ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
			lt_GMM_and_TMSI_Detach			
17	0		+lt_GMM_Detach			
18	1		Dc ? RRC_DataInd	car_InitDirectTransfer (	(P)	

				tsc_CellDedicated, tsc_RB3, c_TMSI_DetachInd)		
19	0		Dc ? RRC_DataInd	car_InitDirectTransfer (tsc_CellDedicated, tsc_RB3, c_TMSI_DetachInd)	(P)	
20	1		+It_GMM_Detach			

2.3 Tables added to RRCv310

2.3.1 Tables added from RRCv143

Type	Name
Test Suite Parameter Declarations	pc_SupportOpModeA px_SupportOpModeC px_PTMSI_2 px_PTMSI_Sig2 px_KeySeqDefxxxxx
Structured Type Constraint Declarations	c_MobileIdTMSILoc c_GMM_AttachResultPS_Only c_GMM_AttachType c_GMM_AttachTypePS_Only c_MobileIdPTMSI_Def c_MobileIdPTMSI_lv_Def
TTCN PDU Constraint Declarations	cs_LocUpdAcpTMSI_2 cr_DetachReq
Test Cases	tc_12_2_1_1
Test Steps	ts_GMM_Config_CellA ts_MMI_SetOpModeA ts_MMI_SetOpModeC ts_PS_PagingResp ts_VerifyNoAccess ts_RegistrationOnCS ts_RegistrationOnCS_IfOpModeA ts_GMM_StartIntegrityProtection ts_GMM_AuthenticateAndStartIntegrityProtection

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 c_TMSI_DetachInd

Reason for change:
A constraint is needed that checks that the UE is using its TMSI as its Mobile ID for CS..

Summary of Change:
Table added to suite. Based on c_IMSI_DetachInd.

Constraint Name	c_TMSI_DetachInd			
PDU Type	IMSIDETACHINDICATION			
Derivation Path				
Encoding Variation				
Comments				
	Element Name	Element Value	Element Encoding	Comments
	….			
	mSClsmk1	tsc_AttOn		
	nmo	c_MS_Clsmk1_Def		
	mobileId	c_MobileIdTMSI_lv		

2.4 Modifications to tables added from RRCv143

2.4.1 ts_PS_PagingResp

Reason for Change
To correct parameter usage.

Summary of Change
Modify the first parameter of the call to ts_SS_SecurityDownloadStart to use the appropriate domain type instead of the cell Id.

Change test case from:

Test Case Name		ts_PS_PagingResp			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	… ..	…..	…..	… ..	…..
2		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_ServiceRequest(c_ServiceType_v('010'B), c_MobileIdPTMSI_lv (tcv_AssignedPTMSI), tcv_PS_KeySeq))		
3		+ ts_SS_SecurityDownloadStart (p_CellId, tcv_Start)			
4		[p_StartIntegrity = FALSE]			
8	… ..	… ..	… ..	… ..	… ..

To:

Test Case Name		ts_PS_PagingResp			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	… ..	…..	…..	… ..	…..
2		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_ServiceRequest(c_ServiceType_v('010'B), c_MobileIdPTMSI_lv (tcv_AssignedPTMSI), tcv_PS_KeySeq))		
3		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
4		[p_StartIntegrity = FALSE]			
8	… ..	… ..	… ..	… ..	… ..

2.4.2 ts_RegistrationOnCS

Reason for Change(s)
1. To correct the start value which should be reset after authentication.
2. To use the correct cell when receiving direct transfers.
3. To correct ts_SS_SecurityDownloadStart parameter usage.
4. To use alternative security test step.
5. To correct the order of the parameters to cs_LocUpdAcpTMSI_2.

Summary of Change
1. Reset the start value upon reception .
2. Use tsc_CellDedicated where necessary.
3. Modify the first parameter of the call to ts_SS_SecurityDownloadStart to use the appropriate domain type instead of the cell Id.
4. Use alternative security test step.
5. Reversed the order of the mnc and mcc parameters to cs_LocUpdAcpTMSI_2.

Change test case from:

Test Case Name		ts_PS_PagingResp			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	… ..	…..	…..	… ..	…..
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(?))		
4		+ts_SS_SecurityDownloadStart (p_CellId, tcv_Start)			
5		+ts_MM_Authentication(p_CellId)			
6		+ ts_MM_SecurityOn (p_CellId, px_CipheringOnOff, FALSE, cs_domain)			
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)		
9		+ts_RRC_ConnRel(p_CellId, cell_Dch)			

To:

Test Case Name		ts_PS_PagingResp			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	… ..	…..	…..	… ..	…..
2		+ts_RRC_ConnEst(p_CellId, est_Reg,			

		registration)			
3		Dc?RRC_DataInd (tcv_Start := '00000000000000000000'B)	car_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cb_LocUpdReqAny(?))		
4		+ts_SS_SecurityDownloadStart (cs_domain, tcv_Start)			
5		+ts_MM_Authentication(p_CellId)			
6		+ts_RRC_Security(p_CellId, tcv_AuthCK, tcv_AuthIK, tcv_AuthKcGSM, FALSE, cs_domain)			
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))		
8		Dc?RRC_DataInd	car_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, c_TMSI_Realloc Cmpl)		
9		+ts_RRC_ConnRel(p_CellId, cell_Dch)			

2.4.3 ts_PS_PagingResp

Reason for Change
To correct parameter usage.

Summary of Change
Modify the first parameter of the call to ts_SS_SecurityDownloadStart to use the appropriate domain type instead of the cell Id.

Change test case from:

Test Case Name		ts_PS_PagingResp			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	… ..	…..	…..	… ..	…..
2		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_ServiceRequest(c_ServiceType_v('010'B), c_MobileIdPTMSI_lv (tcv_AssignedPTMSI), tcv_PS_KeySeq))		
3		+ ts_SS_SecurityDownloadStart (p_CellId, tcv_Start)			
4		[p_StartIntegrity = FALSE]			
8	… ..	… ..	… ..	… ..	… ..

To:

Test Case Name		ts_PS_PagingResp			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1	… ..	…..	…..	… ..	…..
2		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_ServiceRequest(c_ServiceType_v('010'B), c_MobileIdPTMSI_lv (tcv_AssignedPTMSI), tcv_PS_KeySeq))		
3		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
4		[p_StartIntegrity = FALSE]			
8	… ..	… ..	… ..	… ..	… ..

2.4.4 ts_GMM_StartIntegrityProtection

Reason for change:
1. To provide compatibility between the test step ts_GMM_StartIntegrityProtection added from v143 suite and the existing test step ts_RRC_Security already present in v310 suite.

Summary of Change:
1. Adjust the parameters to ts_RRC_Security as required.

Change test case from:

Test Step Name		ts_GMM_StartIntegrityProtection (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraint 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)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ ts_RRC_Security (p_CellId, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			

2.4.5 ts_GMM_AuthenticateAndStartIntegrityProtection

Reason for change:

1. To provide compatibility between the test step ts_GMM_AuthenticateAndStartIntegrityProtection added from v143 suite and the existing test step ts_RRC_Security already present in v310 suite.

Summary of Change:

1. 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)			

2.4.6 c_GMM_AttachTypePS_Only

Reason for Change:
1. 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:
1. 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

2.4.7 tc_12_2_1_1

Reason for Change(s)

1. Guard timer too short. Guard timer was expiring during 'normal' test case operation.
2. The test case does not allow the UE to perform an automatic MM attach after switch on.
3. Incorrect parameter used when calling ts_SS_SecurityDownloadStart.
4. The constraints used for the Attach Request received during lt_Steps_11To16 and lt_Steps_20To23 do not allow for the UE requsting to follow on.
5. The prose indicates that authentication should be performed during the attach in the test body so that the value of tcv_KeySeq is irrelevant.
6. The SS does not perform authentication during lt_Steps_11To16 and lt_Steps_20To23 (refer 34.123-1 V5.3.0).
7. The TTCN does not match the prose for step 14d (refer 34.123-1 V5.3.0).
8. There is no way of signifying that that the PTMSI signature in the next attach request should be omitted.

Summary of Change(s)

1. Increase the duration of the guard timer.
2. Allow the UE to perform an automatic MM attach after switch on.
3. Use the appropriate domain as the first parameter to ts_SS_SecurityDownloadStart instead of the cell id.
4. Modified the 'for' parameter to c_GMM_AttachType to allow for the UE to request follow on.
5. Replace tcv_PS_KeySeq (last parameter of cr_AttachReq in Nr32 (lt_Steps_11To16)) with a ?.
6. Perform authentication during steps 11 to 16.
7. Step 14d now matches the prose.
8. TTCN modified to set tcv_Assigned_PTMSI_Sig to an empty string. This change is used in conjunction with a change to ts_GMM_DetachOnSwitchOff that checks the length of this test case variable before deciding if the PTMSI signature should be included or not.

Change test case from:

Test Case Name		tc_12_2_1_1			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		START t_Guard(300)			
2		+ts_InitVariables			
19		(tcv_TestBody := TRUE)		(P)	
20		+ts_MMI_UE_SwitchOnTriggerGMM_Attach			
21		+ts_RegistrationOnCS_IfOpModeA(tsc_CellA, px_TMSI_Def)			
22		+lt_Steps_3To7			
23		+ts_GMM_DetachOnSwitchOff (tsc_CellA)			
24		+ts_MMI_UE_SwitchOnTriggerGMM_Attach			
25		+ts_RegistrationOnCS_IfOpModeA (tsc_CellA, px_TMSI_Def)			
26		+lt_Steps_11To16			
27		+ts_GMM_DetachOnSwitchOff (tsc_CellA)			
28		+ts_MMI_UE_SwitchOnTrigger GMM_Attach			
29		+ts_RegistrationOnCS_IfOpModeA(tsc_CellA, px_TMSI_Def)			
30		+lt_Steps_20To23			
33		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachTypePS_Only, c_MobileIdIMSI_lv, ?, -, tcv_PS_KeySeq))		

34		+ ts_SS_SecurityDownloadStart (tsc_CellA, tcv_Start)			
35		+ ts_GMM_AuthenticateAndStartIntegrity Protection (tsc_CellA)			
		lt_Steps_11To16			
41		+ts_RRC_ConnEst(tsc_CellA, est_Reg, registration)			
42		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachType('0'B, '001'B), c_MobileIdPTMSI_Iv (px_PTMSI_2), c_RAI_Def_v, c_PTMSI_Signature (px_PTMSI_Sig2), tcv_PS_KeySeq))		
43		+ ts_SS_SecurityDownloadStart (tsc_CellA, tcv_Start)			
44		+ ts_GMM_StartIntegrityProtection (tsc_CellA)			
45		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_AttachResult('001'B), c_RAI_Def_v, c_PTMSI_SignatureDef, c_MobileIdPTMSI_Def, -))		
48		+ts_GMM_PagingType1_PTMSI (tsc_CellA, terminatingInteractiveCall, px_PTMSI_Def)			
49		+ts_RRC_ConnEst(tsc_CellA, est_MT, terminatingInteractiveCall)			
50		+ts_RRC_ConnRel(tsc_CellA, cell_Dch)			
51		+ts_GMM_PagingType1_PTMSI (tsc_CellA, terminatingInteractiveCall, px_PTMSI_2)			
52		+ts_VerifyNoAccess(10000)			
		lt_Steps_20To23			
53		+ts_RRC_ConnEst(tsc_CellA, est_Reg, registration)			
54		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachType('0'B, '001'B), c_MobileIdPTMSI_Iv_Def, c_RAI_Def_v, c_PTMSI_SignatureDef, tcv_PS_KeySeq))		
55		+ ts_SS_SecurityDownloadStart (tsc_CellA, tcv_Start)			
56		Dc ! RRC_DataReq	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3,		

			cs_AttachAcc(c_GMM_AttachResult('001'B), c_RAI_Def_v, -, -, -))		
57		+ts_RRC_ConnRel(tsc_CellA, cell_Dch)			
58		+ts_GMM_PagingType1_PTMSI (tsc_CellA, terminatingInteractiveCall, px_PTMSI_Def)			
59		+ts_PS_PagingResp (tsc_CellA, terminatingInteractiveCall, FALSE)			

To:

Test Case Name		tc_12_2_1_1			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		START t_Guard(480)			
2		+ts_InitVariables			
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_Steps_3To7			
24		+ts_GMM_DetachOnSwitchOff (tsc_CellA)			
25		+ ts_MMI_UE_SwitchOn			
26		+ts_RegistrationOnCS_IfOpModeA(tsc_CellA, px_TMSI_Def)			
27		+ts_AT_TriggerGMM_Attach			
28		+lt_Steps_11To16			
29		+ts_GMM_DetachOnSwitchOff (tsc_CellA)			
30		+ ts_MMI_UE_SwitchOn			
31		+ts_RegistrationOnCS_IfOpModeA(tsc_CellA, px_TMSI_Def)			
32		+ts_AT_TriggerGMM_Attach			
33		+lt_Steps_20To23			
36		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))		
37		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
38		+ ts_GMM_AuthenticateAndStartIntegrity Protection (tsc_CellA)			
		lt_Steps_11To16			
44		+ts_RRC_ConnEst(tsc_CellA, est_Reg, registration)			
45		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachType(?, '001'B), c_MobileIdPTMSI		

			_Iv (px_PTMSI_2), c_RAI_Def_v, c_PTMSI_SignatureDef, ?))		
46		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
47		+ ts_GMM_AuthenticateAndStartIntegrityProtection (tsc_CellA)			
48		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_AttachResult('001'B), c_RAI_Def_v, c_PTMSI_SignatureDef, c_MobileIdPTMSI_Def, -))		
51		+ts_GMM_PagingType1_PTMSI (tsc_CellA, terminatingInteractiveCall, px_PTMSI_Def)			
52		TM ? RLC_TR_DATA_IND (tcv_InitialUE_Id := RLC_TR_DATA_IND.tM_message.uL_CCCH_Message.message.rrcConnectionRequest.initialUE_Identity) CANCEL t_Dly	car_RRC_ConnReq (tsc_CellA, tsc_RB0, cbr_108_RRC_ConnReq (?))		
53		UM!RLC_UM_DATA_REQ	cas_RRC_ConnRej (tsc_CellA, tsc_RB0, cs_108_RRC_ConnRej (tcv_InitialUE_Id, tcv_RRC_Ti, unspecified, 0))		
54		+ts_GMM_PagingType1_PTMSI(tsc_CellA, terminatingInteractiveCall, px_PTMSI_2)			
55		+ts_VerifyNoAccess(10000)			
		lt_Steps_20To23			
56		+ts_RRC_ConnEst(tsc_CellA, est_Reg, registration)			
57		Dc ? RRC_DataInd (tcv_Start := RRC_DataInd.start)	car_PS_InitDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AttachReq (c_GMM_AttachType(?, '001'B), c_MobileIdPTMSI_Iv_Def, c_RAI_Def_v, c_PTMSI_SignatureDef, ?))		
58		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
59		+ ts_GMM_AuthenticateAndStartIntegrityProtection (tsc_CellA)			
60		Dc ! RRC_DataReq (tcv_Assigned_PTMSI_Sig := "O)	ca_PS_DataReq(tsc_CellDedicated, tsc_RB3, cs_AttachAcc(c_GMM_AttachResult('001'B), c_RAI_Def_v, -,		

			-, -))		
61		+ts_RRC_ConnRel(tsc_CellA, cell_Dch)			
63		…			

3GPP TSG-T1/SIG Meeting #2019 **T1S ⌘03xxxx030602464xx15**
Munich, Germany 28 July-1August 2003Seoul, Korea, 12-15 May 2003

CR-Form-v7

CHANGE REQUEST

⌘	RRC ATSTS 34.123-3	CR	11900306 0246803 xxxxxx15	⌘ rev	1	⌘	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 8.3.4.12.1.10
Source:	⌘	Anritsu LtdT1
Work item code:	⌘	
Date:	⌘	0824/053/2003
Category:	⌘	**F**
Release:	⌘	R99

Use one 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 one 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 8.2.1.10 8.3.4.1 to RRCv310
Summary of change:	⌘	- 0 table(s) deleted from RRCv310 - 315 table(s) modified in RRCv310 - 12 table(s) added from RRCv143 of which - 1 table(s) have been modified - 26 new table(s) added - 2 tables added from RRCv143 of which - 2 tables have been modified For more details see below.
Consequences if not approved:	⌘	Test case 8.2.1.10 8.3.4.1will not be added

Clauses affected:	⌘	N/A				
		Y	**N**			
Other specs Affected:	⌘		**X**	Other core specifications	⌘	
			X	Test specifications		
			X	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.

Anritsu
ANRITSU LIMITED

TSG-T Working Group1 SWG SIG E-mail Approval

T1-03~~20(8.2.1.10)~~06
02~~464~~

~~Luton, UK~~Seoul, Korea 12-15 May 2003 ~~24/3/2003~~

Title	~~Changes to TC~~ Introducing test case 8.~~3~~2.4.1.~~1.10~~ required ~~for approval~~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 8.3.4.1 to RRCv310 by using RRCv143 as the primary source of the new tables and applying only essential fixes to the TTCN. ~~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 ~~8.2.1.8~~ ~~8.2.~~8.3.4.1~~1.10~~

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 cb_SIB11_Defc_CellInfoDef

Reason for change

The existing constraint contains incorrect event 1a reportCriteria_intraFreqReportingCriteria which causes step 9a failure. nstraint 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 secti
on 2.4.1.22.4.1.22.3.1.2.

Summary of Change

Update the constraint as follows.c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.

Change the Structured Type Constraintt Declaration from:

Constraint Name	cb_SIB11_Def (p_ActiveCellInfo, p_IntraCellInfo2, p_IntraCellInfo3, p_IntraCellInfo4, p_IntraCellInfo5, p_InterCellInfo6, p_InterCellInfo7, p_InterCellInfo8 : CellInfoCfg)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)
ASN1 TypeStructured Type	SysInfoType11CellInfoCfg
Derivation Path	
Encoding Variation	
Comments	Default system information block type 11. To be used by cell A,B,C,G and H: - 5 intra cells frequency of the same frequency - 3 inter cell frequency of the same frequency.

…
reportCriteria_intraFreqReportingCriteria : {
eventCriteriaList {{
event e1a : {
triggeringCondition monitoredSetCellsOnly,
reportingRange 5,
w 1,
reportDeactivationThreshold t2,
reportingAmount ra4,
reportingInterval ri4
},
…Element Name Element Value Element Encoding Comments

….
attFlag
tsc_AttOn
nmo
tsc_NMO_I
ura_Identity
p_URA_Id
….

To:

Constraint Name	cb_SIB11_Def (p_ActiveCellInfo, p_IntraCellInfo2, p_IntraCellInfo3, p_IntraCellInfo4, p_IntraCellInfo5, p_InterCellInfo6, p_InterCellInfo7, p_InterCellInfo8 : CellInfoCfg)
ASN1 Type	SysInfoType11
Derivation Path	
Encoding Variation	
Comments	Default system information block type 11. To be used by cell A,B,C,G and H: - 5 intra cells frequency of the same frequency - 3 inter cell frequency of the same frequency.

```
...
        reportCriteria  intraFreqReportingCriteria : {
            eventCriteriaList {{
                event e1a : {
                    triggeringCondition    activeSetAndMonitoredSetCells,    -- refer to TS25.331 for active and monitiored set definition
                    reportingRange    5,
                    w  1,
                    reportDeactivationThreshold    t2,
                    reportingAmount    ra4,
                    reportingInterval    ri4
                },
...
```

ETSI: Done but in a different way by defining a new SIB 11 derived constraint.

2.2.2c_TrChInfoUL_336_148

Reason 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	

```
{
ulconnectedTrCHList {
    { trchid          tsc_UL_DCH5,
      transportChannelInfo          c_DCH_148_TFS_UL },
    { trchid          tsc_UL_DCH1,
      transportChannelInfo          c_DCH_336_TFS }},
ulTFCS          c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS
}
```

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	

```
{
ulconnectedTrCHList {
    { trchid          tsc_UL_DCH1,
      transportChannelInfo          c_DCH_336_TFS },
    { trchid          tsc_UL_DCH5,
      transportChannelInfo          c_DCH_148_TFS_UL }},
ulTFCS          c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS
}
```

2.2.3cr_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)		
	....			

2.2.4cr_AttachReq

Reason for change
The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST nas 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_lv; 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_lv; 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	*		
	....			

2.2.5cr_QoS_InteractiveMO_CellFACH_lv

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 2.2.82.2.82.2.8 and 2.2.92.2.92.2.9).

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_lv 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_lv (p_trafficClass : 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	'100'B		Best effort
	relabilityClass	'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 ; p-trafficHandPro : B2)			
Structured Type	QualityOfService_lv			
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	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		Interactive=traffic class, Background=4
	relabilityClass	'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

2.2.6cs_QoS_InteractiveMT_lv

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_lv 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_lv (p_trafficClass : B3)			
Structured Type	QualityOfService_lv			
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
	relabilityClass	'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 CS			
	Element Name	Element Value	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	relabilityClass	'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

2.2.2 ts_SHO_ConfigureAdditionalDL_DPCH

Reason for change
Local tree lt_ConfigSpeech contains incorrect configuration detail as follow:

- incorrect Radio Link configuration for 12.2 K AMR
- configuration of the transport ~~configuration~~channel for SHO is not required per TS25.303 section 6.4.4

Summary of Change
Update the test step from :

Test Step Name		ts_SHO_ConfigureAdditionalDL_DPCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		….. lt_ConfigSpeech			
19		CPHY!CPHY_RL_Setup_REQ	ca_DL_DPCH_Info (p_CellId, tsc_DL_DPCH1, cb_DL_DPCH_64K_CS (c_DL_CommonInformation RB_SetUp (tsc_DL_DPCH1_SFP_Speech), tcv_TmpCellInfo.dl_DPCH_2ndScrCode))		
20		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_DL_DPCH1)		
21		CPHY!CPHY_TrCH_Config_REQ	ca_4DCH_DL_InfoActNow (p_CellId, tsc_DL_DPCH1)		
22		CPHY?CPHY_TrCH_Config_CNF	ca_TrChCfgCnf (p_CellId, tsc_DL_DPCH1)		
		lt_Config64kCS ….			

To:

Test Step Name		ts_SHO_ConfigureAdditionalDL_DPCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		….. lt_ConfigSpeech			
19		CPHY!CPHY_RL_Setup_REQ	ca_DL_DPCH_Info (p_CellId, tsc_DL_DPCH1, cb_DL_DPCH_122_AMR (c_DL_CommonInformation RB_SetUpSpeech (tsc_DL_DPCH1_SFP_Speech), tcv_TmpCellInfo.dl_DPCH_2ndScrCode))		
20		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_DL_DPCH1)		
		lt_Config64kCS ….			

ETSI : First change accepted, second change under discussion

2.2.7ts_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_DetermineDlyClassAndTrafficClassAndTrafficHandPrc			
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_lv (tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPrio)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...		.....			

2.2.3 ts_SHO_ReleaseDL_DPCH

2.2.8ts_AT_OrgPS_Call

Reason for change:

Release of Transport Channel for SHO is not required. Refer to previous section 2.2.2 for explanation.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 test step as follows:the AT commands issued.

Change test step from:

Test Step Name		ts_SHO_ReleaseDL_DPCH (p_CellId : INTEGER)ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId).....			
217		+ ts_CPHY_TrChRel (p_CellId , tsc_DL_DPCH1) (tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			Release of this step is not necessary as this channel is configured in the first placeset up the Minimum QoS same as Required QoS
203	ERR1	+ ts_SS_StopRL (p_CellId , tsc_DL_DPCH1) [TRUE]		I	Parameter error
4		(tcv_TmpCellInfo.DL_DPCH_SHO := FALSE)			
5		+ ts_SaveCellInfo (p_CellId)			

To:

Test Step Name		ts_SHO_ReleaseDL_DPCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		+ ts_SS_StopRL (p_CellId , tsc_DL_DPCH1)			
3		(tcv_TmpCellInfo.DL_DPCH_SHO := FALSE)			
4		+ ts_SaveCellInfo (p_CellId)			

ETSI : Under Discussion

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

2.2.10ts_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)]			

2.2.11ts_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 Authenticatioin 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 2.4.1.12.4.1.12.3.1.1, 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 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(			Verify that the

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

2.2.12ts_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).
		.....			

2.2.13ts_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(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_lv('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_lv('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_lv('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_lv('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]		!	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]		!	Parameter error

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_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(cr_QoS_InteractiveOrBackgrou ndMO_CellFACH_iv(tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

2.2.15ts_RRC_NAS_SessionActPS_MT_P9_P10

Reason 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_lv(tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		

~~Tables added to RRCv310~~

2.3 Tables added to RRCv310

~~2.3~~2.3.1 Tables added from RRCv143– No changes necessary

none

~~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~~ **~~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~~

2.3.2 Other ~~New~~ tables added

2.3.2.1 cr_108_MeasReportIntraFreqPeriodic2cell_e1a ~~adde~~ ~~c_AuthCiphRspExtAny~~

This table is not based on one in any existing ATS.

Reason for change

Test case expects the periodic measurement report to delivered the measurement results in a specific cell order. However, this may not be applicable for the cell when equal CPICH RSCP is received. Therefore it is necessary to create a constraint to accept flexible cell ordering per event 1a~~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	cr_108_MeasReportIntraFreqPeriodic2cell_e1a (p_MeasId : MeasurementIdentity ; p_PriScmbCode : INTEGER; p_CellSync : CellSynchronisationInfo; p_PrimaryScr2:INTEGER; p_CellSync2 : CellSynchronisationInfo; p_PriScmbCode_event: INTEGER)~~c_AuthCiphRspExtAny~~
PDU~~Structured~~ Type	UL_DCCH_Message~~AuthRspExt~~
Derivation Path	
Encoding Variation	
Comments	

~~Element Name~~
~~Element Value~~
~~Element Encoding~~
~~Comments~~

~~lei~~
~~'00101001'B~~
~~lel~~
~~?~~
~~RES~~{ integrityCheckInfo *,
message measurementReport :
{
measurementIdentity p_MeasId,
measuredResults intraFreqMeasuredResultsList
:
{{
cellIdentity OMIT,
sfn_SFN_ObsTimeDifference *,
cellSynchronisationInfo p_CellSync,
modeSpecificInfo fdd
:
{
primaryCPICH_Info
{
primaryScramblingCode p_PriScmbCode
},
cpich_Ec_N0 OMIT,
cpich_RSCP ?,
pathloss OMIT
}
},
{
cellIdentity OMIT,
sfn_SFN_ObsTimeDifference OMIT,
cellSynchronisationInfo p_CellSync2,
modeSpecificInfo fdd
:
{
primaryCPICH_Info
{
primaryScramblingCode p_PrimaryScr2
},
cpich_Ec_N0 OMIT,
cpich_RSCP ?,
pathloss OMIT
}
}
},
measuredResultsOnRACH OMIT,
additionalMeasuredResults OMIT,
eventResults intraFreqEventResults : { eventID e1a,
cellMeasurementEventResults fdd : { { primaryScramblingCode
p_PriScmbCode_event}}},
v390nonCriticalExtensions *
}
}
~~?~~

~~2.3.1.2~~2.3.2.2 cr_108_MeasReportIntraFreqPeriodic2cell_e1b~~px_NMO~~

This table is not based on one in any existing ATS

Reason for change
Test case expects the periodic measurement report ~~is~~to deliver~~ed~~ the measurement results in a specific cell order. However, this may not be applicable for the when equal CPICH RSCP is received. Therefore it is necessary to create a contarin to accept flexible cell ordering per event 1b~~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 Constraint Declaration:

Constraint Name	cr_108_MeasReportIntraFreqPeriodic2cell_e1b (p_MeasId : MeasurementIdentity ; p_PriScmbCode : INTEGER; p_CellSync : CellSynchronisationInfo; p_PrimaryScr2:INTEGER; p_CellSync2 : CellSynchronisationInfo; p_PriScmbCode_event: INTEGER)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{ integrityCheckInfo   *,
message          measurementReport :
  {
    measurementIdentity p_MeasId,
    measuredResults   intraFreqMeasuredResultsList
:
    {{
      cellIdentity OMIT,
      sfn_SFN_ObsTimeDifference *,
      cellSynchronisationInfo p_CellSync,
      modeSpecificInfo fdd
:
        {
          primaryCPICH_Info
            {
              primaryScramblingCode p_PriScmbCode
            },
          cpich_Ec_N0 OMIT,
          cpich_RSCP  ?,
          pathloss  OMIT
        }
    },
        {
      cellIdentity OMIT,
     sfn_SFN_ObsTimeDifference OMIT,
      cellSynchronisationInfo p_CellSync2,
      modeSpecificInfo fdd
:
        {
          primaryCPICH_Info
            {
              primaryScramblingCode p_PrimaryScr2
            },
          cpich_Ec_N0 OMIT,
          cpich_RSCP  ?,
          pathloss  OMIT
        }
    }
},
    measuredResultsOnRACH OMIT,
    additionalMeasuredResults OMIT,
    eventResults intraFreqEventResults : { eventID e1b,
                                          cellMeasurementEventResults fdd : { { primaryScramblingCode
p_PriScmbCode_event}}},
    v390nonCriticalExtensions *
}
}
```

ETSI : Rejected as not required.

~~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~~

~~2.3.1.3tcv_DlyClass~~
~~2.3.1.3~~
~~2.3.1.3Reason for change~~
~~2.3.1.3The 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.~~
~~2.3.1.3~~
~~2.3.1.3Summary of Change~~
~~2.3.1.3Table added to suite.~~
~~2.3.1.3~~
~~2.3.1.3Add Test Case Variable Declaration:~~

~~2.3.1.3Variable Name~~	~~2.3.1.3tcv_DlyClass~~
~~2.3.1.3Type~~	~~2.3.1.3B3~~
~~2.3.1.3Value~~	~~2.3.1.3~~
~~2.3.1.3Comments~~	~~2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.~~

~~2.3.1.3~~

2.3.1.3tcv_TrafficClass
2.3.1.3
2.3.1.3Reason for change
2.3.1.3The 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.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add Test Case Variable Declaration:

2.3.1.3Variable Name	2.3.1.3tcv_TrafficClass
2.3.1.3Type	2.3.1.3B3
2.3.1.3Value	2.3.1.3
2.3.1.3Comments	2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.3
2.3.1.3tcv_TrafficHandPro
2.3.1.3
2.3.1.3Reason for change
2.3.1.3The 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 2.4.1.62.4.1.62.3.1.6) to determine the appropriate value and store it in this test case variable.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add Test Case Variable Declaration:

2.3.1.3Variable Name	2.3.1.3tcv_TrafficHandlingPriority
2.3.1.3Type	2.3.1.3B2
2.3.1.3Value	2.3.1.3
2.3.1.3Comments	2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.3
2.3.1.3ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro
2.3.1.3
2.3.1.3Reason for change
2.3.1.3To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add test step:

2.3.1.3Test Step Name	2.3.1.3ts_DetermineDlyClassAndTrafficClass
2.3.1.3Group	2.3.1.3BasicM_General_Steps/
2.3.1.3Objsctive	2.3.1.3
2.3.1.3Default	2.3.1.3
2.3.1.3Comments	2.3.1.3
2.3.1.3Description	2.3.1.3

2.3.1 2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1 2.3.1.3	2.3.1.3[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3 (tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3 (tcv_DlyClass := '100'B, tcv_TrafficClass :=	2.3.1.3	2.3.1.3	2.3.1.3

		'100'B, tcv_TrafficHandPro := '??'B)			
2.3.1	2.3.1.3	2.3.1.3[TRUE]	2.3.1.3	2.3.1.3I	2.3.1.3

2.3.1.3

2.3.1.3Modifications to tables added from RRCv143
2.3.1.3
2.3.1.3tc_8_2_1_10
2.3.1.3Reason for change
2.3.1.3The 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.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Change the test case behaviour line such that the Activate PDP Context Accept is only sent once.
2.3.1.3
2.3.1.3Change test case from:

2.3.1.3Test Case Name		2.3.1.3tc_8_2_1_10			
2.3.1	2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1	2.3.1.3…	2.3.1.3…..	2.3.1.3…..	2.3.1.3…	2.3.1.3…..
2.3.1	2.3.1.3	2.3.1.3 (tcv_CellInfoA.cellConfig := cell_DCH_64kPS_RAB_SRB)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1	2.3.1.3	2.3.1.3 +ts_ReceiveActivatePDP_Accept_FACH (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3test step is called to complete the PDP context
2.3.1	2.3.1.3	2.3.1.3Ut ? AT_CmdCnf 2.3.1.3	2.3.1.3 ca_AT_CmdCnf	2.3.1.3	2.3.1.3Acknowledgement to the Initial AT comamnd
2.3.1	2.3.1.3	2.3.1.3 + ts_NAS_ConnCompleteMO_CS_PS (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1	2.3.1.3…	2.3.1.3… ..	2.3.1.3… ..	2.3.1.3…	2.3.1.3… ..

2.3.1.3
2.3.1.3To:

2.3.1.3Test Case Name		2.3.1.3tc_8_2_1_10			
2.3.1	2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1	2.3.1.3…	2.3.1.3…..	2.3.1.3…..	2.3.1.3…	2.3.1.3…..
2.3.1	2.3.1.3	2.3.1.3 (tcv_CellInfoA.cellConfig := cell_DCH_64kPS_RAB_SRB)	2.3.1.3	2.3.1.3	2.3.1.3

2.3.1 2.3.1.3		2.3.1.3+ ts_NAS_ConnCompleteMO_CS_PS (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3…		2.3.1.3… ..	2.3.1.3… ..	2.3.1.3…	2.3.1.3… ..

2.3.1.3

2.4 Modifications to tables added from RRCv143

2.4.1 cs_ActSetUpdateAdd

Reason for change
The existing constraint contains an incorrect IE as follows:

- Secondary Scrambling Code shall not be omitted
- Incorrect Spreading factor and channelisation code
- Inocrrect tfci_CombiningIndicator

Summary of Change
Update the constraint as follows.

Change the Constraint Declaration from:

Constraint Name	cs_ActSetUpdateAdd (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_Act_time: ActivationTime; p_PrimScramblingCode_: PrimaryScramblingCode; p_Dpch_FrameOffset:DPCH_FrameOffset)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message activeSetUpdate: r3:{
    activeSetUpdate_r3 {   --ActiveSetUpdate_r3_IEs,
      rrc_TransactionIdentifier   p_RRC_TI,
      activationTime   p_Act_time,
      newU_RNTI   OMIT,
      cn_InformationInfo   OMIT,
      maxAllowedUL_TX_Power   OMIT,
      rl_AdditionInformationList   {{      primaryCPICH_Info { primaryScramblingCode p_PrimScramblingCode },
        dl_DPCH_InfoPerRL   fdd: {
          pCPICH_UsageForChannelEst mayBeUsed,
          dpch_FrameOffset p_Dpch_FrameOffset,
          secondaryCPICH_Info OMIT,
          dl_ChannelisationCodeList {{   --DL_ChannelisationCode
            secondaryScramblingCode OMIT,
            sf_AndCodeNumber sf256: 255,
            scramblingCodeChange noCodeChange
          }},
          tpc_CombinationIndex 0,
          ssdt_CellIdentity OMIT,
          closedLoopTimingAdjMode OMIT
        },
        tfci_CombiningIndicator   TRUE,
        sccpch_InfoforFACH   OMIT
      }},
      rl_RemovalInformationList   OMIT,
      tx_DiversityMode   noDiversity,
      ssdt_Information   OMIT
    },
    nonCriticalExtensions   OMIT
  }
}
```

To:

Constraint Name	cs_ActSetUpdateAdd (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_Act_time: ActivationTime; p_PrimScramblingCode : PrimaryScramblingCode; p_Dpch_FrameOffset:DPCH_FrameOffset; p_SecondaryScramblingCode : SecondaryScramblingCode)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message activeSetUpdate: r3:{
    activeSetUpdate_r3 {   --ActiveSetUpdate_r3_IEs,
      rrc_TransactionIdentifier   p_RRC_TI,
      activationTime   p_Act_time,
      newU_RNTI   OMIT,
      cn_InformationInfo   OMIT,
      maxAllowedUL_TX_Power   OMIT,
      rl_AdditionInformationList   {{      primaryCPICH_Info { primaryScramblingCode p_PrimScramblingCode },
        dl_DPCH_InfoPerRL   fdd: {
          pCPICH_UsageForChannelEst mayBeUsed,
          dpch_FrameOffset p_Dpch_FrameOffset,
          secondaryCPICH_Info OMIT,
          dl_ChannelisationCodeList {{   --DL_ChannelisationCode
            secondaryScramblingCode p_SecondaryScramblingCode, --OMIT,
            sf_AndCodeNumber tsc_DL_DPCH1_ChC_Speech, --  sf256: 255,
            scramblingCodeChange noCodeChange
          }},
          tpc_CombinationIndex 0,
          ssdt_CellIdentity OMIT,
          closedLoopTimingAdjMode OMIT
        },
        tfci_CombiningIndicator FALSE, --TRUE,
        sccpch_InfoforFACH   OMIT
    }},
      rl_RemovalInformationList   OMIT,
      tx_DiversityMode   noDiversity,
      ssdt_Information   OMIT
    },
    nonCriticalExtensions   OMIT
  }
}
```

ETSI : Done in a different way

2.4.2 tc_8_3_4_1

Reason for change
The existing test step has bee modified as follows:

- Line 15 - ts_Compute_DPCH_FrameOffset fails to acquire the real time SFN as expected moved the computation during Activate Set Update PDU transmission using px_SFN_OffSetA and px_SFN_OffSetB (see modified table line 16)

ETSI: Acepted but done in a different way. ETSI feels the solution proposed is also not correct, as DPCH Frame offset is offset of DPCCH with respect to P-CCPCH of same cell. But not some offset between 2 cells.

- Line 13 contains a regid scheme w.r.t. to cell ordering – replaced this with a local tree (lt_mea_report_cellb_e1a) to allow flexible permutation of cell ordering (see modified table line 13)

ETSI : Accepted

- Line 17 cas_ActSetUpdate contains parameter reversal (i.e. tcv_CellInfoB.priScrmCode, tcv_ActTime) and the tcv_DPCH_FrameOffset shall be replaced with px_SFN_OffSetB and px_SFN_OffSetA (i.e computation of DPCH frame offset)
- Line 23 contains a regid scheme w.r.t. to cell ordering – replaced this with a local tree (lt_mea_report_cella_e1b) to allow flexible permutation of cell ordering (see modified table line 22)

ETSI Rejected as at T2, there is large difference in power levels of 2 cells, hence order should be rigid.

- Line 27 disallow single mode UE to be tested (i.e InterRAT_UE_RadioAccessCapabilityList must be present) Replace '?' with a '*' to allow single mode UE to pass the test case.

ETSI: accepted

- Line 30 contains a regid scheme w.r.t. to cell ording – replaced this with a local tree (lt_mea_report_cella_e1a) to allow flexible permutation of cell ordering (see modified table line 29)

ETSI: Accepted

- Line 33 contains a regid scheme w.r.t. to cell ording – replaced this with a local tree (lt_mea_report_cellb_e1b) to allow flexible permutation of cell ordering (see modified table line 29)

ETSI Rejected as at T3, there is large difference in power levels of 2 cells, hence order should be rigid.

- Line 40 disallow single mode UE to be tested (i.e InterRAT_UE_RadioAccessCapabilityList must be present) Replace '?' with a '*' to allow single mode UE to pass the test case.

Summary of Change
Update the test as follows.

From:

1		START t_Guard			
2		+lt_RRC_InitVariables			Initial Test Case Variables
3		+pr_GotoState6_9_Or6_10_MT (tsc_CellA)			Initial conditions: DCH state either PS or CS according to TS 34.108 clause 7.4
4		+ts_SS_CreateCellDCH (tsc_CellB)			Create cell B
5		+ts_SendDefSysInfo(tsc_CellB)			
6		(tcv_TestBody:=TRUE)			
7		+lt_TestBody			
8		(tcv_TestBody:=FALSE)			
9		+po_SHO_ConnectionAndSS_Rel			Postamble
		lt_TestBody			
10		+ts_SS_IncrementCellPowerLevel (tsc_CellB ,15)			
11		START t_WaitMS			
12	TBF1	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
13	TBP1	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_108_MeasReportIntraFreqPeriodic (tcv_CellIndInfo.integrityCheckInfo, 1, INT_TO_BIT(tsc_CellB,28), tcv_CellInfoA.priScrmCode, tcv_CellInfoB.priScrmCode))	(P)	Step 2. MEASUREMENT REPORT This message is sent by the UE when it detects cell B (at -60 dBm) wich has been created above.
14		+ts_SHO_ConfigureAdditionalDL_DPCH (tsc_CellB)			Step 3. To configure an additional radio link (downlink) for cell B
15		+ts_Compute_DPCH_FrameOffset (tsc_CellA, tsc_CellB)			
16		+ts_CalculateActTime (tsc_CellA)			
17		AM ! RLC_AM_DATA_REQ	cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateAdd (tcv_CellIndInfo.integrityCheckInfo, tcv_RRC_Ti, tcv_CellInfoB.priScrmCode, tcv_ActTime, tcv_DPCH_FrameOffset))		Step 3 . ACTIVE SET UPDATE message including "Radio Link Addition Information"
18		START t_WaitMS			
19	TBF2	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
20	TBP2	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_ActSetUpdateCmpl(tsc_CellDedicated, tsc_RB2, cr_108_ActSetUpdateCmpl (tcv_CellIndInfo.integrityCheckInfo, tcv_RRC_Ti))	(P)	Step 4 . ACTIVE SET UPDATE COMPLETE UE configures a new radio link to cell 2
21		+ts_SS_DecrementCellPowerLevel (tsc_CellA, 30)			Step 5. Set power levels according to column T2 in Table 8.3.4.2 (Cell A off, Cell B -60 dBm)
22		+ts_SHO_ReleaseDL_DPCH (tsc_CellA)			Step 5. SS configures DL power settings according to T2 in Table 8.3.4.1 (Cell A Off, Cell B -60 dBm)
23	TBP3	AM ? RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_MeasReportIntraFreqPeriodic2 (tcv_CellIndInfo.integrityCheckInfo,1, INT_TO_BIT(tsc_CellB,28), tcv_CellInfoA.priScrmCode, tcv_CellInfoB.priScrmCode))	(P)	Step 5a. MEASUREMENT REPORT
24		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityEnqy(tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityEnq (tcv_CellIndInfo.integrityCheckInfo, tcv_RRC_Ti))		Step 6. UE CAPABILITY ENQUIRY (send via cell B)
25		START t_WaitMS			
26	TBF3	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
27	TBP4	AM?RLC_AM_DATA_IND CANCEL t_WaitMS	car_UE_CapabilityInfoAM (tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?,?,?))	(P)	Step 7. UE CAPABILITY INFORMATION To confirm that the UE communication with Cell B
28		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityInfoCnfAM (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityInfoCnfAM (tcv_CellIndInfo.integrityCheckInfo, tcv_RRC_Ti))		Step 8. UE CAPABILITY INFORMATION CONFIRM.
29		+ts_SS_IncrementCellPowerLevel (tsc_CellA ,30)			Step 9;
30	TBP5	AM ? RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,	(P)	Step 9a. MEASUREMENT REPORT

			cr_108_MeasReportIntraFreqPeriodic (tcv_CellIndInfo.integrityCheckInfo,1, INT_TO_BIT(tsc_CellB,28), tcv_CellInfoA.priScrmCode, tcv_CellInfoB.priScrmCode))		
31		+ts_SS_DecrementCellPowerLevel (tsc_CellB, 30)			Step 10.
32		+ts_SHO_ConfigureAdditionalDL_DPCH (tsc_CellA)			Step 9. SS reconfigures again DL DPCH of cell A Power settings according to T1 in Table 8.3.4.1 (Cell A -60 dBm, Cell B -60 dBm)
33	TBP6	AM ? RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_MeasReportIntraFreqPeriodic2 (tcv_CellIndInfo.integrityCheckInfo,1, INT_TO_BIT(tsc_CellB,28), tcv_CellInfoA.priScrmCode, tcv_CellInfoB.priScrmCode))	(P)	Step 10a:. MEASUREMENT REPORT
34		START t_WaitS (15)			
35		? TIMEOUT t_WaitS			Wait 15 s
36		+ts_SHO_ReleaseDL_DPCH (tsc_CellB)			Step 10. Configure DL transmission power according to column T3 in Table 8.3.4.1 (Cell A -60 dBm, Cell B Off)
37		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityEnqy(tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityEnq (tcv_CellIndInfo.integrityCheckInfo, tcv_RRC_Ti))		Step 11. UE CAPABILITY ENQUIRY (send via cell A)
38		START t_WaitMS			
39	TBF4	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
40	TBP7	AM?RLC_AM_DATA_IND CANCEL t_WaitMS	car_UE_CapabilityInfoAM (tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?,?,?))	(P)	Step 12. UE CAPABILITY INFORMATION To confirm that the UE communication with Cell A
41		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityInfoCnfAM (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityInfoCnfAM (tcv_CellIndInfo.integrityCheckInfo, tcv_RRC_Ti))		Step 13. UE CAPABILITY INFORMATION CONFIRM.
42		+ts_C3_CheckCellDCH (tsc_CellA)			Step 14 : To check UE is in CELL_DCH
		lt_RRC_InitVariables			
43		+ts_RRC_InitVariables (cell_DCH)			
44		(tcv_CellInfoA.attenuationLevel := tsc_AttLevToPower60_dBm, tcv_CellInfoB.attenuationLevel := tsc_AttLevToPower75_dBm)			

To:

1		START t_Guard			
2		+lt_RRC_InitVariables			Initial Test Case Variables
3		+pr_GotoState6_9_Or6_10_MO (tsc_CellA)			Initial conditions: DCH state either PS or CS according to TS 34.108 clause 7.4
4		+ts_SS_CreateCellDCH (tsc_CellB)			Create cell B
5		+ts_SendDefSysInfo (tsc_CellB)			
6		(tcv_TestBody:=TRUE)			
7		+lt_TestBody			
8		(tcv_TestBody:=FALSE)			
9		+po_SHO_ConnectionAndSS_Rel lt_TestBody			Postamble
10		+ts_SS_IncrementCellPowerLevel (tsc_CellB ,15)			
11		START t_WaitMS			
12	TBF1	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
13		+lt_mea_report_cellb_e1a			Step 2. MEASUREMENT REPORT This message is sent by the UE when it detects cell B (at -60 dBm) wich has been created above.
14		+ts_SHO_ConfigureAdditionalDL_DPCH (tsc_CellB)			Step 3. To configure an additional radio link (downlink) for cell B
15		+ts_CalculateActTime (tsc_CellA)			
16		AM ! RLC_AM_DATA_REQ	cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateAdd (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_CellInfoB.priScrmCode, px_SFN_OffsetB , px_SFN_OffsetA , tcv_TmpCellInfo.dl_DPCH_2ndScrCode))		Step 3 . ACTIVE SET UPDATE message including "Radio Link Addition Information"
17		START t_WaitMS			
18	TBF2	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
19	TBP2	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_ActSetUpdateCmpl (tsc_CellDedicated, tsc_RB2, cr_108_ActSetUpdateCmpl (tcv_RRC_Ti))	(P)	Step 4 . ACTIVE SET UPDATE COMPLETE UE configures a new radio link to cell 2
20		+ts_SS_DecrementCellPowerLevel (tsc_CellA, 30)			Step 5. Set power levels according to column T2 in Table 8.3.4.2 (Cell A off, Cell B -60 dBm)
21		+ts_SHO_ReleaseDL_DPCH (tsc_CellA)			Step 5. SS configures DL power settings according to T2 in Table 8.3.4.1 (Cell A Off, Cell B -60 dBm)
22		+lt_mea_report_cella_e1b			Step 5a. MEASUREMENT REPORT
23		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityEnqy (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityEnq (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 6. UE CAPABILITY ENQUIRY (send via cell B)
24		START t_WaitMS			
25	TBF3	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
26	TBP4	AM?RLC_AM_DATA_IND CANCEL t_WaitMS	car_UE_CapabilityInfoAM (tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?,?,*))	(P)	Step 7. UE CAPABILITY INFORMATION To confirm that the UE communication with Cell B
27		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityInfoCnfAM (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityInfoCnfAM (tcv_CellIndInfo.dl_IntegrityChe		Step 8. UE CAPABILITY INFORMATION CONFIRM.

			ckInfo, tcv_RRC_Ti))		
28	_	+ts_SS_IncrementCellPowerLevel (tsc_CellA ,30)	_	_	Step 9;
29		+lt_mea_report_cella_e1a			Step 9a. MEASUREMENT REPORT should test for cell A e1a car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_108_MeasReportIntraFreqPeriodic (1, INT_TO_BIT (tsc_CellB,28), tcv_CellInfoA.priScrmCode, tcv_CellInfoB.priScrmCode))
30	_	+ts_SS_DecrementCellPowerLevel (tsc_CellB, 30)	_	_	Step 10.
31	_	+ts_SHO_ConfigureAdditionalDL_DPCH (tsc_CellA)	_	_	Step 9. SS reconfigures again DL DPCH of cell A Power settings according to T1 in Table 8.3.4.1 (Cell A -60 dBm, Cell B -60 dBm)
32		+lt_mea_report_cellb_e1b			Step 10a;. MEASUREMENT REPORT - expecting cellB e1b
33	_	START t_WaitS (15)	_	_	_
34	_	? TIMEOUT t_WaitS	_	_	Wait 15 s
35	_	+ts_SHO_ReleaseDL_DPCH (tsc_CellB)	_	_	Step 10. Configure DL transmission power according to column T3 in Table 8.3.4.1 (Cell A -60 dBm, Cell B Off)
36	_	AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityEnqy (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityEnq (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))	_	Step 11. UE CAPABILITY ENQUIRY (send via cell A)
37	_	START t_WaitMS	_	_	_
38	TBF4	? TIMEOUT t_WaitMS	_	(F)	Wait for 13 secs
39	TBP7	AM?RLC_AM_DATA_IND CANCEL t_WaitMS	car_UE_CapabilityInfoAM (tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?,?,*))	(P)	Step 12. UE CAPABILITY INFORMATION To confirm that the UE communication with Cell A
40	_	AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityInfoCnfAM (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityInfoCnfAM (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))	_	Step 13. UE CAPABILITY INFORMATION CONFIRM.
41	_	+ts_C3_CheckCellDCH (tsc_CellA)	_	_	Step 14 : To check UE is in CELL_DCH
		lt_RRC_InitVariables			
42	_	+ts_RRC_InitVariables (cell_DCH)	_	_	_
43	_	(tcv_CellInfoA.attenuationLevel := tsc_AttLevToPower60_dBm, tcv_CellInfoB.attenuationLevel := tsc_AttLevToPower75_dBm)	_	_	_
		lt_mea_report_cellb_e1a			
44	TBP1	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1a (1, tcv_CellInfoA.priScrmCode, OMIT, tcv_CellInfoB.priScrmCode,?, tcv_CellInfoB.priScrmCode)))	(P)	Step 2. MEASUREMENT REPORT This message is sent by the UE when it detects cell B (at -60 dBm) wich has been created above.
45	TBP1A	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1a (1, tcv_CellInfoB.priScrmCode,?,	(P)	Step 2. MEASUREMENT REPORT This is necessary when both cell has exactly the same quality

			tcv_CellInfoA.priScrmCode, OMIT,tcv_CellInfoB.priScrmCode)))		
		lt_mea_report_cella_e1b			
46	TBP3	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1b (1, tcv_CellInfoA.priScrmCode,OMIT, tcv_CellInfoB.priScrmCode,OMIT, tcv_CellInfoA.priScrmCode)))	(P)	Step 5a. MEASUREMENT REPORT
47	TBP3A	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1b(1, tcv_CellInfoB.priScrmCode,OMIT, tcv_CellInfoA.priScrmCode,OMIT, tcv_CellInfoA.priScrmCode)))	(P)	
		lt_mea_report_cella_e1a			
48	TBP5	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1a(1, tcv_CellInfoA.priScrmCode,OMIT, tcv_CellInfoB.priScrmCode,OMIT, tcv_CellInfoA.priScrmCode)))	(P)	Step 9a
49	TBP5A	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1a(1, tcv_CellInfoB.priScrmCode,OMIT, tcv_CellInfoA.priScrmCode,OMIT, tcv_CellInfoA.priScrmCode)))	(P)	
		lt_mea_report_cellb_e1b			
50	TBP6	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1b(1, tcv_CellInfoA.priScrmCode,OMIT, tcv_CellInfoB.priScrmCode,OMIT, tcv_CellInfoB.priScrmCode)))	(P)	Step 10a
51	TBP6A	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1b(1, tcv_CellInfoB.priScrmCode,OMIT, tcv_CellInfoA.priScrmCode,OMIT, tcv_CellInfoB.priScrmCode)))	(P)	

3GPP TSG-T1~~/SIC~~ Meeting #20~~19~~ ***T1~~S~~ ⌘03xxxx030604~~464xx15~~***

Munich, Germany 28 July-1August 2003~~Seoul, Korea, 12-15 May 2003~~

CR-Form-v7

CHANGE REQUEST

⌘	~~RRC ATS~~TS 34.123-3	CR	*120~~0306~~0403060~~246803xxxxxx15~~*	⌘ rev	~~1~~	⌘	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 8.3.4.2~~2.1.10~~
Source:	⌘	~~Anritsu Ltd~~T1
Work item code:	⌘	***Date:*** ⌘ 21~~24~~/05~~3~~/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one 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 one 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 ~~8.2.1.10~~ 8.3.4.2 to RRCv310
Summary of change:	⌘	- 0 table(s) deleted from RRCv310 - 5~~15~~ table(s) modified in RRCv310 ~~- 12 table(s) added from RRCv143 of which~~ ~~- 1 table(s) have been modified~~ - 4~~6~~ new table(s) added - 4 tables added from RRCv143 of which - 2 tables have been modified For more details see below.
Consequences if not approved:	⌘	Test case ~~8.2.1.10~~ 8.3.4.2 will not be added

Clauses affected:	⌘	N/A

		Y	N		
Other specs Affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	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.

Anritsu

ANRITSU LIMITED

TSG-T Working Group1 SWG SIG E-mail Approval

T1-03~~20(8.2.1.10)~~06 04~~464~~

~~Luton, UK~~Seoul, Korea 12-15 May 2003 ~~24/3/2003~~

Title	~~Changes to TC~~ Introducing test case 8.~~3~~2.4.2.~~1.10~~ required ~~for approval~~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 8.3.4.2 to RRCv310 by using RRCv143 as the primary source of the new tables and applying only essential fixes to the TTCN. ~~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 ~~8.2.1.8~~ ~~8.2.~~8.3.4.2~~1.10~~

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 cb_SIB11_Defc_CellInfoDef

Reason for change

The existing constraint contains incorrect event 1a reportCriteria_intraFreqReportingCriteria which causes step 9a failure ~~nstraint 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 secti on 2.4.1.22.4.1.22.3.1.2.~~

Summary of Change

Update the constraint as follows.~~c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.~~

Change the ~~Structured Type~~ Constraintt Declaration from:

Constraint Name	cb_SIB11_Def (p_ActiveCellInfo, p_IntraCellInfo2, p_IntraCellInfo3, p_IntraCellInfo4, p_IntraCellInfo5, p_InterCellInfo6, p_InterCellInfo7, p_InterCellInfo8 : CellInfoCfg)~~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)~~
ASN1 Type~~Structured Type~~	SysInfoType11~~CellInfoCfg~~
Derivation Path	
Encoding Variation	
Comments	Default system information block type 11. To be used by cell A,B,C,G and H: - 5 intra cells frequency of the same frequency - 3 inter cell frequency of the same frequency.

…
reportCriteria_intraFreqReportingCriteria : {
eventCriteriaList {{
event e1a : {
triggeringCondition monitoredSetCellsOnly,
reportingRange 5,
w 1,
reportDeactivationThreshold t2,
reportingAmount ra4,
reportingInterval ri4
},
…~~Element Name~~ ~~Element Value~~ ~~Element Encoding~~ ~~Comments~~

~~….~~
~~attFlag~~
~~tsc_AttOn~~
~~nmo~~
~~tsc_NMO_I~~
~~ura_Identity~~
~~p_URA_Id~~
~~….~~

To:

Constraint Name	cb_SIB11_Def (p_ActiveCellInfo, p_IntraCellInfo2, p_IntraCellInfo3, p_IntraCellInfo4, p_IntraCellInfo5, p_InterCellInfo6, p_InterCellInfo7, p_InterCellInfo8 : CellInfoCfg)
ASN1 Type	SysInfoType11
Derivation Path	
Encoding Variation	
Comments	Default system information block type 11. To be used by cell A,B,C,G and H: - 5 intra cells frequency of the same frequency - 3 inter cell frequency of the same frequency.

```
...
        reportCriteria intraFreqReportingCriteria : {
            eventCriteriaList {{
                event e1a : {
                    triggeringCondition    activeSetAndMonitoredSetCells,    -- refer to TS25.331 for active and monitiored set
definition
                    reportingRange    5,
                    w    1,
                    reportDeactivationThreshold    t2,
                    reportingAmount    ra4,
                    reportingInterval    ri4
                },
...
```

2.2.2c_TrChInfoUL_336_148

Reason 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	

```
{
ulconnectedTrCHList {
    { trchid          tsc_UL_DCH5,
      transportChannelInfo          c_DCH_148_TFS_UL },
    { trchid          tsc_UL_DCH1,
      transportChannelInfo          c_DCH_336_TFS }},
ulTFCS          c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS
}
```

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	

```
{
ulconnectedTrCHList {
    { trchid          tsc_UL_DCH1,
      transportChannelInfo          c_DCH_336_TFS },
    { trchid          tsc_UL_DCH5,
      transportChannelInfo          c_DCH_148_TFS_UL }},
ulTFCS          c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS
}
```

2.2.3cr_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)		
	....			

2.2.4cr_AttachReq

Reason for change
The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST nas 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_lv; 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_lv; 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	*		
	....			

2.2.5cr_QoS_InteractiveMO_CellFACH_lv

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 2.2.82.2.82.2.8 and 2.2.92.2.92.2.9).

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_lv 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_lv (p_trafficClass : 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	'100'B		Best effort
	relabilityClass	'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 ; p-trafficHandPro : B2)			
Structured Type	QualityOfService_lv			
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	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		Interactive=traffic class, Background=4
	relabilityClass	'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

2.2.6cs_QoS_InteractiveMT_lv

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_lv 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_lv (p_trafficClass : B3)			
Structured Type	QualityOfService_lv			
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
	relabilityClass	'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 CS			
	Element Name	Element Value	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	relabilityClass	'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

2.2.2 ts_SHO_ConfigureAdditionalDL_DPCH

Reason for change
Local tree lt_ConfigSpeech contains incorrect configuration detail as follow:

- incorrect Radio Link configuration for 12.2 K AMR
- configuration of the transport ~~configuration~~channel for SHO is not required per TS25.303 section 6.4.4

Summary of Change
Update the test step from :

Test Step Name		ts_SHO_ConfigureAdditionalDL_DPCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		….. lt_ConfigSpeech			
19		CPHY!CPHY_RL_Setup_REQ	ca_DL_DPCH_Info (p_CellId, tsc_DL_DPCH1, cb_DL_DPCH_64K_CS (c_DL_CommonInformation RB_SetUp (tsc_DL_DPCH1_SFP_Speech), tcv_TmpCellInfo.dl_DPCH_2ndScrCode))		
20		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_DL_DPCH1)		
21		CPHY!CPHY_TrCH_Config_REQ	ca_4DCH_DL_InfoActNow (p_CellId, tsc_DL_DPCH1)		
22		CPHY?CPHY_TrCH_Config_CNF	ca_TrChCfgCnf (p_CellId, tsc_DL_DPCH1)		
		lt_Config64kCS ….			

To:

Test Step Name		ts_SHO_ConfigureAdditionalDL_DPCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		….. lt_ConfigSpeech			
19		CPHY!CPHY_RL_Setup_REQ	ca_DL_DPCH_Info (p_CellId, tsc_DL_DPCH1, cb_DL_DPCH_122_AMR (c_DL_CommonInformation RB_SetUpSpeech (tsc_DL_DPCH1_SFP_Speech), tcv_TmpCellInfo.dl_DPCH_2ndScrCode))		
20		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_DL_DPCH1)		
		lt_Config64kCS ….			

2.2.7ts_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_DetermineDlyClassAndTrafficClassAndTraffic HandPrc			
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_CellFACH_lv (tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPrio)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...		.....			

2.2.3 ts_SHO_ReleaseDL_DPCH

2.2.8ts_AT_OrgPS_Call

Reason for change:

Release of Transport Channel for SHO is not required. Refer to previous section 2.2.2 for explanation.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 test step as follows:the AT commands issued.

Change test step from:

Test Step Name		ts_SHO_ReleaseDL_DPCH (p_CellId : INTEGER)ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId).....			
21 7		+ ts_CPHY_TrChRel (p_CellId , tsc_DL_DPCH1) (tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))			Release of this step is not necessary as this channel is not configured in the first placeset up the Minimum QoS same as Required QoS
20 3	ERR1	+ ts_SS_StopRL (p_CellId , tsc_DL_DPCH1) [TRUE]		I	Parameter error
4		(tcv_TmpCellInfo.DL_DPCH_SHO := FALSE)			
5		+ ts_SaveCellInfo (p_CellId)			

To:

Test Step Name		ts_SHO_ReleaseDL_DPCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		+ ts_SS_StopRL (p_CellId , tsc_DL_DPCH1)			
3		(tcv_TmpCellInfo.DL_DPCH_SHO := FALSE)			
4		+ ts_SaveCellInfo (p_CellId)			

2.2.4 cas_UE_CapabilityInfoCnfAM

Reason for change
The existing constraint does not set the “confirm request” to “confirmationRequested” as the name may suggest. Therefore the AM Data confirm was not received which cause the test case to fail.

Summary of Change
Update the constraint as follows.

Change the Constraint Declaration from:

Constraint Name	cas_UE_CapabilityInfoCnfAM(p_CellId: INTEGER; p_RB_Id: INTEGER; p_PDU: DL_DCCH_Message)
ASP Type	RLC_AM_DATA_REQ
Derivation Path	
Encoding Variation	
Comments	

{
cellId p_CellId,
routingInfo rB_Identity: p_RB_Id,
confirmationRequest noConfirmationRequest: NULL,
aM_message dL_DCCH_Message : p_PDU
}	

To:

Constraint Name	cas_UE_CapabilityInfoCnfAM(p_CellId: INTEGER; p_RB_Id: INTEGER; p_Mui : Mui; p_PDU: DL_DCCH_Message)
ASP Type	RLC_AM_DATA_REQ
Derivation Path	
Encoding Variation	
Comments	

{
cellId p_CellId,
routingInfo rB_Identity: p_RB_Id,
confirmationRequest confirmationRequested: p_Mui,
aM_message dL_DCCH_Message : p_PDU
}	

2.2.5 ts_SS_Rel

Reason for change
The test step contain in correct qualifier logic to release non-existent radio bearers RB20. (i.e. RB20 was never established in this test case prior to the CS Cell DCH to Cell FACH transition)

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		+ lt_RelSRB1_4			
15		+lt_ReleaseCommonCh			
16		+ lt_Release_BCCH			
17		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			
18		[(tcv_TmpCellInfo.cellConfig = cell_FACH_NoConn)]			
19		+ lt_RelSRB1_4			
20		+lt_ReleaseCommonCh			
21		+ lt_Release_BCCH			
22		+ ts_SetCellCfg (p_CellId, cell_NotConfigured)			
	… ..	… ..	… ..	… ..	… ..

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]		!	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]		!	Parameter error

2.2.10ts_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)]			

2.2.11ts_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 Authenticatioin 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 2.4.1.12.4.1.12.3.1.1, 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 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(			Verify that the

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

2.2.12ts_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).
		.....			

2.2.13ts_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(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_lv('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_lv('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_lv('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_lv('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_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_Iv('100'B, '100'B), OMIT))		
8	ERR1	[TRUE]		!	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_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_Iv('100'B, '100'B), OMIT))		
14	ERR2	[TRUE]		!	Parameter error

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_DetermineDlyClassAndTrafficClassAndTrafficH andPrio			
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_InteractiveOrBackgrou ndMO_CellFACH_lv(tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPrio)))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

2.2.15ts_RRC_NAS_SessionActPS_MT_P9_P10

Reason 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_lv(tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		

~~Tables added to RRCv310~~

2.3 Tables added to RRCv310

~~2.3~~2.3.1 Tables added from RRCv143– No changes necessary

cr_UTRAN_MobilityInfoCnf	
cs_ActSetUpdateRemv	
~~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~~

2.3.2 Other ~~New~~ tables added

2.3.2.1 cr_108_MeasReportIntraFreqPeriodic2cell_e1a

~~adde~~
~~c_AuthCiphRspExtAny~~

This table is not based on one in any existing ATS.

Reason for change
Test case expects the periodic measurement report to delivered the measurement results in a specific cell order. However, this may not be applicable for the cell when equal CPICH RSCP is received. Therefore it is necessary to create a constraint to accept flexible cell ordering per event 1a~~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	cr_108_MeasReportIntraFreqPeriodic2cell_e1a (p_MeasId : MeasurementIdentity ; p_PriScmbCode : INTEGER; p_CellSync : CellSynchronisationInfo; p_PrimaryScr2:INTEGER; p_CellSync2 : CellSynchronisationInfo; p_PriScmbCode_event: INTEGER)~~c_AuthCiphRspExtAny~~
PDU~~Structured~~ Type	UL_DCCH_Message~~AuthRspExt~~
Derivation Path	
Encoding Variation	
Comments	

~~Element Name~~
~~Element Value~~
~~Element Encoding~~
~~Comments~~

~~lei~~
~~'00101001'B~~
~~lel~~
~~?~~
~~RES~~{ integrityCheckInfo *,
message measurementReport :
{
measurementIdentity p_MeasId,
measuredResults intraFreqMeasuredResultsList
:
{{
cellIdentity OMIT,
sfn_SFN_ObsTimeDifference *,
cellSynchronisationInfo p_CellSync,
modeSpecificInfo fdd
:
{
primaryCPICH_Info
{
primaryScramblingCode p_PriScmbCode
},
cpich_Ec_N0 OMIT,
cpich_RSCP ?,
pathloss OMIT
}
},
{
cellIdentity OMIT,
sfn_SFN_ObsTimeDifference OMIT,
cellSynchronisationInfo p_CellSync2,
modeSpecificInfo fdd
:
{
primaryCPICH_Info
{
primaryScramblingCode p_PrimaryScr2
},
cpich_Ec_N0 OMIT,
cpich_RSCP ?,
pathloss OMIT
}
}
},
measuredResultsOnRACH OMIT,
additionalMeasuredResults OMIT,
eventResults intraFreqEventResults : { eventID e1a,
cellMeasurementEventResults fdd : { { primaryScramblingCode
p_PriScmbCode_event}}},
v390nonCriticalExtensions *
}
}
~~?~~

~~2.3.1.2~~2.3.2.2 cr_108_MeasReportIntraFreqPeriodic2cell_e1b~~px_NMO~~

This table is not based on one in any existing ATS

Reason for change
Test case expects the periodic measurement report ~~is~~to deliver~~ed~~ the measurement results in a specific cell order. However, this may not be applicable for the when equal CPICH RSCP is received. Therefore it is necessary to create a contarin to accept flexible cell ordering per event 1b~~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 Constraint Declaration:

Constraint Name	cr_108_MeasReportIntraFreqPeriodic2cell_e1b (p_MeasId : MeasurementIdentity ; p_PriScmbCode : INTEGER; p_CellSync : CellSynchronisationInfo; p_PrimaryScr2:INTEGER; p_CellSync2 : CellSynchronisationInfo; p_PriScmbCode_event: INTEGER)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{ integrityCheckInfo   *,
message          measurementReport :
  {
    measurementIdentity p_MeasId,
    measuredResults   intraFreqMeasuredResultsList
:
    {{
      cellIdentity OMIT,
      sfn_SFN_ObsTimeDifference *,
      cellSynchronisationInfo p_CellSync,
      modeSpecificInfo fdd
:
        {
          primaryCPICH_Info
            {
              primaryScramblingCode p_PriScmbCode
            },
          cpich_Ec_N0 OMIT,
          cpich_RSCP  ?,
          pathloss  OMIT
        }
    },
        {
      cellIdentity OMIT,
     sfn_SFN_ObsTimeDifference OMIT,
      cellSynchronisationInfo p_CellSync2,
      modeSpecificInfo fdd
:
        {
          primaryCPICH_Info
            {
              primaryScramblingCode p_PrimaryScr2
            },
          cpich_Ec_N0 OMIT,
          cpich_RSCP  ?,
          pathloss  OMIT
        }
    }
},
    measuredResultsOnRACH OMIT,
    additionalMeasuredResults OMIT,
    eventResults intraFreqEventResults : {  eventID e1b,
                                        cellMeasurementEventResults fdd : { { primaryScramblingCode
p_PriScmbCode_event}}},
    v390nonCriticalExtensions *
}
}
```

2.3.2.3 cs_CellUpdateCnfGenericDCCH_noURA

This table is not based on one in any existing ATS

Reason for change
URA ID is only required in the PCH state. Therefore a new constraint is introduced

Summary of Change
Table added to suite.

Add Constraint Declaration:

Constraint Name	cs_CellUpdateCnfGenericDCCH_noURA (

	p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_U_RNTI_New : U_RNTI; p_C_rnti: C_RNTI; p_State_Ind: RRC_StateIndicator; p_RB_Rls: RB_InformationReleaseList ; p_RB_Affected: RB_InformationAffectedList ; p_Ul_reconf_trch : UL_AddReconfTransChInfoList; p_Reconfpower:MaxAllowedUL_TX_Power; p_Dl_reconf_trch:DL_AddReconfTransChInfoList; p_Rb_infoReconf:RB_InformationReconfigList)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	Based on cs_CellUpdateCnfGenericDCCH

```
{
integrityCheckInfo   p_IntegrityCheckInfo,
message cellUpdateConfirm: r3:{
cellUpdateConfirm_r3  {      --CellUpdateConfirm_r3_IEs
    rrc_TransactionIdentifier p_RRC_TI,
    integrityProtectionModeInfo   OMIT,
    cipheringModeInfo   OMIT,
    activationTime OMIT ,
    new_U_RNTI p_U_RNTI_New ,
    new_C_RNTI   p_C_rnti,
    rrc_StateIndicator   p_State_Ind,
    utran_DRX_CycleLengthCoeff   OMIT,
    rlc_Re_establishIndicatorRb2_3or4 FALSE,
     rlc_Re_establishIndicatorRb5orAbove FALSE,
    cn_InformationInfo   OMIT,
    ura_Identity   OMIT,  -- '0000000000000001'B,
    rb_InformationReleaseList p_RB_Rls,
    rb_InformationReconfigList p_Rb_infoReconf,
    rb_InformationAffectedList p_RB_Affected,
    ul_CommonTransChInfo OMIT,
    ul_deletedTransChInfoList_OMIT,
    ul_AddReconfTransChInfoList_p_Ul_reconf_trch,
    modeSpecificTransChInfo fdd: {
        cpch_SetID OMIT,
        addReconfTransChDRAC_Info OMIT
    },
    dl_CommonTransChInfo OMIT,
    dl_DeletedTransChInfoList OMIT,
    dl_AddReconfTransChInfoList p_Dl_reconf_trch,
    frequencyInfo OMIT,
    maxAllowedUL_TX_Power p_Reconfpower,
    ul_ChannelRequirement OMIT,
    modeSpecificPhysChInfo fdd:{
    dl_PDSCH_Information OMIT
  },
  dl_CommonInformation OMIT,
  dl_InformationPerRL_List OMIT
  },
v3a0NonCriticalExtensions OMIT
}
}
```

2.3.2.4 ts_CMAC_Reconf_SCCPCH_to_2FACH

Reason for change
Prior to the the transmission of Cell Confrim Update PDU the S-CCPCH is required to be re-configured to re-route the downlink PDU through DDCH over FACH

Summary of Change
Table Added to suite

Test Step Name		ts_CMAC_Reconf_SCCPCH_to_2FACH (p_CellId : INTEGER; p_DL_TrLogMapping: TrCH_LogCHMappingList1)			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		_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)		
3		_CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf(p_CellId, tsc_S_CCPCH1)		

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

2.3.1.3tcv_DlyClass
2.3.1.3
2.3.1.3Reason for change
2.3.1.3The 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.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add Test Case Variable Declaration:

2.3.1.3Variable Name	2.3.1.3tcv_DlyClass
2.3.1.3Type	2.3.1.3B3
2.3.1.3Value	2.3.1.3
2.3.1.3Comments	2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.3

2.3.1.3tcv_TrafficClass
2.3.1.3
2.3.1.3Reason for change
2.3.1.3The 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.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add Test Case Variable Declaration:

2.3.1.3Variable Name	2.3.1.3tcv_TrafficClass
2.3.1.3Type	2.3.1.3B3
2.3.1.3Value	2.3.1.3
2.3.1.3Comments	2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.3
2.3.1.3tcv_TrafficHandPro
2.3.1.3
2.3.1.3Reason for change
2.3.1.3The 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 2.4.1.62.4.1.62.3.1.6) to determine the appropriate value and store it in this test case variable.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add Test Case Variable Declaration:

2.3.1.3Variable Name	2.3.1.3tcv_TrafficHandlingPriority
2.3.1.3Type	2.3.1.3B2
2.3.1.3Value	2.3.1.3
2.3.1.3Comments	2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.3
2.3.1.3ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro
2.3.1.3
2.3.1.3Reason for change
2.3.1.3To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add test step:

2.3.1.3Test Step Name	2.3.1.3ts_DetermineDlyClassAndTrafficClass
2.3.1.3Group	2.3.1.3BasicM_General_Steps/
2.3.1.3Objsctive	2.3.1.3
2.3.1.3Default	2.3.1.3
2.3.1.3Comments	2.3.1.3
2.3.1.3Description	2.3.1.3

2.3.1 2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1 2.3.1.3	2.3.1.3[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3 (tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3 (tcv_DlyClass := '100'B, tcv_TrafficClass :=	2.3.1.3	2.3.1.3	2.3.1.3

		'100'B, tcv_TrafficHandPro := '??'B)			
2.3.1	2.3.1.3	2.3.1.3[TRUE]	2.3.1.3	2.3.1.3I	2.3.1.3

2.3.1.3

2.3.1.3Modifications to tables added from RRCv143
2.3.1.3
2.3.1.3tc_8_2_1_10
2.3.1.3Reason for change
2.3.1.3The 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.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Change the test case behaviour line such that the Activate PDP Context Accept is only sent once.
2.3.1.3
2.3.1.3Change test case from:

2.3.1.3Test Case Name		2.3.1.3tc_8_2_1_10			
2.3.1	2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1	2.3.1.3…	2.3.1.3…..	2.3.1.3…..	2.3.1.3…	2.3.1.3…..
2.3.1	2.3.1.3	2.3.1.3 (tcv_CellInfoA.cellConfig := cell_DCH_64kPS_RAB_SRB)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1	2.3.1.3	2.3.1.3 +ts_ReceiveActivatePDP_Accept_FACH (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3test step is called to complete the PDP context
2.3.1	2.3.1.3	2.3.1.3Ut ? AT_CmdCnf 2.3.1.3	2.3.1.3 ca_AT_CmdCnf	2.3.1.3	2.3.1.3Acknowledgement to the Initial AT comamnd
2.3.1	2.3.1.3	2.3.1.3 + ts_NAS_ConnCompleteMO_CS_PS (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1	2.3.1.3…	2.3.1.3… ..	2.3.1.3… ..	2.3.1.3…	2.3.1.3… ..

2.3.1.3
2.3.1.3To:

2.3.1.3Test Case Name		2.3.1.3tc_8_2_1_10			
2.3.1	2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1	2.3.1.3…	2.3.1.3…..	2.3.1.3…..	2.3.1.3…	2.3.1.3…..
2.3.1	2.3.1.3	2.3.1.3 (tcv_CellInfoA.cellConfig := cell_DCH_64kPS_RAB_SRB)	2.3.1.3	2.3.1.3	2.3.1.3

2.3.1 2.3.1.3		2.3.1.3+ ts_NAS_ConnCompleteMO_CS_PS (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3…		2.3.1.3… ..	2.3.1.3… ..	2.3.1.3…	2.3.1.3… ..

2.3.1.3

2.4 Modifications to tables added from RRCv143

2.4.1 cs_ActSetUpdateAdd

Reason for change
The existing constraint contains an incorrect IE as follows:

- Secondary Scrambling Code shall not be omitted
- Incorrect Spreading factor and channelisation code
- Inocrrect tfci_CombiningIndicator

Summary of Change
Update the constraint as follows.

Change the Constraint Declaration from:

Constraint Name	cs_ActSetUpdateAdd (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_Act_time: ActivationTime; p_PrimScramblingCode : PrimaryScramblingCode; p_Dpch_FrameOffset:DPCH_FrameOffset)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message activeSetUpdate: r3:{
    activeSetUpdate_r3 {  --ActiveSetUpdate_r3_IEs,
      rrc_TransactionIdentifier  p_RRC_TI,
      activationTime  p_Act_time,
      newU_RNTI  OMIT,
      cn_InformationInfo  OMIT,
      maxAllowedUL_TX_Power  OMIT,
      rl_AdditionInformationList  {{  primaryCPICH_Info { primaryScramblingCode p_PrimScramblingCode },
        dl_DPCH_InfoPerRL  fdd: {
          pCPICH_UsageForChannelEst mayBeUsed,
          dpch_FrameOffset p_Dpch_FrameOffset,
          secondaryCPICH_Info OMIT,
          dl_ChannelisationCodeList {{  --DL_ChannelisationCode
            secondaryScramblingCode OMIT,
            sf_AndCodeNumber sf256: 255,
            scramblingCodeChange noCodeChange
          }},
          tpc_CombinationIndex 0,
          ssdt_CellIdentity OMIT,
          closedLoopTimingAdjMode OMIT
        },
        tfci_CombiningIndicator  TRUE,
```

```
        sccpch_InfoforFACH  OMIT
    }} ,
        rl_RemovalInformationList  OMIT,
        tx_DiversityMode  noDiversity,
        ssdt_Information  OMIT
    },
    nonCriticalExtensions  OMIT
  }
}
```

To:

Constraint Name	cs_ActSetUpdateAdd (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_Act_time: ActivationTime; p_PrimScramblingCode : PrimaryScramblingCode; p_Dpch_FrameOffset:DPCH_FrameOffset; p_SecondaryScramblingCode : SecondaryScramblingCode)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message activeSetUpdate: r3:{
    activeSetUpdate_r3 {   --ActiveSetUpdate_r3_IEs,
      rrc_TransactionIdentifier  p_RRC_TI,
      activationTime  p_Act_time,
      newU_RNTI  OMIT,
      cn_InformationInfo  OMIT,
      maxAllowedUL_TX_Power  OMIT,
      rl_AdditionInformationList  {{      primaryCPICH_Info { primaryScramblingCode p_PrimScramblingCode },
        dl_DPCH_InfoPerRL  fdd: {
          pCPICH_UsageForChannelEst mayBeUsed,
          dpch_FrameOffset p_Dpch_FrameOffset,
          secondaryCPICH_Info OMIT,
          dl_ChannelisationCodeList {{  --DL_ChannelisationCode
            secondaryScramblingCode p_SecondaryScramblingCode, --OMIT,
            sf_AndCodeNumber tsc_DL_DPCH1_ChC_Speech, --  sf256: 255,
            scramblingCodeChange noCodeChange
          }},
          tpc_CombinationIndex 0,
          ssdt_CellIdentity OMIT,
          closedLoopTimingAdjMode OMIT
        },
        tfci_CombiningIndicator FALSE, --TRUE,
        sccpch_InfoforFACH  OMIT
    }} ,
      rl_RemovalInformationList  OMIT,
      tx_DiversityMode  noDiversity,
      ssdt_Information  OMIT
    },
    nonCriticalExtensions  OMIT
  }
}
```

2.4.2 tc_8_3_4_2

Reason for change
The existing test step has bee modified as follows:

- Line 9 - Postamble po_SHO_ConnectionAndSS_Rel is not suitable for Cell FACH stte release replaced with po_ConnectionAndSS_Rel (see modified table line 9 and 10)
- Line 13 contains a rigid scheme w.r.t. to cell ordering – replaced this with a local tree (lt_mea_report_cellb_e1a) to allow flexible permutation of cell ordering (see modified table line 14)
- Line 15 - ts_Compute_DPCH_FrameOffset fails to acquire the real time SFN as expected moved the computation during Activate Set Update PDU transmission using px_SFN_OffSetA and px_SFN_OffSetB (see modified table line 17)
- Line 24 contains a rigid scheme w.r.t. to cell ordering – replaced this with a local tree (lt_mea_report_cellb_e1b) to allow flexible permutation of cell ordering (see modified table line 24)
- ~~er~~Line 34 disallow single mode UE to be tested (i.e InterRAT_UE_RadioAccessCapabilityList must be present) Replace '?' with a '*' to allow single mode UE to pass the test case.
- Line 36 – missing awaiting UE Capability Confirm primitive which causes the RLC engine to reset and subsequently leads to test case failure. (see modified table line 36) **Note:- This change must be rippled through all the test cases which use the cas_UE_CapabilityInfoCnfAM constraint**
- Line 38 – Cell B power level is not consistent with corresponding 34.123-1 clause modified the (T3) power level accordingly (see modified table line 39)
- Line 41 – missing cell FACH state assignment and S-CCPCH re-configuration for the Cell Update to be transmitted through DCCH over FACH (see modified table line 42 and 43)
- Line 42 – transmission of Cell Update Confrim PDU in Cell FACH state does not require U-RNTI and URA ID. (see modified table line 42 & 43)
- Line 44 – contains incorrect Annex C test procedure for Cell FACH, replaces procedure with UE Cell FACH state checker accordingly (see modified table line 47)

Summary of Change
Update the test as follows.

From:

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START t_Guard			
2		+lt_RRC_InitVariables			Initial Test Case Variables
3		+pr_GotoState6_9_Or6_10_MO (tsc_CellA)			Initial conditions: DCH state either PS or CS according to TS 34.108 clause 7.4
4		+ts_SS_CreateCellDCH(tsc_CellB)			Create also cell B
5		+ts_SendDefSysInfo(tsc_CellB)			
6		(tcv_TestBody:=TRUE)			
7		+lt_TestBody			
8		(tcv_TestBody:=FALSE)			
9		+po_SHO_ConnectionAndSS_Rel			Postamble
		lt_TestBody			
10		+ts_SS_IncrementCellPowerLevel (tsc_CellB ,15)			
11		START t_WaitMS			
12	TBF1	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
13	TBP1	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_108_MeasReportIntraFreqPeriodic (1, INT_TO_BIT (tsc_CellB,28), tcv_CellInfoA.priScrmCode,tcv_CellInfoB.priScrmCode))	(P)	Step 2. MEASUREMENT REPORT This message is sent by the UE when it detects cell B (at -60 dBm) wich has been created above.
14		+ts_SHO_ConfigureAdditionalDL_DPCH (tsc_CellB)			To configure an additional radio link (downlink) for cell B
15		+ts_Compute_DPCH_FrameOffset (tsc_CellA, tsc_CellB)			
16		+ ts_CalculateActTime (tsc_CellA)			
17		AM ! RLC_AM_DATA_REQ	cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateAdd (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_CellInfoB.priScrmCode, tcv_DPCH_FrameOffset))		Step 3. ACTIVE SET UPDATE message including "Radio Link Addition Information"
18		START t_WaitMS			
19	TBF2	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
20	TBP2	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_ActSetUpdateCmpl(tsc_CellDedicated, tsc_RB2,	(P)	Step 4 . UE configures a new radio link to cell 2

			cr_108_ActSetUpdateCmpl (tcv_RRC_Ti))		
21		+ts_SS_DecrementCellPowerLevel (tsc_CellA, 15)			Step 5. Set power levels according to column T2 in Table 8.3.4.2 (Cell A -75 dBm, Cell B -60 dBm)
22		START t_WaitMS			
23	TBF3	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
24	TBP3	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_MeasReportIntraFreqPeriodic2(1, INT_TO_BIT(tsc_CellB,28), tcv_CellInfoB.priScrmCode, tcv_CellInfoA.priScrmCode))	(P)	Step 6. MEASUREMENT REPORT
25		+ ts_CalculateActTime (tsc_CellA)			
26		AM ! RLC_AM_DATA_REQ	cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateRemv (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_CellInfoA.priScrmCode))		Step 7 . ACTIVE SET UPDATE message including "Radio Link Removal Information" for Cell A
27		START t_WaitMS			
28	TBF4	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
29	TBP4	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_ActSetUpdateCmpl (tsc_CellDedicated, tsc_RB2, cr_108_ActSetUpdateCmpl (tcv_RRC_Ti))	(P)	Step 8. ACTIVE SET UPDATE COMPLETE (removal of link to cell A completed)
30		+ts_SHO_ReleaseDL_DPCH (tsc_CellA)			Remove DL DPCH on cell A, it is not used any more.
31		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityEnqy(tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityEnq (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 9. UE CAPABILITY ENQUIRY
32		START t_WaitMS			
33	TBF5	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
34	TBP5	AM?RLC_AM_DATA_IND CANCEL t_WaitMS	car_UE_CapabilityInfoAM (tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?,	(P)	Step 10. UE CAPABILITY INFORMATION

			?, ?))		
35		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityInfoCnfAM (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityInfoCnfAM (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 11. UE CAPABILITY INFORMATION CONFIRM.
36		+ts_SHO_ReleaseDL_DPCH (tsc_CellB)			Step 12. Set power levels according to column T2 in Table 8.3.4.2. Cell B is "Off". (and RL to cell A has been released in step3)
37		+ts_SS_IncrementCellPowerLevel (tsc_CellA ,15)			Step 12;
38		+ts_SS_DecrementCellPowerLevel (tsc_CellB ,15)			Deactivate Cell B;
39		+localTree			
		localTree			
40	TBP6	+ts_RRC_ReceiveCellUpdate(tsc_CellA, cbr_108_CellUpdate (tcv_CellInfoA.uRNTI, cellReselection),(tsc_MaxCampingTime * 1000))			Step 13. UE sends CELL UPDATE with "Cell update cause" cell reselection "
41		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cs_CellUpdateCnfGenericDCCH(tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, c_U_RNTI_2, tsc_CRNTI_Id2, cell_FACH, OMIT, OMIT, OMIT, OMIT,OMIT,OMIT))		Step 14 . SS sends CELL UPDATE CONFIRM with IEs "new C-RNTI"
42		+ts_CMAC_NewU_RNTI_Reconf (tsc_CellA, c_U_RNTI_2, tsc_CRNTI_Id2)			SS reconfiguration
43	TBP7	AM ? RLC_AM_DATA_IND	car_RRC_UtranMobilityInfoCnf(tsc_CellDedicated, tsc_RB2,	(P)	Step 15

			cr_UTRAN_MobilityInfoCnf(tcv_RRC_Ti))		
44		+ ts_C3_CheckCellDCH (tsc_CellA)			
		lt_RRC_InitVariables			
45		+ts_RRC_InitVariables (cell_DCH)			
46		(tcv_CellInfoA.attenuationLevel := tsc_AttLevToPower60_dBm, tcv_CellInfoB.attenuationLevel := tsc_AttLevToPower75_dBm)			

To:

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START t_Guard			
2		+lt_RRC_InitVariables			Initial Test Case Variables
3		+pr_GotoState6_9_Or6_10_MO (tsc_CellA)			Initial conditions: DCH state either PS or CS according to TS 34.108 clause 7.4
4		+ts_SS_CreateCellDCH(tsc_CellB)			Create also cell B
5		+ts_SendDefSysInfo(tsc_CellB)			
6		(tcv_TestBody:=TRUE)			
7		+lt_TestBody			
8		(tcv_TestBody:=FALSE)			
9		+po_ConnectionAndSS_Rel (tsc_CellA)			Postamble - cna not use DCH postamble +po_SHO_ConnectionAndSS_Rel
10		+po_ConnectionAndSS_Rel (tsc_CellB)			release Cell B Common channels
		lt_TestBody			
11		+ts_SS_IncrementCellPowerLevel (tsc_CellB ,15)			
12		START t_WaitMS			
13	TBF1	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
14		+lt_mea_report_cellb_e1a			Step 2. MEASUREMENT REPORT This message is sent by the UE when it detects cell B (at -60 dBm) wich has been created above.
15		+ts_SHO_ConfigureAdditionalDL_DPCH (tsc_CellB)			To configure an additional radio link (downlink) for cell B
16		+ ts_CalculateActTime (tsc_CellA)			
17		AM ! RLC_AM_DATA_REQ	cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateAdd (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_CellInfoB.priScrmCode, px_SFN_OffsetB - px_SFN_OffsetA, tcv_TmpCellInfo.dl_DPCH_2ndScrCode))		Step 3. ACTIVE SET UPDATE message including "Radio Link Addition Information" cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateAdd (tcv_CellIndInfo.dl_IntegrityCheck Info, tcv_RRC_Ti, tcv_ActTime, tcv_CellInfoB.priScrmCode,

					tcv_DPCH_FrameOffset))
18		START t_WaitMS			
19	TBF2	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
20	TBP2	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_ActSetUpdateCmpl(tsc_CellDedicated, tsc_RB2, cr_108_ActSetUpdateCmpl (tcv_RRC_Ti))	(P)	Step 4 . UE configures a new radio link to cell 2
21		+ts_SS_DecrementCellPowerLevel (tsc_CellA, 15)			Step 5. Set power levels according to column T2 in Table 8.3.4.2 (Cell A -75 dBm, Cell B -60 dBm)
22		START t_WaitMS			
23	TBF3	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
24		+lt_mea_report_cella_e1b			Step 6. MEASUREMENT REPORT
25		+ ts_CalculateActTime (tsc_CellA)			
26		AM ! RLC_AM_DATA_REQ	cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateRemv (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_CellInfoA.priScrmCode))		Step 7 . ACTIVE SET UPDATE message including "Radio Link Removal Information" for Cell A
27		START t_WaitMS			
28	TBF4	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
29	TBP4	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_ActSetUpdateCmpl (tsc_CellDedicated, tsc_RB2, cr_108_ActSetUpdateCmpl (tcv_RRC_Ti))	(P)	Step 8. ACTIVE SET UPDATE COMPLETE (removal of link to cell A completed)
30		+ts_SHO_ReleaseDL_DPCH (tsc_CellA)			Remove DL DPCH on cell A, it is not used any more.
31		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityEnqy(tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityEnq (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 9. UE CAPABILITY ENQUIRY
32		START t_WaitMS			
33	TBF5	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
34	TBP5	AM?RLC_AM_DATA_IND	car_UE_CapabilityInfoAM (	(P)	Step 10. UE CAPABILITY

		CANCEL t_WaitMS	tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?, ?, *))		INFORMATION car_UE_CapabilityInfoAM (tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?, ?, ?))
35		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityInfoCnfAM (tsc_CellDedicated, tsc_RB2, tsc_Mui, cs_108_UE_CapabilityInfoCnfAM (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 11. UE CAPABILITY INFORMATION CONFIRM. cas_UE_CapabilityInfoCnfAM (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityInfoCnfA M (tcv_CellIndInfo.dl_IntegrityCheck Info, tcv_RRC_Ti))
36		AM ? RLC_AM_DATA_CNF	car_AM_DataMuiCnf (tsc_CellDedicated, tsc_RB2, tsc_Mui)		
37		+ts_SHO_ReleaseDL_DPCH (tsc_CellB)			Step 12. Set power levels according to column T2 in Table 8.3.4.2. Cell B is "Off". (and RL to cell A has been released in step3)
38		+ts_SS_IncrementCellPowerLevel (tsc_CellA ,15)			Step 12;
39		+ts_SS_DecrementCellPowerLevel (tsc_CellB ,30)			Deactivate Cell B; +ts_SS_DecrementCellPowerLe vel (tsc_CellB ,15)
40		+localTree			
		localTree			
41	TBP6	+ts_RRC_ReceiveCellUpdate(tsc_CellA, cbr_108_CellUpdate_(tcv_CellInfoA.uRNTI, radiolinkFailure),(tsc_MaxCampingTime * 1000))			Step 13. UE sends CELL UPDATE with "Cell update cause" cell reselection " +ts_RRC_ReceiveCellUpdate(ts c_CellA, cbr_108_CellUpdate_(tcv_CellInfoA.uRNTI,

					cellReselection),(tsc_MaxCampingTime * 1000))
42		+ ts_SetCellCfg (tsc_CellA, cell_FACH)			UE is in Cell FACH State Now
43		+ts_CMAC_Reconf_SCCPCH_to_2FACH (tsc_CellA,c_TrLogMappingPCH_FACH)			SS reconfiguration the SSCPCH to send Cell Update Confirm using DCCH over FACH
44		UM ! RLC_UM_DATA_REQ	cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cs_CellUpdateCnfGenericDCCH_noURA(tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, OMIT, tsc_CRNTI_Id2, cell_FACH, OMIT, OMIT, OMIT, OMIT,OMIT,OMIT))		Step 14 . SS sends CELL UPDATE CONFIRM with IEs "new C-RNTI" cas_RRC_CellUpdateCnf(tsc_CellDedicated, tsc_RB1, cs_CellUpdateCnfGenericDCCH (tcv_CellIndInfo.dl_IntegrityCheck Info, tcv_RRC_Ti, c_U_RNTI_2, tsc_CRNTI_Id2, cell_FACH, OMIT, OMIT, OMIT, OMIT,OMIT,OMIT))
45		+ts_CMAC_NewU_RNTI_Reconf (tsc_CellA, c_U_RNTI_2, tsc_CRNTI_Id2)			SS reconfiguration
46	TBP7	AM ? RLC_AM_DATA_IND	car_RRC_UtranMobilityInfoCnf(tsc_CellDedicated, tsc_RB2, cr_UTRAN_MobilityInfoCnf(tcv_RRC_Ti))	(P)	Step 15
47		+ ts_C2_CheckCellFACH (tsc_CellA)			
		It_RRC_InitVariables			
48		+ts_RRC_InitVariables (cell_DCH)			
49		(tcv_CellInfoA.attenuationLevel := tsc_AttLevToPower60_dBm, tcv_CellInfoB.attenuationLevel := tsc_AttLevToPower75_dBm)			
		It_mea_report_cellb_e1a			
50	TBP1	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1a(1, tcv_CellInfoA.priScrmCode,OMIT,tcv_CellInfoB.priScrmCode,?,tcv_CellInfoB.priScrmCode)))	(P)	Step 2. MEASUREMENT REPORT This message is sent by the UE when it detects cell B (at -60 dBm) wich has been created above.
51	TBP1A	AM ? RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated,	(P)	Step 2. MEASUREMENT

		CANCEL t_WaitS	tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1a(1, tcv_CellInfoB.priScrmCode,?,tcv_CellInfoA.priScrmCode,OMIT,tcv_CellInfoB.priScrmCode)))		REPORT This is necessary when both cell has exactly the same quality
		lt_mea_report_cella_e1b			
52	TBP3	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1b(1, tcv_CellInfoA.priScrmCode,OMIT,tcv_CellInfoB.priScrmCode,OMIT,tcv_CellInfoA.priScrmCode)))	(P)	Step 5a. MEASUREMENT REPORT
53	TBP3A	AM ? RLC_AM_DATA_IND CANCEL t_WaitS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1b(1, tcv_CellInfoB.priScrmCode,OMIT,tcv_CellInfoA.priScrmCode,OMIT,tcv_CellInfoA.priScrmCode)))	(P)	Step 5a. MEASUREMENT REPORT

3GPP TSG-T1~~/SIC~~ Meeting #20~~19~~ ***T1~~S~~ ⌘03xxxx030606~~464xx15~~***

~~Seoul, Korea, 12-15 May 2003~~Munich, Germany 28 July-1August 2003

CR-Form-v7

CHANGE REQUEST

⌘	~~RRC ATS~~TS 34.123-3	CR	*121~~0306 0646803 xxxxxx1 5~~*	⌘ rev	~~1~~	⌘	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 8.3.4.3~~12.1.10~~
Source:	⌘	~~Anritsu Ltd~~T1
Work item code:	⌘	***Date:*** ⌘ 12~~24~~/05~~3~~/2003
Category:	⌘ **F**	***Release:*** ⌘ R99

Use one 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 one 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 ~~8.2.1.10~~ 8.3.4.3 to RRCv310
Summary of change:	⌘	- 0 table(s) deleted from RRCv310 - 3~~15~~ table(s) modified in RRCv310 ~~- 12 table(s) added from RRCv143 of which~~ ~~- 1 table(s) have been modified~~ - 3~~6~~ new table(s) added - 3 tables added from RRCv143 of which - 3 tables have been modified For more details see below.
Consequences if not approved:	⌘	Test case ~~8.2.1.10~~ 8.3.4.3 will not be added

Clauses affected:	⌘	N/A

		Y	N		
Other specs Affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	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.

Anritsu
ANRITSU LIMITED

TSG-T Working Group1 SWG SIG E-mail Approval

T1-03~~20(8.2.1.10)~~06 06~~464~~

~~Luton, UK~~Seoul, Korea 12-15 May 2003 ~~24/3/2003~~

Title	~~Changes to TC~~ Introducing test case 8.~~3~~2.4.3.~~1.10~~ required ~~for approval~~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 8.3.4.3 to RRCv310 by using RRCv143 as the primary source of the new tables and applying only essential fixes to the TTCN. ~~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 ~~8.2.1.8~~ ~~8.2.~~8.3.4.3~~1.10~~

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1 cb_SIB11_Defc_CellInfoDef

Reason for change

The existing constraint contains incorrect event 1a reportCriteria_intraFreqReportingCriteria which causes step 9a failure ~~nstraint 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 secti on 2.4.1.22.4.1.22.3.1.2.~~

Summary of Change

Update the constraint as follows.~~c_CellInfoDef constraint to reference px_NMO rather than tsc_NMO_I.~~

Change the ~~Structured Type~~ Constraintt Declaration from:

Constraint Name	cb_SIB11_Def (p_ActiveCellInfo, p_IntraCellInfo2, p_IntraCellInfo3, p_IntraCellInfo4, p_IntraCellInfo5, p_InterCellInfo6, p_InterCellInfo7, p_InterCellInfo8 : CellInfoCfg)~~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)~~
ASN1 Type~~Structured Type~~	SysInfoType11~~CellInfoCfg~~
Derivation Path	
Encoding Variation	
Comments	Default system information block type 11. To be used by cell A,B,C,G and H: - 5 intra cells frequency of the same frequency - 3 inter cell frequency of the same frequency.

…
reportCriteria_intraFreqReportingCriteria : {
eventCriteriaList {{
event e1a : {
triggeringCondition monitoredSetCellsOnly,
reportingRange 5,
w 1,
reportDeactivationThreshold t2,
reportingAmount ra4,
reportingInterval ri4
},
…~~Element Name~~ ~~Element Value~~ ~~Element Encoding~~ ~~Comments~~

~~….~~
~~attFlag~~
~~tsc_AttOn~~
~~nmo~~
~~tsc_NMO_I~~
~~ura_Identity~~
~~p_URA_Id~~
~~….~~

To:

Constraint Name	cb_SIB11_Def (p_ActiveCellInfo, p_IntraCellInfo2, p_IntraCellInfo3, p_IntraCellInfo4, p_IntraCellInfo5, p_InterCellInfo6, p_InterCellInfo7, p_InterCellInfo8 : CellInfoCfg)
ASN1 Type	SysInfoType11
Derivation Path	
Encoding Variation	
Comments	Default system information block type 11. To be used by cell A,B,C,G and H: - 5 intra cells frequency of the same frequency - 3 inter cell frequency of the same frequency.

```
...
        reportCriteria intraFreqReportingCriteria : {
            eventCriteriaList {{
                event e1a : {
                    triggeringCondition    activeSetAndMonitoredSetCells,    -- refer to TS25.331 for active and monitiored set
definition
                    reportingRange    5,
                    w    1,
                    reportDeactivationThreshold    t2,
                    reportingAmount    ra4,
                    reportingInterval    ri4
                },
...
```

2.2.2c_TrChInfoUL_336_148

Reason 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	

```
{
ulconnectedTrCHList {
    { trchid          tsc_UL_DCH5,
      transportChannelInfo          c_DCH_148_TFS_UL },
    { trchid          tsc_UL_DCH1,
      transportChannelInfo          c_DCH_336_TFS }},
ulTFCS          c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS
}
```

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	

```
{
ulconnectedTrCHList {
    { trchid          tsc_UL_DCH1,
      transportChannelInfo          c_DCH_336_TFS },
    { trchid          tsc_UL_DCH5,
      transportChannelInfo          c_DCH_148_TFS_UL }},
ulTFCS          c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS
}
```

2.2.3cr_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)		
	....			

2.2.4cr_AttachReq

Reason for change
The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST nas 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_lv; 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_lv; 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	*		
	....			

2.2.5cr_QoS_InteractiveMO_CellFACH_lv

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 2.2.82.2.82.2.8 and 2.2.92.2.92.2.9).

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_lv 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_lv (p_trafficClass : 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	'100'B		Best effort
	relabilityClass	'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 ; p-trafficHandPro : B2)			
Structured Type	QualityOfService_lv			
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	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		Interactive=traffic class, Background=4
	relabilityClass	'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

2.2.6cs_QoS_InteractiveMT_lv

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_lv 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_lv (p_trafficClass : B3)			
Structured Type	QualityOfService_lv			
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
	relabilityClass	'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 CS			
	Element Name	Element Value	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	relabilityClass	'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~~

ETSI : Rejected, as the reason is wrong, further if it is done so in step 9a of prose, additional measurement report for event 1a, triggered by cell A needs to be handled.

ts_SHO_ConfigureAdditionalDL_DPCH

Reason for change
Local tree lt_ConfigSpeech contains incorrect configuration detail as follow:

- incorrect Radio Link configuration for 12.2 K AMR
- configuration of the transport ~~configuration~~channel for SHO is not required per TS25.303 section 6.4.4

Summary of Change
Update the test step from :

Test Step Name		ts_SHO_ConfigureAdditionalDL_DPCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		….. lt_ConfigSpeech			
19		CPHY!CPHY_RL_Setup_REQ	ca_DL_DPCH_Info (p_CellId, tsc_DL_DPCH1, cb_DL_DPCH_64K_CS (c_DL_CommonInformation RB_SetUp (tsc_DL_DPCH1_SFP_Speech), tcv_TmpCellInfo.dl_DPCH_2ndScrCode))		
20		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_DL_DPCH1)		
21		CPHY!CPHY_TrCH_Config_REQ	ca_4DCH_DL_InfoActNow (p_CellId, tsc_DL_DPCH1)		
22		CPHY?CPHY_TrCH_Config_CNF	ca_TrChCfgCnf (p_CellId, tsc_DL_DPCH1)		
		lt_Config64kCS ….			

To:

Test Step Name		ts_SHO_ConfigureAdditionalDL_DPCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		….. lt_ConfigSpeech			
19		CPHY!CPHY_RL_Setup_REQ	ca_DL_DPCH_Info (p_CellId, tsc_DL_DPCH1, cb_DL_DPCH_122_AMR (c_DL_CommonInformation RB_SetUpSpeech (tsc_DL_DPCH1_SFP_Speech), tcv_TmpCellInfo.dl_DPCH_2ndScrCode))		
20		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf (p_CellId, tsc_DL_DPCH1)		
		lt_Config64kCS ….			

ETSI See document 602 reply

2.2.7ts_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_DetermineDlyClassAndTrafficClassAndTrafficHandPrc			
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_lv (tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPrio)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...		.....			

2.2.2 ts_SHO_ReleaseDL_DPCH

~~2.2.8ts_AT_OrgPS_Call~~
Reason for change:

Release of Transport Channel for SHO is not required. Refer to previous section for explanation.~~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 test step as follows:~~the AT commands issued.~~

Change test step from:

Test Step Name		ts_SHO_ReleaseDL_DPCH (p_CellId : INTEGER)~~ts_AT_OrgPS_Call (p_CellId : INTEGER)~~			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)~~.....~~			
2~~1~~ ~~7~~		+ ts_CPHY_TrChRel (p_CellId , tsc_DL_DPCH1) ~~(tcv_AT_Cmd := ("AT+CGEQMIN=1,2,64, 64, 64, 64, 1, 320, 1E3,6E8,1,,,<CR>"))~~			Release of this step is not necessary as this channel is configured in the first place~~set up the Minimum QoS same as Required QoS~~
~~20~~ 3	~~ERR1~~	+ ts_SS_StopRL (p_CellId , tsc_DL_DPCH1) ~~[TRUE]~~		~~I~~	~~Parameter error~~
4		(tcv_TmpCellInfo.DL_DPCH_SHO := FALSE)			
5		+ ts_SaveCellInfo (p_CellId)			

To:

Test Step Name		ts_SHO_ReleaseDL_DPCH (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		+ ts_SS_StopRL (p_CellId , tsc_DL_DPCH1)			
3		(tcv_TmpCellInfo.DL_DPCH_SHO := FALSE)			
4		+ ts_SaveCellInfo (p_CellId)			

ETSI See document 602 reply

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

2.2.10ts_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)]			

2.2.11ts_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 Authenticatioin 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 2.4.1.12.4.1.12.3.1.1, 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 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(			Verify that the

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

2.2.12ts_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).
		.....			

2.2.13ts_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(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_lv('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_lv('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_lv('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_lv('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_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_Iv('100'B, '100'B), OMIT))		
8	ERR1	[TRUE]		!	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_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_Iv('100'B, '100'B), OMIT))		
14	ERR2	[TRUE]		!	Parameter error

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_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(cr_QoS_InteractiveOrBackgrou ndMO_CellFACH_iv(tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

2.2.15ts_RRC_NAS_SessionActPS_MT_P9_P10

Reason 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_lv(tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		

~~Tables added to RRCv310~~

2.3 Tables added to RRCv310

~~2.3~~2.3.1 Tables added from RRCv143– No changes necessary

none

~~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~~ **~~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~~

2.3.2 Other ~~New~~ tables added

2.3.2.1 cr_108_MeasReportIntraFreqPeriodic2cell_e1a ~~adde~~ ~~c_AuthCiphRspExtAny~~

This table is not based on one in any existing ATS.

Reason for change

Test case expects the periodic measurement report to deliver~~ed~~ the measurement results in a specific cell order. However, this may not be applicable for the cell when equal CPICH RSCP is received. Therefore it is necessary to create a constraint to accept flexible cell ordering per event 1a~~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	cr_108_MeasReportIntraFreqPeriodic2cell_e1a (p_MeasId : MeasurementIdentity ; p_PriScmbCode : INTEGER; p_CellSync : CellSynchronisationInfo; p_PrimaryScr2:INTEGER; p_CellSync2 : CellSynchronisationInfo; p_PriScmbCode_event: INTEGER)~~c_AuthCiphRspExtAny~~
PDU~~Structured~~ Type	UL_DCCH_Message~~AuthRspExt~~
Derivation Path	
Encoding Variation	
Comments	

~~Element Name~~
~~Element Value~~
~~Element Encoding~~
~~Comments~~

~~lei~~
~~'00101001'B~~
~~lel~~
~~?~~
~~RES~~{ integrityCheckInfo *,
message measurementReport :
{
measurementIdentity p_MeasId,
measuredResults intraFreqMeasuredResultsList
:
{{
cellIdentity OMIT,
sfn_SFN_ObsTimeDifference *,
cellSynchronisationInfo p_CellSync,
modeSpecificInfo fdd
:
{
primaryCPICH_Info
{
primaryScramblingCode p_PriScmbCode
},
cpich_Ec_N0 OMIT,
cpich_RSCP ?,
pathloss OMIT
}
},
{
cellIdentity OMIT,
sfn_SFN_ObsTimeDifference OMIT,
cellSynchronisationInfo p_CellSync2,
modeSpecificInfo fdd
:
{
primaryCPICH_Info
{
primaryScramblingCode p_PrimaryScr2
},
cpich_Ec_N0 OMIT,
cpich_RSCP ?,
pathloss OMIT
}
}
},
measuredResultsOnRACH OMIT,
additionalMeasuredResults OMIT,
eventResults intraFreqEventResults : { eventID e1a,
cellMeasurementEventResults fdd : { { primaryScramblingCode
p_PriScmbCode_event}}},
v390nonCriticalExtensions *
}
}
~~?~~

ETSI : Accepted but done in different way.

~~2.3.1.2~~2.3.2.2 cr_108_MeasReportIntraFreqPeriodic3cell_e1a ~~px_NMO~~

This table is not based on one in any existing ATS

Reason for change

Test case expects the periodic measurement report ~~is~~to deliver~~ed~~ the measurement results in a specific cell order. However, this may not be applicable for the when equal CPICH RSCP is received. Therefore it is necessary to create a contarint to accept flexible cell ordering per event 1a~~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 Constraint Declaration:

Constraint Name	cr_108_MeasReportIntraFreqPeriodic3cell_e1a_(p_MeasId : MeasurementIdentity ; p_PriScmbCode : INTEGER; p_CellSync : CellSynchronisationInfo; p_PrimaryScr2:INTEGER; p_CellSync2 : CellSynchronisationInfo; p_PrimaryScr3:INTEGER; p_CellSync3 : CellSynchronisationInfo; p_PriScmbCode_event: INTEGER)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{ integrityCheckInfo   *,
 message          measurementReport :
  {
   measurementIdentity p_MeasId,
   measuredResults   intraFreqMeasuredResultsList
:
   {{
      cellIdentity OMIT,
      sfn_SFN_ObsTimeDifference *,
      cellSynchronisationInfo p_CellSync,
      modeSpecificInfo fdd
:
      {
        primaryCPICH_Info
          {
            primaryScramblingCode p_PriScmbCode
          },
        cpich_Ec_N0 OMIT,
        cpich_RSCP_?,
        pathloss_OMIT
      }
   },
      {
      cellIdentity OMIT,
     sfn_SFN_ObsTimeDifference OMIT,
      cellSynchronisationInfo p_CellSync2,
      modeSpecificInfo fdd
:
      {
        primaryCPICH_Info
          {
            primaryScramblingCode p_PrimaryScr2
          },
        cpich_Ec_N0 OMIT,
        cpich_RSCP_?,
        pathloss_OMIT
      }
   },
      {
      cellIdentity OMIT,
     sfn_SFN_ObsTimeDifference OMIT,
      cellSynchronisationInfo p_CellSync3,
      modeSpecificInfo fdd
:
      {
        primaryCPICH_Info
          {
            primaryScramblingCode p_PrimaryScr3
          },
        cpich_Ec_N0 OMIT,
        cpich_RSCP_?,
        pathloss_OMIT
      }
   }
},
   measuredResultsOnRACH OMIT,
   additionalMeasuredResults OMIT,
   eventResults intraFreqEventResults : {  eventID e1a,
                                          cellMeasurementEventResults fdd : { { primaryScramblingCode
p_PriScmbCode_event}}},
   v390nonCriticalExtensions *
}
}
```

ETSI Accepted

~~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 cr_108_MeasReportIntraFreqPeriodic3cell_e1b

This table is not based on one in any existing ATS

Reason for change
Test case expects the periodic measurement report to~~is~~ deliver~~ed~~ the measurement results in a specific cell order. However, this may not be applicable for the when equal CPICH RSCP is received. Therefore it is necessary to create a contarint to accept flexible cell ordering per event 1b

Summary of Change
Table added to suite.

Add Constraint Declaration:

Constraint Name	cr_108_MeasReportIntraFreqPeriodic3cell_e1b_(p_MeasId : MeasurementIdentity ; p_PriScmbCode : INTEGER; p_CellSync : CellSynchronisationInfo; p_PrimaryScr2:INTEGER; p_CellSync2 : CellSynchronisationInfo; p_PrimaryScr3:INTEGER; p_CellSync3 : CellSynchronisationInfo; p_PriScmbCode_event: INTEGER)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{ integrityCheckInfo   *,
 message          measurementReport :
  {
   measurementIdentity p_MeasId,
   measuredResults   intraFreqMeasuredResultsList
:
   {{
      cellIdentity OMIT,
      sfn_SFN_ObsTimeDifference *,
      cellSynchronisationInfo p_CellSync,
      modeSpecificInfo fdd
:
      {
        primaryCPICH_Info
          {
            primaryScramblingCode p_PriScmbCode
          },
        cpich_Ec_N0 OMIT,
        cpich_RSCP_?,
        pathloss_OMIT
      }
   },
      {
      cellIdentity OMIT,
     sfn_SFN_ObsTimeDifference OMIT,
      cellSynchronisationInfo p_CellSync2,
      modeSpecificInfo fdd
:
      {
        primaryCPICH_Info
          {
            primaryScramblingCode p_PrimaryScr2
          },
        cpich_Ec_N0 OMIT,
        cpich_RSCP_?,
        pathloss_OMIT
      }
   },
      {
      cellIdentity OMIT,
     sfn_SFN_ObsTimeDifference OMIT,
      cellSynchronisationInfo p_CellSync3,
      modeSpecificInfo fdd
:
      {
        primaryCPICH_Info
          {
            primaryScramblingCode p_PrimaryScr3
          },
        cpich_Ec_N0 OMIT,
        cpich_RSCP_?,
        pathloss_OMIT
      }
   }
},
   measuredResultsOnRACH OMIT,
   additionalMeasuredResults OMIT,
   eventResults intraFreqEventResults : {  eventID e1b,
                                    cellMeasurementEventResults fdd : { { primaryScramblingCode
p_PriScmbCode_event}}},
   v390nonCriticalExtensions *
}
}
```

ETSI : Accepted

2.3.1.3tcv_DlyClass
2.3.1.3
2.3.1.3Reason for change
2.3.1.3The 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.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add Test Case Variable Declaration:

2.3.1.3Variable Name	2.3.1.3tcv_DlyClass
2.3.1.3Type	2.3.1.3B3
2.3.1.3Value	2.3.1.3
2.3.1.3Comments	2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.3

2.3.1.3tcv_TrafficClass
2.3.1.3
2.3.1.3Reason for change
2.3.1.3The 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.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add Test Case Variable Declaration:

2.3.1.3Variable Name	2.3.1.3tcv_TrafficClass
2.3.1.3Type	2.3.1.3B3
2.3.1.3Value	2.3.1.3
2.3.1.3Comments	2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.3
2.3.1.3tcv_TrafficHandPro
2.3.1.3
2.3.1.3Reason for change
2.3.1.3The 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 2.4.1.62.4.1.62.3.1.6) to determine the appropriate value and store it in this test case variable.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add Test Case Variable Declaration:

2.3.1.3Variable Name	2.3.1.3tcv_TrafficHandlingPriority
2.3.1.3Type	2.3.1.3B2
2.3.1.3Value	2.3.1.3
2.3.1.3Comments	2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.3
2.3.1.3ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro
2.3.1.3
2.3.1.3Reason for change
2.3.1.3To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add test step:

2.3.1.3Test Step Name	2.3.1.3ts_DetermineDlyClassAndTrafficClass
2.3.1.3Group	2.3.1.3BasicM_General_Steps/
2.3.1.3Objsctive	2.3.1.3
2.3.1.3Default	2.3.1.3
2.3.1.3Comments	2.3.1.3
2.3.1.3Description	2.3.1.3

2.3.1 2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1 2.3.1.3	2.3.1.3[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3 (tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3 (tcv_DlyClass := '100'B, tcv_TrafficClass :=	2.3.1.3	2.3.1.3	2.3.1.3

		'100'B, tcv_TrafficHandPro := '??'B)			
2.3.1	2.3.1.3	2.3.1.3[TRUE]	2.3.1.3	2.3.1.3I	2.3.1.3

2.3.1.3

2.3.1.3Modifications to tables added from RRCv143
2.3.1.3
2.3.1.3tc_8_2_1_10
2.3.1.3Reason for change
2.3.1.3The 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.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Change the test case behaviour line such that the Activate PDP Context Accept is only sent once.
2.3.1.3
2.3.1.3Change test case from:

2.3.1.3Test Case Name		2.3.1.3tc_8_2_1_10			
2.3.1	2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1	2.3.1.3…	2.3.1.3…..	2.3.1.3…..	2.3.1.3…	2.3.1.3…..
2.3.1	2.3.1.3	2.3.1.3 (tcv_CellInfoA.cellConfig := cell_DCH_64kPS_RAB_SRB)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1	2.3.1.3	2.3.1.3 +ts_ReceiveActivatePDP_Accept_FACH (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3test step is called to complete the PDP context
2.3.1	2.3.1.3	2.3.1.3Ut ? AT_CmdCnf 2.3.1.3	2.3.1.3 ca_AT_CmdCnf	2.3.1.3	2.3.1.3Acknowledgement to the Initial AT comamnd
2.3.1	2.3.1.3	2.3.1.3 + ts_NAS_ConnCompleteMO_CS_PS (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1	2.3.1.3…	2.3.1.3… ..	2.3.1.3… ..	2.3.1.3…	2.3.1.3… ..

2.3.1.3
2.3.1.3To:

2.3.1.3Test Case Name		2.3.1.3tc_8_2_1_10			
2.3.1	2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1	2.3.1.3…	2.3.1.3…..	2.3.1.3…..	2.3.1.3…	2.3.1.3…..
2.3.1	2.3.1.3	2.3.1.3 (tcv_CellInfoA.cellConfig := cell_DCH_64kPS_RAB_SRB)	2.3.1.3	2.3.1.3	2.3.1.3

2.3.1	2.3.1.3	2.3.1.3+ ts_NAS_ConnCompleteMO_CS_PS (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1	2.3.1.3…	2.3.1.3… ..	2.3.1.3… ..	2.3.1.3…	2.3.1.3… ..

2.3.1.3

2.4 Modifications to tables added from RRCv143

2.4.1 cs_ActSetUpdateAdd

Reason for change
The existing constraint contains an incorrect IE as follows:

- Secondary Scrambling Code shall not be omitted
- Incorrect Spreading factor and channelisation code
- Inocrrect tfci_CombiningIndicator

Summary of Change
Update the constraint as follows.

Change the Constraint Declaration from:

Constraint Name	cs_ActSetUpdateAdd (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_Act_time: ActivationTime; p_PrimScramblingCode : PrimaryScramblingCode; p_Dpch_FrameOffset:DPCH_FrameOffset)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message activeSetUpdate: r3:{
    activeSetUpdate_r3 {   --ActiveSetUpdate_r3_IEs,
      rrc_TransactionIdentifier   p_RRC_TI,
      activationTime   p_Act_time,
      newU_RNTI   OMIT,
      cn_InformationInfo   OMIT,
      maxAllowedUL_TX_Power   OMIT,
      rl_AdditionInformationList   {{      primaryCPICH_Info { primaryScramblingCode p_PrimScramblingCode },
        dl_DPCH_InfoPerRL   fdd: {
          pCPICH_UsageForChannelEst mayBeUsed,
          dpch_FrameOffset p_Dpch_FrameOffset,
          secondaryCPICH_Info OMIT,
          dl_ChannelisationCodeList {{   --DL_ChannelisationCode
            secondaryScramblingCode OMIT,
            sf_AndCodeNumber sf256: 255,
            scramblingCodeChange noCodeChange
          }},
          tpc_CombinationIndex 0,
          ssdt_CellIdentity OMIT,
          closedLoopTimingAdjMode OMIT
        },
        tfci_CombiningIndicator   TRUE,
        sccpch_InfoforFACH   OMIT
  }} ,
      rl_RemovalInformationList   OMIT,
      tx_DiversityMode   noDiversity,
      ssdt_Information   OMIT
    },
    nonCriticalExtensions   OMIT
  }
}
```

To:

Constraint Name	cs_ActSetUpdateAdd (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_Act_time: ActivationTime; p_PrimScramblingCode : PrimaryScramblingCode; p_Dpch_FrameOffset:DPCH_FrameOffset; p_SecondaryScramblingCode : SecondaryScramblingCode)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message activeSetUpdate: r3:{
    activeSetUpdate_r3 {   --ActiveSetUpdate_r3_IEs,
      rrc_TransactionIdentifier   p_RRC_TI,
      activationTime   p_Act_time,
      newU_RNTI   OMIT,
      cn_InformationInfo   OMIT,
      maxAllowedUL_TX_Power   OMIT,
      rl_AdditionInformationList   {{      primaryCPICH_Info { primaryScramblingCode p_PrimScramblingCode },
        dl_DPCH_InfoPerRL   fdd: {
          pCPICH_UsageForChannelEst mayBeUsed,
          dpch_FrameOffset p_Dpch_FrameOffset,
          secondaryCPICH_Info OMIT,
          dl_ChannelisationCodeList {{   --DL_ChannelisationCode
            secondaryScramblingCode p_SecondaryScramblingCode, --OMIT,
            sf_AndCodeNumber tsc_DL_DPCH1_ChC_Speech, --  sf256: 255,
            scramblingCodeChange noCodeChange
          }},
          tpc_CombinationIndex 0,
          ssdt_CellIdentity OMIT,
          closedLoopTimingAdjMode OMIT
        },
        tfci_CombiningIndicator FALSE, --TRUE,
        sccpch_InfoforFACH   OMIT
    }},
      rl_RemovalInformationList   OMIT,
      tx_DiversityMode   noDiversity,
      ssdt_Information   OMIT
    },
    nonCriticalExtensions   OMIT
  }
}
```

ETSI See document 602 reply

cs_ActSetUpdateAdd2Remove1

Reason for change
The existing constraint contains an incorrect IE as follows:

- Secondary Scrambling Code shall not be omitted
- Incorrect Spreading factor and channelisation code
- Inocrrect tfci_CombiningIndicator

Summary of Change
Update the constraint as follows.

Change the Constraint Declaration from:

Constraint Name	cs_ActSetUpdateAdd2Remove1 (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_Act_time: ActivationTime; p_PrimScramblingCode_2 : PrimaryScramblingCode; p_PrimScramblingCode_1 : PrimaryScramblingCode; p_Dpch_FrameOffset:DPCH_FrameOffset)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message activeSetUpdate: r3:{
    activeSetUpdate_r3 {  --ActiveSetUpdate_r3_IEs,
      rrc_TransactionIdentifier  p_RRC_TI,
      activationTime  p_Act_time,
      newU_RNTI  OMIT,
      cn_InformationInfo  OMIT,
      maxAllowedUL_TX_Power  OMIT,
      rl_AdditionInformationList  {{  primaryCPICH_Info { primaryScramblingCode p_PrimScramblingCode_2 },
        dl_DPCH_InfoPerRL  fdd: {
          pCPICH_UsageForChannelEst mayBeUsed,
          dpch_FrameOffset p_Dpch_FrameOffset,
          secondaryCPICH_Info OMIT,
          dl_ChannelisationCodeList {{  --DL_ChannelisationCode
            secondaryScramblingCode OMIT,
            sf_AndCodeNumber sf256: 255,
            scramblingCodeChange noCodeChange
          }},
          tpc_CombinationIndex 0,
          ssdt_CellIdentity OMIT,
          closedLoopTimingAdjMode OMIT
        },
        tfci_CombiningIndicator  TRUE,
        sccpch_InfoforFACH  OMIT
      }},
      rl_RemovalInformationList  {{  --RL_RemovalInformationList
        primaryScramblingCode p_PrimScramblingCode_1
      }},
      tx_DiversityMode  noDiversity,
      ssdt_Information  OMIT
    },
    nonCriticalExtensions  OMIT
  }
}
```

To:

Constraint Name	cs_ActSetUpdateAdd2Remove1 (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_Act_time: ActivationTime; p_PrimScramblingCode_2 : PrimaryScramblingCode; p_PrimScramblingCode_1 : PrimaryScramblingCode; p_Dpch_FrameOffset:DPCH_FrameOffset; p_SecondaryScramblingCode : SecondaryScramblingCode)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message activeSetUpdate: r3:{
    activeSetUpdate_r3 {   --ActiveSetUpdate_r3_IEs,
      rrc_TransactionIdentifier   p_RRC_TI,
      activationTime   p_Act_time,
      newU_RNTI   OMIT,
      cn_InformationInfo   OMIT,
      maxAllowedUL_TX_Power   OMIT,
      rl_AdditionInformationList   {{      primaryCPICH_Info { primaryScramblingCode p_PrimScramblingCode_2 },
        dl_DPCH_InfoPerRL   fdd: {
          pCPICH_UsageForChannelEst mayBeUsed,
          dpch_FrameOffset p_Dpch_FrameOffset,
          secondaryCPICH_Info OMIT,
          dl_ChannelisationCodeList {{   --DL_ChannelisationCode
            secondaryScramblingCode p_SecondaryScramblingCode,
            sf_AndCodeNumber tsc_DL_DPCH1_ChC_Speech,
            scramblingCodeChange noCodeChange
          }},
          tpc_CombinationIndex 0,
          ssdt_CellIdentity OMIT,
          closedLoopTimingAdjMode OMIT
        },
        tfci_CombiningIndicator   FALSE,
        sccpch_InfoforFACH   OMIT
  }} ,
      rl_RemovalInformationList   {{  --RL_RemovalInformationList
        primaryScramblingCode p_PrimScramblingCode_1
    }},
      tx_DiversityMode   noDiversity,
      ssdt_Information   OMIT
    },
    nonCriticalExtensions   OMIT
  }
}
```

ETSI : Accepted and done in a differenent way.

2.4.2 tc_8_3_4_3

Reason for change
The existing test step has bee modified as follows:

- Line 15 contains a regid scheme w.r.t. to cell ording – replaced this with a local tree (lt_cellB_e1a) to allow flexible permutation of cell ordering (see modified table line 15)

ETSI: Accepted

- Line 17 - ts_Compute_DPCH_FrameOffset fails to acquire the real time SFN as expected moved the computation during Activate Set Update PDU transmission using px_SFN_OffSetA and px_SFN_OffSetB (see modified table line 17)

ETSI see 602 Reply

- Line 18 cas_ActSetUpdate contains parameter - tcv_DPCH_FrameOffset shall be replaced with px_SFN_OffSetB and px_SFN_OffSetA (i.e computation of DPCH frame offset)

ETSI see 602 Reply

- Line 23 contains a regid scheme w.r.t. to cell ording – replaced this with a local tree (lt_CellC_e1a) to allow flexible permutation of cell ordering (see modified table line 24)

ETSI: Partially accepted as in our ~~see~~ TTCN implementation.

- Line 24 cas_ActSetUpdate contains parameter - tcv_DPCH_FrameOffset shall be replaced with px_SFN_OffSetC and px_SFN_OffSetB (i.e computation of DPCH frame offset)

ETSI see 602 Reply

- Line 28 inconsistent with 34-123-1. the Active Setupdate is to add Cell C and remove CellA – release Cell B instead of CellA (see modified table line 30)

ETSI Accepted

- Line 29 is duplication of line 30 – decrement power of Cell A instead (see modified table line31)

ETSI Already done

- Line31 missing await Cell B event 1b procedure according to 34.123-1 CR T1-030571 for explanation (See modified table line 33,34 & 35)

ETSI : Accepted

- Line 34 disallow single mode UE to be tested (i.e InterRAT_UE_RadioAccessCapabilityList must be present) Replace '?' with a '*' to allow single mode UE to pass the test case. (see modified table line 39)

ETSI : Accepted

- Line 36 inconsistent with 34-123-1 since Cell A was never removed in the first place. This line shall be removed (see line 28)

ETS~~i~~I Accepted, ~~A~~already done

- Line 41inconsistent with 34-123-1 – increment Cell Power Level of Cell C instead (see modified table line 45)

ETSI Accepted, already done~~ETSI Already done~~

- Line 42 missing await Cell C event 1b procedure according to 34.123-1 CR T1-030571 for explanation (See modified table line 46,47 & 48)

ETSI~~i~~ :Accepted

- Line 45 disallow single mode UE to be tested (i.e InterRAT_UE_RadioAccessCapabilityList must be present) Replace '?' with a '*' to allow single mode UE to pass the test case. (see modified table line 52)

ETSI :Accepted

Summary of Change
Update the test as follows.

From:

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START t_Guard			
2		+lt_RRC_InitVariables			Initial Test Case Variables
3		+pr_GotoState6_9_Or6_10_MO (tsc_CellA)			Initial conditions: DCH state either PS or CS according to TS 34.108 clause 7.4
4		+ts_SS_CreateCellDCH(tsc_CellB)			Create cell B
5		+ts_SendDefSysInfo(tsc_CellB)			
6		+ts_SS_CreateCellDCH(tsc_CellC)			Create cell C
7		+ts_SendDefSysInfo(tsc_CellC)			
8		(tcv_TestBody:=TRUE)			
9		+lt_TestBody			
10		(tcv_TestBody:=FALSE)			
11		+po_SHO_ConnectionAndSS_Rel			Postamble
		lt_TestBody			
12		+ts_SS_IncrementCellPowerLevel (tsc_CellB ,20)			Step 0a.
13		START t_WaitMS			
14	TBF1	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
15	TBP1	AM ? RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_108_MeasReportIntraFreqPeriodic(1, INT_TO_BIT(tsc_CellB,28), tcv_CellInfoA.priScrmCode, tcv_CellInfoB.priScrmCode))	(P)	Step . MEASUREMENT REPORT
16		+ts_SHO_ConfigureAdditionalDL_DPCH (tsc_CellB)			To configure an additional radio link (downlink) for cell B
17		+ts_Compute_DPCH_FrameOffset (tsc_CellA, tsc_CellB)			
18		AM ! RLC_AM_DATA_REQ	cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateAdd (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_CellInfoB.priScrmCode, tcv_DPCH_FrameOffset))		Step 0c:
19		START t_WaitMS			
20	TBF2	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
21	TBP2	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_ActSetUpdateCmpl(tsc_CellDedicated, tsc_RB2, cr_108_ActSetUpdateCmpl (tcv_RRC_Ti))	(P)	Step 0d;
22		+ts_SS_IncrementCellPowerLevel (tsc_CellC ,20)			Step 1;
23		AM ? RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_108_MeasReportIntraFreqPeriodic(1, INT_TO_BIT(tsc_CellB,28), tcv_CellInfoB.priScrmCode, tcv_CellInfoC.priScrmCode))	(P)	Step 2. MEASUREMENT REPORT
24		AM ! RLC_AM_DATA_REQ	cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateAdd2Remove1 (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_CellInfoC.priScrmCode, tcv_CellInfoB.priScrmCode, 0))		Step 3 . ACTIVE SET UPDATE message including "Radio Link Addition Information" for cell B (cell 3) and "Radio Link Removal Information" for cell A (cell 2)
25		START t_WaitMS			
26	TBF3	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
27	TBP3	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_ActSetUpdateCmpl(tsc_CellDedicated, tsc_RB2, cr_108_ActSetUpdateCmpl (tcv_RRC_Ti))	(P)	Step 4 . ACTIVE SET UPDATE COMPLETE
28		+ts_SHO_ReleaseDL_DPCH (tsc_CellA)			Now remove DL radio link of cell A (cell 1)
29		+ts_SS_DecrementCellPowerLevel			Step 4a: Power

		(tsc_CellB, 30)			setting according to "T3"
30		+ts_SS_DecrementCellPowerLevel (tsc_CellB, 30)			Step 4a: Power setting according to "T3" MAX Attenuation
31		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityEnqy(tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityEnq (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 5. UE CAPABILITY ENQUIRY (send via cell C)
32		START t_WaitMS			
33	TBF4	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
34	TBP4	AM?RLC_AM_DATA_IND CANCEL t_WaitMS	car_UE_CapabilityInfoAM (tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?,?,?))	(P)	Step 6. UE CAPABILITY INFORMATION To confirm that the UE communication with Cell C
35		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityInfoCnfAM (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityInfoCnfAM (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 7. UE CAPABILITY INFORMATION CONFIRM.
36		+ts_SHO_ConfigureAdditionalDL_DPCH (tsc_CellA)			Step 8; Configure Cell A Radio link
37		+ts_SHO_ReleaseDL_DPCH (tsc_CellC)			Step 8. Set cell C to "Off" [FFS: We need still to set to "Off" all physical channels assiciated to cell C]
38		+lt_RecvUeCap			
		lt_RecvUeCap			
39		+ts_SS_IncrementCellPowerLevel (tsc_CellA ,30)			Step 8;
40		+ts_SS_IncrementCellPowerLevel (tsc_CellB ,20)			Step 8;
41		+ts_SS_DecrementCellPowerLevel (tsc_CellB ,15)			Simulate OFF by decreasinf Power level of Cell B so that UE will camp on to CellA
42		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityEnqy(tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityEnq (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 9. UE CAPABILITY ENQUIRY (send via cell C)
43		START t_WaitMS			
44	TBF5	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
45	TBP5	AM?RLC_AM_DATA_IND CANCEL t_WaitMS	car_UE_CapabilityInfoAM (tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?,?,?))	(P)	Step 10. UE CAPABILITY INFORMATION To confirm that the UE communication with Cell C
46		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityInfoCnfAM (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityInfoCnfAM (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 11. UE CAPABILITY INFORMATION CONFIRM.
		lt_RRC_InitVariables			
47		+ts_RRC_InitVariables (cell_DCH)			
48		(tcv_CellInfoA.attenuationLevel := tsc_AttLevToPower60_dBm, tcv_CellInfoB.attenuationLevel := tsc_AttLevToPower80_dBm, tcv_CellInfoC.attenuationLevel := tsc_AttLevToPower80_dBm)			Set as per table 8.3.4.3 T0

To:

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		START t_Guard			
2		+lt_RRC_InitVariables			Initial Test Case Variables
3		+pr_GotoState6_9_Or6_10_MO (tsc_CellA)			Initial conditions: DCH state either PS or CS according to TS 34.108 clause 7.4
4		+ts_SS_CreateCellDCH(tsc_CellB)			Create cell B
5		+ts_SendDefSysInfo(tsc_CellB)			
6		+ts_SS_CreateCellDCH(tsc_CellC)			Create cell C
7		+ts_SendDefSysInfo(tsc_CellC)			
8		(tcv_TestBody:=TRUE)			
9		+lt_TestBody			
10		(tcv_TestBody:=FALSE)			
11		+po_SHO_ConnectionAndSS_Rel			Postamble
		lt_TestBody			
12		+ts_SS_IncrementCellPowerLevel (tsc_CellB ,20)			Step 0a.
13		START t_WaitMS			
14	TBF1	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
15		+lt_CellB_e1a			Step 0b MEASUREMENT REPORT AM ! RLC_AM_DATA_IND car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_108_MeasReportIntraFreqPeriodic(1, INT_TO_BIT(tsc_CellB,28) , tcv_CellInfoA.priScrmCode , tcv_CellInfoB.priScrmCode))
16		+ts_SHO_ConfigureAdditionalDL_DPCH (tsc_CellB)			To configure an additional radio link (downlink) for cell B
17		AM ! RLC_AM_DATA_REQ	cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateAdd (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_CellInfoB.priScrmCode, px_SFN_OffsetB - px_SFN_OffsetA, tcv_TmpCellInfo.dl_DPCH_2ndScrCode))		Step 0c: cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateAdd (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_CellInfoB.priScrmCode , tcv_DPCH_FrameOffset))
18		START t_WaitMS			
19	TBF2	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
20	TBP2	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_ActSetUpdateCmpl(tsc_CellDedicated, tsc_RB2, cr_108_ActSetUpdateCmpl (tcv_RRC_Ti))	(P)	Step 0d;
21		+ts_SS_IncrementCellPowerLevel (tsc_CellC ,20)			Step 1;
22		START t_WaitMS			
23	TBF2A	? TIMEOUT t_WaitMS		(F)	
24		+lt_CellC_e1a			AM ? RLC_AM_DATA_IND car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_108_MeasReportIntraFreqPeriodic(1, INT_TO_BIT(tsc_CellB,28) , tcv_CellInfoB.priScrmCode , tcv_CellInfoC.priScrmCode))
25		+ts_SHO_ConfigureAdditionalDL_DPCH (tsc_CellC)			**** Missing step 3 addition of Cell C DL RL prior to the active set update
26		AM ! RLC_AM_DATA_REQ	cas_ActSetUpdate (tsc_CellDedicated, tsc_RB2, cs_ActSetUpdateAdd2Remove1 (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti,		Step 3 . ACTIVE SET UPDATE message including "Radio Link Addition Information" for cell C and "Radio Link Removal Information" for

			tcv_ActTime, tcv_CellInfoC.priScrmCode, tcv_CellInfoB.priScrmCode, px_SFN_OffsetC - px_SFN_OffsetB, tcv_TmpCellInfo.dl_DPCH_2ndScrCode))		cell B
27		START t_WaitMS			
28	TBF3	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
29	TBP3	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_ActSetUpdateCmpl(tsc_CellDedicated, tsc_RB2, cr_108_ActSetUpdateCmpl (tcv_RRC_Ti))	(P)	Step 4 . ACTIVE SET UPDATE COMPLETE
30		+ts_SHO_ReleaseDL_DPCH (tsc_CellB)			Now remove DL radio link of cell B
31		+ts_SS_DecrementCellPowerLevel (tsc_CellA, 30)			Step 4a: Power setting according to "T3"
32		+ts_SS_DecrementCellPowerLevel (tsc_CellB, 30)			Step 4a: Power setting according to "T3" MAX Attenuation
33		START t_WaitMS			
34	TBF3A	? TIMEOUT t_WaitMS		(F)	
35		+lt_CellB_e1b			this step is introduce to guard against the intermittent loss of DL PDU. await the report of Cell B leaving the measurment range
36		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityEnqy(tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityEnq (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 5. UE CAPABILITY ENQUIRY (send via cell C)
37		START t_WaitMS			
38	TBF4	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
39	TBP4	AM?RLC_AM_DATA_IND CANCEL t_WaitMS	car_UE_CapabilityInfoAM (tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?,?,?))	(P)	Step 6. UE CAPABILITY INFORMATION To confirm that the UE communication with Cell C car_UE_CapabilityInfoAM (tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?,?,?))
40		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityInfoCnfAM (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityInfoCnfAM (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 7. UE CAPABILITY INFORMATION CONFIRM.
41		+ts_SHO_ReleaseDL_DPCH (tsc_CellC)			Step 8. Set cell C to "Off" [FFS: We need still to set to "Off" all physical channels assiciated to cell C]
42		+lt_RecvUeCap			
		lt_RecvUeCap			
43		+ts_SS_IncrementCellPowerLevel (tsc_CellA ,30)			Step 8:
44		+ts_SS_IncrementCellPowerLevel (tsc_CellB ,20)			Step 8:
45		+ts_SS_DecrementCellPowerLevel (tsc_CellC ,15)			Simulate OFF by decreasinf Power level of Cell B so that UE will camp on to CellA
46		START t_WaitMS			
47	TBF4A	? TIMEOUT t_WaitMS		(F)	
48		+lt_CellC_e1b			
49		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityEnqy(tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityEnq (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 9. UE CAPABILITY ENQUIRY (send via cell C)
50		START t_WaitMS			
51	TBF5	? TIMEOUT t_WaitMS		(F)	Wait for 13 secs
52	TBP5	AM?RLC_AM_DATA_IND CANCEL t_WaitMS	car_UE_CapabilityInfoAM (tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?,?,?))	(P)	Step 10. UE CAPABILITY INFORMATION To confirm that the UE communication with Cell A car_UE_CapabilityInfoAM (

					tsc_CellDedicated, tsc_RB2, cr_108_UE_CapabilityInfoAM (?,?,?))
53		AM ! RLC_AM_DATA_REQ	cas_UE_CapabilityInfoCnfAM (tsc_CellDedicated, tsc_RB2, cs_108_UE_CapabilityInfoCnfAM (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti))		Step 11. UE CAPABILITY INFORMATION CONFIRM.
		lt_RRC_InitVariables			
54		+ts_RRC_InitVariables (cell_DCH)			
55		(tcv_CellInfoA.attenuationLevel := tsc_AttLevToPower60_dBm, tcv_CellInfoB.attenuationLevel := tsc_AttLevToPower80_dBm, tcv_CellInfoC.attenuationLevel := tsc_AttLevToPower80_dBm)			Set as per table 8.3.4.3 T0
		lt_CellB_e1a			
56	TBP1	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1a(1, tcv_CellInfoA.priScrmCode,OMIT,tcv_CellInfoB.priScrmCode,?,tcv_CellInfoB.priScrmCode)))	(P)	
57	TBP1A	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_108_MeasReportIntraFreqPeriodic2cell_e1a(1, (tcv_CellInfoB.priScrmCode,?,tcv_CellInfoA.priScrmCode,OMIT,tcv_CellInfoB.priScrmCode)))	(P)	
58	TBP1B	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoA.priScrmCode, OMIT, tcv_CellInfoB.priScrmCode,?, tcv_CellInfoC.priScrmCode, ?, tcv_CellInfoB.priScrmCode))	(P)	
59	TBP1C	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoB.priScrmCode, ?, tcv_CellInfoC.priScrmCode, ?, tcv_CellInfoA.priScrmCode, OMIT, tcv_CellInfoB.priScrmCode))	(P)	
60	TBP1D	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoC.priScrmCode, ?, tcv_CellInfoA.priScrmCode,OMIT, tcv_CellInfoB.priScrmCode, ?,tcv_CellInfoB.priScrmCode))	(P)	
61	TBP1E	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoA.priScrmCode, OMIT, tcv_CellInfoC.priScrmCode,?, tcv_CellInfoB.priScrmCode, ?, tcv_CellInfoB.priScrmCode))	(P)	
62	TBP1F	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoB.priScrmCode, ?, tcv_CellInfoA.priScrmCode,OMIT, tcv_CellInfoC.priScrmCode, ?, tcv_CellInfoB.priScrmCode))	(P)	
63	TBP1G	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoC.priScrmCode, ?, tcv_CellInfoB.priScrmCode,?, tcv_CellInfoA.priScrmCode, OMIT, tcv_CellInfoB.priScrmCode))	(P)	
		lt_CellC_e1a			
64	TBP2A	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoA.priScrmCode, OMIT, tcv_CellInfoB.priScrmCode,*, tcv_CellInfoC.priScrmCode, ?, tcv_CellInfoC.priScrmCode))	(P)	
65	TBP2A_A	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoB.priScrmCode, *, tcv_CellInfoC.priScrmCode, ?, tcv_CellInfoA.priScrmCode, OMIT, tcv_CellInfoC.priScrmCode))	(P)	
66	TBP2A_B	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoC.priScrmCode, ?, tcv_CellInfoA.priScrmCode,OMIT, (tcv_CellInfoB.priScrmCode, *,tcv_CellInfoC.priScrmCode))	(P)	
67	TBP2A_C	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoA.priScrmCode, OMIT, tcv_CellInfoC.priScrmCode,?, tcv_CellInfoB.priScrmCode, *, tcv_CellInfoC.priScrmCode))	(P)	
68	TBP2A_D	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoB.priScrmCode, *,	(P)	

			tcv_CellInfoA.priScrmCode,OMIT, tcv_CellInfoC.priScrmCode, ? tcv_CellInfoC.priScrmCode))		
69	TBP2 A_E	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1a (1, tcv_CellInfoC.priScrmCode, ? tcv_CellInfoB.priScrmCode,*, tcv_CellInfoA.priScrmCode, OMIT, tcv_CellInfoC.priScrmCode))	{P}	
		It_CellB_e1b			
70	TBP3 A	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoA.priScrmCode, * tcv_CellInfoB.priScrmCode,* tcv_CellInfoC.priScrmCode, * tcv_CellInfoA.priScrmCode))	{P}	
71	TBP3 A_A	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoB.priScrmCode, * tcv_CellInfoC.priScrmCode, * tcv_CellInfoA.priScrmCode, * tcv_CellInfoA.priScrmCode))	{P}	
72	TBP3 A_B	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoC.priScrmCode, * tcv_CellInfoA.priScrmCode,* tcv_CellInfoB.priScrmCode, *,tcv_CellInfoA.priScrmCode))	{P}	
73	TBP3 A_C	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoA.priScrmCode, * tcv_CellInfoC.priScrmCode,* tcv_CellInfoB.priScrmCode, * tcv_CellInfoA.priScrmCode))	{P}	
74	TBP3 A_D	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoB.priScrmCode, * tcv_CellInfoA.priScrmCode,* tcv_CellInfoC.priScrmCode, * tcv_CellInfoA.priScrmCode))	{P}	
75	TBP3 A_E	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoC.priScrmCode, * tcv_CellInfoB.priScrmCode,* tcv_CellInfoA.priScrmCode, * tcv_CellInfoA.priScrmCode))	{P}	
		It_CellC_e1b			
76	TBP4 A	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoA.priScrmCode, * tcv_CellInfoB.priScrmCode,* tcv_CellInfoC.priScrmCode, * tcv_CellInfoC.priScrmCode))	{P}	
77	TBP4 A_A	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoB.priScrmCode, * tcv_CellInfoC.priScrmCode, * tcv_CellInfoA.priScrmCode, * tcv_CellInfoC.priScrmCode))	{P}	
78	TBP4 A_B	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoC.priScrmCode, * tcv_CellInfoA.priScrmCode,* tcv_CellInfoB.priScrmCode *,tcv_CellInfoC.priScrmCode))	{P}	
79	TBP4 A_C	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoA.priScrmCode, * tcv_CellInfoC.priScrmCode,* tcv_CellInfoB.priScrmCode, * tcv_CellInfoC.priScrmCode))	{P}	
80	TBP4 A_D	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoB.priScrmCode, * tcv_CellInfoA.priScrmCode,* tcv_CellInfoC.priScrmCode, * tcv_CellInfoC.priScrmCode))	{P}	
81	TBP4 A_E	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2,cr_108_MeasReportIntraFreqPeriodic3cell_e1b (1, tcv_CellInfoC.priScrmCode, * tcv_CellInfoB.priScrmCode,* tcv_CellInfoA.priScrmCode, * tcv_CellInfoC.priScrmCode))	{P}	

3GPP TSG-T1~~/SIC~~ Meeting #20~~19~~ T1~~S~~

~~Seoul, Korea, 12-15 May~~Munich, Germany 28 July – 1 August 2003

CR-Form-v7

CHANGE REQUEST

⌘	~~RRC ATS~~TS 34.123-3	CR	122~~0306 0846803 xxxxxx1 5~~	⌘ rev	~~1~~	⌘	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~~.4.1.1~~2.1.10~~
Source:	⌘	~~Anritsu Ltd~~T1
Work item code:	⌘	***Date:*** ⌘ 16~~24~~/05~~3~~/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one 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 one 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 ~~8.2.1.10~~ 8.4.1.1 to RRCv310
Summary of change:	⌘	- 0 table(s) deleted from RRCv310 - 3~~1~~5 table(s) modified in RRCv310 ~~- 12 table(s) added from RRCv143 of which~~ ~~- 1 table(s) have been modified~~ - 5~~6~~ new table(s) added - 18 tables added from RRCv143 of which - 4 tables have been modified For more details see below.
Consequences if not approved:	⌘	Test case ~~8.2.1.10~~ 8.4.1.1 will not be added

Clauses affected:	⌘	N/A

		Y	N		
Other specs Affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	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.

Anritsu

ANRITSU LIMITED

TSG-T Working Group1 SWG SIG E-mail Approval

T1-03~~20(8.2.1.10)~~06 08~~464~~

~~Luton, UK~~Seoul, Korea 12-15 May 2003 ~~24/3/2003~~

Title	~~Changes to TC~~ Introducing test case 8.~~4~~2.1.1.~~1.10~~ required ~~for approval~~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 8.4.1.1 to RRCv310 by using RRCv143 as the primary source of the new tables and applying only essential fixes to the TTCN. ~~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 ~~8.2.1.8~~ ~~8.2.~~8.4.1.1~~1.10~~

2.1 Tables deleted from RRCv310

None

2.2 Tables modified in RRCv310

2.2.1c_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 2.4.1.22.4.1.22.3.1.2.

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:

2.2.2c_TrChInfoUL_336_148

Reason 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	

```
{
ulconnectedTrCHList {
    { trchid          tsc_UL_DCH5,
      transportChannelInfo          c_DCH_148_TFS_UL },
    { trchid          tsc_UL_DCH1,
      transportChannelInfo          c_DCH_336_TFS }},
ulTFCS          c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS
}
```

To:

Constraint Name	c_TrChInfoUL_336_148
ASP Type	TrCHInfo
Derivation Path	
Encoding Variation	
Comments	

```
{
ulconnectedTrCHList {
    { trchid          tsc_UL_DCH1,
      transportChannelInfo          c_DCH_336_TFS },
    { trchid          tsc_UL_DCH5,
      transportChannelInfo          c_DCH_148_TFS_UL }},
ulTFCS          c_TFCS_Cmpl0_1_2_3_4_5_6_7_8_9_Rx -- sent to SS
}
```

2.2.3cr_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)		
	....			

2.2.4cr_AttachReq

Reason for change
The information element "oldPTMSI_Signature" is optional in the ATTACH REQUEST nas 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_lv; 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_lv; 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	*		
	....			

2.2.5cr_QoS_InteractiveMO_CellFACH_lv

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 2.2.82.2.82.2.8 and 2.2.92.2.92.2.9).

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_lv 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_lv (p_trafficClass : 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	'100'B		Best effort
	relabilityClass	'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 ; p-trafficHandPro : B2)			
Structured Type	QualityOfService_lv			
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	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		Interactive=traffic class, Background=4
	relabilityClass	'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

2.2.6cs_QoS_InteractiveMT_lv

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_lv 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_lv (p_trafficClass : B3)			
Structured Type	QualityOfService_lv			
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
	relabilityClass	'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 CS			
	Element Name	Element Value	Element Encoding	Comments
	length	'0B'O		
	spare	'00'B		
	dlyClass	p_dlyClass		
	relabilityClass	'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

2.2.1 ts_SendSIB7_NoSIB12_LongNeighCellInfo

Reason for change
Local tree lt_ConcatWithSIB3 containa missing segment of SIB7.

Summary of Change
Update the test step

from :

Test Step Name		ts_SendSIB7_NoSIB12_LongNeighCellInfo(p_SIB: SysInfoType7; p_CellId : INTEGER; p_Timing: INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		….. lt_ConcatWithSIB3			
10		(tcv_Segs.seg2 := o_SIB_PER_Encoding (sIB3 : tcv_SIB3))			
11		[(LENGTH_OF(tcv_Segs.seg1) + LENGTH_OF(tcv_Segs.seg2)) >201]			
		….			

To:

Test Step Name		ts_SendSIB7_NoSIB12_LongNeighCellInfo(p_SIB: SysInfoType7; p_CellId : INTEGER; p_Timing: INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		….. lt_ConcatWithSIB3			
10		(tcv_Segs.seg1 := o_SIB_PER_Encoding (sIB7 : p_SIB), tcv_Segs.seg2 := o_SIB_PER_Encoding (sIB3 : tcv_SIB3))			
20		[(LENGTH_OF(tcv_Segs.seg1) + LENGTH_OF(tcv_Segs.seg2)) >201]			
		….			

2.2.7ts_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_DetermineDlyClassAndTrafficClassAndTrafficHandPrc			
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_lv (tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPrio)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
...		.....			

2.2.2 ts_SendDefSysInfoWithoutSIB12_LongNeighCellInfo

2.2.8ts_AT_OrgPS_Call

Reason for change:

Missing SIB2 transmission.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 test step as follows:the AT commands issued.

Change test step from:

from :

Test Step Name		ts_SendDefSysInfoWithoutSIB12_LongNeighCellInfo(p_CellId: INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		…..			
		[px_RAT = fdd]			
7		+ts_SendSIB1_LongNeighCellInfo (cb_SIB1_Def(tcv_TmpCellInfo), p_CellId, tsc_Now)			
8		+ts_SendSIB3_LongNeighCellInfo (tcv_SIB3, p_CellId, tsc_Now)			
		….			

To:

Test Step Name		ts_SendDefSysInfoWithoutSIB12_LongNeighCellInfo(p_CellId: INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		…..			
		[px_RAT = fdd]			
7		+ts_SendSIB1_LongNeighCellInfo (cb_SIB1_Def(tcv_TmpCellInfo), p_CellId, tsc_Now)			
8		+ts_SendSIB2_LongNeighCellInfo (tcv_SIB2 , p_CellId, tsc_Now)			Missing SIB2
9		+ts_SendSIB3_LongNeighCellInfo (tcv_SIB3, p_CellId, tsc_Now)			
		….			

Test Step Name		ts_AT_OrgPS_Call (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		…..			
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
20	ERR1	[TRUE]		!	Parameter error

~~To:~~

2.2.3 ts_SendSIB18_LongNeighCellInfo

Reason for change:

Incorrect SB1 Reference List index

Summary of Change
Modify the test step as follows:

Change test step

from :

Test Step Name		ts_SendSIB18_LongNeighCellInfo (p_SIB: SysInfoType18; p_CellId : INTEGER; p_Timing: INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		…..			
6		TM!RLC_TR_DATA_REQ	ca_TR_DataReq(p_CellId, tsc_RB_BCCH, cs_SIB_MsgCmplList2(systemInformationBlockType7, tcv_Segs.seg2, systemInformationBlockType18, tcv_Segs.seg1))		
7		(tcv_SB1.sib_ReferenceList.[4].sib_Type.sysInfoType18 := (tcv_SB1.sib_ReferenceList.[4].sib_Type.sysInfoType18) MOD 4 + 1)			Incorrenct index
8		__+ts_ChangeSB1_ValueTag			

To:

Test Step Name		ts_SendSIB18_LongNeighCellInfo (p_SIB: SysInfoType18; p_CellId : INTEGER; p_Timing: INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
		…..			
6		TM!RLC_TR_DATA_REQ	ca_TR_DataReq(p_CellId, tsc_RB_BCCH, cs_SIB_MsgCmplList2(systemInformationBlockType7, tcv_Segs.seg2, systemInformationBlockType18, tcv_Segs.seg1))		
7		(tcv_SB1.sib_ReferenceList.[3].sib_Type.sysInfoType18 := (tcv_SB1.sib_ReferenceList.[3].sib_Type.sysInfoType18) MOD 4 + 1)			
8		__+ts_ChangeSB1_ValueTag			

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

2.2.10ts_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)]			

2.2.11ts_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 Authenticatioin 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 2.4.1.12.4.1.12.3.1.1, 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 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(			Verify that the

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

2.2.12ts_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).
		.....			

2.2.13ts_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(tcv_TI_S, cs_LLC_SAPI_UMTS_GSM_v, cs_QoS_InteractiveMT_lv('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_lv('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_lv('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_lv('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]		!	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]		!	Parameter error

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_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(cr_QoS_InteractiveOrBackgrou ndMO_CellFACH_iv(tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

2.2.15ts_RRC_NAS_SessionActPS_MT_P9_P10

Reason 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_lv(tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		

~~Tables added to RRCv310~~

2.3 Tables added to RRCv310

~~2.3~~2.3.1 Tables added from RRCv143– No changes necessary

tsc_Hysteresis2
tsc_Offset8_4_1_1
tsc_TCell8_4_1_1
tsc_ThresholdIntraFreq8_4_1_1
tsc_cpich_RSCPMax
tsc_cpich_RSCPMin
tcv_Checkcpich_RSCP
tcv_Tolerance
c_SIB11_ModifiedIntrafreqMeas
c_T_Cell256
cas_SysInfoChangeInd
cr_MeasReportIntraFreqEvent1a1b
cr_MeasReportIntraFreqPeriodicAddMeasResults
cs_MeasurementControlModifyIntraFreq
cs_SysInfoChangeInd
ts_ToStateMO_CS_6_9_PS_6_10Or6_11
ts_SendDef_sysInfo_MultiCellWithoutSIB12
ts_SendModifiedSIB11_SysInfo
ts_SendSystemInfoChangeInd

~~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~~ **~~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~~

2.3.2 Other ~~New~~ tables added

~~adde~~
~~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~~	

2.3.2.1 cr_MeasReportIntraFreq2cell_Event1e

This table is not based on one in any existing ATS.

Reason for change
Implementation of the Step 10 of prose expects the periodic measurement report is delivered the measurement results in a specific cell order. However, this may not be applicable when equal CPICH RSCP is received. Therefore it is necessary to create a contarint to accept flexible cell ordering per event 1e

Summary of Change
Table added to suite.

Add Constraint Declaration:

Constraint Name	cr_MeasReportIntraFreq2cell_Event1e (p_MeasId : MeasurementIdentity ; p_PriScmbCode : INTEGER; p_CellSync : CellSynchronisationInfo; p_Cpich_Ec_N0: INTEGER; p_PrimaryScr2:INTEGER; p_CellSync2 : CellSynchronisationInfo; p_Cpich_Ec_N02: INTEGER; p_PriScmbCode_event: INTEGER)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	Based on cb_SIB11_Def – changed the sib12indicator FALSE

```
{ integrityCheckInfo   *,
 message          measurementReport :
  {
   measurementIdentity p_MeasId,
   measuredResults   intraFreqMeasuredResultsList :
    {{
      cellIdentity OMIT,
      sfn_SFN_ObsTimeDifference *,
      cellSynchronisationInfo p_CellSync,
      modeSpecificInfo fdd :
       {
```

```
        primaryCPICH_Info
          {
            primaryScramblingCode p_PriScmbCode
          },
        cpich_Ec_N0 p_Cpich_Ec_N0,
        cpich_RSCP ?,
        pathloss OMIT
      }
    },
    {
      cellIdentity OMIT,
      sfn_SFN_ObsTimeDifference OMIT,
      cellSynchronisationInfo p_CellSync2,
      modeSpecificInfo fdd :
        {
        primaryCPICH_Info
          {
            primaryScramblingCode p_PrimaryScr2
          },
        cpich_Ec_N0 p_Cpich_Ec_N02,
        cpich_RSCP ?,
        pathloss OMIT
      }
    }
},
  measuredResultsOnRACH OMIT,
  additionalMeasuredResults OMIT,
  eventResults intraFreqEventResults : { eventID e1e,
    cellMeasurementEventResults fdd : { { primaryScramblingCode p_PriScmbCode_event}}},
  v390nonCriticalExtensions *
}
}
```

2.3.2.2 cr_MeasReportIntraFreq3cell_Event1e

This table is not based on one in any existing ATS.

Reason for change
Implementation of the Step 10b of prose expects the periodic measurement report is delivered the measurement results in a specific cell order. However, this may not be applicable when equal CPICH RSCP is received. Therefore it is necessary to create a contarint to accept flexible cell ordering per event 1e

Summary of Change
Table added to suite.

Add Constraint Declaration:

Constraint Name	cr_MeasReportIntraFreq3cell_Event1e (p_MeasId : MeasurementIdentity ; p_PriScmbCode : INTEGER; p_CellSync : CellSynchronisationInfo; p_Cpich_Ec_N0: INTEGER; p_PrimaryScr2:INTEGER; p_CellSync2 : CellSynchronisationInfo; p_Cpich_Ec_N02: INTEGER; p_PrimaryScr3:INTEGER; p_CellSync3 : CellSynchronisationInfo; p_Cpich_Ec_N03: INTEGER;p_PriScmbCode_event: INTEGER)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{ integrityCheckInfo  *,
  message          measurementReport :
  { measurementIdentity p_MeasId,
    measuredResults  intraFreqMeasuredR esultsList :
    {{ cellIdentity OMIT,
       sfn_SFN_ObsTimeDifference *,
       cellSynchronisationInfo p_CellSync,
       modeSpecificInfo fdd :
         {   primaryCPICH_Info
             { primaryScramblingCode p_PriScmbCode},
           cpich_Ec_N0 p_Cpich_Ec_N0,
           cpich_RSCP  ?,
           pathloss  OMIT
         }
    },
    {
      cellIdentity OMIT,
      sfn_SFN_ObsTimeDifference OMIT,
      cellSynchronisationInfo p_CellSync2,
      modeSpecificInfo fdd  : {
        primaryCPICH_Info
        {   primaryScramblingCode p_PrimaryScr2 },
        cpich_Ec_N0 p_Cpich_Ec_N02,
        cpich_RSCP  ?,
        pathloss  OMIT
      }
    } ,
    {
      cellIdentity OMIT,
      sfn_SFN_ObsTimeDifference OMIT,
      cellSynchronisationInfo p_CellSync3,
      modeSpecificInfo fdd  :  {
        primaryCPICH_Info
```

```
        {  primaryScramblingCode p_PrimaryScr },
        cpich_Ec_N0 p_Cpich_Ec_N03,
        cpich_RSCP  ?,
        pathloss  OMIT
      }
    }
},
  measuredResultsOnRACH OMIT,
  additionalMeasuredResults OMIT,
  eventResults intraFreqEventResults : {  eventID e1e,
  cellMeasurementEventResults fdd : { { primaryScramblingCode p_PriScmbCode_event}}},
  v390nonCriticalExtensions *
}}
```

~~2.3.1.2~~2.3.2.3 cr_CellSync_CountCSfnFrameDiff ~~px_NMO~~

This table is not based on one in any existing ATS

Reason for change

Used by cr_MeasReportIntraFreq2cell_Event1e_and_cr_MeasReportIntraFreq3cell_Event1e as parameters p_CellSync, p_CellSync2_and p_CellSync3.~~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 Constraint Declaration:

Constraint Name	cr_CellSync_CountCSfnFrameDiff
ASN1 Type	CellSynchronisationInfo
Derivation Path	
Encoding Variation	
Comments	

```
{
  modeSpecificInfo fdd :
  {
    countC_SFN_Frame_difference ?,
    tm ?
  }
}
```

2.3.2.4 cr_MeasReportIntraFreqPeriodicAddMeasResultsTwoCells

This table is not based on one in any existing ATS.

Reason for change
Implementation of the Step 6 and 6A of prose expects the periodic measurement report contains Cell B only . However, this is not always TRUE because UE may deliver two cell measurement report (Cell B and C). Therefore the test body needs to be modified to accept either one or two cell measurement report. The constraint is introduced for this purpose.

Summary of Change
Table added to suite.

Add Constraint Declaration:

Constraint Name	cr_MeasReportIntraFreqPeriodicAddMeasResultsTwoCells (p_MeasId : MeasurementIdentity ; p_CellId1, p_CellId2 : BITSTRING; p_PriScmbCode1, p_PriScmbCode2 : INTEGER; p_AdditionalMeasResult: MeasuredResultsList)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

```
{ integrityCheckInfo  *,
 message          measurementReport :
  {
   measurementIdentity p_MeasId,
   measuredResults  intraFreqMeasuredResultsList  :
    {{
      cellIdentity p_CellId1,
        sfn_SFN_ObsTimeDifference OMIT,
      cellSynchronisationInfo OMIT,
      modeSpecificInfo fdd :
       {
        primaryCPICH_Info
          {
            primaryScramblingCode p_PriScmbCode1
          },
        cpich_Ec_N0 OMIT,
        cpich_RSCP  ?, -- was OMIT
        pathloss  OMIT
       }
    },

{
      cellIdentity p_CellId2,
      sfn_SFN_ObsTimeDifference OMIT,
      cellSynchronisationInfo OMIT,
      modeSpecificInfo fdd :
       {
        primaryCPICH_Info
          {
            primaryScramblingCode p_PriScmbCode2
          },
        cpich_Ec_N0 OMIT,
        cpich_RSCP  ?,
        pathloss  OMIT
```

```
        }
    }

},
    measuredResultsOnRACH OMIT,
    additionalMeasuredResults  p  AdditionalMeasResult,
    eventResults OMIT,
    v390nonCriticalExtensions  *
}
}
```

2.3.2.5 tsc_Cpich_RSCP_70dBm

Reason for change

Current range checking method is incorrect a reference of CPICH power of RSCP of 70dBm must be generated as part of the range checking. Therefore a test suite constant is required for this purpose. Refer to modified table case local tree - lt_Cpich_Range_Check.

Summary of Change

Add new test suite constant

Constantt Name	tsc_Cpich_RSCP_70dBm
Type	INTEGER
Value	45
Comments	the equivalent of 70dBm ref to TS25.133

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

2.3.1.3tcv_DlyClass
2.3.1.3
2.3.1.3Reason for change
2.3.1.3The 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.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add Test Case Variable Declaration:

2.3.1.3Variable Name	2.3.1.3tcv_DlyClass
2.3.1.3Type	2.3.1.3B3
2.3.1.3Value	2.3.1.3
2.3.1.3Comments	2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.3

2.3.1.3tcv_TrafficClass
2.3.1.3
2.3.1.3Reason for change
2.3.1.3The 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.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add Test Case Variable Declaration:

2.3.1.3Variable Name	2.3.1.3tcv_TrafficClass
2.3.1.3Type	2.3.1.3B3
2.3.1.3Value	2.3.1.3
2.3.1.3Comments	2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.3
2.3.1.3tcv_TrafficHandPro
2.3.1.3
2.3.1.3Reason for change
2.3.1.3The 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 2.4.1.62.4.1.62.3.1.6) to determine the appropriate value and store it in this test case variable.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add Test Case Variable Declaration:

2.3.1.3Variable Name	2.3.1.3tcv_TrafficHandlingPriority
2.3.1.3Type	2.3.1.3B2
2.3.1.3Value	2.3.1.3
2.3.1.3Comments	2.3.1.3Refer 27.107 for derivation of value. Refer 24.008 for encoding.

2.3.1.3
2.3.1.3ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro
2.3.1.3
2.3.1.3Reason for change
2.3.1.3To provide a means of setting the new test case variables tcv_DlyClass and tcv_TrafficClass.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Table added to suite.
2.3.1.3
2.3.1.3Add test step:

2.3.1.3Test Step Name	2.3.1.3ts_DetermineDlyClassAndTrafficClass
2.3.1.3Group	2.3.1.3BasicM_General_Steps/
2.3.1.3Objsctive	2.3.1.3
2.3.1.3Default	2.3.1.3
2.3.1.3Comments	2.3.1.3
2.3.1.3Description	2.3.1.3

2.3.1 2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1 2.3.1.3	2.3.1.3[pc_Interactive AND (px_RRC_PS_ServTested = ps_Interactive)]	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3 (tcv_DlyClass := '011'B, tcv_TrafficClass := '011'B, tcv_TrafficHandPro := '11'B)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3[pc_Background AND (px_RRC_PS_ServTested = ps_Background)]	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3	2.3.1.3 (tcv_DlyClass := '100'B, tcv_TrafficClass :=	2.3.1.3	2.3.1.3	2.3.1.3

		'100'B, tcv_TrafficHandPro := '??'B)			
2.3.1	2.3.1.3	2.3.1.3[TRUE]	2.3.1.3	2.3.1.3I	2.3.1.3

2.3.1.3

2.3.1.3Modifications to tables added from RRCv143
2.3.1.3
2.3.1.3tc_8_2_1_10
2.3.1.3Reason for change
2.3.1.3The 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.
2.3.1.3
2.3.1.3Summary of Change
2.3.1.3Change the test case behaviour line such that the Activate PDP Context Accept is only sent once.
2.3.1.3
2.3.1.3Change test case from:

2.3.1.3Test Case Name		2.3.1.3tc_8_2_1_10			
2.3.1	2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1	2.3.1.3…	2.3.1.3…..	2.3.1.3…..	2.3.1.3…	2.3.1.3…..
2.3.1	2.3.1.3	2.3.1.3 (tcv_CellInfoA.cellConfig := cell_DCH_64kPS_RAB_SRB)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1	2.3.1.3	2.3.1.3 +ts_ReceiveActivatePDP_Accept_FACH (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3test step is called to complete the PDP context
2.3.1	2.3.1.3	2.3.1.3Ut ? AT_CmdCnf 2.3.1.3	2.3.1.3 ca_AT_CmdCnf	2.3.1.3	2.3.1.3Acknowledgement to the Initial AT comamnd
2.3.1	2.3.1.3	2.3.1.3 + ts_NAS_ConnCompleteMO_CS_PS (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1	2.3.1.3…	2.3.1.3… ..	2.3.1.3… ..	2.3.1.3…	2.3.1.3… ..

2.3.1.3
2.3.1.3To:

2.3.1.3Test Case Name		2.3.1.3tc_8_2_1_10			
2.3.1	2.3.1.3L	2.3.1.3Behaviour Description	2.3.1.3Constraint Ref	2.3.1.3V	2.3.1.3Comments
2.3.1	2.3.1.3…	2.3.1.3…..	2.3.1.3…..	2.3.1.3…	2.3.1.3…..
2.3.1	2.3.1.3	2.3.1.3 (tcv_CellInfoA.cellConfig := cell_DCH_64kPS_RAB_SRB)	2.3.1.3	2.3.1.3	2.3.1.3

2.3.1 2.3.1.3		2.3.1.3+ ts_NAS_ConnCompleteMO_CS_PS (tsc_CellA)	2.3.1.3	2.3.1.3	2.3.1.3
2.3.1 2.3.1.3…		2.3.1.3… ..	2.3.1.3… ..	2.3.1.3…	2.3.1.3… ..

2.3.1.3

2.4 Modifications to tables added from RRCv143

2.4.1 tsc_cpich_RSCPMin

Reason for change
Current range checking is set according to TS25.133 – 9.1.1. This is a theoretical value applicable under the assumption of no quantization mapping error margin as well as zero test equipment tolerance. Refer to modified table case local tree - lt_Cpich_Range_Check.

Summary of Change

Change the suite constant

From:

Constantt Name	tsc_cpich_RSCPMin
Type	INTEGER
Value	-3
Comments	

To:

Constantt Name	tsc_cpich_RSCPMin
Type	INTEGER
Value	-6
Comments	

2.4.2 tsc_cpich_RSCPMax

Reason for change
Current range checking is set according to TS25.133 – 9.1.1. This is a theoretical value applicable under the assumption of no quantization mapping error margin as well as zero test equipment tolerance. Refer to modified table case local tree - lt_Cpich_Range_Check.

Summary of Change

Change the suite constant

From:

Constantt Name	tsc_cpich_RSCPMax
Type	INTEGER
Value	3
Comments	

To:

Constantt Name	tsc_cpich_RSCPMax
Type	INTEGER
Value	6
Comments	

2.4.3 c_SIB11_ModifiedIntrafreqMeas

Reason for change
The current constraint is incorrect according to TS34.123-1 – the SIB 11 is to be sent with no inter-frequency measurement (Ref. 34.123-1 8.4.1.1 – specific message content)

Summary of Change
Update the constrinst as follows.

From:

Constraint Name	c_SIB11_ModifiedIntrafreqMeas (p_ActiveCellInfo, p_IntraCellInfo2, p_IntraCellInfo3, p_InterCellInfo4, p_InterCellInfo5, p_InterCellInfo6, p_IntraCellInfo7, p_IntraCellInfo8 : CellInfoCfg)
ASN1 Type	SysInfoType11
Derivation Path	
Encoding Variation	
Comments	

```
{
 sib12indicator FALSE,
 measurementControlSysInfo {
    use_of_HCS  hcs_not_used :  {
  cellSelectQualityMeasure  cpich_RSCP : {
   intraFreqMeasurementSysInfo {
     intraFreqMeasurementID  OMIT,
     intraFreqCellInfoSI_List {
     removedIntraFreqCellList OMIT,
     newIntraFreqCellList {
   {
   intraFreqCellID  p_ActiveCellInfo.cellId,
    cellInfo {
   cellIndividualOffset  OMIT,
   referenceTimeDifferenceToCell  OMIT,
   modeSpecificInfo fdd :  {
 primaryCPICH_Info { primaryScramblingCode p_ActiveCellInfo.priScrmCode },
 readSFN_Indicator  TRUE,
 tx_DiversityIndicator  FALSE
  },
  cellSelectionReselectionInfo OMIT
 }
   },
   {
   intraFreqCellID  p_IntraCellInfo2.cellId,
    cellInfo {
   cellIndividualOffset OMIT,
     referenceTimeDifferenceToCell  accuracy256 : 4,
   modeSpecificInfo fdd :  {
 primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo2.priScrmCode },
 readSFN_Indicator  TRUE,
 tx_DiversityIndicator  FALSE
  },
  cellSelectionReselectionInfo OMIT
   }
 },
    {
   intraFreqCellID  p_IntraCellInfo3.cellId,
    cellInfo {
   cellIndividualOffset  0,
```

```
    referenceTimeDifferenceToCell    OMIT,
    modeSpecificInfo fdd :  {
  primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo3.priScrmCode  },
  readSFN_Indicator    TRUE,
  tx_DiversityIndicator  FALSE
    },
   cellSelectionReselectionInfo  OMIT
    }
  },
  {
    intraFreqCellID   p_IntraCellInfo7.cellId,
    cellInfo {
    cellIndividualOffset  0,
    referenceTimeDifferenceToCell    OMIT,
    modeSpecificInfo fdd :  {
  primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo7.priScrmCode  },
  readSFN_Indicator    TRUE,
  tx_DiversityIndicator  FALSE
    },
   cellSelectionReselectionInfo  OMIT
    }
  },
  {
    intraFreqCellID   p_IntraCellInfo8.cellId,
    cellInfo {
    cellIndividualOffset  0,
    referenceTimeDifferenceToCell    OMIT,
    modeSpecificInfo fdd :  {
  primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo8.priScrmCode  },
  readSFN_Indicator    TRUE,
  tx_DiversityIndicator  FALSE
    },
   cellSelectionReselectionInfo  OMIT
    }
    }

    }
    },
     intraFreqMeasQuantity {
    filterCoefficient    fc0,
    modeSpecificInfo fdd : {
    intraFreqMeasQuantity_FDD   cpich_RSCP
    }
    },
     intraFreqReportingQuantityForRACH OMIT,
     maxReportedCellsOnRACH    noReport,
     reportingInfoForCellDCH {
    intraFreqReportingQuantity {
  activeSetReportingQuantities {
    sfn_SFN_OTD_Type    noReport,
    cellIdentity_reportingIndicator  FALSE,
    cellSynchronisationInfoReportingIndicator FALSE,
    modeSpecificInfo_fdd : {
cpich_Ec_N0_reportingIndicator FALSE,
cpich_RSCP_reportingIndicator FALSE,
pathloss_reportingIndicator FALSE }
  },
```

```
  monitoredSetReportingQuantities {
   sfn_SFN_OTD_Type  noReport,
   cellIdentity_reportingIndicator   FALSE,
   cellSynchronisationInfoReportingIndicator   FALSE,
   modeSpecificInfo   fdd : {
  cpich_Ec_N0_reportingIndicator   FALSE,
  cpich_RSCP_reportingIndicator   TRUE,
  pathloss_reportingIndicator     FALSE }
      }
   },
   measurementReportingMode  {
    measurementReportTransferMode   acknowledgedModeRLC,
    periodicalOrEventTrigger periodical
   },
   reportCriteria  periodicalReportingCriteria : {
   reportingAmount   ra  Infinity,
   reportingInterval  ril64
      }}},


   interFreqMeasurementSysInfo
 {
    interFreqCellInfoSI_List {
removedInterFreqCellList OMIT,
newInterFreqCellList  { {
   interFreqCellID p_InterCellInfo4.cellId,
   frequencyInfo p_InterCellInfo4.frequencyInfo,
   cellInfo {
    cellIndividualOffset  0,
    referenceTimeDifferenceToCell OMIT,
    modeSpecificInfo fdd :  {
  primaryCPICH_Info { primaryScramblingCode p_InterCellInfo4.priScrmCode  },
  readSFN_Indicator   TRUE,
  tx_DiversityIndicator  FALSE
   },
   cellSelectionReselectionInfo  OMIT
    }
   },
    {
   interFreqCellID p_InterCellInfo5.cellId,
   frequencyInfo p_InterCellInfo5.frequencyInfo,
   cellInfo {
    cellIndividualOffset  0,
    referenceTimeDifferenceToCell OMIT,
    modeSpecificInfo fdd :  {
  primaryCPICH_Info { primaryScramblingCode p_InterCellInfo5.priScrmCode  },
  readSFN_Indicator   TRUE,
  tx_DiversityIndicator  FALSE
   },
   cellSelectionReselectionInfo  OMIT
    }
   },
   {
   interFreqCellID p_InterCellInfo6.cellId,
   frequencyInfo p_InterCellInfo6.frequencyInfo,
   cellInfo {
    cellIndividualOffset  0,
```

```
    referenceTimeDifferenceToCell OMIT,
    modeSpecificInfo fdd :  {
  primaryCPICH_Info { primaryScramblingCode p_InterCellInfo6.priScrmCode },
  readSFN_Indicator    TRUE,
  tx_DiversityIndicator  FALSE
    },
    cellSelectionReselectionInfo  OMIT
     }
    }
     }
}
      }}}},
  nonCriticalExtensions  {}
}
```

To:

Constraint Name	c_SIB11_ModifiedIntrafreqMeas (p_ActiveCellInfo, p_IntraCellInfo2, p_IntraCellInfo3, p_InterCellInfo4, p_InterCellInfo5, p_InterCellInfo6, p_IntraCellInfo7, p_IntraCellInfo8 : CellInfoCfg)
ASN1 Type	SysInfoType11
Derivation Path	
Encoding Variation	
Comments	

```
{
  sib12indicator FALSE,
  measurementControlSysInfo {
     use_of_HCS   hcs_not_used :  {
    cellSelectQualityMeasure    cpich_RSCP : {
     intraFreqMeasurementSysInfo {
       intraFreqMeasurementID    OMIT,
       intraFreqCellInfoSI_List {
       removedIntraFreqCellList OMIT,
       newIntraFreqCellList {
     {
     intraFreqCellID    p_ActiveCellInfo.cellId,
     cellInfo {
     cellIndividualOffset  OMIT,
     referenceTimeDifferenceToCell  OMIT,
     modeSpecificInfo fdd :  {
  primaryCPICH_Info { primaryScramblingCode p_ActiveCellInfo.priScrmCode },
  readSFN_Indicator    TRUE,
  tx_DiversityIndicator  FALSE
    },
    cellSelectionReselectionInfo OMIT
   }
     },
     {
     intraFreqCellID    p_IntraCellInfo2.cellId,
     cellInfo {
     cellIndividualOffset OMIT,
       referenceTimeDifferenceToCell    accuracy256 : 4,
     modeSpecificInfo fdd :  {
  primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo2.priScrmCode },
  readSFN_Indicator    TRUE,
  tx_DiversityIndicator  FALSE
    },
    cellSelectionReselectionInfo OMIT
     }
```

```
  },
    {
    intraFreqCellID  p_IntraCellInfo3.cellId,
    cellInfo {
    cellIndividualOffset  0,
    referenceTimeDifferenceToCell  OMIT,
    modeSpecificInfo fdd :  {
  primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo3.priScrmCode  },
  readSFN_Indicator  TRUE,
  tx_DiversityIndicator  FALSE
  },
  cellSelectionReselectionInfo  OMIT
    }
  },
  {
    intraFreqCellID  p_IntraCellInfo7.cellId,
    cellInfo {
    cellIndividualOffset  0,
    referenceTimeDifferenceToCell  OMIT,
    modeSpecificInfo fdd :  {
  primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo7.priScrmCode  },
  readSFN_Indicator  TRUE,
  tx_DiversityIndicator  FALSE
  },
  cellSelectionReselectionInfo  OMIT
    }
  },
  {
    intraFreqCellID  p_IntraCellInfo8.cellId,
    cellInfo {
    cellIndividualOffset  0,
    referenceTimeDifferenceToCell  OMIT,
    modeSpecificInfo fdd :  {
  primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo8.priScrmCode  },
  readSFN_Indicator  TRUE,
  tx_DiversityIndicator  FALSE
  },
  cellSelectionReselectionInfo  OMIT
    }
    }

    }
    },
    intraFreqMeasQuantity {
    filterCoefficient  fc0,
    modeSpecificInfo fdd : {
    intraFreqMeasQuantity_FDD  cpich_RSCP
  }
    },
    intraFreqReportingQuantityForRACH OMIT,
    maxReportedCellsOnRACH  noReport,
    reportingInfoForCellDCH {
    intraFreqReportingQuantity {
  activeSetReportingQuantities {
    sfn_SFN_OTD_Type  noReport,
    cellIdentity_reportingIndicator  FALSE,
    cellSynchronisationInfoReportingIndicator FALSE,
```

```
    modeSpecificInfo fdd : {
cpich_Ec_N0_reportingIndicator FALSE,
cpich_RSCP_reportingIndicator FALSE,
pathloss_reportingIndicator FALSE }
  },
  monitoredSetReportingQuantities {
   sfn_SFN_OTD_Type noReport,
    cellIdentity_reportingIndicator   FALSE,
    cellSynchronisationInfoReportingIndicator   FALSE,
    modeSpecificInfo   fdd : {
  cpich_Ec_N0_reportingIndicator   FALSE,
  cpich_RSCP_reportingIndicator   TRUE,
  pathloss_reportingIndicator     FALSE }
      }
    },
    measurementReportingMode  {
     measurementReportTransferMode   acknowledgedModeRLC,
     periodicalOrEventTrigger periodical
    },
    reportCriteria  periodicalReportingCriteria : {
    reportingAmount   ra_Infinity,
    reportingInterval  ril64
  }}},
    interFreqMeasurementSysInfo OMIT
    }}},
  nonCriticalExtensions  {}
}
```

2.4.4 tc_8_4_1_1

Reason for change
The existing test step has bee modified as follows:

- Line 21 contains a regid scheme w.r.t. cell ording – replaced this with a local tree (lt_periodic_reporting) to allow flexible permutation of cell ordering (see modified table line 21)

- Line 22 contains incorrect CPICH RSCP range checking logics – rplaces with a local tree (lt_Cpich_Range_Check)

- Line 27,28 contains a regid scheme w.r.t. cell ording – replaced this with a local tree (lt_periodic_reporting2) to allow flexible permutation of cell ordering (see modified table line 27)

- Line 36 contains a regid scheme w.r.t. cell ording – replaced this with a local tree (lt_2Cell_e1e) to allow flexible permutation of cell ordering with time out(see modified table line 35..37)

- Line 38 contains a regid scheme w.r.t. cell ording – replaced this with a local tree (lt_3Cell_e1e) to allow flexible permutation of cell ordering with time out (see modified table line 39..41)

- Line 45 set the Cell power level according to “T0” per 34.123-1. However this can not produce the desired mesurement report per step 12 per 34.123-1 as the “reporting range” of the corresponding Mesurement Control PDU is set to 15dB therefore power level “T0” is replaced by “T1” (i.e. change the Cell B power level from -70dBm to –60dBm)

Summary of Change
Update the test case as follows.

From:

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START t_Guard			
2		[px_RAT = fdd]			FDD specific behaviour
3		+lt_InitVariables			
4		+ts_SS_CreateCellDCH (tsc_CellA)			Configure lower tester
5		+ts_SendDef_sysInfo_MultiCellWithoutSIB12 (tsc_CellA)			Sends the default system information in CellC
6		+ts_SS_CreateCellFACH (tsc_CellB)			Configure lower tester
7		+ts_SendDef_sysInfo_MultiCellWithoutSIB12 (tsc_CellB)			Sends the default system information in CellB
8		+ts_SS_CreateCellFACH (tsc_CellC)			Configure lower tester
9		+ts_SendDef_sysInfo_MultiCellWithoutSIB12 (tsc_CellC)			Sends the default system information in CellA
10		+ts_IdleUpdated (tsc_CellA)			Idle Update and bring UE to cell_Dch state and release the connection again
11		+lt_LocalTest			
12		+po_ConnectionAndSS_Rels			Postamble : To release the RRC connection and all the Configuration
13	ERR1	[px_RAT = tdd]			TDD specific behaviour
14	ERR2	[TRUE]		I	
		lt_LocalTest			
15	TBS	(tcv_TestBody := TRUE)			
16		+ts_SendModifiedSIB11_SysInfo (tsc_CellA , c_SIB11_ModifiedIntrafreqMeas (tcv_CellInfoA , tcv_CellInfoB, tcv_CellInfoC, tcv_CellInfoD, tcv_CellInfoE, tcv_CellInfoF, tcv_CellInfoG, tcv_CellInfoH))			Step 1 in prose;
17		+ts_ToStateMO_CS_6_9_PS_6_10Or6_11 (tsc_CellA)			Step 2-4 in prose;
18		(tcv_Tolerance := (64 * 1000) / 10)			
19		START t_WaitMS (64 * 1000 + tcv_Tolerance)			Initialize the wait timer to 64 seconds
20	TBF1	? TIMEOUT t_WaitMS		(F)	Timer expires the test case fails
21	TBP1	AM ?RLC_AM_DATA_IND (tcv_Checkcpich_RSCP := RLC_AM_DATA_IND.aM_message. uL_DCCH_Message.message.measurementReport.measuredResults.intraFreqMeasuredResultsList. [0].modeSpecificInfo.fdd.cpich_RSCP)	car_MeasurementReport (tsc_CellDedicated , tsc_RB2, cr_MeasReportIntraFreqPeriodicAddMeasResults (1, OMIT, tcv_CellInfoB.priScrmCode, OMIT))	(P)	Step 6 in prose; Measurement report recieved once
22	TBP2	[(tcv_Checkcpich_RSCP >= tsc_cpich_RSCPMin) AND (tcv_Checkcpich_RSCP <= tsc_cpich_RSCPMax)]		(P)	
23		CANCEL t_WaitMS			
24		(tcv_Tolerance := (64 * 1000) / 10)			
25		START t_WaitMS (64 * 1000 + tcv_Tolerance)			Initialize the wait timer to 64 seconds
26	TBF2	? TIMEOUT t_WaitMS		(F)	Timer expires the test case fails
27	TBP3	AM ?RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_MeasReportIntraFreqPeriodicAddMeasResults (1, OMIT, tcv_CellInfoB.priScrmCode, OMIT))	(P)	Step 6a in prose; Measurement report recieved twice in 64 seconds
28		CANCEL t_WaitMS			If recieved two measurement reports, cancel the timer
29		AM !RLC_AM_DATA_REQ	cas_MeasurementControl (tsc_CellDedicated, tsc_RB2, cs_MeasurementControlevent1e (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, 1, tsc_Offset8_4_1_1, tcv_CellInfoC.priScrmCode, tcv_CellInfoA.priScrmCode))		Step 7 in prose; sending Measurement control command
30		START t_WaitMS (64 * 1000)			Initialize thewait timer to 64 seconds
31	TBF3	AM ? RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_MeasReportIntraFreqPeriodicAddMeasResults (*, * , *, *))	(F)	Step 8 in prose; Measurement report recieved Then FAIL
32	TBP4	? TIMEOUT t_WaitMS		(P)	
33		(tcv_CellInfoC.attenuationLevel := tcv_CellInfoC.powerpCPICH + 60 , tcv_CellInfoB.attenuationLevel := tcv_CellInfoB.powerpCPICH + 60)			Step 9 in prose; Initialise parameters such that power levels at time T1 can be configured.
34		+ts_SetAttenuationLevel (tsc_CellC, tcv_CellInfoC.attenuationLevel)			Changing the power level of cell C as given in Table at time T1
35		+ts_SetAttenuationLevel (tsc_CellB, tcv_CellInfoB.attenuationLevel)			Changing the power level of cell B as given in Table at time T1
36	TBP5	AM ?RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_MeasReportIntraFreqEvent1e (1, OMIT, OMIT , tcv_CellInfoA.priScrmCode,	(P)	Step 10 in prose; Measurement report recieved once

			tcv_CellInfoC.priScrmCode))		
37		AM !RLC_AM_DATA_REQ	cas_MeasurementControl (tsc_CellDedicated, tsc_RB2, cs_MeasurementControlModifyIntraFreq (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, 1, tcv_CellInfoB.priScrmCode))		Step 10a in prose; sending Measurement control command
38	TBP6	AM ?RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_MeasReportIntraFreqMeas_AndEventResults1e (1, OMIT, OMIT, OMIT , tcv_CellInfoA.priScrmCode,tcv_CellInfoB.priScrmCode, tcv_CellInfoC.priScrmCode))	(P)	Step 10b in prose;
39		(tcv_CellInfoB.attenuationLevel := tcv_CellInfoB.powerpCPICH + 80)			Step 11 in prose; Initialise parameters such that power levels at time T2 can be configured.
40		+ts_SetAttenuationLevel (tsc_CellB, tcv_CellInfoB.attenuationLevel)			Changing the power level of cell B as given in Table at time T1
41		AM !RLC_AM_DATA_REQ	cas_MeasurementControl (tsc_CellDedicated, tsc_RB2, cs_MeasurementControlEvent1a (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, 1, tsc_Offset8_4_1_1, tsc_TCell8_4_1_1, tcv_CellInfoA.priScrmCode, tcv_CellInfoB.priScrmCode))		Step 12 in prose; sending Measurement control command
42		(tcv_CellInfoB.attenuationLevel := tcv_CellInfoB.powerpCPICH + 70 , tcv_CellInfoC.attenuationLevel := tcv_CellInfoC.powerpCPICH + 60)			Step 13 in prose; Initialise parameters such that power levels at time T0 can be configured.
43		+ts_SetAttenuationLevel (tsc_CellB, tcv_CellInfoB.attenuationLevel)			Changing the power level of cell B as given in Table at time T0
44		+ts_SetAttenuationLevel (tsc_CellC, tcv_CellInfoC.attenuationLevel)			Changing the power level of cell C as given in Table at time T0
45		(tcv_Tolerance := (5 * 1000) / 10)			
46		START t_WaitMS (5 * 1000 + tcv_Tolerance)			Initialize the wait timer to 5 seconds
47		? TIMEOUT t_WaitMS			
48		(tcv_Tolerance := (16 * 1000) / 10)			
49		START t_WaitMS (16 * 1000 + tcv_Tolerance)			Initialize the wait timer to 16 seconds
50	TBF5	? TIMEOUT t_WaitMS		(F)	Timer expires the test case fails
51	TBP7	AM ?RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_MeasReportIntraFreqEvent1a1b (1, tcv_CellInfoB.priScrmCode,e1a))	(P)	Step 14 in prose;
52		+ts_C3_CheckCellDCH (tsc_CellA)			Step 15 in prose;
53	TBE	(tcv_TestBody := FALSE)		(P)	
		lt_InitVariables			
54		+ts_RRC_InitVariables (cell_DCH)			
55		(tcv_CellInfoA := c_CellInfoDiff (tsc_CellA, px_PriScrmCode, tsc_URA_IdCellA, px_CRNTI , px_TCellA, px_SFN_OffsetA, tcv_FreqInfoMid, px_UL_ScramblingCode))			
56		(tcv_CellInfoB := c_CellInfoDiff (tsc_CellB, ((px_PriScrmCode + 50) MOD 512) , tsc_URA_IdCellB, px_CRNTI , px_TCellB, px_SFN_OffsetB, tcv_FreqInfoMid, ((px_UL_ScramblingCode +1000) MOD 16777216)))			
57		(tcv_CellInfoC := c_CellInfoDiff (tsc_CellC, ((px_PriScrmCode + 100) MOD 512), tsc_URA_IdCellC, px_CRNTI , px_TCellC, px_SFN_OffsetC, tcv_FreqInfoMid, ((px_UL_ScramblingCode +2000) MOD 16777216)))			
58		(tcv_CellInfoC.attenuationLevel := tcv_CellInfoC.powerpCPICH + 80)			
59		(tcv_CellInfoB.attenuationLevel := tcv_CellInfoB.powerpCPICH + 70)			
60		(tcv_CellInfoA.attenuationLevel := tcv_CellInfoA.powerpCPICH + 60)			

To:

	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START t_Guard			
2		[px_RAT = fdd]			FDD specific behaviour
3		+lt_InitVariables			
4		+ts_SS_CreateCellDCH (tsc_CellA)			Configure lower tester
5		+ts_SendDef_sysInfo_MultiCellWithoutSIB12 (tsc_CellA)			Sends the default system information in CellC
6		+ts_SS_CreateCellFACH (tsc_CellB)			Configure lower tester
7		+ts_SendDef_sysInfo_MultiCellWithoutSIB12 (tsc_CellB)			Sends the default system information in CellB
8		+ts_SS_CreateCellFACH (tsc_CellC)			Configure lower tester
9		+ts_SendDef_sysInfo_MultiCellWithoutSIB12 (tsc_CellC)			Sends the default system information in CellA
10		+ts_IdleUpdated (tsc_CellA)			Idle Update and bring UE to cell_Dch state and release the connection again
11		+lt_LocalTest			
12		+ po_ConnectionAndSS_Rels			Postamble : To release the RRC connection and all the Configuration
13	ERR1	[px_RAT = tdd]			TDD specific behaviour
14	ERR2	[TRUE]		I	
		lt_LocalTest			
15	TBS	(tcv_TestBody := TRUE)			
16		+ts_SendModifiedSIB11_SysInfo (tsc_CellA , c_SIB11_ModifiedIntrafreqMeas (tcv_CellInfoA , tcv_CellInfoB, tcv_CellInfoC, tcv_CellInfoD, tcv_CellInfoE, tcv_CellInfoF, tcv_CellInfoG, tcv_CellInfoH))			Step 1 in prose;
17		+ts_ToStateMO_CS_6_9_PS_6_10Or6_11 (tsc_CellA)			Step 2-4 in prose;
18		(tcv_Tolerance := (64 * 1000) / 10)			
19		START t_WaitMS (64 * 1000 + tcv_Tolerance)			Initialize the wait timer to 64 seconds
20	TBF1	? TIMEOUT t_WaitMS		(F)	Timer expires the test case fails
21		+lt_periodic_reprting			
22		+lt_Cpich_Range_Check			
23		CANCEL t_WaitMS			
24		(tcv_Tolerance := (64 * 1000) / 10)			
25		START t_WaitMS (64 * 1000 + tcv_Tolerance)			Initialize the wait timer to 64 seconds
26	TBF2A	? TIMEOUT t_WaitMS		(F)	Timer expires the test case fails
27		+lt_periodic_reprting2			
28		AM !RLC_AM_DATA_REQ	cas_MeasurementControl (tsc_CellDedicated, tsc_RB2, cs_MeasurementControlevent1e (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, 1, tsc_Offset8_4_1_1, tcv_CellInfoC.priScrmCode, tcv_CellInfoA.priScrmCode))		Step 7 in prose; sending Measurement control command
29		START t_WaitMS (64 * 1000)			Initialize thewait timer to 64 seconds
30	TBF3	AM ?RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_MeasReportIntraFreqPeriodicAddMeasResults (*, * , *, *))	(F)	Step 8 in prose; Measurement report recieved Then FAIL
31	TBP4	? TIMEOUT t_WaitMS		(P)	
32		(tcv_CellInfoC.attenuationLevel := tcv_CellInfoC.powerpCPICH + 60 , tcv_CellInfoB.attenuationLevel := tcv_CellInfoB.powerpCPICH + 60)			Step 9 in prose; Initialise parameters such that power levels at time T1 can be configured.
33		+ts_SetAttenuationLevel (tsc_CellC, tcv_CellInfoC.attenuationLevel)			Changing the power level of cell C as given in Table at time T1
34		+ts_SetAttenuationLevel (tsc_CellB, tcv_CellInfoB.attenuationLevel)			Changing the power level of cell B as given in Table at time T1
35		START t_WaitMS			Time out upon fialure; otherwise the case gones forever until overall guard time timeout
36	TBF5	? TIMEOUT t_WaitMS		(F)	
37		+lt_2Cell_CellC_e1e			Step 10 in prose; Measurement report recieved once
38		AM !RLC_AM_DATA_REQ	cas_MeasurementControl (tsc_CellDedicated, tsc_RB2, cs_MeasurementControlModifyIntraFreq (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, 1, tcv_CellInfoB.priScrmCode))		Step 10a in prose; sending Measurement control command
39		START t_WaitMS			Time out upon fialure; otherwise the case gones forever until overall guard time timeout
40	TBF6	? TIMEOUT t_WaitMS		(F)	
41		+lt_3Cell_CellB_e1e			Step 10b in prose;

42		(tcv_CellInfoB.attenuationLevel := tcv_CellInfoB.powerpCPICH + 80)			Step 11 in prose; Initialise parameters such that power levels at time T2 can be configured.
43		+ts_SetAttenuationLevel (tsc_CellB, tcv_CellInfoB.attenuationLevel)			Changing the power level of cell B as given in Table at time T1
44		AM !RLC_AM_DATA_REQ	cas_MeasurementControl (tsc_CellDedicated, tsc_RB2, cs_MeasurementControlEvent1a (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, 1, tsc_Offset8_4_1_1, tsc_TCell8_4_1_1, tcv_CellInfoA.priScrmCode, tcv_CellInfoB.priScrmCode))		Step 12 in prose; sending Measurement control command
45		(tcv_CellInfoB.attenuationLevel := tcv_CellInfoB.powerpCPICH + 60 , tcv_CellInfoC.attenuationLevel := tcv_CellInfoC.powerpCPICH + 60)			Step 13 in prose; Initialise parameters such that power levels at time T0 can be configured. Step 13 in prose; need to set Cell B higher cos the measurement control demands 15dB for reporting range Initialise parameters such that power levels at time T0 can be configured. (tcv_CellInfoB.attenuationLevel := tcv_CellInfoB.powerpCPICH + 70 , tcv_CellInfoC.attenuationLevel := tcv_CellInfoC.powerpCPICH + 60)
46		+ts_SetAttenuationLevel (tsc_CellB, tcv_CellInfoB.attenuationLevel)			Changing the power level of cell B as given in Table at time T0
47		+ts_SetAttenuationLevel (tsc_CellC, tcv_CellInfoC.attenuationLevel)			Changing the power level of cell C as given in Table at time T0
48		(tcv_Tolerance := (5 * 1000) / 10)			
49		START t_WaitMS (5 * 1000 + tcv_Tolerance)			Initialize the wait timer to 5 seconds
50		? TIMEOUT t_WaitMS			
51		(tcv_Tolerance := (16 * 1000) / 10)			
52		START t_WaitMS (16 * 1000 + tcv_Tolerance)			Initialize the wait timer to 16 seconds
53	TBF7	? TIMEOUT t_WaitMS		(F)	Timer expires the test case fails
54	TBP7	AM ?RLC_AM_DATA_IND	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, cr_MeasReportIntraFreqEvent1a1b (1, tcv_CellInfoB.priScrmCode,e1a))	(P)	Step 14 in prose;
55		+ts_C3_CheckCellDCH (tsc_CellA)			Step 15 in prose;
56	TBE	(tcv_TestBody := FALSE)		(P)	
		lt_InitVariables			
57		+ts_RRC_InitVariables (cell_DCH)			
58		(tcv_CellInfoA := c_CellInfoDiff (tsc_CellA, px_PriScrmCode, tsc_URA_IdCellA, px_CRNTI , px_TCellA, px_SFN_OffsetA, tcv_FreqInfoMid, px_UL_ScramblingCode))			
59		(tcv_CellInfoB := c_CellInfoDiff (tsc_CellB, ((px_PriScrmCode + 50) MOD 512) , tsc_URA_IdCellB, px_CRNTI , px_TCellB, px_SFN_OffsetB, tcv_FreqInfoMid, ((px_UL_ScramblingCode +1000) MOD 16777216)))			
60		(tcv_CellInfoC := c_CellInfoDiff (tsc_CellC, ((px_PriScrmCode + 100) MOD 512), tsc_URA_IdCellC, px_CRNTI , px_TCellC, px_SFN_OffsetC, tcv_FreqInfoMid, ((px_UL_ScramblingCode +2000) MOD 16777216)))			
61		(tcv_CellInfoA.attenuationLevel := tcv_CellInfoA.powerpCPICH + 60)			(tcv_CellInfoC.attenuationLevel := tcv_CellInfoC.powerpCPICH + 80)
62		(tcv_CellInfoB.attenuationLevel := tcv_CellInfoB.powerpCPICH + 70)			(tcv_CellInfoB.attenuationLevel := tcv_CellInfoB.powerpCPICH + 70)
63		(tcv_CellInfoC.attenuationLevel := tcv_CellInfoC.powerpCPICH + 80)			(tcv_CellInfoA.attenuationLevel := tcv_CellInfoA.powerpCPICH + 60)
		lt_periodic_reprting			
64	TBP1	AM ?RLC_AM_DATA_IND (tcv_Checkcpich_RSCP := RLC_AM_DATA_IND.aM_message. uL_DCCH_Message.message.measurementReport.measuredResults.intraFreqMeasuredResultsList. [0].modeSpecificInfo.fdd.cpich_RSCP)	car_MeasurementReport (tsc_CellDedicated , tsc_RB2 , cr_MeasReportIntraFreqPeriodicAddMeas Results (1, OMIT, tcv_CellInfoB.priScrmCode, OMIT))	(P)	Step 6 in prose;
65	TBP1A	AM ?RLC_AM_DATA_IND (tcv_Checkcpich_RSCP := RLC_AM_DATA_IND.aM_message. uL_DCCH_Message.message.measurementReport.measuredResults.intraFreqMeasuredResultsList. [0].modeSpecificInfo.fdd.cpich_RSCP)	car_MeasurementReport (tsc_CellDedicated , tsc_RB2 , cr_MeasReportIntraFreqPeriodicAddMeas ResultsTwoCells (1, OMIT, OMIT, tcv_CellInfoB.priScrmCode, tcv_CellInfoC.priScrmCode, OMIT))	(P)	Step 6 in prose; must allow a two cell report to happen depending on the commencement of the measurement cycle ?
		lt_Cpich_Range_Check			
66	TBP2	[((tcv_Checkcpich_RSCP - tsc_Cpich_RSCP_70dBm) >= tsc_cpich_RSCPMin) AND ((tsc_Cpich_RSCP_70dBm - tcv_Checkcpich_RSCP) <= tsc_cpich_RSCPMax)]		(P)	does not make sense [(tcv_Checkcpich_RSCP >= tsc_cpich_RSCPMin) AND (tcv_Checkcpich_RSCP <= tsc_cpich_RSCPMax)]
67	TBF2	[TRUE]		(F)	exceeded the range check of 6dBm

		lt_periodic_reprting2			
68	TBP3	AM ?RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated , tsc_RB2, cr_MeasReportIntraFreqPeriodicAddMeasResults (1, OMIT, tcv_CellInfoB.priScrmCode, OMIT))	(P)	
69	TBP3A	AM ?RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated , tsc_RB2, cr_MeasReportIntraFreqPeriodicAddMeasResultsTwoCells (1, OMIT, OMIT, tcv_CellInfoB.priScrmCode, tcv_CellInfoC.priScrmCode, OMIT))	(P)	Step 6a in prose:
		lt_2Cell_CellC_e1e			
70	TBP5	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_MeasReportIntraFreq2cell_Event1e (1, tcv_CellInfoA.priScrmCode,OMIT,?, tcv_CellInfoC.priScrmCode,cr_CellSync_CountCSfnFrameDiff, OMIT, tcv_CellInfoC.priScrmCode)))	(P)	
71	TBP5A	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_MeasReportIntraFreq2cell_Event1e (1, tcv_CellInfoC.priScrmCode,cr_CellSync_CountCSfnFrameDiff, OMIT, tcv_CellInfoA.priScrmCode,OMIT, ?, tcv_CellInfoC.priScrmCode)))	(P)	
		lt_3Cell_CellB_e1e			
72	TBP6	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_MeasReportIntraFreq3cell_Event1e (1, tcv_CellInfoA.priScrmCode,OMIT,?, tcv_CellInfoB.priScrmCode,cr_CellSync_CountCSfnFrameDiff ,OMIT, tcv_CellInfoC.priScrmCode,cr_CellSync_CountCSfnFrameDiff ,OMIT, tcv_CellInfoB.priScrmCode)))	(P)	
73	TBP6A	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_MeasReportIntraFreq3cell_Event1e (1, tcv_CellInfoB.priScrmCode,cr_CellSync_CountCSfnFrameDiff, OMIT, tcv_CellInfoC.priScrmCode,cr_CellSync_CountCSfnFrameDiff, OMIT, tcv_CellInfoA.priScrmCode,OMIT, ?, tcv_CellInfoB.priScrmCode)))	(P)	
74	TBP6B	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_MeasReportIntraFreq3cell_Event1e (1, tcv_CellInfoC.priScrmCode,cr_CellSync_CountCSfnFrameDiff ,OMIT, tcv_CellInfoA.priScrmCode,OMIT,?, tcv_CellInfoB.priScrmCode,cr_CellSync_CountCSfnFrameDiff ,OMIT, tcv_CellInfoB.priScrmCode)))	(P)	
75	TBP6C	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_MeasReportIntraFreq3cell_Event1e (1, tcv_CellInfoA.priScrmCode,OMIT, ?, tcv_CellInfoC.priScrmCode,cr_CellSync_CountCSfnFrameDiff, OMIT, tcv_CellInfoB.priScrmCode,cr_CellSync_CountCSfnFrameDiff, OMIT, tcv_CellInfoB.priScrmCode)))	(P)	
76	TBP6D	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS	car_MeasurementReport (tsc_CellDedicated, tsc_RB2, (cr_MeasReportIntraFreq3cell_Event1e (1, tcv_CellInfoC.priScrmCode,cr_CellSync_CountCSfnFrameDiff ,OMIT, tcv_CellInfoB.priScrmCode,cr_CellSync_CountCSfnFrameDiff ,OMIT, tcv_CellInfoA.priScrmCode,OMIT,2, tcv_CellInfoB.priScrmCode)))	(P)	
77	TBP6E	AM ? RLC_AM_DATA_IND CANCEL t_WaitMS			

3GPP TSG-T1/SIG Meeting #19
Seoul, Korea, 12-15 May 2003

T1S ⌘030624

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-3** **CR** **124** ⌘ **rev** **1** ⌘ 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:	⌘	T1
Work item code:	⌘	***Date:*** ⌘ 1/05/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one 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 one 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

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	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.

ANRITSU LIMITED

TSG-T Working Group1 SWG SIG E-mail Approval T1—030624

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_lv with c_MobileIdTMSI_lv.

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_lv		

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_lv		

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_lv; 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_lv; 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_lv; 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_lv; 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 satisfactorarily 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_MMI_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		Dc!RRC_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_MMI_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		Dc!RRC_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(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 Authenticatioin 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)		
		lt_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		
		lt_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	TI		
	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
	Iei	'00101001'B		
	Iel	?		
	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. Additionaly, 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('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
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 lt_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			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
…		…..	…..		…..
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 paramters
…		…..			
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_Cell A, px_TMSI_Def)			
22		+lt_Attach_Steps_3To5			
…		…..			
25		+lt_ServiceRequest_Steps_7To9			
26		+ts_GMM_DetachOnSwitchOff (tsc_CellA)			Steps 10 to 11
		lt_Attach_Steps_3To5			
…		…..			
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_AuthenticateAndStartIntegrityPro tection (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.authR sp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authR spExt)	car_PS_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthRspExtAny))		Step 9. AUTHENTICATION AND CIPHERING RESPONSE including Authentication Response paramters (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			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
…		…..	…..		…..
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 paramters
…		…..			
19		(tcv_TestBody := TRUE)		(P)	
20		+ts_MMI_UE_SwitchOn			Switch on UE and attempt to initiate the attach procedure.
21		+ts_RegistrationOnCS_IfOpModeA(tsc_Cell A, px_TMSI_Def)			
22		+ts_AT_TriggerGMM_Attach			
23		+lt_Attach_Steps_3To5			
…		…..			
25		+lt_ServiceRequest_Steps_7To9			
26		+ts_GMM_DetachOnSwitchOffPreamble (tsc_CellA)			Steps 10 to 11
		lt_Attach_Steps_3To5			
…		…..			
28		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
29		+ ts_SS_SecurityDownloadStart (ps_domain, tcv_Start)			
30		+ts_GMM_AuthenticateAndStartIntegrityPro tection (tsc_CellA)			
…		…..			
35		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
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.authR sp.value, tcv_AuthRspExt := tcv_TmpAuthAndCiphRspPDU.authR spExt)	car_PS_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_AuthAndCiphRsp (c_AuthRspAny_tv,c_AuthCiphRspExtAn y))		Step 9. AUTHENTICATION AND CIPHERING RESPONSE including Authentication Response paramters (RES)
40		+ ts_RRC_Security (tsc_CellA, tcv_PS_AuthCK, tcv_PS_AuthIK, tcv_AuthKcGSM, TRUE, ps_domain)			Start ciphering and integrity protection
41		+lt_TimeoutOrReceiveActivateP dpContextRequest			
42		+ts_RRC_ConnRel(tsc_CellA , cell_Dch)			
		lt_TimeoutOrReceiveActivatePdpContextRequest			
43		START t_3390			
44		Dc ? RRC_DataInd (tcv_ActPDP_ContextReq := RRC_DataInd.msg , tcv_TI_R := tcv_ActPDP_ContextReq.ti)	car_PS_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3 , cr_ActPDP_ContextReqMO_Any)		
45		+ts_SetTI_Rsp (tcv_TI_R)			
46		Dc ! RRC_DataReq	ca_PS_DataReq (tsc_CellDedicated , tsc_RB3 , cs_ActPDP_ContextRejMT (tcv_TI_S , cb_SM_Cause_v ('1F'O) , 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_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_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(tsc_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_LocUpdAcpTMSI_2(tcv_TmpCellInfo.mcc, tcv_TmpCellInfo.mnc, tcv_TmpCellInfo.lac, p_TMSI))		LOCATION UPDATING ACCEPT
8		Dc?RRC_DataInd	car_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, c_TMSI_ReallocCmpl)		TMSI REALLOCATION COMPLETE
9		+ts_RRC_ConnRel(p_CellId, cell_Dch)			

3GPP TSG-T1 Meeting #19
Seoul, South Korea, 12 – 16 May 2003

Tdoc ⌘T1-030657

CR-Form-v7

CHANGE REQUEST

⌘ **RLC ATS CR 127** ⌘ **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 7.2.3.19 to RLC ATS V3.1.0
Source:	⌘	T1
Work item code:	⌘	N/A
Date:	⌘	08/05/03
Category:	⌘	**B**
Release:	⌘	R99

Use one 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 one 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 7.2.3.19 to the approved RLC ATS V3.1.0
Summary of change:	⌘	This document lists all changes applied to test case 7.2.3.19 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:	⌘	Y	N		
			X	Other core specifications	⌘
			X	Test specifications	
			X	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.

3GPP TSG- T1 Meeting #19 **T1-030657**
Seoul, South Korea, 12 – 16 May 2003

Title: **Changes to test case 7.2.3.19 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 list all the changes needed to correct problems in the TTCN implementation of test case 7.2.3.19 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_19
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 7.2.3.19

4.1 Introduction

This section describes the changes required to make test case 7.2.3.19 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 7.2.3.19 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 declearations 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:

Timer Name	Duration	Unit	Comments
t_3395	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 declearations section changed from 5000 to 10000 to let the test case continue.
Source of change	new change
Label	WA #RLC 3127

Timer Declarations

Group:

Timer Name	Duration	Unit	Comments
t_3395	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 dur ation 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 inconclu sive verdict. WA #RLC 3101
t_Reset	5000	ms	This timer is used to ensure that RESET PDUs are received. The duration of thi s timer must be longer than the duration of the test body. Expiry of this timer is h andled in the RLC_Default behaviour table, and results in an inconclusive verdic t.
t_Status	10000	ms	This timer is used to ensure that STATUS PDUs are received. In general, it is st arted 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_Def ault 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 Variation:	
Comments:	WA #RLC 3115

Constraint Value

```
{
 tfc_Subset OMIT,
 ptach_TFCS OMIT,
 modeSpecificInfo fdd:{
  ul_TFCS c_TFCS_Cmpl0_1_Tx ( c_PowerOffsetInfoBelow64k )
 }
}
```

4.5 Incomplete transport format setting in RAB release (WA #RLC 3116 and 3117)

Constraint name **Test step name**	cs_RB_RelRLC
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_RelRLC (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_ActivationTime : ActivationTime; p_FreqInfo : 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_FreqInfo,
```

4.6 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

tcv_CellInfoH	CellInfoCfg	c_CellInfoDef (tsc_CellH, px_PriScrmCode, tsc_URA_IdCellH, px_TCellH, px_SFN_OffsetH, c_FreqInfo (px_UARFCN_D_Mid - 950 , px_UARFCN_D_Mid), ((px_UL_ScramblingCode + 7000) MOD 16777216))	
tcv_Count	INTEGER	0	To hold a temporary counter value.
tcv_AMD_SeqNum	BITSTRING	'000000000000000'B	To hold a temporary AMD sequnce 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.

4.7 Incorrect length indicator value (WA #RLC 3120)

Constraint name	c_LIs5_7BitLIs
Reason for change	Lis incorrect
Summary of change	Correct Lis to indicate end of SDU.
Source of change	new change
Label	WA #RLC 3120

Structured Type Constraint Declaration

Constraint Name:	c_LIs5_7BitLIs(p_LI INTEGER)
Group:	
Type Name:	Lorems
Derivation Path:	
Encoding Variation:	
Comments:	This constraint is used to send a 5 length indicator group within a PDU (AM or UM). This constraint is used when there are exactly five 7 bit Lis in the group. These LIs all have the same length value. Parameters p_LI An integer representing the first 7 bit length indicators. This parameter is used within a call to INT_TO_BIT, so a value must be provided. WA #RLC 3120 Length indicator values corrected

Element Name	Element Value	Type Encoding	Comments
lorem7_1	c_Lorem7AndE_Bit(1 * p_LI, tsc_E_LI_AndE_Bit)		
lorem7_2	c_Lorem7AndE_Bit(2 * p_LI, tsc_E_LI_AndE_Bit)		
lorem7_3	c_Lorem7AndE_Bit(3 * p_LI, tsc_E_LI_AndE_Bit)		
lorem7_4	c_Lorem7AndE_Bit(4 * p_LI, tsc_E_LI_AndE_Bit)		
lorem7_5	c_Lorem7AndE_Bit(5 * p_LI, tsc_E_Data)		
lorem15_1	-		
lorem15_2	-		
lorem15_3	-		

4.8 Looped back PDUs not correctly handled when polling (WA #RLC 3132)

Test step name	test body of 7.2.3.19
Reason for change	Looped back PDUs are not expected in the test body and therefore arrive in the postamble (where they lead to a inconclusive verdict).
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.
Source of change	new change
Label	WA #RLC 3132

Test Case	
Test Case Id:	tc_7_2_3_19
Test Group Reference:	RLCAcknowledgedMode/Polling/
Purpose:	1. To verify that the UE polls the SS in the next PDU to be transmitted or retransmitted each time the Timer_Poll_Periodic timer expires. 2. To verify that if there is no PDU to be transmitted, and all the PDUs have already been acknowledged, the timer is restarted, but no poll is sent.
Configuration:	
Defaults:	RLC_Default
Comments:	References: TS 25.322 clauses 9.5, 9.7.1 and 11.3.2.1.1

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		START t_Guard(300)			
2		+pr_GenericSetupProcedures			
3		+lt_TimerPollPeriodicTest(cds_RLC_InfoAM_7_2_3_19_Run1, 500)			(1)
4		(tcv_RB_Established := FALSE)			
5		+ts_RRC_RB_RelRLC(tsc_DefaultCellId)			
6		+lt_TimerPollPeriodicTest(cds_RLC_InfoAM_7_2_3_19_Run2, 2000)			(2)
7		+po_GenericCleanupProcedures			
lt_TimerPollPeriodicTest(p_RLC_Info: RLC_Info; p_T: INTEGER)					
8		+pr_RB_SetupAM7(p_RLC_Info)			
9		+lt_CalcCount(p_T)			(31)
10		+pr_CloseUE_TestLoop0(tcv_PayloadSize * (tcv_Count5 (p-1) * 8)			(32)
11		(tcv_NumPDUsTx := 0, tcv_NumPollsRx := 0, tcv_NumTimeouts := 0)			WA #RLC 3132
12	TSG	(tcv_TestBody := TRUE)			
13		+lt_MonitorUplink(p_T)			(3)
14		+ts_RLC_CalcTolerance(p_T)			(4)
15		START t_TTI			(5)
16		REPEAT lt_TxAndRx(p_T) UNTIL [(tcv_NumPDUsTx >= 1) AND (tcv_AMD_SeqNum = INT_TO_BIT(tcv_Count-1,12)) AND (tcv_NumPollsRx = 2)]			(7.1) WA #RLC 3132
17		+lt_MonitorUplink(p_T)			(3)
18		START t_TTI			(5)
19		REPEAT lt_TxAndRx(p_T) UNTIL [(tcv_NumPDUsTx >= 2) AND (tcv_AMD_SeqNum = INT_TO_BIT(2 * tcv_Count -1, 12)) AND (tcv_NumPollsRx = 3)]			(7.2) WA #RLC 3132
20		+lt_CheckNumPolls			(8)
21		TM ? RxAMD (tcv_AMD_PDU := RxAMD.data, tcv_AMD_SeqNum:=tcv_AMD_PDU.seqNum)	car_DataInd(tsc_RB_AM_7_RLC, cr_AMD_Any)		(36) WA #RLC 3135
22		TM ! TxStatus	cas_StatusReq(tsc_RB_AM_7_RLC, cs_SF_Ack(BIT_TO_INT(tcv_AMD_PDU.seqNum) + 1), (2 * (tcv_PayloadSize + 2)) - 5)		(25)
23	TBE	(tcv_TestBody := FALSE)			
24		+po_OpenUE_TestLoop			
lt_TxAndRx(p_T: INTEGER)					
25		TM ? RxAMD (tcv_AMD_PDU := RxAMD.data, tcv_AMD_SeqNum :=tcv_AMD_PDU.seqNum)	car_DataInd(tsc_RB_AM_7_RLC, cr_AMD_Any)		(9) WA #RLC 3132
26		+lt_CheckPollBit(p_T)			(9)
27		? TIMEOUT t_TTI			(5)
28		[((tcv_NumPDUsTx = 1) OR (tcv_NumPollsRx = 2) AND (tcv_NumPDUsTx <= 2))]			(10)
29		+ts_TxAM_7_PRBS(tsc_P_NoPoll, c_List5_7BitLIs((tcv_PayloadSize/5) - 1) , tcv_PayloadSize - 5)			(6)
30		(tcv_NumPDUsTx := tcv_NumPDUsTx + 1)			(10)
31		START t_TTI			(5)
32		[TRUE]			
33		?TIMEOUT t_LowerBound (tcv_NumTimeouts := tcv_NumTimeouts + 1)			(11)
34		CANCEL t_UpperBound			(24)
35	TBF1	[tcv_NumPollsRx <> tcv_NumTimeouts] (tcv_InvalidTimeout := TRUE)		(F)	(12)
36		[tcv_NumPollsRx = tcv_NumTimeouts]			(12)
37	ERR3	?TIMEOUT t_Dly		I	(26)
38	TBF2	?TIMEOUT t_UpperBound (tcv_InvalidTimeout := TRUE)		(F)	(13)

4.9 Looped back PDUs not correctly handled for timeout condition (WA #RLC 3135)

Test step name	test body of 7.2.3.19
Reason for change	As timer poll periodic is performed in parallel to the exchange of PDUs, the timer may legally run out simultaneously with the acknowlegement (by the SS) of the received PDUs. Such a collision situation leads to an unwanted PDU received during the postamble.
Summary of change	The PDU issued by the UE upon timeout of timer poll periodic is expected, and only afterwards the received PDUs are acknowledged. This prevents a collision situation leading to an unwanted PDU received during the postamble.

Source of change	new change
Label	WA #RLC 3135

Test Case

Test Case Id:	tc_7_2_3_19
Test Group Reference:	RLC/Acknowledged Mode/Polling/
Purpose:	1. To verify that the UE polls the SS in the next PDU to be transmitted or retransmitted each time the Timer_Poll_Periodic timer expires. 2. To verify that if there is no PDU to be transmitted, and all the PDUs have already been acknowledged, the timer is restarted, but no poll is sent.
Configuration:	
Defaults:	RLC_Default
Comments:	References: TS 25.322 clauses 9.5, 9.7.1 and 11.3.2.1.1

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		START t_Guard(300)			
2		+pr_GenericSetupProcedures			
3		+tt_TimerPollPeriodicTest(cds_RLC_InfoAM_7_2_3_19_Run1, 500)			(1)
4		(tcv_RB_Established = FALSE)			
5		+ts_RRC_RB_ReRLCdsr_DefaultCallId)			
6		+tt_TimerPollPeriodicTest(cds_RLC_InfoAM_7_2_3_19_Run2, 2000)			(2)
7		+po_GenericCleanupProcedures			
tt_TimerPollPeriodicTest(p_RLC_Info: RLC_Info; p_T: INTEGER)					
8		+pr_RB_SetupAM7(p_RLC_Info)			
9		+tt_CalcCount(p_T)			(31)
10		+pr_CloseUE_TestLoop0(tcv_PayloadSize * (tcv_Count[0]-1) * 8)			(32)
11		(tcv_NumPDUsTx = 8, tcv_NumPollsRx := 0, tcv_NumTimeouts := 0)			WA #RLC 3132
12	TSG	(tcv_TestBody := TRUE)			
13		+tt_MonitorUplink(p_T)			(3)
14		+ts_RLC_CalcTolerance(p_T)			(4)
15		START t_TTI			(5)
16		REPEAT tt_TxAndRx(p_T) UNTIL ((tcv_NumPDUsTx == 1) AND (tcv_AMD_SeqNum = INT_TO_BIT(tcv_Count-1,12)) AND (tcv_NumPollsRx = 2))			(7.1) WA #RLC 3132
17		+tt_MonitorUplink(p_T)			(3)
18		START t_TTI			(5)
19		REPEAT tt_TxAndRx(p_T) UNTIL ((tcv_NumPDUsTx == 2) AND (tcv_AMD_SeqNum = INT_TO_BIT(2 * tcv_Count-1, 12))) AND (tcv_NumPollsRx = 3))			(7.2) WA #RLC 3132
20		+tt_CheckNumPolls			(8)
21		TM ? RxAMD (tcv_AMD_PDU := RxAMD:data, tcv_AMD_SeqNum:=tcv_AMD_PDU.seqNum)	cw_DataInd(tsc_RB_AM_7_RLC, {r_AMD_Any})		(36) WA #RLC 3135
22		TM ! TxStatus	cas_StatusReq(tsc_RB_AM_7_RLC, cs_SF_Adc(BIT_TO_INT(tcv_AMD_PDU.seqNum) + 1), (2 * (tcv_PayloadSize + 2)) - 5)		(35)

5 Branches executed in test case 7.2.3.19

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_19-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_19-pics-pixit.txt**
  A text file containing all PICS/PIXIT parameters used for testing.

7 References

[1] **T1-030658**
This archive comprises HTML Execution log files, PICS/PIXIT file and the TTCN MP file

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 01 August 2003

Tdoc ⌘T1-030877

CR-Form-v7

CHANGE REQUEST

⌘ **RAB ATS CR 128** ⌘ **rev -** ⌘ Current version: **3.2.0** ⌘

*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 RAB test case 14.2.13.1 to RAB ATS V3.2.0
Source:	⌘	T1
Work item code:	⌘	N/A
Date:	⌘	18/06/03
Category:	⌘	**B**
Release:	⌘	R99

Use one 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 one 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 RAB test case 14.2.13.1 to the approved RAB ATS V3.2.0
Summary of change:	⌘	This document lists all changes applied to test case 14.2.13.1 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:	⌘	Y: ; N: X	Other core specifications	⌘	
		Y: ; N: X	Test specifications		
		Y: ; N: X	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.

3GPP TSG- T1 Meeting #19 **T1-030877**
Munich, Germany, 28 July – 01 August 2003

Title:	**Changes to test case 14.2.13.1 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 14.2.13.1 which is part of the RAB 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.

2 Table of Contents

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3 Verification Test Summary

Test Case:	TC_14_2_13_1
Test Group:	CombinationOnDPCH/Conversational_unknown/
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 14.2.13.1

4.1 Introduction

This section describes the changes required to make test case 14.2.13.1 run correctly with a 3G UE. All modifications are marked with label "**WA#RAB<number>**" in the TTCN comments column of the enclosed RAB ATS [1]. RAB ATS V1.44 delivered by MCC160 was used as a basis.

4.2 Inconsistent test loop configuration (WA#RAB4002)

Test step name	Test body, line 4
Reason for change	In order to perform the "Close Test Loop" procedure, the test case needs to specify, among other information, the uplink RLC SDU size in bits and the RB identity of the radio bearer that loopback is to be setup for. This information should be passed in a single parameter in the test step "ts_RB_SubTest_RB10" and sent in the CLOSE UE TEST LOOP message (step 12 in the prose). In the original ATS delivered by ETSI this parameter is set to OMIT, so the "Close Test Loop" procedure fails.
Summary of change	Included information elements RLC SDU size for Uplink in bits and the RB identity using the constraint "c_UE_TestLoopMode1_LB_Setup(640, tsc_RB10)" instead of the OMIT as the fourth parameter of the test step "ts_RB_SubTest_RB10"
Source of change	new change
Label	WA#RAB4002

Test Case

Test Case Id:	tc_14_2_13_1
Test Group Reference:	CombinationOnDPCH/Conversational_unknown/
Purpose:	Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.13 for the 20 ms TTI case
Configuration:	
Defaults:	RRC_Def1
Comments:	

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		START t_Guard			
2		+ ts_InitVariables			Initial Test Case Variables
3		+ ts_RB_InitTest_CS (convUnknown_64k_20, terminatingConversationalCall, terminatingConversationalCall)			Steps 1-10
4		+ ts_RB_SubTest_RB10 (px_RB_DataConversational_64, c_TFC_Allowed_0_?_2_3, c_TFC_Allowed_0_1_2, c_UE_TestLoopMode1_LB_Setup(640, tsc_RB10) , 1280)			Subtest!! Steps 11-17 WA#RAB4002
5	TBE	(tcv_TestBody = FALSE)			
6		+ ts_TC_DeactivateRB_TestMode (tsc_CellDedicated)			Steps 20-21
7		+ po_ConnectionAndSS_Rel (tsc_CellA)			

4.3 Constraint c_UE_TestLoopMode1_LB_Setup (WA#RAB4003)

Constraint name	c_UE_TestLoopMode1_LB_Setup
Reason for change	Definition for specifying the uplink RLC SDU sizes and the RB identities of the radio bearers to be looped back is missing, see WA#RAB4002
Summary of change	Added new constraint "c_UE_TestLoopMode1_LB_Setup" for the case that only one RAB is setup for loopback.
Source of change	new change
Label	WA#RAB4003

Structured Type Constraint Declaration

Constraint Name:	c_UE_TestLoopMode1_LB_Setup (p_LB_Size, p_RB_Identity: INTEGER)
Group:	
Type Name:	UE_TestLoopMode1LB_Setup
Derivation Path:	
Encoding Variation:	
Comments:	WA#RAB4003 This constraint is used as a complete UE test loop mode 1 setup IE, with a single LB entity in the LB setup list Parameters: p_LB_Size: The uplink RLC SDU size in bits. This value will be represented as a 14 bit value in the LB Setup IE, so the valid range is from 0..16383. p_RB_Identity: The RB id of the radio bearer that loopback is to be setup for. Valid range is 5..31, since RB 0-4 are used for signalling radio bearers.

Element Name	Element Value	Type Encoding	Comments
iel	'83'O		
IB_SetupRB_IE1	c_LB_SetupRB_IE(p_LB_Size, p_RB_Identity)		
IB_SetupRB_IE2	-		
IB_SetupRB_IE3	-		
IB_SetupRB_IE4	-		

4.4 Constraint c_LB_SetupRB_IE (WA#RAB4004)

Constraint name	c_LB_SetupRB_IE
Reason for change	The new constraint c_UE_TestLoopMode1_LB_Setup added in WA#RAB4003 uses constraint c_LB_SetupRB_IE.
Summary of change	Added "c_LB_SetupRB_IE"a with 2 parameters for definition of uplink RLC SDU size in bits and the RB Identity.
Source of change	new change
Label	WA#RAB4004

Structured Type Constraint Declaration	
Constraint Name:	c_LB_SetupRB_IE(p_LB_Size, p_RB_Identity: INTEGER)
Group:	
Type Name:	LB_SetupRB_IE
Derivation Path:	
Encoding Variation:	
Comments:	WAP/RAB/4004 This constraint is used as an LB entry in an LB setup list. Parameters: p_LB_Size: The uplink RLC SDU size in bits. This value will be represented as a 14 bit value in the LB Setup IE, so the valid range is from 0..16383. p_RB_Identity: The RB Id of the radio bearer that loopback is to be setup for. Valid range is 5..31, since RB 0-4 are used for signalling radio bearers.

Element Name	Element Value	Type Encoding	Comments
rLC_SDU_Size	INT_TO_BIT(p_LB_Size, 14)		
spare_2	'00'B		
rB_Identity	INT_TO_BIT(p_RB_Identity, 5)		

5 Branches executed in test case 14.2.13.1

The test case implementation executed the CS branch with Integrity activated and Ciphering 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 14_2_13_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 14_2_13_1-pics-pixit.txt**
  A document containing all PICS/PIXIT parameters used for testing.

7 References

[1] **T1-030878**
This archive comprises HTML execution log files, PICS/PIXIT file and the TTCN MP file

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 01 August 2003

Tdoc ⌘T1-030879

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-3 CR 129** ⌘ **rev 1** ⌘ Current version: **3.2.0** ⌘

*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 7.2.2.2 to RLC ATS V3.2.0
Source:	⌘	T1
Work item code:	⌘	N/A
Date:	⌘	09/07/03
Category:	⌘	**B**
Release:	⌘	R99

Use one 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 one 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 7.2.2.2 to the approved RLC ATS V3.2.0
Summary of change:	⌘	This document lists all changes applied to test case 7.2.2.2 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:	⌘	**Y**	**N**		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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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.

3GPP TSG- T1 Meeting #20 **T1-030879**
Munich, Germany, 28 July – 01 August 2003

Title: **Changes to test case 7.2.2.2 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 7.2.2.2 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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4.5 Constraint to correct setting of TFCI existence and Position (WA #BasicM 4128) 4
5 Branches executed in test case 7.2.2.2 6
6 Execution Log Files 6
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7 References 6

3 Verification Test Summary

Test Case:	TC_7_2_2_2
Test Group:	RLC/AcknowledgedMode/Polling/
ATS Version:	V3.20 + 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 7.2.2.2

4.1 Introduction

This section describes the changes required to make test case 7.2.2.2 run correctly with a 3G UE. All RLC 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 RLCv320.mp provided by MCC 160. In a first step test case 7.2.2.2 from RLC_wk24.mp was merged into this ATS.

In subsequent steps TTCN objects required by test case 7.2.2.2 were merged into the ATS. These objects are listed, but not marked with WA #RLC <number> in the ATS unless they were corrected.

Changes required in such TTCN objects which are contained in modules common all ATSs are marked with label “WA #BasicM <number>”

4.2 List of TTCN objects imported from RLC_wk24.mp

Test suite constant name	tsc_TestDataSize7Or15, tsc_UM_15_PayloadSize, tsc_LI15_Padding
Structured Type Constraint name	c_LIs2_15BitLIs, c_LenInd15AndE_Bit
ASN.1 Type Constraint name	c_UL_AddReconfTransChInfoList15_RLC, c_DCH_1344_148_DL_InfoRLC, c_DCH_1344_148_UL_InfoRLC, c_TrChInfoDL_1344_148_RLC, c_TrChInfoUL_1344_148_RLC, c_DCH_1344_TFS_RLC, c_DCH_1344_TFS_RLC_UE
Test case name	tc_7_2_2_2
Test step name	pr_RB_SetupUM15, ts_TxUM_15_PRBS, ts_RxUM_15_PRBS, ts_RRC_SetupRAB_UM_15_RLC

4.3 Incorrect setting of RB Config Type (WA #RLC 3166)

Test step name	ts_RRC_SetupRAB_UM_15_RLC
Reason for change	An incorrect RB Config Type value is saved which causes problems when actions are to be performed depending on this value.
Summary of change	RB Config Type value changed from cell_RLC_DCH_AM_RAB_15Lis to cell_RLC_DCH_UM_RAB_15Lis
Source of change	new change
Label	WA #RLC 3166

Test Step	
Test Step Id:	ts_RRC_SetUpRAB_UM_15_RLC (p_CellId: INTEGER; p_RAB_Id : BITSTRING; p_RLC_Info : RLC_Info)
Test Step Group Ref:	BasicM_RRC_Steps/RRC_RAB_Steps/
Objective:	
Defaults:	RRC_Def1
Comments:	This test step performs an RB setup procedure to configure RB10 in the UE as a UM DTCH entity that should use 15 bit length indicators. Reference 3G TS 34.108 clause 6.11.2. The corresponding entity in the SS is configured as TM, but with an identical transport block size. The AM header information is specified in the TTCN for DL, and can be inspected by the TTCN for UL. Parameters p_CellId: The cell id to use for signalling, and configuration of the RB for testing. p_RAB_Id: The RAB Id to be used within the RB SETUP message. p_RLC_Info: The RLC configuration information to be used within the RB setup message for DTCH. This parameter is provided so that different configurations can be used to meet the requirements of each specific test case.

Nr	La...	Behaviour Description	Constraint Ref	...	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			

.....

8		+ts_SS_RB_TM_Cfg_RLC(1344, tsc_RB_UM_15_RLC)			
9	TSP	+ ts_RRC_ReceiveRB_SetupCmpl (p_CellId , cell_RLC_DCH_UM_RAB_15Lis)			
10		+ ts_SetCellCfg (p_CellId, cell_RLC_DCH_UM_RAB_15Lis)			WA #RLC 3166

...

4.4 Incorrect setting of TFCI existence and Position (WA #BasicM 4127)

Constraint name	cs_RB_RelRLC
Reason for change	TFCI existence and position are set inconsistently wrt the seetings in the corresponding RRC Connection Setup.
Summary of change	TFCI existence and position are reverted wrt to the settings in the ATS by using constraint cd_DL_CommonInformationRB_SetUp
Source of change	new change
Label	WA #BasicM 4127

ASN.1 PDU Constraint Declaration

Constraint Name:	cs_RB_RelRLC (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_ActivationTime : ActivationTime; p_FreqInfo : 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 #BasicM 4127

Constraint Value

```
{
 integrityCheckInfo p_IntegrityCheckInfo,
 message radioBearerRelease : r3:{
```

...

```
   modeSpecificPhysChInfo fdd :
   {
    dl_PDSCH_Information OMIT
   },
   dl_CommonInformation cd_DL_CommonInformationRB_SetUp (tsc_DL_DPCH1_SFP_SRB),
   dl_InformationPerRL_List c_DL_InformationPerRL ( p_PrimaryScramblingCode, tsc_DL_DPCH1_ChC_SRB, tsc_DL_DPCH1_2ndScrC )
  },
  v3a0NonCriticalExtensions {
   radioBearerRelease_v3a0ext { new_DSCH_RNTI OMIT },
   nonCriticalExtensions OMIT
  }
```

...

4.5 Constraint to correct setting of TFCI existence and Position (WA #BasicM 4128)

Constraint name	cd_DL_CommonInformationRB_SetUp
Reason for change	As TFCI existence and position are set inconsistently wrt the seetings in the corresponding RRC Connection Setup a new constraint is needed.
Summary of change	TFCI existence and position are reverted wrt to the settings in the ATS by using the newly created constraint cd_DL_CommonInformationRB_SetUp
Source of change	new change
Label	WA #BasicM 4128

ASN.1 Type Constraint Declaration	
Constraint Name:	cd_DL_CommonInformationRB_SetUp (p_Sf: SF512_AndPilot)
Group:	
Type Name:	DL_CommonInformation
Derivation Path:	c_DL_CommonInformationRB_SetUp.
Encoding Variation:	
Comments:	WA #BasicM 4128

Constraint Value
REPLACE dl_DPCH_InfoCommon.modeSpecificInfo.fdd.positionFixedOrFlexible BY fixed, REPLACE dl_DPCH_InfoCommon.modeSpecificInfo.fdd.tfci_Existence BY FALSE

5 Branches executed in test case 7.2.2.2

The test case implementation executed the CS and PS branches which were completely executed. Integrity was enabled, and ciphering was 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 files 7_2_2_2-CS-Logs\Index.html and 7_2_2_2-PS-Logs\Index.html**
  This execution log files in HTML format show 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_2_2-CS-pics-pixit.doc and 7_2_2_2-PS-pics-pixit.doc**
  WINWORD files containing all PICS/PIXIT parameters used for testing.

7 References

[1] **T1-030880**
This archive comprises HTML Execution log files, PICS/PIXIT files and the TTCN MP file

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 01 August 2003

Tdoc ⌘T1-030881

CR-Form-v7

CHANGE REQUEST

⌘ **TS34.123-3 CR 130** ⌘ **rev 1** ⌘ Current version: **3.2.0** ⌘

*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 7.2.3.2 to RLC ATS V3.2.0
Source:	⌘	T1
Work item code:	⌘	N/A
Date:	⌘	09/07/03
Category:	⌘	**B**
Release:	⌘	R99

Use one 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 one 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 7.2.3.2 to the approved RLC ATS V3.2.0
Summary of change:	⌘	This document lists all changes applied to test case 7.2.3.2 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

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

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.

3GPP TSG- T1 Meeting #20 **T1-030881**
Munich, Germany, 28 July – 01 August 2003

Title: **Changes to test case 7.2.3.2 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 7.2.3.2 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 6

3 Verification Test Summary

Test Case:	TC_7_2_3_2
Test Group:	RLC/AcknowledgedMode/Polling/
ATS Version:	V3.20 + 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 7.2.3.2

4.1 Introduction

This section describes the changes required to make test case 7.2.3.2 run correctly with a 3G UE. All RLC 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 RLCv320.mp provided by MCC 160. In a first step test case 7.2.3.2 from RLC_wk24.mp was merged into this ATS.

In subsequent steps TTCN objects required by test case 7.2.3.2 were merged into the ATS. These objects are listed, but not marked with WA #RLC <number> in the ATS unless they were corrected.

Changes required in such TTCN objects which are contained in modules common all ATSs are marked with label “WA #BasicM <number>”

4.2 List of TTCN objects imported from RLC_wk24.mp

Test suite constant name	tsc_TestDataSize7Or15, tsc_AM_15_PayloadSize, tsc_LI15_Padding, tsc_LI15_PiggyBackStatus
Structured Type Constraint name	c_LIs2_15BitLIs, c_LenInd15AndE_Bit
ASN.1 Type Constraint name	cds_RLC_InfoAM_7_2_3_2_Run2, c_UL_AddReconfTransChInfoList15_RLC, c_DCH_1344_148_DL_InfoRLC, c_DCH_1344_148_UL_InfoRLC, c_TrChInfoDL_1344_148_RLC, c_TrChInfoUL_1344_148_RLC, c_DCH_1344_TFS_RLC, c_DCH_1344_TFS_RLC_UE
Test case name	tc_7_2_3_2
Test step name	pr_RB_SetupAM15, ts_TxAM_15_PRBS, ts_RRC_SetupRAB_AM_15_RLC

4.3 STATUS PDU to acknowledge all received PDUs (WA #RLC 3150)

Test case name	tc_7_2_3_2
Reason for change	The number of PDUs acknowledged at the end of the test case was incorrectly set to 2.
Summary of change	The test case keeps track of the received PDUs and acknowledges as many as received.
Source of change	new change
Label	WA #RLC 3150

Test Case	
Test Case Id:	tc_7_2_3_2
Test Group Reference:	RLC/AcknowledgedMode/Segmentation/
Purpose:	To test that if the configured AMD PDU size is <= 126 octets, 7 bit "Length Indicators" are used in transmitted AMD PDUs, otherwise, 15 bit "Length Indicators" are used.
Configuration:	
Defaults:	RLC_Default
Comments:	References: TS 25.322 Clauses 9.2.2.8, 9.2.2.9

...	...	Behaviour Description	Constraint Ref	...	Comments
1		START t_Guard(300)			

.....

18		TM ! TxStatus	cas_StatusReq(tsc_RB_AM_15_RLC, cs_SF_Ack(tcv_AM_VRR), ((tcv_PayloadSize + 2) * 2) - 1)		3 WA #RLC 3150
19	TBE	(tcv_TestBody := FALSE)			
20		+po_GenericCleanupProcedures			
It_Rx7BitLI					
21	TBP 1	TM ? RxAMD [tcv_NumPDUsReceived = 0] (tcv_NumPDUsReceived := 1)	car_DataInd(tsc_RB_AM_7_RLC, cr_AMD_LI_Data(c_LIs2_7BitLIs(tsc_TestDataSize7Or15, tsc_LI7_Padding), tcv_AM_RxData.data))	(P)	3
22		+ts_IncrementAM_VRR			WA #RLC 3150
23	TBP 2	TM ? RxAMD [(tcv_NumPDUsReceived = 0) AND (tcv_StatusReceived = FALSE)] (tcv_NumPDUsReceived := 1, tcv_StatusReceived := TRUE)	car_DataInd(tsc_RB_AM_7_RLC, cr_AMD_LI_DataStatus(c_LIs2_7BitLIs(tsc_TestDataSize7Or15, tsc_LI7_PiggyBackStatus), tcv_AM_RxData.data))	(P)	3
24		+ts_IncrementAM_VRR			WA #RLC 3150

.....

29		+ts_IncrementAM_VRR			WA #RLC 3150
30	TBP 5	TM ? RxAMD [(tcv_NumPDUsReceived = 0) AND (tcv_StatusReceived = FALSE)] (tcv_NumPDUsReceived := 1, tcv_StatusReceived := TRUE)	car_DataInd(tsc_RB_AM_15_RLC, cr_AMD_LI_DataStatus(c_LIs2_15BitLIs(tsc_TestDataSize7Or15, tsc_LI15_PiggyBackStatus), tcv_AM_RxData.data))	(P)	8
31		+ts_IncrementAM_VRR			WA #RLC 3150

...

4.4 Incorrect setting of TFCI existence and Position (WA #BasicM 4127)

Constraint name	cs_RB_RelRLC
Reason for change	TFCI existence and position are set inconsistently wrt the seetings in the corresponding RRC Connection Setup.
Summary of change	TFCI existence and position are reverted wrt to the settings in the ATS by using constraint cd_DL_CommonInformationRB_SetUp
Source of change	new change
Label	WA #BasicM 4127

ASN.1 PDU Constraint Declaration

Constraint Name:	cs_RB_RelRLC (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_ActivationTime : ActivationTime; p_FreqInfo : 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 #BasicM 4127

Constraint Value

```
{
 integrityCheckInfo p_IntegrityCheckInfo,
 message radioBearerRelease : r3:{
```

...

```
    modeSpecificPhysChInfo fdd :
    {
      dl_PDSCH_Information OMIT
    },
    dl_CommonInformation cd_DL_CommonInformationRB_SetUp (tsc_DL_DPCH1_SFP_SRB),
    dl_InformationPerRL_List c_DL_InformationPerRL ( p_PrimaryScramblingCode, tsc_DL_DPCH1_ChC_SRB, tsc_DL_DPCH1_2ndScrC )
  },
  v3a0NonCriticalExtensions {
    radioBearerRelease_v3a0ext { new_DSCH_RNTI OMIT },
    nonCriticalExtensions OMIT
  }
```

...

4.5 Constraint to correct setting of TFCI existence and Position (WA #BasicM 4128)

Constraint name	cd_DL_CommonInformationRB_SetUp
Reason for change	As TFCI existence and position are set inconsistently wrt the seetings in the corresponding RRC Connection Setup a new constraint is needed.
Summary of change	TFCI existence and position are reverted wrt to the settings in the ATS by using the newly created constraint cd_DL_CommonInformationRB_SetUp
Source of change	new change
Label	WA #BasicM 4128

ASN.1 Type Constraint Declaration	
Constraint Name:	cd_DL_CommonInformationRB_SetUp (p_Sf: SF512_AndPilot)
Group:	
Type Name:	DL_CommonInformation
Derivation Path:	c_DL_CommonInformationRB_SetUp.
Encoding Variation:	
Comments:	WA #BasicM 4128

Constraint Value
REPLACE dl_DPCH_InfoCommon.modeSpecificInfo.fdd.positionFixedOrFlexible BY fixed, REPLACE dl_DPCH_InfoCommon.modeSpecificInfo.fdd.tfci_Existence BY FALSE

5 Branches executed in test case 7.2.3.2

The test case implementation executed the CS and PS branches which were completely executed. Integrity was enabled, and ciphering was 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 files 7_2_3_2-CS-Logs\Index.html and 7_2_3_2-PS-Logs\Index.html**
  This execution log files in HTML format show 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_2-CS-pics-pixit.doc and 7_2_3_2-PS-pics-pixit.doc**
  WINWORD files containing all PICS/PIXIT parameters used for testing.

7 References

[1] **T1-030882**
This archive comprises HTML Execution log files, PICS/PIXIT files and the TTCN MP file

3GPP TSG-T1/SIG Meeting #20 ***T1-030896***
Munich, Germany 28 July – 1 August 2003

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-3 CR** 131 ⌘ **rev** ⌘ Current version: **3.2.0** ⌘

*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 8.2.3.9
Source:	⌘	T1
Work item code:	⌘	***Date:*** ⌘ 24/06/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one 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 one 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 8.2.3.9 to RRCv320
Summary of change:	⌘	- 0 table deleted from RRCv310 - 16 existing tables modified in RRCv310 - 6 tables added, unchanged, from RRCv143 - 1 table added, and modified, from RRCv143 - 7 new tables created. - cr_QoS_InteractiveMO_CellFACH_lv has been renamed as cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv - cs_QoS_InteractiveMT_CellFACH_lv has been renamed as cs_QoS_InteractiveOrBackgroundMT_CellFACH_ lv For more details see below.
Consequences if not approved:	⌘	Test case 8.2.3.9 will not be added

Clauses affected:	⌘	N/A

Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
		X		Test specifications	34.123-1
			X	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.

Anritsu

ANRITSU LIMITED

TSG-T Working Group1 SWG SIG E-mail Approval T1-030896

Munich, Germany 28th July – 1st August, 2003

Title	The introduction of test case 8.2.3.9 into RRCv320
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 8.2.3.9 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 8.2.3.9

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 2.3.3.

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

Summary of Change:
1. Parameterize the QoS 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)		
	….			

2.2.3 cr_AttachReq

Reason for change:
The information element “oldPTMSI_Signature” is optional in an ATTACH REQUEST nas 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_lv; 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_lv; 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_ReceiveActivatePDP_Accept_FACH

Reason for change:
1. To provide for differing Quality of Service delay and traffic classes.
2. 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:
1. Determine and then pass the appropriate QoS delay and traffic class values into the Activate PDP Context Accept message using the revised QoS constraint.
2. 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_lv('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_lv('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_lv('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_lv('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_Iv(‘011’B , ‘011’B), 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_Iv(‘100’B , ‘100’B), 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_Iv(‘011’B , ‘011’B), 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_Iv(‘100’B , ‘100’B), OMIT))		Send PDP Context Activation Accept, with LLC SAPI set as 0 (not assigned)
14	ERR2	[TRUE]		I	Parameter error

2.2.5 ts_ActivatePDP_RequestCellFACH_MO

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

Summary of Change:
1. Determine the appropriate delay and traffic classes and then use them in the appropriate 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_lv (tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		
3		+ts_SetTI_Rsp(tcv_TI_R)			
…		…..			

2.2.6 ts_RRC_NAS_SessionActPS_MO_P9_P10

Reason for change:
To provide for differing Quality of Service elements; delay class, traffic class and traffic handling priority.

Summary of Change:
1. Call the test step ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro to determine the values for QoS delay class, traffic class and traffic handling priority.
2. Pass these values into the Activate PDP Context Request message using the revised cr_ActPDP_ContextReqFACH_MO 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_DetermineDlyClassAndTrafficClassAnd TrafficHandPro			
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_InteractiveOrBackgrou ndMO_CellFACH_lv(tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		
9		+ ts_SetTI_Rsp (tcv_TI_R)			

2.2.7 ts_RRC_NAS_SessionActPS_MT_P9_P10

Reason for change:
To provide for differing Quality of Service elements; delay class, traffic class and traffic handling priority.

Summary of Change:
1. Call the test step ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro to determine the values for QoS delay class, traffic class and traffic handling priority.
2. Pass these values into the Activate PDP Context Request message using the revised cr_ActPDP_ContextReqFACH_MO 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
		…..			
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))		
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_MT_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))		
16		+ ts_DetermineDlyClassAndTrafficClassAnd TrafficHandPro			
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_lv(tcv_TrafficClass , tcv_DlyClass, tcv_TrafficHandPro)))		

2.2.8 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 Authenticatioin 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 Nr 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.
		…..			

2.2.9 ts_GMM_IdleUpdated

Reason for change:
The part of the test step dealing with a UE which performs 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 and 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).
		…..			

2.2.10 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)]			

2.2.11 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 used elsewhere by this test case.

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

2.2.12 ts_AT_SetQoS

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

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

2.2.13 cbs_108_RB_RelFACH_ToDCH

Reason for change:
1. The UE needs to know the new common transport channel configurations (UL and DL)

Summary of Change:
1. Specify the required UL and DL common transport channel parameters required for this CELL_DCH connection.

Change the ASN.1 PDU Constraint Declaration from:

Constraint Name	cbs_108_RB_RelFACH_ToDCH (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_Freqnfo : FrequencyInfo; p_PrimaryScramblingCode : PrimaryScramblingCode; p_UL_ScramblingCode : UL_ScramblingCode)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

Constraint Value

ul_CommonTransChInfo OMIT,
ul_deletedTransChInfoList OMIT,
ul_AddReconfTransChInfoList c_UL_AddReconfTransChInfoListDCCH_13_6k,

dl_CommonTransChInfo OMIT,
dl_DeletedTransChInfoList OMIT,
dl_AddReconfTransChInfoList c_DL_AddReconfTransChInfo2ListDCCH,

},
dl_CommonInformation c_DL_CommonInformationDCH_DPCH_Offset (tsc_DL_DPCH1_SFP_SRB),
dl_InformationPerRL_List c_DL_InfoPerRL_DPCH_Offset(p_PrimaryScramblingCode , tsc_DL_DPCH_ScrC_3, tsc_DL_DPCH1_ChC_SRB)

To:

Constraint Name	cbs_108_RB_RelFACH_ToDCH (p_IntegrityCheckInfo : IntegrityCheckInfo; p_RRC_TI: RRC_TransactionIdentifier; p_Freqnfo : FrequencyInfo; p_PrimaryScramblingCode : PrimaryScramblingCode; p_UL_ScramblingCode : UL_ScramblingCode)
PDU Type	DL_DCCH_Message
Derivation Path	
Encoding Variation	
Comments	

Constraint Value

ul_CommonTransChInfo OMIT,
ul_deletedTransChInfoList c_UL_DeletedTransChInfo (tsc_UL_DCH1),
ul_AddReconfTransChInfoList c_UL_AddReconfTransChInfoListDCCH_13_6k,

dl_CommonTransChInfo OMIT,
dl_DeletedTransChInfoList c_DL_DeletedTransChInfo_PS (tsc_DL_DCH1),
dl_AddReconfTransChInfoList c_DL_AddReconfTransChInfo2ListDCCH,

},
dl_CommonInformation cd_DL_CommonInformationDCH_DPCH_Offset (tsc_DL_DPCH1_SFP_SRB),
dl_InformationPerRL_List c_DL_InfoPerRL_DPCH_Offset(p_PrimaryScramblingCode , tsc_DL_DPCH_ScrC_3, tsc_DL_DPCH1_ChC_SRB)

2.2.14 c_UL_CommTrChInfoDCCH3_4k

Reason for change:
1. Because a DCH has been removed, the old TFCS is no longer suitable. Therefore, the constaint needs to specify a new, complete TFCS.

Summary of Change:
1. A 'complete' TFCS is specified.

Change the ASN.1 Test Suite Type constraint from:

Constraint Name	c_UL_CommTrChInfoDCCH3_4k
PDU Type	UL_CommonTransChInfo
Derivation Path	
Encoding Variation	
Comments	
Constraint Value	

```
{
   tfc_Subset  OMIT,
   prach_TFCS    OMIT,
   modeSpecificInfo    fdd:{
      ul_TFCS   c_TFCS_Add0_1_Tx(c_PowerOffsetInfoBelow64k)
   }
}
```

To:

Constraint Name	c_UL_CommTrChInfoDCCH3_4k
PDU Type	UL_CommonTransChInfo
Derivation Path	
Encoding Variation	
Comments	
Constraint Value	

```
{
   tfc_Subset  OMIT,
   prach_TFCS    OMIT,
   modeSpecificInfo    fdd:{
      ul_TFCS   c_TFCS_Cmpl0_1_Tx ( c_PowerOffsetInfoBelow64k )
   }
}
```

2.2.15 cr_QoS_InteractiveMO_CellFACH_lv

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. Rename the constraint to cr_QoS_InteractiveOrBackgroundMO_CellFACH_lv, to reflect the fact that it is being used for both interactive and background traffic classes.
2. Update the constraint to check for the correct quality of service.
3. Parameterize delay class, traffic class and traffic handling priority.
4. Correct comments

Change the Structured Type Constraint Declaration from:

Constraint Name	cr_QoS_InteractiveMO_CellFACH_lv (p_trafficClass : 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	'100'B		Best effort
	relabilityClass	'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 ; p_TrafficHandPro : B2)
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		Interactive=traffic class, Background=4
	relabilityClass	'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		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	?		Transfer delay will be neglected in case of interactive or background. Hence the value is set to spare
	trafficHandpro	p_TrafficHandPro		Interactive=value set in AT command, Background=? (value is ignored)
	bitRateUplink	?		The gaurented bit rate is set equal to requested bit rate.
	bitRateDnlink	?		This will be neglected by UE as the class is interactive

2.2.16 cs_QoS_InteractiveMT_CEllFACH_lv

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 (3GPP TS 23.107).
3. Some of the comments are wrong.

Summary of Change

1. Rename the constraint to cs_QoS_InteractiveOrBackgroundMT_CellFACHlv to more accurately reflect the values it contains.
2. Update the constraint to send a quality of service that matches the request .
3. Parameterize delay class and traffic class.
4. Correct comments.

Change the Structured Type Constraint Declaration from:

Constraint Name	cs_QoS_InteractiveMT_lv (p_trafficClass : B3)
Structured Type	QualityOfService_lv
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
	relabilityClass	'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 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		Interactive=traffic class, Background=4
	relabilityClass	'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 Tables added to RRCv310

2.3.1 Tables from RRC V143 (No Changes Required)

Test Suite Parameter Declarations	px_KeySeqDefxxxxx
ASN.1 PDU Constraint Declarations	cbs_108_RB_RelDCH_ToFACH cr_108_RRC_ConnRelCmpl
Test Cases **RRC_RB_release**	 tc_8_2_3_9
Test Steps **RRC_Preambles** **BasicM_MM_GMM_Steps**	 pr_GotoState6_11_MO ts_MM_SecurityOn

2.3.2 Tables from RRC V143 (Changes Required)

2.3.2.1 tc_8_2_3_9

Reason for change:

1. The version of ts_SS_SwitchOffCipheringRB copied from RRC V143 uses a different definition of tcv_CellIndInfo that does not differentiate between ciphering in the CS and PS domains. The version of tcv_CellIndInfo used in RRC V310 does.

Summary of Change:

1. Call a new test step: ts_SS_SwitchOffCipheringRB_PS, based on ts_SS_SwitchOffCipheringRB, that uses the definition of tcv_CellIndInfo found in RRC V310.

Change table from:

Test Case Name		tc_8_2_3_9			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
12		AM ? RLC_AM_DATA_CNF	car_AM_DataMuiCnf(tsc_CellDedicated, tsc_RB2, tsc_Mui)		
13		+ts_SS_SwitchOffCipheringRB (tsc_CellA, tcv_ActTime)			
14		(tcv_CellInfoA.dl_DPCH_2ndScr Code := tsc_DL_DPCH_ScrC_3)			

To:

Test Case Name		tc_8_2_3_9			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
12		AM ? RLC_AM_DATA_CNF	car_AM_DataMuiCnf(tsc_CellDedicated, tsc_RB2, tsc_Mui)		
13		+ts_SS_SwitchOffCipheringRB_PS (tsc_CellA, tcv_ActTime)			
14		(tcv_CellInfoA.dl_DPCH_2ndScr Code := tsc_DL_DPCH_ScrC_3)			

2.3.3 New Tables

2.3.3.1 px_NMO

Reason for change:
To provide 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

2.3.3.2 tcv_DlyClass

Reason for change:
To provide a means of specifiying 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	

2.3.3.3 tcv_TrafficClass

Reason for change:
To provide a means of specifying 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	

2.3.3.4 tcv_TrafficHandPro

Reason for change:
To provide a means of specifying the Traffic Handling Priority for Quality of Service constraints.

Summary of Change:
Table added to suite.

Add Test Case Variable Declaration:

Parameter Name	TrafficHandPro
Type	B2
PICS/PIXIT Ref	
Comments	

2.3.3.5 ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro

Reason for change:
To provide a means of automatically setting the new test case variables tcv_DlyClass, tcv_TrafficClass and tcv_TrafficHandPro depending on current PICS/PIXIT settings.

Summary of Change:
Table added to suite.

Add test step:

Test Step Name		ts_DetermineDlyClassAndTrafficClassAndTrafficHandPro			
Group		BasicM_General_Steps/			
Objsctive					
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	

2.3.3.6 ts_SS_SwitchOffCipheringRB_PS

This test case is based in ts_SS_SwitchOffCipheringRB with the following changes.

Reason for change:

1. In RRCv143, the test step ts_SS_SwitchOffCipheringRB references the cipheringStarted 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_cipheringStarted instead of tcv_CellIndInfo.cipheringStarted.
2. The parameters passed to ts_CMAC_DL_CipherCfg and ts_CRLC_DL_CipherCfgRB have been updated to match their new parameter lists

ts_SS_SwitchOffCipheringRB:

Test Step Name		ts_SS_SwitchOffCipheringRB (p_CellId : INTEGER; p_ActTime : ActivationTime)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		[px_CipheringOnOff AND tcv_CellIndInfo.cipheringStarted]			1.
3		[(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)]			
4		+ ts_CMAC_DL_CipherCfg (p_CellId, tcv_TmpCellInfo.cellConfig, cs_CipheringModeCmdOn (uea0) , p_ActTime)			
5		+ ts_CRLC_DL_CipherCfgRB (p_CellId, cs_CipheringModeCmdOn (uea0) , tcv_TmpCellInfo.cellConfig)			
6		+ lt_CRLC_UL_CipherCfg			

ts_SS_SwitchOffCipheringRB_PS:

Test Step Name		ts_SS_SwitchOffCipheringRB_PS (p_CellId : INTEGER; p_ActTime : ActivationTime)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+ ts_SetTmpCellInfo (p_CellId)			
2		[px_CipheringOnOff AND tcv_CellIndInfo.ps_cipheringStarted]			1.
3		[(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)]			
4		+ ts_CMAC_DL_CipherCfg (cs_CipheringModeCmdOn (uea0) , p_ActTime , incr)			
5		+ ts_CRLC_DL_CipherCfgRB (cs_CipheringModeCmdOn			

		(uea0) , tcv_TmpCellInfo.cellConfig)			
6		+ lt_CRLC_UL_CipherCfg			

2.3.3.7 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. This 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	?		

3GPP TSG-T1~~/SIC~~ Meeting #20 *T1~~S~~ ⌘ 030897~~03xxxx~~*

Munich, Germany, 28 July – 1 August 2003

CR-Form-v7

CHANGE REQUEST

⌘	~~RRC~~ ~~ATS~~TS34.123-3	CR	132~~03xx xx~~	⌘ rev	1 ~~1~~	⌘	Current version:	3.2.0	⌘

*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 7.2.3.21
Source:	⌘	T1
Work item code:	⌘	***Date:*** ⌘ 24~~25~~/06/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one 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 one 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 7.2.3.21 to RRCv310
Summary of change:	⌘	- 0 table deleted from RLCv310, - ~~14~~1 table modified in RLCv310, - 28~~3~~ tables added from RLCv143, - 3 tables added from RRCv310, - 3~~6~~ new tables created. For more details see below.
Consequences if not approved:	⌘	Test case 7.2.3.21 will not be added

Clauses affected:	⌘	N/A

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	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.

ANRITSU LIMITED

TSG-T W~~orking~~ G~~roup~~ 1 ~~SWG SIG~~ E-mail Approval

T1-03~~2~~20897~~(8.1.1.8)~~

Munich, Germany 28 July – 1 August 2003

Title	~~Changes to~~ Introducing test case 7.2.3.21~~8 required for approval~~to RRCv32~~0~~
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~~ introduce test case 7.2.3.21~~8~~ to RLCv310. 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 7.2.3.21~~8~~.

2 Changes required for test-case 7.2.3.21~~8~~

2.1 Tables deleted from RLCv310

None.

2.2 Tables modified in RLCv310

~~2.2.6~~2.2.1 t_Poll

Reason for change: To provide sufficient time for the test case to execute.

Summary of Change: Increase the duration of the timer from 5 seconds to 20 seconds.

Change timer declaration from:

Timer Name	t_Poll
Duration	5000
Unit	ms
Comments	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.

To:

Timer Name	t_Poll
Duration	20000
Unit	ms
Comments	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.

2.3 Tables added to RLCv310

2.3.1 Tables added from RLCv143

Type	Name
Test Suite Constant Declarations	tsc_TTI
Test Case Variable Declarations	tcv_InvalidTimeout
	tcv_NumPDUsRx
	tcv_NumPDUsTx
	tcv_NumPollsRx
	tcv_NumTimeouts
	tcv_Tolerance
Timer Declarations	t_TTI
	t_LowerBound
	t_UpperBound
ASN.1 Constraint Declarations	cds_RLC_InfoAM_7_2_3_21_Run1
	cds_RLC_InfoAM_7_2_3_21_Run2
	c_DL_DeletedTransChInfo_PS
	c_RB_InformationRel10
	c_RB_InformationRel20
	c_UL_DeletedTransChInfo
ASN.1 ASP Constraint Declarations	ca_DL_DPCH_ModifyInfoActNow
	ca_UL_DPCH_ModifyInfoActNow
ASN.1 PDU Constraint Declarations	cr_108_RB_RelCmpl
	cs_RB_RelRLC
Test Cases	tc_7_2_3_21
Test Step Library	ts_IncrementAM_VRR
	ts_RLC_CalcTolerance
	ts_CalculateActTime
	ts_SS_ReleaseDCH_ToDCH
	ts_CPHY_ActTime
	ts_SS_1DCH_DCCH_Modify
	ts_RRC_RB_RelRLC

~~2.3.1~~2.3.2 Tables added from RRCv310

Type	Name
ASN.1 ASP Constraint Declarations	car_RB_RelCmpl
	cas_RB_ReleaseWithCnf
Test Step Library	ts_RRC_ReceiveRB_RelCmpl

2.4 New tables added

~~2.4.3~~2.4.1 tcv_LastSeqNum

Reason for change: Provision of a means of detecting when a received PDU has been retransmitted.

Summary of Change: Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_LastSeqNum
Type	AM_SeqNum
Value	'111111111111'B
Comments	

~~2.4.4~~2.4.2 c_DL_AddReconfTransChInfo2

Reason for change: This constraint was needed in order to add the dl_AddReconfTransChInfoList information element to the Radio Bearer Release message. This IE was required in order to set the TTI for the SRBs back to 10ms in the UE during the Radio Bearer Release procedure.

Summary of Change: Table added to suite.

Add ASN.1 Constraint Declaration:

Constraint Name	c_DL_AddReconfTransChInfo2 (p_DlTrChId:TransportChannelIdentity; p_UlTrChId:TransportChannelIdentity)
ASN1 Type	DL_AddReconfTransChInformation2
Derivation Path	
Encoding Variation	
Comments	

	Constraint Value

	{
	dl_TransportChannelType dch,
	transportChannelIdentity p_DlTrChId,
	tfs_SignallingMode sameAsULTrCH :
	{
	ul_TransportChannelType dch,
	ul_TransportChannelIdentity p_UlTrChId
	} ,
	qualityTarget{
	bler_QualityValue -20
	}
	}

~~2.4.4~~2.4.3 c_DL_AddReconfTransChInfoListDCCH_SRB2

Reason for change: This constraint was needed in order to add the dl_AddReconfTransChInfoList information element to the Radio Bearer Release message. This IE was required in order to set the TTI for the SRBs back to 10ms in the UE during the Radio Bearer Release procedure.

Summary of Change: Table added to suite.

Add ASN.1 Constraint Declaration:

Constraint Name	c_DL_AddReconfTransChInfoListDCCH_SRB2
ASN1 Type	DL_AddReconfTransChInfo2List
Derivation Path	
Encoding Variation	
Comments	
	Constraint Value

	{
	c_DL_AddReconfTransChInfo2(tsc_DL_DCH5,tsc_UL_DCH5)
	}

2.5 Modifications to tables added from RLCv143

2.5.1 ca_DL_DPCH_ModifyInfoActNow

Reason for change: Mismatch between ASN.1 field names in constraint and Type

Summary of Change: Rename field cellIdentity to cellId.

Change ASN.1 ASP Constraint Declaration from:

Constraint Name	ca_DL_DPCH_ModifyInfoActNow (p_CellId: INTEGER; p_PhyChId: INTEGER; p_DL_DPCHInfo: DL_DPCHInfo)
PDU Type	CPHY_RL_Modify_REQ
Derivation Path	
Comments	To modify down link physical channel DPCH.
	Constraint Value
	{ cellIdentity p_CellId, routingInfo physicalChannelIdentity: p_PhyChId, ratType fdd, modifyMessage { activationTime activateNow : NULL, physicalChannelInfo dPCHInfo : { dl_DPCHInfo p_DL_DPCHInfo } } }

To:

Constraint Name	ca_DL_DPCH_ModifyInfoActNow (p_CellId: INTEGER; p_PhyChId: INTEGER; p_DL_DPCHInfo: DL_DPCHInfo)
PDU Type	CPHY_RL_Modify_REQ
Derivation Path	
Comments	To modify down link physical channel DPCH.
	Constraint Value
	{ cellId p_CellId, routingInfo physicalChannelIdentity: p_PhyChId, ratType fdd, modifyMessage { activationTime activateNow : NULL, physicalChannelInfo dPCHInfo : { dl_DPCHInfo p_DL_DPCHInfo } } }

2.5.2 ca_UL_DPCH_ModifyInfoActNow

Reason for change: Mismatch between ASN.1 field names in constraint and Type

Summary of Change: Rename field cellIdentity to cellId.

Change ASN.1 ASP Constraint Declaration from:

Constraint Name	ca_UL_DPCH_ModifyInfoActNow (p_CellId: INTEGER; p_PhyChId: INTEGER; p_UL_DPCHInfo: UL_DPCH_Info)
PDU Type	CPHY_RL_Modify_REQ
Derivation Path	
Comments	To setup uplink physical channel DPDCH.
	Constraint Value
	{ cellIdentity p_CellId, routingInfo physicalChannelIdentity: p_PhyChId, ratType fdd, modifyMessage { activationTime activateNow : NULL, physicalChannelInfo dPCHInfo : { ul_DPCHInfo p_UL_DPCHInfo } } }

To:

Constraint Name	ca_UL_DPCH_ModifyInfoActNow (p_CellId: INTEGER; p_PhyChId: INTEGER; p_UL_DPCHInfo: UL_DPCH_Info)
PDU Type	CPHY_RL_Modify_REQ
Derivation Path	
Comments	To setup uplink physical channel DPDCH.
	Constraint Value
	{ cellId p_CellId, routingInfo physicalChannelIdentity: p_PhyChId, ratType fdd, modifyMessage { activationTime activateNow : NULL, physicalChannelInfo dPCHInfo : { ul_DPCHInfo p_UL_DPCHInfo } } }

2.5.3 cs_RB_RelRLC

Reason for change: In the Radio Bearer Release message the TTI of the SRB needs to be set back to 10ms, the TFCS needs resetting to reflect the removal of the RAB

Summary of Change:

Change ASN.1 PDU Constraint Declaration from:

Constraint Name	cs_RB_RelRLC (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)
PDU Type	DL_CCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	Defined in TS 34.123-1 annex A condition A.1

Constraint Value

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message radioBearerRelease : r3:{
    radioBearerRelease_r3 { --RadioBearerRelease_r3_IEs
      rrc_TransactionIdentifier p_RRC_TI,
      integrityProtectionModeInfo OMIT,
      cipheringModeInfo OMIT,
      activationTime p_ActivationTime,
      new_U_RNTI OMIT,
      new_C_RNTI OMIT,
      rrc_StateIndicator cell_DCH,
      utran_DRX_CycleLengthCoeff OMIT,
      cn_InformationInfo OMIT,
      ura_Identity OMIT,
      rab_InformationReconfigList OMIT,
      rb_InformationReleaseList p_RB_InformationReleaseList,
      rb_InformationAffectedList OMIT,
      dl_CounterSynchronisationInfo OMIT,
      ul_CommonTransChInfo OMIT,
      ul_deletedTransChInfoList c_UL_DeletedTransChInfo ( tsc_UL_DCH1 ),
      ul_AddReconfTransChInfoList OMIT,
      modeSpecificTransChInfo fdd : { cpch_SetID OMIT,
        addReconfTransChDRAC_Info OMIT
      },

      dl_CommonTransChInfo OMIT ,
      dl_DeletedTransChInfoList c_DL_DeletedTransChInfo_PS ( tsc_DL_DCH1),
      dl_AddReconfTransChInfoList OMIT,
      frequencyInfo p_Freqnfo,
      maxAllowedUL_TX_Power tsc_MaxAllowPwr,
      ul_ChannelRequirement ul_DPCH_Info : cb_UL_DPCH_Info(tsc_UL_DPDCH_SF_SRB, pl1 ,
p_UL_ScramblingCode ),
      modeSpecificPhysChInfo fdd :
      {
        dl_PDSCH_Information OMIT
      },
      dl_CommonInformation c_DL_CommonInformationRB_SetUp (tsc_DL_DPCH1_SFP_SRB ),
      dl_InformationPerRL_List c_DL_InformationPerRL ( p_PrimaryScramblingCode, tsc_DL_DPCH1_ChC_SRB,
tsc_DL_DPCH1_2ndScrC )
    },
    v3a0NonCriticalExtensions {
      radioBearerRelease_v3a0ext { new_DSCH_RNTI OMIT },
      nonCriticalExtensions OMIT
    }
  }
}
```

To:

Constraint Name	cs_RB_RelRLC (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)
PDU Type	DL_CCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	Defined in TS 34.123-1 annex A condition A.1

Constraint Value

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message radioBearerRelease : r3:{
    radioBearerRelease_r3 { --RadioBearerRelease_r3_IEs
      rrc_TransactionIdentifier p_RRC_TI,
      integrityProtectionModeInfo OMIT,
      cipheringModeInfo OMIT,
      activationTime p_ActivationTime,
      new_U_RNTI OMIT,
      new_C_RNTI OMIT,
      rrc_StateIndicator cell_DCH,
      utran_DRX_CycleLengthCoeff OMIT,
      cn_InformationInfo OMIT,
      ura_Identity OMIT,
      rab_InformationReconfigList OMIT,
      rb_InformationReleaseList p_RB_InformationReleaseList,
      rb_InformationAffectedList OMIT,
      dl_CounterSynchronisationInfo OMIT,
      ul_CommonTransChInfo
      {
        tfc_Subset OMIT,
        prach_TFCS OMIT,
        modeSpecificInfo fdd: {
          ul_TFCS c_TFCS_Cmpl0_1_Tx ( c_PowerOffsetInfoHigher64k )
        }
      },
      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_SRB2,
      frequencyInfo p_Freqnfo,
      maxAllowedUL_TX_Power tsc_MaxAllowPwr,
      ul_ChannelRequirement ul_DPCH_Info : cb_UL_DPCH_Info(tsc_UL_DPDCH_SF_SRB, pl1 ,
p_UL_ScramblingCode ),
      modeSpecificPhysChInfo fdd :
      {
        dl_PDSCH_Information OMIT
      },
      dl_CommonInformation cd_DL_CommonInformationDCH_DPCH_Offset (tsc_DL_DPCH1_SFP_SRB ),
      dl_InformationPerRL_List c_DL_InformationPerRL ( p_PrimaryScramblingCode, tsc_DL_DPCH1_ChC_SRB,
tsc_DL_DPCH1_2ndScrC )
    },
    v3a0NonCriticalExtensions {
      radioBearerRelease_v3a0ext { new_DSCH_RNTI OMIT },
      nonCriticalExtensions OMIT
    }
  }
}
```

~~2.2.12~~2.5.4 tc_7_2_3_21

Reason for change: To change the value of Timer_Poll from 500ms to 600ms as required by 34.123 v 5.3.0. To ensure that 2*Timer_Poll_Periodic/TTI SDUs are transmitted rather than 2*Timer_Poll/TTI. To reset tcv_NumTimeouts between tests so that the second test can run. To ensure that all uplink PDUs with the poll bit set that arrive after the measurement has been made are acknowledged. To ensure that any repeated PDUs are not counted in the tally of received PDUs.

Summary of Change:

Change test step from:

Test Case Name		tc_7_2_3_21			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
…		…..			
2		+pr_GenericSetupProcedures			
3		+lt_TimerPollExpiryTest(cds_RLC_InfoAM_7_2_3_21_Run1, 500)			
4		(tcv_RB_Established:= FALSE)			
5		+ts_RRC_RB_RelRLC(tsc_DefaultCellId)			
6		+lt_TimerPollExpiryTest(cds_RLC_InfoAM_7_2_3_21_Run2, 1000)			
7		+po_GenericCleanupProcedures			
		lt_TimerPollExpiryTest(p_RLC_Info: RLC_Info; p_T: INTEGER)			
8		+pr_RB_SetupAM7(p_RLC_Info)			
9		+pr_CloseUE_TestLoop((tcv_PayloadSize - 1) * 8)			
10		(tcv_NumPDUsTx:= 0, tcv_NumPDUsRx:= 0, tcv_NumPollsRx:= 0)			
11		+ts_RLC_CalcTolerance(p_T)			
…		…..			
14	TBS	(tcv_TestBody:= TRUE)			
15		REPEAT lt_TxAndRx(p_T) UNTIL [((tcv_NumPDUsTx =(2 * p_T / tsc_TTI)) AND(tcv_NumPDUsRx =(2 * p_T / tsc_TTI))) OR (tcv_InvalidTimeout = TRUE)]			
16		+lt_CheckNumPolls			
…		…..			
20		+po_OpenUE_TestLoop			
		lt_TxAndRx(p_T: INTEGER)			
21		TM ? RxAMD(tcv_AMD_PDU:= RxAMD.data)	car_DataInd(tsc_RB_AM_7_RLC, cr_AMD_LI_Data(c_LIs1_7BitLI(tcv_PayloadSize - 1), *))		
22		+lt_CheckPollBit(p_T)			
23		+ts_IncrementAM_VRR			
24		(tcv_NumPDUsRx:= tcv_NumPDUsRx + 1)			
25		? TIMEOUT t_TTI			
26		[tcv_NumPDUsTx < 2 * p_T / tsc_TTI]			
27		+ts_TxAM_7_PRBS(tsc_P_NoPoll, c_LIs1_7BitLI(tcv_PayloadSize - 1), tcv_PayloadSize - 1)			
…		…..			
44		[tcv_NumPollsRx > 2]			
45	ERR1	[TRUE]		I	
…		…..			
47	TBF4	[TRUE]		(F)	

To:

~~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:~~

~~To:~~

Test Case Name		tc_7_2_3_21			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
…		…..			
2		+pr_GenericSetupProcedures			
3		+lt_TimerPollExpiryTest(cds_RLC_InfoAM_7_2_3_21_Run1, 600 , 2000)			
4		(tcv_RB_Established:= FALSE)			
5		+ts_RRC_RB_RelRLC(tsc_DefaultCellId)			
6		+lt_TimerPollExpiryTest(cds_RLC_InfoAM_7_2_3_21_Run2, 1000 , 2000)			
7		+po_GenericCleanupProcedures			
		lt_TimerPollExpiryTest(p_RLC_Info: RLC_Info; p_T , p_TE : INTEGER)			
8		+pr_RB_SetupAM7(p_RLC_Info)			
9		+pr_CloseUE_TestLoop((tcv_PayloadSize - 1) * 8)			
10		(tcv_NumPDUsTx:= 0, tcv_NumPDUsRx:= 0, tcv_NumPollsRx:= 0, tcv_NumTimeouts:= 0)			
11		+ts_RLC_CalcTolerance(p_T)			
…		…..			
14	TBS	(tcv_TestBody:= TRUE)			
15		REPEAT lt_TxAndRx(p_T , p_TE) UNTIL [((tcv_NumPDUsTx =(2 * p_TE / tsc_TTI)) AND(tcv_NumPDUsRx =(2 * p_TE / tsc_TTI))) OR (tcv_InvalidTimeout = TRUE)]			
16		+lt_AckLastPollOrTimeout(p_T)			
17		+lt_CheckNumPolls			
…		…..			
21		+po_OpenUE_TestLoop			
		lt_TxAndRx(p_T , p_TE : INTEGER)			
22		TM ? RxAMD(tcv_AMD_PDU:= RxAMD.data)	car_DataInd(tsc_RB_AM_7_RLC, cr_AMD_LI_Data(c_LIs1_7BitLI (tcv_PayloadSize - 1), *))		
23		+lt_CheckPollBit(p_T)			
24		[BIT_TO_INT(tcv_AMD_PDU.seqNum) <> BIT_TO_INT(tcv_LastSeqNum)]			
25		(tcv_LastSeqNum := tcv_AMD_PDU.seqNum)			
26		+ts_IncrementAM_VRR			
27		(tcv_NumPDUsRx:= tcv_NumPDUsRx + 1)			
28		[TRUE]			
29		? TIMEOUT t_TTI			
30		[tcv_NumPDUsTx < 2 * p_TE / tsc_TTI]			
31		+ts_TxAM_7_PRBS(tsc_P_NoPoll, c_LIs1_7BitLI(tcv_PayloadSize - 1), tcv_PayloadSize - 1)			
…		…..			
48		[tcv_NumPollsRx > 2]			
49		TM ! TxStatus	cas_StatusReq(tsc_RB_AM_7_RLC, cs_SF_Ack(BIT_TO_INT(tcv_A		

			MD_PDU.seqNum) + 1), (2*(tcv_PayloadSize + 2)) - 5)		
50	ERR1	[TRUE]		I	
…		…..			
52	TBF4	[TRUE]		(F)	
		It_AckLastPollOrTimeout(p_T : INTEGER)			
53		START t_WaitS(5)			
54		TM ? RxAMD(tcv_AMD_PDU:= RxAMD.data)	car_DataInd(tsc_RB_AM_7_RLC, cr_AMD_LI_Data(c_LIs1_7BitLI (tcv_PayloadSize - 1), *))		
55		+It_CheckPollBit(p_T)			
56		CANCEL t_WaitS			
57		?TIMEOUT t_WaitS			

~~2.2.12~~2.5.5 ts_RRC_RB_RelRLC

Reason for change: To make the SS wait for a CNF indication before reordering the radio bearers. To ensure that the SS has reconfigured the radio bearers before attempting to receive a Radio Bearer Release Complete message from the UE.

Summary of Change:

Change test step from:

Test Case Name		ts_RRC_RB_RelRLC (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
…		…..			
3		+ lt_SendRAB_Rel			
4		+ ts_RRC_ReceiveRB_RelCmpl (tsc_CellA, tcv_TmpCellInfo.cellConfig)			
5		+ lt_SS_RadioBearerRel			
6		+ ts_SetCellCfg (p_CellId, cell_DCH_StandAloneSRB)			
…		…..			
15		[tcv_CN_Domain = cs_domain]			
16		AM ! RLC_AM_DATA_REQ	cas_RB_Release (tsc_CellDedicated, tsc_RB2, cs_RB_RelRLC (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_TmpCellInfo.frequencyInfo, tcv_TmpCellInfo.priScrmCode, tcv_TmpCellInfo.uL_ScramblingCode, c_RB_InformationRel10))		
17		[tcv_CN_Domain = ps_domain]			
18		AM ! RLC_AM_DATA_REQ	cas_RB_Release (tsc_CellDedicated, tsc_RB2, cs_RB_RelRLC (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_TmpCellInfo.frequencyInfo, tcv_TmpCellInfo.priScrmCode, tcv_TmpCellInfo.uL_ScramblingCode, c_RB_InformationRel20))		

To:

~~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:~~

~~To:~~

Test Case Name		ts_RRC_RB_RelRLC (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
…		…..			
3		+ lt_SendRAB_Rel			
4		AM ? RLC_AM_DATA_CNF	car_AM_DataMuiCnf (tsc_CellDedicated, tsc_RB2, tsc_Mui)		
5		+ lt_SS_RadioBearerRel			
6		+ ts_RRC_ReceiveRB_RelCmpl (tsc_CellA, tcv_TmpCellInfo.cellConfig)			
7		+ ts_SetCellCfg (p_CellId, cell_DCH_StandAloneSRB)			
…		…..			
16		[tcv_CN_Domain = cs_domain]			
17		AM ! RLC_AM_DATA_REQ	cas_RB_ReleaseWithCnf (tsc_CellDedicated, tsc_RB2, tsc_Mui, cs_RB_RelRLC (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_TmpCellInfo.frequencyInfo, tcv_TmpCellInfo.priScrmCode, tcv_TmpCellInfo.uL_ScramblingCode, c_RB_InformationRel10))		
18		[tcv_CN_Domain = ps_domain]			
19		AM ! RLC_AM_DATA_REQ	cas_RB_ReleaseWithCnf (tsc_CellDedicated, tsc_RB2, tsc_Mui, cs_RB_RelRLC (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_TmpCellInfo.frequencyInfo, tcv_TmpCellInfo.priScrmCode, tcv_TmpCellInfo.uL_ScramblingCode, c_RB_InformationRel20))		

3GPP TSG-T1~~/SIC~~ Meeting #20 *T1~~S~~ ⌘ 030898~~03xxxx~~*

Munich, Germany, 28 July – 1 August 2003

CR-Form-v7

CHANGE REQUEST

⌘	~~RRC~~ ATS~~TS~~34.123-3	CR	133~~03xx xx~~	⌘ rev	1~~1~~	⌘	Current version:	3.2.0	⌘

*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 7.2.3.22
Source:	⌘	T1
Work item code:	⌘	***Date:*** ⌘ 24~~25~~/06/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one 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 one 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 7.2.3.22 to RRCv320
Summary of change:	⌘	- 0 table deleted from RRCv310, - ~~14~~1 table modified in RRCv310, - 27 tables added from RRCv143, - 3 tables added from RRCv310, - 3 new tables created. For more details see below.
Consequences if not approved:	⌘	Test case 7.2.3.22 will not be added

Clauses affected:	⌘	N/A

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	
		X	Test specifications	
		X	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.

ANRITSU LIMITED

TSG-T W~~orking~~ G~~roup~~ 1 ~~SWG SIG~~ E-mail Approval

T1-03~~2~~20898~~(8.1.1.8)~~

Munich, Germany 28 July – 1 August 2003

Title	~~Changes to~~ Introducing test case 7.2.3.22~~8 required for approval~~to RRCv32~~0~~
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~~ introduce test case 7.2.3.22~~8~~ to RLCv310. 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 7.2.3.22~~8~~.

2 Changes required for test-case 7.2.3.22~~8~~

2.1 Tables deleted from RLCv310

None.

2.2 Tables modified in RLCv310

~~2.2.6~~2.2.1 t_Poll

Reason for change: To provide sufficient time for the test case to execute.

Summary of Change: Increase the duration of the timer from 5 seconds to 20 seconds.

Change timer declaration from:

Timer Name	t_Poll
Duration	5000
Unit	ms
Comments	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.

To:

Timer Name	t_Poll
Duration	20000
Unit	ms
Comments	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.

2.3 Tables added to RLCv310

2.3.1 Tables added from RLCv143

Type	Name
Test Suite Constant Declarations	tsc_TTI
Test Case Variable Declarations	tcv_InvalidTimeout
	tcv_NumPDUsRx
	tcv_NumPDUsTx
	tcv_NumPollsRx
	tcv_NumTimeouts
	tcv_Tolerance
Timer Declarations	t_TTI
	t_LowerBound
	t_UpperBound
ASN.1 Constraint Declarations	cds_RLC_InfoAM_7_2_3_22_Run1
	cds_RLC_InfoAM_7_2_3_22_Run2
	c_DL_DeletedTransChInfo_PS
	c_RB_InformationRel10
	c_RB_InformationRel20
	c_UL_DeletedTransChInfo
ASN.1 ASP Constraint Declarations	ca_DL_DPCH_ModifyInfoActNow
	ca_UL_DPCH_ModifyInfoActNow
ASN.1 PDU Constraint Declarations	cr_108_RB_RelCmpl
	cs_RB_RelRLC
Test Cases	tc_7_2_3_22
Test Step Library	ts_RLC_CalcTolerance
	ts_CalculateActTime
	ts_SS_ReleaseDCH_ToDCH
	ts_CPHY_ActTime
	ts_SS_1DCH_DCCH_Modify
	ts_RRC_RB_RelRLC

~~2.3.1~~2.3.2 Tables added from RRCv310

Type	Name
ASN.1 ASP Constraint Declarations	car_RB_RelCmpl
	cas_RB_ReleaseWithCnf
Test Step Library	ts_RRC_ReceiveRB_RelCmpl

2.4 New tables added

~~2.4.3~~2.4.1 tcv_LastSeqNum

Reason for change: Provision of a means of detecting when a received PDU has been retransmitted.

Summary of Change: Table added to suite.

Add Test Case Variable Declaration:

Variable Name	tcv_LastSeqNum
Type	AM_SeqNum
Value	'111111111111'B
Comments	

~~2.4.4~~2.4.2 c_DL_AddReconfTransChInfo2

Reason for change: This constraint was needed in order to add the dl_AddReconfTransChInfoList information element to the Radio Bearer Release message. This IE was required in order to set the TTI for the SRBs back to 10ms in the UE during the Radio Bearer Release procedure.

Summary of Change: Table added to suite.

Add ASN.1 Constraint Declaration:

Constraint Name	c_DL_AddReconfTransChInfo2 (p_DlTrChId:TransportChannelIdentity; p_UlTrChId:TransportChannelIdentity)
ASN1 Type	DL_AddReconfTransChInformation2
Derivation Path	
Encoding Variation	
Comments	

	Constraint Value

	{
	dl_TransportChannelType dch,
	transportChannelIdentity p_DlTrChId,
	tfs_SignallingMode sameAsULTrCH :
	{
	ul_TransportChannelType dch,
	ul_TransportChannelIdentity p_UlTrChId
	} ,
	qualityTarget{
	bler_QualityValue -20
	}
	}

~~2.4.4~~2.4.3 c_DL_AddReconfTransChInfoListDCCH_SRB2

Reason for change: This constraint was needed in order to add the dl_AddReconfTransChInfoList information element to the Radio Bearer Release message. This IE was required in order to set the TTI for the SRBs back to 10ms in the UE during the Radio Bearer Release procedure.

Summary of Change: Table added to suite.

Add ASN.1 Constraint Declaration:

Constraint Name	c_DL_AddReconfTransChInfoListDCCH_SRB2
ASN1 Type	DL_AddReconfTransChInfo2List
Derivation Path	
Encoding Variation	
Comments	
	Constraint Value

	{
	c_DL_AddReconfTransChInfo2(tsc_DL_DCH5,tsc_UL_DCH5)
	}

2.5 Modifications to tables added from RLCv143

2.5.1 ca_DL_DPCH_ModifyInfoActNow

Reason for change: Mismatch between ASN.1 field names in constraint and Type

Summary of Change: Rename field cellIdentity to cellId.

Change ASN.1 ASP Constraint Declaration from:

Constraint Name	ca_DL_DPCH_ModifyInfoActNow (p_CellId: INTEGER; p_PhyChId: INTEGER; p_DL_DPCHInfo: DL_DPCHInfo)
PDU Type	CPHY_RL_Modify_REQ
Derivation Path	
Comments	To modify down link physical channel DPCH.
	Constraint Value
	{ cellIdentity p_CellId, routingInfo physicalChannelIdentity: p_PhyChId, ratType fdd, modifyMessage { activationTime activateNow : NULL, physicalChannelInfo dPCHInfo : { dl_DPCHInfo p_DL_DPCHInfo } } }

To:

Constraint Name	ca_DL_DPCH_ModifyInfoActNow (p_CellId: INTEGER; p_PhyChId: INTEGER; p_DL_DPCHInfo: DL_DPCHInfo)
PDU Type	CPHY_RL_Modify_REQ
Derivation Path	
Comments	To modify down link physical channel DPCH.
	Constraint Value
	{ cellId p_CellId, routingInfo physicalChannelIdentity: p_PhyChId, ratType fdd, modifyMessage { activationTime activateNow : NULL, physicalChannelInfo dPCHInfo : { dl_DPCHInfo p_DL_DPCHInfo } } }

2.5.2 ca_UL_DPCH_ModifyInfoActNow

Reason for change: Mismatch between ASN.1 field names in constraint and Type

Summary of Change: Rename field cellIdentity to cellId.

Change ASN.1 ASP Constraint Declaration from:

Constraint Name	ca_UL_DPCH_ModifyInfoActNow (p_CellId: INTEGER; p_PhyChId: INTEGER; p_UL_DPCHInfo: UL_DPCH_Info)
PDU Type	CPHY_RL_Modify_REQ
Derivation Path	
Comments	To setup uplink physical channel DPDCH.
	Constraint Value
	{ cellIdentity p_CellId, routingInfo physicalChannelIdentity: p_PhyChId, ratType fdd, modifyMessage { activationTime activateNow : NULL, physicalChannelInfo dPCHInfo : { ul_DPCHInfo p_UL_DPCHInfo } } }

To:

Constraint Name	ca_UL_DPCH_ModifyInfoActNow (p_CellId: INTEGER; p_PhyChId: INTEGER; p_UL_DPCHInfo: UL_DPCH_Info)
PDU Type	CPHY_RL_Modify_REQ
Derivation Path	
Comments	To setup uplink physical channel DPDCH.
	Constraint Value
	{ cellId p_CellId, routingInfo physicalChannelIdentity: p_PhyChId, ratType fdd, modifyMessage { activationTime activateNow : NULL, physicalChannelInfo dPCHInfo : { ul_DPCHInfo p_UL_DPCHInfo } } }

~~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:~~

~~To:~~

2.5.3 cs_RB_RelRLC

Reason for change: In the Radio Bearer Release message the TTI of the SRB needs to be set back to 10ms, the TFCS needs resetting to reflect the removal of the RAB

Summary of Change:

Change ASN.1 PDU Constraint Declaration from:

Constraint Name	cs_RB_RelRLC (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)
PDU Type	DL_CCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	Defined in TS 34.123-1 annex A condition A.1
	Constraint Value

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message radioBearerRelease : r3:{
    radioBearerRelease_r3 { --RadioBearerRelease_r3_IEs
      rrc_TransactionIdentifier p_RRC_TI,
      integrityProtectionModeInfo OMIT,
      cipheringModeInfo OMIT,
      activationTime p_ActivationTime,
      new_U_RNTI OMIT,
      new_C_RNTI OMIT,
      rrc_StateIndicator cell_DCH,
      utran_DRX_CycleLengthCoeff OMIT,
      cn_InformationInfo OMIT,
      ura_Identity OMIT,
      rab_InformationReconfigList OMIT,
      rb_InformationReleaseList p_RB_InformationReleaseList,
      rb_InformationAffectedList OMIT,
      dl_CounterSynchronisationInfo OMIT,
      ul_CommonTransChInfo OMIT,
      ul_deletedTransChInfoList c_UL_DeletedTransChInfo ( tsc_UL_DCH1 ),
      ul_AddReconfTransChInfoList OMIT,
      modeSpecificTransChInfo fdd : { cpch_SetID OMIT,
        addReconfTransChDRAC_Info OMIT
      },

      dl_CommonTransChInfo OMIT ,
      dl_DeletedTransChInfoList c_DL_DeletedTransChInfo_PS ( tsc_DL_DCH1),
      dl_AddReconfTransChInfoList OMIT,
      frequencyInfo p_Freqnfo,
      maxAllowedUL_TX_Power tsc_MaxAllowPwr,
      ul_ChannelRequirement ul_DPCH_Info : cb_UL_DPCH_Info(tsc_UL_DPDCH_SF_SRB, pl1 ,
p_UL_ScramblingCode ),
      modeSpecificPhysChInfo fdd :
      {
        dl_PDSCH_Information OMIT
      },
      dl_CommonInformation c_DL_CommonInformationRB_SetUp (tsc_DL_DPCH1_SFP_SRB ),
      dl_InformationPerRL_List c_DL_InformationPerRL ( p_PrimaryScramblingCode, tsc_DL_DPCH1_ChC_SRB,
tsc_DL_DPCH1_2ndScrC )
    },
    v3a0NonCriticalExtensions {
      radioBearerRelease_v3a0ext { new_DSCH_RNTI OMIT },
      nonCriticalExtensions OMIT
    }
  }
}
```

To:

Constraint Name	cs_RB_RelRLC (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)
PDU Type	DL_CCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comments	Defined in TS 34.123-1 annex A condition A.1

Constraint Value

```
{
  integrityCheckInfo p_IntegrityCheckInfo,
  message radioBearerRelease : r3:{
    radioBearerRelease_r3 { --RadioBearerRelease_r3_IEs
      rrc_TransactionIdentifier p_RRC_TI,
      integrityProtectionModeInfo OMIT,
      cipheringModeInfo OMIT,
      activationTime p_ActivationTime,
      new_U_RNTI OMIT,
      new_C_RNTI OMIT,
      rrc_StateIndicator cell_DCH,
      utran_DRX_CycleLengthCoeff OMIT,
      cn_InformationInfo OMIT,
      ura_Identity OMIT,
      rab_InformationReconfigList OMIT,
      rb_InformationReleaseList p_RB_InformationReleaseList,
      rb_InformationAffectedList OMIT,
      dl_CounterSynchronisationInfo OMIT,
      ul_CommonTransChInfo
      {
        tfc_Subset OMIT,
        prach_TFCS OMIT,
        modeSpecificInfo fdd: {
          ul_TFCS c_TFCS_Cmpl0_1_Tx ( c_PowerOffsetInfoHigher64k )
        }
      },
      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_SRB2,
      frequencyInfo p_Freqnfo,
      maxAllowedUL_TX_Power tsc_MaxAllowPwr,
      ul_ChannelRequirement ul_DPCH_Info : cb_UL_DPCH_Info(tsc_UL_DPDCH_SF_SRB, pl1 ,
p_UL_ScramblingCode ),
      modeSpecificPhysChInfo fdd :
      {
        dl_PDSCH_Information OMIT
      },
      dl_CommonInformation cd_DL_CommonInformationDCH_DPCH_Offset (tsc_DL_DPCH1_SFP_SRB ),
      dl_InformationPerRL_List c_DL_InformationPerRL ( p_PrimaryScramblingCode, tsc_DL_DPCH1_ChC_SRB,
tsc_DL_DPCH1_2ndScrC )
    },
    v3a0NonCriticalExtensions {
      radioBearerRelease_v3a0ext { new_DSCH_RNTI OMIT },
      nonCriticalExtensions OMIT
    }
  }
}
```

~~2.2.12~~2.5.4 **tc_7_2_3_22**

Reason for change: To ensure that all SDUs transmitted are received. To ensure that all uplink PDUs with the poll bit set that arrive after the measurement has been made are acknowledged.

Summary of Change:

Change test step from:

Test Case Name		tc_7_2_3_22			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
…		…..			
9		+pr_CloseUE_TestLoop((tcv_PayloadSize - 1) * 8)			
10		(tcv_NumPDUsTx:= 0, tcv_NumPollsRx:= 0, tcv_NumTimeouts:= 0)			
11		+ts_RLC_CalcTolerance(p_T)			(3)
…		…..			
14	TBS	(tcv_TestBody:= TRUE)			
15		REPEAT lt_TxAndRx(p_T) UNTIL [((tcv_NumPDUsTx >= (2 * p_T / tsc_TTI)) AND (tcv_NumPollsRx >= 2)) OR (tcv_InvalidTimeout = TRUE)]			(6)
16		+lt_CheckNumPolls			(7)
…		…..			
22		+lt_CheckPollBit(p_T)			(8)
23		? TIMEOUT t_TTI			(4)
…		…..			
42		[tcv_NumPollsRx > 2]			(19)
43	ERR1	[TRUE]		I	(20)
…		…..			
45	TBF4	[TRUE]		(F)	

To:

~~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:~~

~~To:~~

Test Case Name		tc_7_2_3_22			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
…		…..			
9		+pr_CloseUE_TestLoop((tcv_PayloadSize - 1) * 8)			
10		(tcv_NumPDUsTx:= 0, tcv_NumPDUsRx:= 0, tcv_NumPollsRx:= 0, tcv_NumTimeouts:= 0)			
11		+ts_RLC_CalcTolerance(p_T)			(3)
…		…..			
14	TBS	(tcv_TestBody:= TRUE)			
15		REPEAT lt_TxAndRx(p_T) UNTIL [((tcv_NumPDUsTx >= (2 * p_T / tsc_TTI)) AND (tcv_NumPollsRx >= 2) AND (tcv_NumPDUsRx = tcv_NumPDUsTx)) OR (tcv_InvalidTimeout = TRUE)]			(6)
16		+lt_AckLastPollOrTimeout(p_T)			
17		+lt_CheckNumPolls			(7)
…		…..			
23		+lt_CheckPollBit(p_T)			(8)
24		[BIT_TO_INT(tcv_AMD_PDU.seqNum) <> BIT_TO_INT(tcv_LastSeqNum)]			
25		(tcv_NumPDUsRx:= tcv_NumPDUsRx + 1, tcv_LastSeqNum := tcv_AMD_PDU.seqNum)			
26		[TRUE]			
27		? TIMEOUT t_TTI			(4)
…		…..			
46		[tcv_NumPollsRx > 2]			(19)
47		TM ! TxStatus	cas_StatusReq(tsc_RB_AM_7_RLC, cs_SF_Ack(BIT_TO_INT(tcv_AMD_PDU.seqNum) + 1), (2 * (tcv_PayloadSize + 2)) - 5)		
48	ERR1	[TRUE]		I	(20)
…		…..			
50	TBF4	[TRUE]		(F)	
		lt_AckLastPollOrTimeout(p_T : INTEGER)			
51		START t_WaitS(5)			
52		TM ? RxAMD(tcv_AMD_PDU:= RxAMD.data)	car_DataInd(tsc_RB_AM_7_RLC, cr_AMD_LI_Data(c_LIs1_7BitLI(tcv_PayloadSize - 1), *))		
53		+lt_CheckPollBit(p_T)			
54		CANCEL t_WaitS			
55		?TIMEOUT t_WaitS			

~~2.2.12~~2.5.5 ts_RRC_RB_RelRLC

Reason for change: To make the SS wait for a CNF indication before reordering the radio bearers. To ensure that the SS has reconfigured the radio bearers before attempting to receive a Radio Bearer Release Complete message from the UE.

Summary of Change:

Change test step from:

Test Case Name		ts_RRC_RB_RelRLC (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
…		…..			
3		+ lt_SendRAB_Rel			
4		+ ts_RRC_ReceiveRB_RelCmpl (tsc_CellA, tcv_TmpCellInfo.cellConfig)			
5		+ lt_SS_RadioBearerRel			
6		+ ts_SetCellCfg (p_CellId, cell_DCH_StandAloneSRB)			
…		…..			
15		[tcv_CN_Domain = cs_domain]			
16		AM ! RLC_AM_DATA_REQ	cas_RB_Release (tsc_CellDedicated, tsc_RB2, cs_RB_RelRLC (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_TmpCellInfo.frequencyInfo, tcv_TmpCellInfo.priScrmCode, tcv_TmpCellInfo.uL_ScramblingCode, c_RB_InformationRel10))		
17		[tcv_CN_Domain = ps_domain]			
18		AM ! RLC_AM_DATA_REQ	cas_RB_Release (tsc_CellDedicated, tsc_RB2, cs_RB_RelRLC (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_TmpCellInfo.frequencyInfo, tcv_TmpCellInfo.priScrmCode, tcv_TmpCellInfo.uL_ScramblingCode, c_RB_InformationRel20))		

To:

~~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:~~

~~To:~~

Test Case Name		ts_RRC_RB_RelRLC (p_CellId : INTEGER)			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
…		…..			
3		+ lt_SendRAB_Rel			
4		AM ? RLC_AM_DATA_CNF	car_AM_DataMuiCnf (tsc_CellDedicated, tsc_RB2, tsc_Mui)		
5		+ lt_SS_RadioBearerRel			
6		+ ts_RRC_ReceiveRB_RelCmpl (tsc_CellA, tcv_TmpCellInfo.cellConfig)			
7		+ ts_SetCellCfg (p_CellId, cell_DCH_StandAloneSRB)			
…		…..			
16		[tcv_CN_Domain = cs_domain]			
17		AM ! RLC_AM_DATA_REQ	cas_RB_ReleaseWithCnf (tsc_CellDedicated, tsc_RB2, tsc_Mui, cs_RB_RelRLC (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_TmpCellInfo.frequencyInfo, tcv_TmpCellInfo.priScrmCode, tcv_TmpCellInfo.uL_ScramblingCode, c_RB_InformationRel10))		
18		[tcv_CN_Domain = ps_domain]			
19		AM ! RLC_AM_DATA_REQ	cas_RB_ReleaseWithCnf (tsc_CellDedicated, tsc_RB2, tsc_Mui, cs_RB_RelRLC (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_ActTime, tcv_TmpCellInfo.frequencyInfo, tcv_TmpCellInfo.priScrmCode, tcv_TmpCellInfo.uL_ScramblingCode, c_RB_InformationRel20))		

3GPP TSG-T1~~/SIC~~ Meeting #20 *T1~~S~~ ⌘ 030928~~03xxxx~~*

Munich, Germany, 28 July – 1 August 2003

CR-Form-v7

CHANGE REQUEST

⌘	~~RRC~~ ~~ATS~~TS34.123-3	CR	134~~03xx xx~~	⌘ rev	1 ~~1~~	⌘	Current version:	3.2.1	⌘

*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 8.2.6.20
Source:	⌘	T1
Work item code:	⌘	***Date:*** ⌘ 18/07/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one 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 one 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 8.2.6.20 to RRCv321
Summary of change:	⌘	- 0 table(s) deleted from RRCv321 - 0 table(s) modified in RRCv321 - 3 new table(s) added from iWD-TRv311 WK20 of which - 2 table(s) have been modified For more details see below.
Consequences if not approved:	⌘	Test case 8.2.6.20 will not be added

Clauses affected:	⌘	N/A

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	
		X	Test specifications	
		X	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.

Anritsu

ANRITSU LIMITED

TSG-T W~~orking~~ G~~roup~~ 1 ~~SWG SIG~~ E-mail Approval

T1-03~~2~~0928~~(8.1.1.8)~~

Munich, Germany 28 July – 1 August 2003

Title	~~Changes to~~ Introducing test case 8.2.6.20~~8 required for approval~~to RRCv320
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 8.2.6.20 to RRCv321 by using iWD-TRv311_WK20 as the primary source of the new tables and applying only essential fixes to the TTCN.

This document details the changes needed to introduce test case 8.2.6.20 in to RRCv321. Only essential fixes to the TTCN are applied. The reference prose specification used is TS 34.123-1 (V5.4.0) with the following path covered:-

Domain: PS
Integrity: Enabled
Ciphering: Disabled

2 Changes required for test-case 8.2.6.208

2.1 Tables deleted from RRCv321

None

2.2 Tables modified in RRCv321

None

2.3 Tables added to RRCv321

2.3.1 Tables added from iWD-TRv311_WK20

cds_PhyChReconfDCH_ToURA_PCH
tc_8_2_6_20
ts_SS_ReconfDCH_ToFACH

2.3.2 New tables added

None

2.4 Modifications to tables added from iWD-TRv311_WK20

2.4.1 tc_8_2_6_20

Reason for change: URA update should be included in the Physical Channel Reconfiguration

Summary of Change: Change constraint reference on line 12 to include a parameter for URA Identity.

Change test case from:

Test Step Name		tc_8_2_6_20			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
…		…..			
		lt_LocalTest			
12		AM ! RLC_AM_DATA_REQ	cas_PhyChReconf (tsc_CellDedicated, tsc_RB2, cds_PhyChReconfDCH_ToURA_PCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_CellInfoA.frequencyInfo, tcv_CellInfoA.priScrmCode, tcv_CellInfoA.cRNTI)		step 1

			)		
13		+ts_RRC_ReceivePhyChReconfCmpl(tsc_CellA, tcv_CellInfoA.cellConfig			step 2

To:

Test Step Name		tc_8_2_6_20			
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
…		…..			
		lt_LocalTest			
12		AM ! RLC_AM_DATA_REQ	cas_PhyChReconf (tsc_CellDedicated, tsc_RB2, cds_PhyChReconfDCH_ToURA_PCH (tcv_CellIndInfo.dl_IntegrityCheckInfo, tcv_RRC_Ti, tcv_CellInfoA.ura_Identity, tcv_CellInfoA.frequencyInfo, tcv_CellInfoA.priScrmCode, tcv_CellInfoA.cRNTI))		step 1
13		+ts_RRC_ReceivePhyChReconfCmpl(tsc_CellA, tcv_CellInfoA.cellConfig			step 2

2.4.2 cds_PhyChReconfDCH_ToURA_PCH

Reason for change: URA update should be included in the Physical Channel Reconfiguration

Summary of Change: Add an additional parameter for URA Identity. This necessitates the constraint being defined in full rather than as a derived constraint. In the detailed change below only technical changes are shown in the constraint body.

Change constraint from:

Constraint Name	cds_PhyChReconfDCH_ToURA_PCH (p_IntegrityInfo: IntegrityCheckInfo ; p_RRC_Ti: RRC_TransactionIdentifier; p_FreqInfo: FrequencyInfo; p_PrimScramblingCode : PrimaryScramblingCode; p_NewC_RNTI : C_RNTI)
PDU Type	DL_DCCH_Message
Derivation Path	cbs_108_PhyChReconf64k_PS_DCH_ToFACH.
Constraint Value	
REPLACE message.physicalChannelReconfiguration.r3.physicalChannelReconfiguration_r3.rrc_StateIndicator BY ura_PCH, REPLACE message.physicalChannelReconfiguration.r3.physicalChannelReconfiguration_r3.utran_DRX_CycleLengthCoeff BY 3	

To

Constraint Name	cds_PhyChReconfDCH_ToURA_PCH (p_IntegrityInfo: IntegrityCheckInfo ; p_RRC_Ti: RRC_TransactionIdentifier; p_URA: URA_Identity; p_FreqInfo: FrequencyInfo; p_PrimScramblingCode : PrimaryScramblingCode; p_NewC_RNTI : C_RNTI)
PDU Type	DL_DCCH_Message
Derivation Path	
Constraint Value	
{	

```
    integrityCheckInfo p_IntegrityInfo,
    message physicalChannelReconfiguration : r3:{
      physicalChannelReconfiguration_r3   {   --PhysicalChannelReconfiguration_r3_IEs
          rrc_TransactionIdentifier   p_RRC_Ti,
          integrityProtectionModeInfo   OMIT,
          cipheringModeInfo   OMIT,
          activationTime   OMIT,
          new_U_RNTI   OMIT,
          new_C_RNTI   p_NewC_RNTI ,
          rrc_StateIndicator   ura_PCH,
          utran_DRX_CycleLengthCoeff   3,
          cn_InformationInfo   OMIT,
          ura_Identity p_URA,
          dl_CounterSynchronisationInfo  OMIT,
          frequencyInfo p_FreqInfo,
          maxAllowedUL_TX_Power  tsc_MaxAllowPwr,
          ul_ChannelRequirement   OMIT,

           modeSpecificInfo   fdd:
            {
              dl_PDSCH_Information  OMIT -- DL_PDSCH_Information
            },
           dl_CommonInformation   OMIT,
           dl_InformationPerRL_List  c_DL_InfoPerRL_DCH_OrFACH_ToFACH_PS
                                     (p_PrimScramblingCode ) --DL_InformationPerRL_List
      },
      v3a0NonCriticalExtensions OMIT
    }
}
```

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 01 August 2003

Tdoc ⌘T1-031016

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-3 CR 135** ⌘ **rev** **-** ⌘ Current version: **3.2.1** ⌘

*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 9.2.1 to NAS ATS V3.2.1
Source:	⌘	T1
Work item code:	⌘	N/A
Date:	⌘	16/07/03
Category:	⌘	**B**
Release:	⌘	R99

Use one 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 one 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 GCF package 2 NAS test case 9.2.1 to the approved NAS ATS V3.2.1
Summary of change:	⌘	This document lists all changes applied to test case 9.2.1 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:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	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.

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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.

3GPP TSG- T1 Meeting #20 **T1-031016**
Munich, Germany, 28 July – 01 August 2003

Title: **Changes to test case 9.2.1 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 9.2.1 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_9_2_1
Test Group:	MM/Authentication/
ATS Version:	iWD-TVB2002-03_D03wk24 + 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 9.2.1

4.1 Introduction

This section describes the changes required to make test case 9.2.1 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 ATS [1].

The ATS version used as basis was NAS_wk24.mp which is part of the iWD-TVB2002-03_D03wk24 release. This is the most recent ATS provided by MCC160 which contains GCF package 1 and 2 test cases.

The enclosed ATS [1] contains a number of additional changes (see list below) in common test steps which are required for other tests, but which are not applicable to test case 9.2.1:

WA#BasicM4037, WA#BasicM4038, WA#BasicM4039, WA#BasicM4100, WA#BasicM4105, WA#BasicM4107, WA#BasicM4125, WA#BasicM4126

4.2 Incorrect cell ID (WA#BasicM 4114)

Test step name	ts_GetRRC_MessageSN
Reason for change	All CRLC messages should use a cellId of "-1" (tsc_CellDedicated).
Summary of change	Changed CellId to tsc_CellDedicated.
Source of change	change already done in V3.21 release
Label	WA#BasicM4114

Test Step

Test Step Id:	ts_GetRRC_MessageSNg_Cell1(INTEGER)
Test Step Group Ref:	BasicM_Security_Steps1
Objective:	To Calculate the Message sequence numbers for RB0 to RB4 and store in TCV's.
Defaults:	
Comments:	

Ind	Label	Behaviour Description	Constraint Ref	Verdict	Comments
0		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB0)		YAMBasicM4114
1		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB0 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB0)		
2		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB1)		
3		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB1 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB1)		
4		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB2)		
5		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB2 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL, tcv_RRC_MSN_RB2_UL := CRLC_RRC_MessageSN_CNF.count_I_LSB_UL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB2)		
6		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB3)		
7		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB3 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB3)		
8		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB4)		
9		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB4 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB4)		

5 Branches executed in test case 9.2.1

The test case implementation executed in CS mode for NMO1, UE_OpMode A, Integrity activated, Ciphering disabled, AutoAttach off.

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 files 9_2_1-Logs\Index.html**
  This execution log files in HTML format show 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 9_2_1-pics-pixit.txt**
  Text file containing all PICS/PIXIT parameters used for testing.

7 References

[1] **T1-031017**
This archive comprises HTML Execution log files, PICS/PIXIT files and the TTCN MP file

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 01 August 2003

Tdoc ⌘T1-031018

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-3** **CR** **136** ⌘ **rev** **-** ⌘ Current version: **3.2.1** ⌘

*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 9.3.1 to NAS ATS V3.2.1
Source:	⌘	T1
Work item code:	⌘	N/A
Date:	⌘	16/07/2003
Category:	⌘	**B**
Release:	⌘	R99

Use one 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 one 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 GCF package 2 NAS test case 9.3.1 to the approved NAS ATS V3.2.1
Summary of change:	⌘	This document lists all changes applied to test case 9.3.1 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:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	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.

3GPP TSG- T1 Meeting #20 **T1-031018**
Munich, Germany, 28 July – 01 August 2003

Title: **Changes to test case 9.3.1 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 lists all the changes needed to correct problems in the TTCN implementation of test case 9.3.1 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_9_3_1
Test Group:	MM/Identification
ATS Version:	iWD-TVB2002-03_D03wk24 + 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 9.3.1

4.1 Introduction

This section describes the changes required to make test case 9.3.1 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 ATS [1].

The ATS version used as basis was NAS_wk24.mp which is part of the iWD-TVB2002-03_D03wk24 release. This is the most recent ATS provided by MCC160 which contains GCF package 1 and 2 test cases.

The enclosed ATS [1] contains a number of additional changes (see list below) in common test steps which are required for other tests, but which are not applicable to test case 9.3.1:

WA#BasicM4037, WA#BasicM4038, WA#BasicM4039, WA#BasicM4100, WA#BasicM4105, WA#BasicM4107, WA#BasicM4125, WA#BasicM4126

4.2 Incorrect cell ID (WA#BasicM4114)

Test step name	ts_GetRRC_MessageSN
Reason for change	All CRLC messages should use a cellId of "-1" (tsc_CellDedicated).
Summary of change	Changed CellId to tsc_CellDedicated.
Source of change	V3.21 release
Label	WA#BasicM4114

Test Step	
Test Step Id:	ts_GetRRC_MessageSNsp_CellId(INTEGER)
Test Step Group Ref:	BasicM_Security_Steps/
Objective:	To Calculate the Message sequence numbers for RB0 to RB4 and store in TCV's
Defaults:	
Comments:	

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
0		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB0)		WA#BasicM4114
1		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB0 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB0)		
2		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB1)		
3		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB1 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB1)		
4		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB2)		
5		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB2 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL, tcv_RRC_MSN_RB2_UL := CRLC_RRC_MessageSN_CNF.count_I_LSB_UL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB2)		
6		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB3)		
7		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB3 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB3)		
8		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB4)		
9		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB4 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB4)		

4.3 Incorrect iel (WA#NAS4006)

Constraint name	c_MobileIdIMEI_lv
Reason for change	Incorrect iel
Summary of change	changed from '09'O to '08'O
Source of change	this change was already reported in ATS V144, but seems to be forgotten in the week 24 ATS → it is included again in the V3.21 release
Label	WA#NAS4006

Structured Type Constraint Declaration	
Constraint Name:	c_MobileIdIMEI_lv
Group:	
Type Name:	MS_Identity_lv
Derivation Path:	
Encoding Variation:	
Comments:	Default IMEI

Element Name	Element Value	Type Enco...	Comments
iel	'08'O		IMEI consists of 15 digits WA#NAS4006
iDigit1	o_FirstDigit(px_IMEI_Def)		
oddEvenInd	'1'B		odd
typeOfId	'010'B		IMEI
otherDigits	o_OtherDigits(px_IMEI_Def)		

Detailed Comment:

5 Branches executed in test case 9.3.1

The test case implementation executed in CS mode for NMO1, UE_OpMode A, Integrity activated, Ciphering disabled, AutoAttach off.

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 files 9_3_1-Logs\Index.html**
  This execution log files in HTML format show 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 9_3_1-pics-pixit.txt**
  Text file containing all PICS/PIXIT parameters used for testing.

7 References

[1] **T1-031019**
This archive comprises HTML Execution log files, PICS/PIXIT files and the TTCN MP file

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 01 August 2003

Tdoc ⌘T1-031020

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-3 CR 137** ⌘ **rev** **-** ⌘ Current version: **3.2.1** ⌘

*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 9.4.5.2 to NAS ATS V3.2.1
Source:	⌘	T1
Work item code:	⌘	N/A
Date:	⌘	21/07/2003
Category:	⌘	**B**
Release:	⌘	R99

Use one 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 one 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 GCF package 2 NAS test case 9.4.5.2 to the approved NAS ATS V3.2.1
Summary of change:	⌘	This document lists all changes applied to test case 9.4.5.2 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:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	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.

3GPP TSG- T1 Meeting #20 **T1-031020**
Munich, Germany, 28 July – 01 August 2003

Title: **Changes to test case 9.4.5.2 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 lists all the changes needed to correct problems in the TTCN implementation of test case 9.4.5.2 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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6 Execution Log Files 6
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6.2 Nokia 3G UE 6
7 References 6

3 Verification Test Summary

Test Case:	TC_9_4_5_2
Test Group:	MM/LocationUpdating/Periodic
ATS Version:	iWD-TVB2002-03_D03wk24 + essential modifications
System Simulator used:	Rohde & Schwarz 3G system simulator CRTU-W
UE used:	Nokia 3G UE 6650 / Ericsson 3G UE
Verification Status:	PASS

4 Corrections required for test case 9.4.5.2

4.1 Introduction

This section describes the changes required to make test case 9.4.5.2 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 ATS [1].

The ATS version used as basis was NAS_wk24.mp which is part of the iWD-TVB2002-03_D03wk24 release. This is the most recent ATS provided by MCC160 which contains GCF package 1 and 2 test cases.

The enclosed ATS [1] contains a number of additional changes (see list below) in common test steps which are required for other tests, but which are not applicable to test case 9.4.5.2:

WA#BasicM4037, WA#BasicM4038, WA#BasicM4039, WA#BasicM4100, WA#BasicM4105, WA#BasicM4107, WA#BasicM4125, WA#BasicM4126

4.2 Incorrect cell ID (WA#BasicM4114)

Test step name	ts_GetRRC_MessageSN
Reason for change	All CRLC messages should use a cellId of "-1" (tsc_CellDedicated).
Summary of change	Changed CellId to tsc_CellDedicated.
Source of change	V3.21 release
Label	WA#BasicM4114

Test Step	
Test Step Id:	ts_GetRRC_MessageSNp_CellId : INTEGER)
Test Step Group Ref:	BasicM_Security_Steps/
Objective:	To Calculate the Message sequence numbers for RB0 to RB4 and store in TCV's
Defaults:	
Comments:	

Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
0		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB0)		WA#BasicM4114
1		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB0 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB0)		
2		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB1)		
3		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB1 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB1)		
4		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB2)		
5		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB2 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL, tcv_RRC_MSN_RB2_UL := CRLC_RRC_MessageSN_CNF.count_I_LSB_UL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB2)		
6		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB3)		
7		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB3 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB3)		
8		CRLC ! CRLC_RRC_MessageSN_REQ	cas_CRLC_RRC_MessageSN_REQ (tsc_CellDedicated, tsc_RB4)		
9		CRLC ? CRLC_RRC_MessageSN_CNF (tcv_RRC_MSN_RB4 := CRLC_RRC_MessageSN_CNF.count_I_LSB_DL)	car_CRLC_RRC_MessageSN_CNF (tsc_CellDedicated, tsc_RB4)		

4.3 Incorrect usage of timer t_Dly (WA#NAS4121)

Timer name	t_Dly1
Reason for change	General purpose timer t_Dly is incorrectly used in the test case. In several test steps the running timer is incorrectly restarted and used for other purposes than originally intended.
Summary of change	A new timer t_Dly1 was defined as another general purpose timer and used in the test body, see section 4.5 and 4.6
Source of change	new change
Label	WA#NAS4121

Timer Declarations

Group:

Timer Name	D...	...	Comments
t_Dly	5000	ms	general purpose delay timer
t_Dly1	5000	ms	general purpose delay timer WA#NAS4121
t_Guard	300	s	test case guard timer
t_T312	5	s	Timer to check physical channel establishment criteria
t_WaitMS	13500	ms	general wait timer
t_WaitS	15	s	general watch timer

Detailed Comment:

4.4 Guard timer too short (WA#NAS4152)

Test step name	Test body of 9_4_5_2
Reason for change	Specified t_Guard Timer is too short for this test case. The total execution time is approx. 30 minutes. In several cases the guard timer terminated the test before it was completed.
Summary of change	Doubled guard timer from 30*60 to 60*60 (1 hour).

Source of change	new change
Label	WA#NAS4152

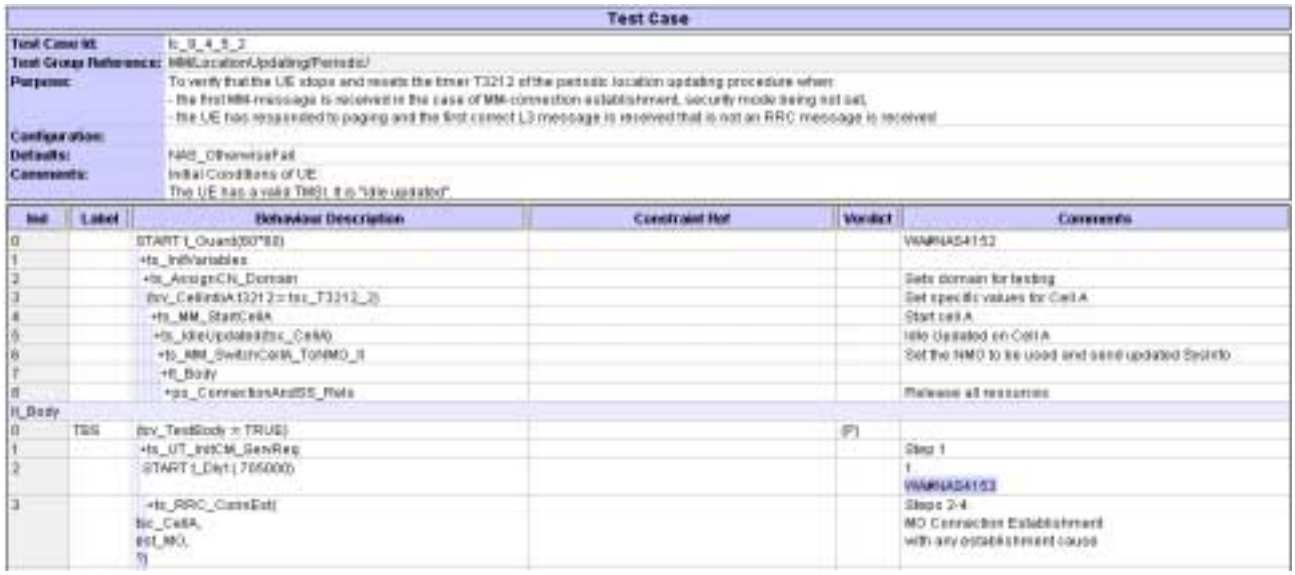
Test Case

Test Case Id:	tc_9_4_5_2
Test Group Reference:	MM/Location/Updating/Periodic/
Purpose:	To verify that the UE stops and resets the timer T3212 of the periodic location updating procedure when: - the first MM-message is received in the case of MM-connection establishment, security mode being not set, - the UE has responded to paging and the first correct L3 message is received that is not an RRC message is received
Configuration:	
Defaults:	NAS_OtherwiseFail
Comments:	Initial Conditions of UE: The UE has a valid TMSI. It is "Idle updated".

Ind	Label	Behaviour Description	Constraint Ref	Verdict	Comments
0		START t_Guard(60*60)			WA#NAS4152
1		+ts_InitVariables			
2		+ts_AssignCN_Domain			Sets domain for testing
3		(tcv_CellInfoA13212:= tsc_T3212_2)			Set specific values for Cell A
4		+ts_MM_StartCellA			Start cell A
5		+ts_IdleUpdated(tsc_CellA)			Idle Updated on Cell A
6		+ts_MM_SwitchCellA_ToNMO_II			Set the NMO to be used and send updated SysInfo
7		+tl_Body			
8		+po_ConnectionAndSS_Rels			Release all resources
tl_Body					

4.5 Incorrect timer usage (WA#NAS4153)

Test step name	Test body of 9.4.5.2
Reason for change	Incorrect Use of timer t_Dly, as it's being used within several local test steps therby leading to multiple timers with the same name.
Summary of change	Replaced t_Dly with a new timer t_Dly1, see section 4.3
Source of change	new change
Label	WA#NAS4153



Test Case

Test Case Id:	tc_9_4_5_2
Test Group Reference:	MM/Location/Updating/Periodic/
Purpose:	To verify that the UE stops and resets the timer T3212 of the periodic location updating procedure when: - the first MM-message is received in the case of MM-connection establishment, security mode being not set, - the UE has responded to paging and the first correct L3 message is received that is not an RRC message is received
Configuration:	
Defaults:	NAS_OtherwiseFail
Comments:	Initial Conditions of UE: The UE has a valid TMSI. It is "Idle updated".

Ind	Label	Behaviour Description	Constraint Ref	Verdict	Comments
0		START t_Guard(60*60)			WA#NAS4152
1		+ts_InitVariables			
2		+ts_AssignCN_Domain			Sets domain for testing
3		(tcv_CellInfoA13212:= tsc_T3212_2)			Set specific values for Cell A
4		+ts_MM_StartCellA			Start cell A
5		+ts_IdleUpdated(tsc_CellA)			Idle Updated on Cell A
6		+ts_MM_SwitchCellA_ToNMO_II			Set the NMO to be used and send updated SysInfo
7		+tl_Body			
8		+po_ConnectionAndSS_Rels			Release all resources
tl_Body					
0	TSS	(tcv_TestBody := TRUE)		(F)	
1		+ts_UT_InitCM_ServReq			Step 1
2		START t_Dly1(705000)			1 WA#NAS4153
3		+ts_RRC_ConnEst(tsc_CellA, est_MO, 1)			Steps 2-4 MO Connection Establishment with any establishment cause

4.6 Incorrect timer usage (WA#NAS4154)

Test step name	Test body of 9.4.5.2
Reason for change	Incorrect Use of timer t_Dly, as it's being used within several local test steps therby leading to multiple timers with the same name.
Summary of change	Replaced t_Dly with a new timer t_Dly1, see section 4.3
Source of change	new change
Label	WA#NAS4154

Test Case

Test Case Id:	tc_8_4_5_2
Test Group Reference:	MM/LocationUpdating/Periodic
Purpose:	To verify that the UE stops and resets the timer T3212 of the periodic location updating procedure when: - the first MM-message is received in the case of MM-connection establishment, security mode being not set. - the UE has responded to paging and the first correct L3 message is received that is not an RRC message is received.
Configuration:	
Defaults:	NAS_OtherwiseFail
Comments:	Initial Conditions of UE: The UE has a valid TMSI. It is "idle updated".

Ind	Label	Behaviour Description	Constraint Ref	Verdict	Comments
0		START t_Guard(60*60)			WAM/NAS/4152
1		+ts_InitVariables			
2		+ts_AssignCN_Domain			Sets domain for testing
3		(tcx_CellInfoA13212:= tsc_T3212_2)			Set specific values for Cell A
4		+ts_MM_StartCellA			Start cell A
5		+ts_IdleUpdatedtdc_CellA			Idle Updated on Cell A
6		+ts_MM_SwitchCellA_ToNMO_II			Set the NMO to be used and send updated SysInfo
7		+tl_Bode			
8		+po_ConnectionAndSS_Rels			Release all resources
tl_Body					
0	TBS	(tcx_TestBody := TRUE)		(P)	
1		+ts_UT_InitCN_ServReq			Step 1
2		START t_Dly1(705888)			1 WAM/NAS/4153
3		+ts_RRC_ConnEst(tsx_CellA, est_MO, ?)			Steps 2-4 MO Connection Establishment with any establishment cause
4		Dc?RRC_DataInd (tcx_Start := RRC_DataInd.start)	cw_InitDirectTransfer(tsx_CellDedicated, tsx_RB3, cb_CM_ServReqAny (tcx_CS_KeySeq))		Step 5 Any CM Service request
5		+ ts_SS_SecurityDownloadStart (tcx_CN_Domain, tcx_Start)			
6		Dc!RRC_DataReq	ca_DataReq(tsx_CellDedicated, tsx_RB3, c_CM_ServRej(tsx_RejCauseNwFail))		step 6 3 .CM Service Reject
7		+ts_RRC_ConnRel tsx_CellA, cell_Dch)			Steps 7-8 Connection Release
8		?TIMEOUT t_Dly1			Step 9 11 min 45 sec over WAM/NAS/4154
9		+tl_Continue			
tl_Continue					

5 Branches executed in test case 9.4.5.2

The test case implementation executed in CS mode for NMO1, UE_OpMode A, Integrity activated, Ciphering disabled, AutoAttach off.

6 Execution Log Files

6.1 Ericsson 3G UE

The Ericsson 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 files 9_4_5_2-Logs\Ericsson\Index.html**
  This execution log files in HTML format show 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 9_4_5_2-Ericsson-pics-pixit.doc**
  Text file containing all PICS/PIXIT parameters used for testing.

6.2 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 files 9_4_5_2-Logs\Nokia\Index.html**
  This execution log files in HTML format show 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 9_4_5_2-Nokia-pics-pixit.doc**
  Text file containing all PICS/PIXIT parameters used for testing.

7 References

[1] **T1-031021**
This archive comprises HTML Execution log files, PICS/PIXIT files and the TTCN MP file

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 01 August 2003

Tdoc ⌘T1-031022

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-3 CR 138** ⌘ **rev** **-** ⌘ Current version: **3.2.1** ⌘

*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 9.5.2 to NAS ATS V3.2.1
Source:	⌘	T1
Work item code:	⌘	N/A
Date:	⌘	16/07/2003
Category:	⌘	**B**
Release:	⌘	R99

Use one 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 one 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 GCF package 2 NAS test case 9.5.2 to the approved NAS ATS V3.2.1
Summary of change:	⌘	This document lists all changes applied to test case 9.5.2 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:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	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.

3GPP TSG- T1 Meeting #20 **T1-031022**
Munich, Germany, 28 July – 01 August 2003

Title: **Changes to test case 9.5.2 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 9.5.1 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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3 Verification Test Summary

Test Case:	TC_9_5_2
Test Group:	MM/MM_Connection
ATS Version:	iWD-TVB2002-03_D03wk24 + 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 9.5.2

4.1 Introduction

This section describes the changes required to make test case 9.5.2 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 ATS [1].

The ATS version used as basis was NAS_wk24.mp which is part of the iWD-TVB2002-03_D03wk24 release. This is the most recent ATS provided by MCC160 which contains GCF package 1 and 2 test cases.

The enclosed ATS [1] contains a number of additional changes (see list below) in common test steps which are required for other tests, but which are not applicable to test case 9.5.2:

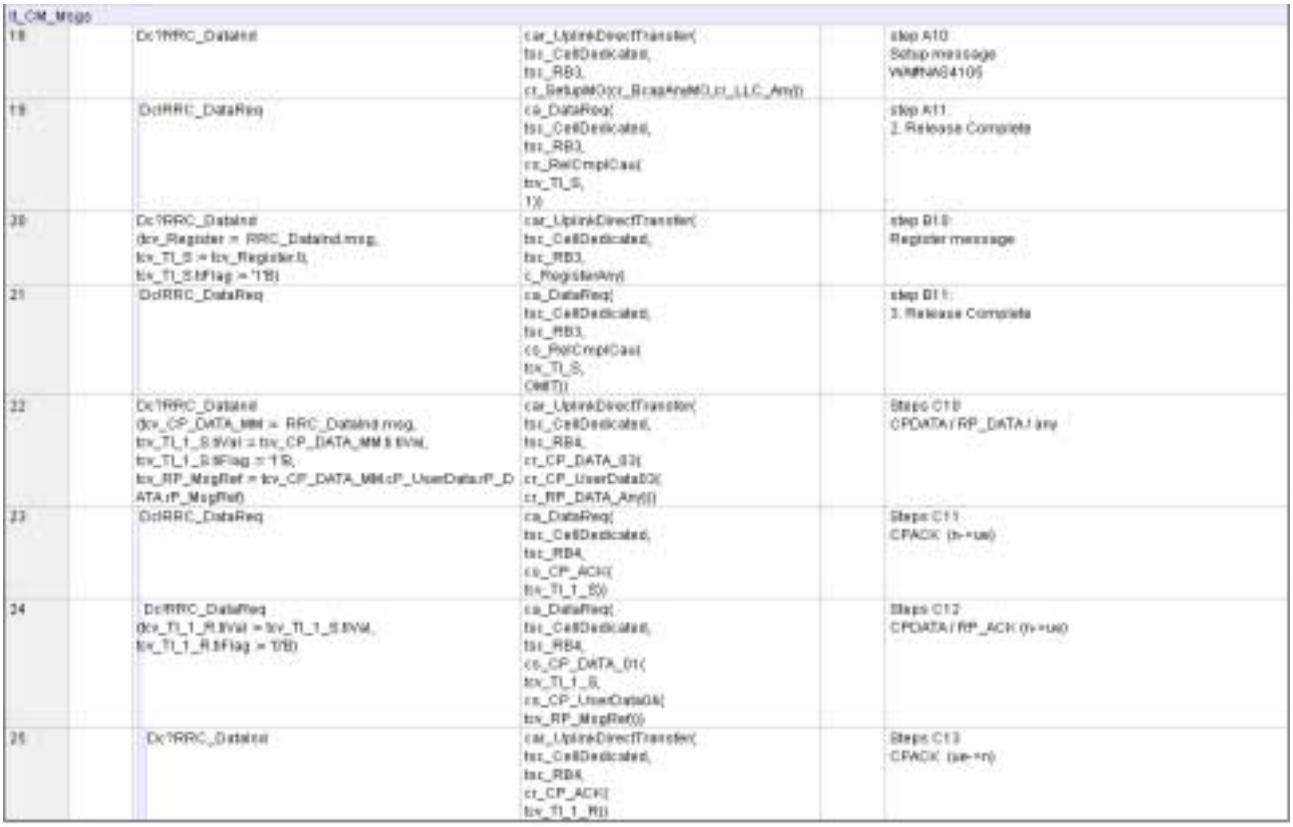
WA#BasicM4037, WA#BasicM4038, WA#BasicM4039, WA#BasicM4100, WA#BasicM4105, WA#BasicM4107, WA#BasicM4125, WA#BasicM4126

4.2 Incorrect cell ID (WA#BasicM4114)

Test step name	ts_GetRRC_MessageSN
Reason for change	All CRLC messages should use a cellId of "-1" (tsc_CellDedicated).
Summary of change	Changed CellId to tsc_CellDedicated.
Source of change	V3.21 release
Label	WA#BasicM4114

4.3 Indentation error (WA#NAS4104)

Test step name	Test body of 9.5.2
Reason for change	Indentation Error in Test Body.
Summary of change	Corrected indentation error from lines 23-25
Source of change	new change
Label	WA#NAS4104



4.4 Constraint cr_SetupMO_Any to cr_SetupMO (WA#NAS4105)

Test step name	Test body of 9.5.2, line 18, constraint cr_SetupMO_Any to cr_SetupMO
Reason for change	The field repeatInd is conditional for PDU "Setupul" & as it's not been sent by the UE, the decoder is not aware of the presence of BCAP I & BCAP II.
Summary of change	Changed cr_SetupMO_Any to cr_SetupMO(cr_BcapAnyMO,cr_LLC_Any) so as to avoid the field repeatInd.
Source of change	new change
Label	WA#NAS4105

II_CM_Msgs					
18		Dc?RRC_DataInd	car_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, cr_SetupMO(cr_BcapAnyMO,cr_LLC_An y))		step A10: Setup message WAIT(AS41.05
19		Dc!RRC_DataReq	ca_DataReq(tsc_CellDedicated, tsc_RB3, cs_RelCmplCau(tcv_TI_S, 1))		step A11: 2. Release Complete
20		Dc?RRC_DataInd dcv_Register := RRC_DataInd.msg, tcv_TI_S := tcv_Register.ti, tcv_TI_S.tiFlag := '1'B)	car_UplinkDirectTransfer(tsc_CellDedicated, tsc_RB3, c_RegisterAny)		step B10: Register message
21		Dc!RRC_DataReq	ca_DataReq(tsc_CellDedicated, tsc_RB3, cs_RelCmplCau(tcv_TI_S, OMIT))		step B11: 3. Release Complete

5 Branches executed in test case 9.5.2

The test case implementation executed the CS branch for NMO1, UE_OpMode A with Integrity activated, Ciphering disabled, AutoAttach off.

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 files 9_5_2-Logs\Index.html**
  This execution log files in HTML format show 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 9_5_2-pics-pixit.txt**
  Text file containing all PICS/PIXIT parameters used for testing.

7 References

[1] **T1-031023**
This archive comprises HTML Execution log files, PICS/PIXIT files and the TTCN MP file

3GPP TSG-T1~~/SIC~~ Meeting #21 *T1~~S~~ ⌘ 03114103~~xxxx~~*

Budapest, Hungary, 3–7 November 2003

CR-Form-v7

CHANGE REQUEST

⌘	~~RRC~~ ~~ATS~~TS34.123-3	CR	139~~03xx xx~~	⌘ rev	~~1~~	⌘	Current version:	3.2.1	⌘

*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 8.1.1.7~~8~~
Source:	⌘	T1
Work item code:	⌘	***Date:*** ⌘ 13~~25~~/0~~3~~8/2003
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one 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 one 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 8.1.1.7~~8~~ to RRCv321
Summary of change:	⌘	- 0 table deleted from RRCv321, - 0 tables modified in RRCv321, - 4 tables added from iWD-TVB2002-03-D03wk24, - 1 new table created. For more details see below.
Consequences if not approved:	⌘	Test case 8.1.1.7~~8~~ will not be added

Clauses affected:	⌘	N/A

Other specs affected: ⌘	Y	N		⌘
		X	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

Other comments:	⌘	This document supersedes T1-030648

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.

Anritsu

ANRITSU LIMITED

TSG-T W~~orking~~ G~~roup~~ 1 ~~SWG SIG~~ E-mail Approval T1-031141~~(8.1.1.8)~~

~~Luton, UK~~Budapest, Hungary 3rd – 7th November 2003~~19/3/2003~~

Title	~~Changes to~~ Introducing test case ~~TC~~ 8.~~–~~1.~~–~~1.7~~–~~8 required for approval~~to RRCv3~~2~~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 fix problems in the TTCN implementation of~~ introduce test case ~~TC_~~8.~~_~~1.~~_~~1.~~_~~7~~8~~ to RRCv321. With these changes applied the test case can be demonstrated to run on an independent 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 8.1.1.7~~8~~.

2 Changes required for test-case 8.1.1.7~~8~~

2.1 Tables deleted from RRCv321

None.

2.2 Tables modified in RRCv321

None.

2.3 Tables added to RRCv321

2.3.1 Tables added from iWD-TVB2002-03-D03wk24

Type	Name
Structured Type Constraint Declaration	cr_PktDataProtoAddrMO_Ipr_GotoState6_11_MO
ASN.1 Constraint Declaration	c_PagingType2_IMSI_GSM_MAP
ASN.1 PDU Constraint Declaration	cr_InitDirectTransfer_NotExpected
ASN.1 PDU Constraint Declaration	cs_108_PagingType2_IMSI_GSM_MAP

2.3.2 Other tables added

~~2.5.1~~2.3.2.1 tc_8_1_1_7

This table is based on iWD-TVB2002-03-D03wk24 but with the modifications described below.
~~8~~

Reason for change:

i) For the initial direct transfer in CS a TMSI is used rather than PTMSI.
ii) Wrong indentation for lines 21-24 (initial direct transfer in PS).

Summary of Change:

i) Change argument px_PTMSI_Def of tso o_OctToBit (parameter for constraint cr_108_InitDirectTransfer; line 19) by px_TMSI_Def,
ii) Increase indentation for lines 21-24 by one.

Change test case from:

Test Case Name		tc_8_1_1_7			
Nr	Label	Behaviour Description	Constraint Ref	Ver dict	Comments
		.....	.....		.....
18		[tcv_CN_Domain = cs_domain]			
19	TBP2	AM ? RLC_AM_DATA_IND	car_RRC_InitDirectTransfer(tsc_CellDedicated , tsc_RB3_DCCH_RRC, cr_108_InitDirectTransfer (tcv_CN_Domain, o_OctToBit (px_PTMSI_Def), *))	(P)	
20		+ ts_SS_RemoveConfigRRC_RB3(tsc_CellA)			
21		[tcv_CN_Domain = ps_domain]			
22		(tcv_RoutingParameterIMSIresponsePaging:= o_RoutingParameterIMSIResponsePaging(px_IMSI_Def))			
23	TBP3	AM ? RLC_AM_DATA_IND	car_RRC_InitDirectTransfer(	(P)	

			tsc_CellDedicated , tsc_RB3_DCCH_RRC, cr_InitDirectTransferGSM_MapRoutingIMSI_CStoPS (tcv_RoutingParameterIMSIresponsePaging, tcv_CN_Domain))		
24		+ ts_SS_RemoveConfigRRC_RB3(tsc_CellA)			

To:

Test Case Name		tc_8_1_1_78			
Nr	Label	Behaviour Description	Constraint Ref	Ver dict	Comments
		.....	.....		.....
18		[tcv_CN_Domain = cs_domain]			
195	TBP21	AM ? RLC_AM_DATA_IND ~~AM ? RLC_AM_DATA_IND~~	car_RRC_InitDirectTransfer(tsc_CellDedicated , tsc_RB3_DCCH_RRC, cr_108_InitDirectTransfer (tcv_CN_Domain, o_OctToBit (px_TMSI_Def), *)) ~~car_UL_DirectTransfer (tsc_CellDedicated , tsc_RB3_DCCH_RRC, cr_108_UplinkDirectTransfer (tcv_CN_Domain, *))~~	(P)~~(P)~~	~~step 3 CN node set to GSM-MAP, routing basis set to IMSI (as for paging)~~
20		+ ts_SS_RemoveConfigRRC_RB3(tsc_CellA)			
21		[tcv_CN_Domain = ps_domain]			
22		(tcv_RoutingParameterIMSIresponsePaging:= o_RoutingParameterIMSIResponsePaging(px_IMSI_Def))			
23	TBP3	AM ? RLC_AM_DATA_IND	car_RRC_InitDirectTransfer(tsc_CellDedicated , tsc_RB3_DCCH_RRC, cr_InitDirectTransferGSM_MapRoutingIMSI_CStoPS (tcv_RoutingParameterIMSIresponsePaging, tcv_CN_Domain))	(P)	
24~~16~~		+ ts_SS_RemoveConfigRRC_RB3(tsc_CellA)~~+ts_SS_RemoveConfigRRC_RB3 (tsc_CellA)~~			