

Source: T1
Title: TTCN test cases
Agenda item: 5.1.3
Document for: Approval

Background information

TTCN V 140 is based on the R99 March 2002 of the 3GPP core specifications. V140 was generated in July 2002 and uploaded at the 3GPP server for verification.

GCF chose TTCN V140 as Stage 1 basis. Therefore, T1 decided to approve test cases taking V140 as a starting point and adding the necessary changes in order to have executable test cases.

Three TTCN test cases - TC_8_1_1_1, TC_8_1_2_1 and TC_8_1_3_1 - in the GCF Package 1 have been successfully verified on two different named SS platforms against different real UEs from different named companies. The test log files and the verified test paths have been published in the T1/Sig e-mail reflector.

TC_8_1_1_1: Paging for Connection in idle mode
TC_8_1_2_1: RRC Connection Establishment in CELL_DCH state: Success
TC_8_1_3_1: RRC Connection Release in CELL_DCH state: Success

Test cases for approval

This document contains the changes necessary to the three mentioned test cases in V140 in order to be executable. These changes have been approved by T1 and are forwarded for T approval.

After the approval, a TTCN MP file will be generated including just these test cases and will be attached to TS 34.123-3 v3.0.0, Annex A.

Title	Changes to TC_8_1_2_1 required for approval
Source	Anritsu, Rohde & Schwarz
Agenda Item	
Document for	
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Overview

This document details the changes needed to fix problems in the TTCN implementation of TC_8_1_2_1. With these changes applied the test case can be demonstrated to run on two independent UE implementations. Only essential fixes to the TTCN are applied. This test case has the full test coverage intended in its prose specification TS 34.123-1 clause 8.1.2.1.

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Introduction

This document describes the changes required to make test case tc_8_1_2_1 (ATS-v140) run correctly with a real UE.

Changes required for test-case 8.1.2.1

Configuring S-CCPCH before PICH

Domain: Suite – TTCN RRCv140

Reason for change: The S-CCPCH has a configurable timing offset relative to the common P-CCPCH timing. For the PICH to be transmitted ahead of its corresponding S-CCPCH (TS25.211) it is required to know the timing of the S-CCPCH when configuring the PICH.

Summary of Change: In ts_SS_PCH_FACH_CCCH_Cfg move configuration of PICH to the end as shown below:

Change:

Test Step Name		ts_SS_PCH_FACH_CCCH_Cfg (p_CellId : INTEGER)			
Group		BasicM_SS_Configuration_Steps/			
Objective		To configure a secondary CCPCH (tsc_S_CCPCH1), then connect PCH and FACH to the secondary CCPCH .(34.108 cl. 4.2.1), finally to map PCCH to PCH and CCCH to FACH.			
Default		SS_Def			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			
2		px_RAT = fdd]			
3		CPHY!CPHY_RL_Setup_REQ	ca_PICH_Info(p_CellId, c_PichInfo, (tcv_TmpCellInfo.powerPICH))		PICH
4		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf(p_CellId, tsc_PICH1)		
5		CPHY!CPHY_RL_Setup_REQ	ca_sCCPCH_Info(p_CellId, tsc_S_CCPCH1, tsc_S_CCPCH_2ndScrCode, tsc_S_CCPCH1_ChC, tcv_TmpCellInfo.slotFormatsCCPCH1, (tcv_TmpCellInfo.powersCCPCH1), tcv_TmpCellInfo.timingsCCPCH1)		s-CCPCH1
6		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf(p_CellId, tsc_S_CCPCH1)		
7		CPHY!CPHY_TrCH_Config_REQ	ca_PCH_2_FACH_InfoActNow (p_CellId, tsc_S_CCPCH1)		connect PCH and FACH to s-CCPCH1
8		CPHY ? CPHY_TrCH_Config_CNF	ca_TrChCfgCnf(p_CellId, tsc_S_CCPCH1)		
9		CMAC! CMAC_Config_REQ	ca_CMAC_CfgInfo (p_CellId, tsc_S_CCPCH1, c_UE_Info (tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI), c_TrChInfoPCH_FACH, c_TrLogMappingPCH_FACH_CellDCH)		map PCCH to PCH
10		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf(p_CellId, tsc_S_CCPCH1)		
11	ERR1	[px_RAT = tdd]			
12	ERR2	[TRUE]			

to:

Test Step Name		ts_SS_PCH_FACH_CCCH_Cfg (p_CellId : INTEGER)			
Group		BasicM_SS_Configuration_Steps/			
Objective		To configure a secondary CCPCH (tsc_S_CCPCH1), then connect PCH and FACH to the secondary CCPCH .(34.108 cl. 4.2.1), finally to map PCCH to PCH and CCCH to FACH.			
Default		SS_Def			

Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			
2		[px_RAT = fdd]			
3		CPHY!CPHY_RL_Setup_REQ	ca_sCCPCH_Info(p_CellId, tsc_S_CCPCH1, tsc_S_CCPCH1_2ndScrCode, tsc_S_CCPCH1_ChC, tcv_TmpCellInfo.slotFormatsCCPCH1, (tcv_TmpCellInfo.powersCCPCH1), tcv_TmpCellInfo.timingsCCPCH1)		s-CCPCH1
4		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf(p_CellId, tsc_S_CCPCH1)		
5		CPHY!CPHY_TrCH_Config_REQ	ca_PCH_2_FACH_InfoActNow (p_CellId, tsc_S_CCPCH1)		connect PCH and FACH to s-CCPCH1
6		CPHY ? CPHY_TrCH_Config_CNF	ca_TrChCfgCnf(p_CellId, tsc_S_CCPCH1)		
7		CMAC ! CMAC_Config_REQ	ca_CMAC_CfgInfo (p_CellId, tsc_S_CCPCH1, c_UE_Info (tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI), c_TrChInfoPCH_FACH, c_TrLogMappingPCH_FACH_CellDCH)		map PCCH to PCH
8		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf(p_CellId, tsc_S_CCPCH1)		
9		CPHY!CPHY_RL_Setup_REQ	ca_PICH_Info(p_CellId, c_PichInfo, (tcv_TmpCellInfo.powerPICH))		PICH
10		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf(p_CellId, tsc_PICH1)		
11	ERR1	[px_RAT = tdd]			
12	ERR2	[TRUE]			

Consequence if not approved: PICH cannot be configured.

RB Identity

Domain: Suite – TTCN RRCv140

Reason for change: In ca_SysInfoCfgCnf, ca_TR_DataReq and car_RRC_ConnReq respectively the Radio Bearer Identity type (RB_Type) does not support negative values. Since the Radio Bearer Identity can be negatives a more suitable type need to be used. For example by using the ASN.1 type SS_RB_Identity (which maps into the integer range [-31..32]) will solve the problem.

Summary of Change: Change the RB_Type by SS_RB_Identity type in the 3 constraints (ca_SysInfoCfgCnf, ca_TR_DataReq and car_RRC_ConnReq) as follows:

1) Change:

Constraint Name	ca_SysInfoCfgCnf(p_CellId: INTEGER; p_RB_Identity: RB_Identity)
ASP Type	CMAC_SYSINFO_Config_CNF
Derivation Path	
Comment	
	{ cellIdentity p_CellId, routingInfo rB_Identity : p_RB_Identity }

To:

Constraint Name	ca_SysInfoCfgCnf(p_CellId: INTEGER; p_RB_Identity: SS_RB_Identity)
ASP Type	CMAC_SYSINFO_Config_CNF
Derivation Path	
Comment	
	{ cellIdentity p_CellId, routingInfo rB_Identity : p_RB_Identity }

2) Change:

Constraint Name	ca_TR_DataReq(p_CellId : INTEGER; p_RB : RB_Identity ; p_Message : BCCH_BCH_Message)
ASP Type	RLC_TR_DATA_REQ
Derivation Path	
Comment	
	{ cellId p_CellId, routingInfo rB_Identity : p_RB , tM_message bCCH_BCH_Message : p_Message }

To:

Constraint Name	ca_TR_DataReq(p_CellId : INTEGER; p_RB : SS_RB_Identity ; p_Message : BCCH_BCH_Message)
ASP Type	RLC_TR_DATA_REQ
Derivation Path	
Comment	
	{ cellId p_CellId, routingInfo rB_Identity : p_RB , tM_message bCCH_BCH_Message : p_Message }

3) Change:

Constraint Name	car_RRC_ConnReq(p_CellId: INTEGER; p_RB_Id: RB_Identity; p_Pdu: UL_CCCH_Message)
ASP Type	RLC_TR_DATA_IND
Derivation Path	
Comment	
	{ cellId p_CellId, routingInfo rB_Identity: p_RB_Id, tM_message uL_CCCH_Message : p_Pdu }

To:

Constraint Name	car_RRC_ConnReq(p_CellId: INTEGER; p_RB_Id: SS_RB_Identity; p_Pdu: UL_CCCH_Message)
ASP Type	RLC_TR_DATA_IND
Derivation Path	
Comment	
	{ cellId p_CellId, routingInfo rB_Identity: p_RB_Id, tM_message uL_CCCH_Message : p_Pdu }

Consequence if not approved: Negative values for RB Ids will cause test case to fail.

Change to CRLC configuration for UL

Domain: Suite – TTCN RRCv140

Reason for change: Test step ts_SS_RB0_Cfg for UL channel configuration uses the constraint ca_RB_Tm_UL_Info. This constraint need to includes p_PayloadSize which is required by the DL channel.

Summary of Change: Changes are illustrated below::

1) Change Constraint Definition from:

Constraint Name	ca_RB_TM_UL_Info(p_CellId: INTEGER; p_RB_Id: INTEGER; p_LogChMapping: RB_LogCH_Mapping)
ASP Type	CRLC_Config_REQ
Derivation Path	
Comment	
	{ cellIdentity p_CellId, routingInfo rB_Identity: p_RB_Id, ratType fdd, configMessage setup : {

	<pre> sS_rlc_Info {sS_ul_RLC_Mode dl_TM_RLC_Mode :{ segmentationIndication TRUE } }, rB_LogCH_Mapping p_LogChMapping } </pre>
--	--

To:

Constraint Name	ca_RB_TM_UL_Info(p_CellId: INTEGER; p_RB_Id: INTEGER; p_PayloadSize: INTEGER; p_LogChMapping : RB_LogCH_Mapping)
ASP Type	CRLC_Config_REQ
Derivation Path	
Comment	
	<pre> { cellIdentity p_CellId, routingInfo rB_Identity: p_RB_Id, ratType fdd, configMessage setup : { sS_rlc_Info {sS_ul_RLC_Mode dl_TM_RLC_Mode :{ segmentationIndication TRUE }, sS_dl_RLC_Mode { dl_PayloadSize p_PayloadSize, dl_RLCModelInfo ul_TM_RLC_Mode :{ segmentationIndication TRUE } } }, rB_LogCH_Mapping p_LogChMapping } } </pre>

2) Change test step from:

Test Step Name	ts_SS_RB0_Cfg(p_CellId : INTEGER)				
Group	BasicM_SS_Configuration_Steps/				
Objective	to setup radio bearers : RB0 (the downlink is UM + CCCH + FACH + sCCPCH1 and uplink is TM + CCCH + RACH + PRACH).The configuration is adapted from 34.108 cl. 6.10.2.4.3 and 6.10.2.4.4				
Default	SS_Def				
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		.....	.....		.....
2		.....	.....
3		CRLC ! CRLC_Config_REQ	ca_RB_TM_UL_Info(p_CellId, tsc_RB0, {uLogicalChannelIdentity tsc_UL_CCCH5})		configure radio bearers (uplink): RB0 (TM + CCCH + RACH)
4		.....	.....

To:

Test Step Name	ts_SS_RB0_Cfg(p_CellId : INTEGER)				
Group	BasicM_SS_Configuration_Steps/				
Objective	to setup radio bearers : RB0 (the downlink is UM + CCCH + FACH + sCCPCH1 and uplink is TM + CCCH + RACH + PRACH).The configuration is adapted from 34.108 cl. 6.10.2.4.3 and 6.10.2.4.4				
Default	SS_Def				
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		.....	.....		.....
2		.....	.....
3		CRLC ! CRLC_Config_REQ	ca_RB_TM_UL_Info(p_CellId, tsc_RB0,166 {uLogicalChannelIdentity tsc_UL_CCCH5})		configure radio bearers (uplink): RB0 (TM +

					CCCH + RACH)
4		.....	.....

Consequence if not approved: The UL Channel cannot be configured and RBO configuration fails.

PowerPICH powerAICH

Domain: Suite – TTCN RRCv140

Reason for change: PowerPICH and powerAICH were being incorrectly calculated.

Summary of Change: Corrections to PowerPICH and powerAICH in both cb_SIB5_Def and cb_SIB6_Def:as follows:

1) Change:

Constraint Name	cb_SIB5_Def (p_CellInfo : CellInfoCfg)
ASP TYpe	SysInfoType5
Derivation Path	
Comments	Default system information block type 5
Constraint Value	
<pre> { sib6indicator TRUE, pich_PowerOffset (p_CellInfo.powerPICH - p_CellInfo.powerpCPICH), modeSpecificInfo fdd : { aich_PowerOffset (p_CellInfo.powerAICH - p_CellInfo.powerpCPICH) }, primaryCCPCH_Info OMIT, </pre>	

To:

Constraint Name	cb_SIB5_Def (p_CellInfo : CellInfoCfg)
ASP TYpe	SysInfoType5
Derivation Path	
Comments	Default system information block type 5
Constraint Value	
<pre> { sib6indicator TRUE, pich_PowerOffset (p_CellInfo.powerPICH), modeSpecificInfo fdd : { aich_PowerOffset (p_CellInfo.powerAICH) }, primaryCCPCH_Info OMIT, </pre>	

2) Change:

Constraint Name	cb_SIB6_Def (p_CellInfo : CellInfoCfg)
ASP TYpe	SysInfoType6
Derivation Path	
Comments	Default system information block type 6, used in connected mode.
Constraint Value	

```
{
  pich_PowerOffset ( p_CellInfo.powerPICH - p_CellInfo.powerCPICH ),
  modeSpecificInfo fdd : {
    aich_PowerOffset ( p_CellInfo.powerAICH - p_CellInfo.powerCPICH )
  },
  primaryCCPCH_Info OMIT,
  .....
  .....
```

To:

Constraint Name	cb_SIB6_Def (p_CellInfo : CellInfoCfg)
ASP TType	SysInfoType6
Derivation Path	
Comments	Default system information block type 6, used in connected mode.
Constraint Value	
<pre>{ pich_PowerOffset (p_CellInfo.powerPICH), modeSpecificInfo fdd : { aich_PowerOffset (p_CellInfo.powerAICH) }, primaryCCPCH_Info OMIT, </pre>	

Consequence if not approved: Out of range power values used for PICH and AICH leading to test case failure.

Omit uRNTI and cRNTI in CMAC_Config_REQ

Domain: Suite – TTCN RRCv140

Reason for change: The uRNTI and cRNTI are not needed to configure the MAC (CMAC_Config_REQ) for PCCPCH, SCCPCH1, PRACH1, DL_DPCH1 and UL_DPCH1 for the following reasons (see TS25.321V3.11.0 – Clause 9):

	P-CCPCH	S-CCPCH1	PRACH1	DL_DPCH1	UL_DPCH1
uRNTI	Only for DCCH when mapped onto common transport channels in downlink	Only when DTCH or DCCH is mapped to FACH	Never used in uplink	Only for DCCH when mapped onto common transport channels in downlink	Never used in uplink
cRNTI	BCCH mapped to BCH requires no MAC header.	Only when DTCH or DCCH is mapped to FACH	Only when DTCH or DCCH is mapped to RACH	Used on common channels only	Used on common channels only

Summary of Change: The parameter uRNTI and cRNTI need to be omitted in CMAC_Config_REQ for PCCPCH, SCCPCH1, PRACH1, DL_DPCH1 and UL_DPCH1. The Changes need to be as follows:

1) P-CCPCH

Change:

Test Step Name	ts_SS_BCH_SCH_CPICH_Cfg (p_CellId : INTEGER)				
Group					
Objective	To configure P-CCPCH, P-SCH, S-SCH and P-CPICH physical channels. To map BCH to P-PCCPCH, then to map logical channel BCCH to transport channel BCH.				
Default	SS_Def				
Comments	To configure P-CCPCH, P-SCH, S-SCH and P-CPICH physical channels and map BCH to P-PCCPCH, then to map logical channel BCCH to transport channel BCH.				
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

12				
13		CMAC!CMAC_Config_REQ	ca_CMAC_CfgInfo(p_CellId, tsc_P_CCPCH, c_UE_Info (tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI) , c_TrChInfoBCH1, c_TrLogMappingBCH1)	mapping BCCH to BCH
14				

To:

Test Step Name		ts_SS_BCH_SCH_CPICH_Cfg (p_CellId : INTEGER)			
Group					
Objective		To configure P-CCPCH, P-SCH, S-SCH and P-CPICH physical channels. To map BCH to P-PCCPCH, then to map logical channel BCCH to transport channel BCH.			
Default		SS_Def			
Comments		To configure P-CCPCH, P-SCH, S-SCH and P-CPICH physical channels and map BCH to P-PCCPCH, then to map logical channel BCCH to transport channel BCH.			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
12					
13		CMAC!CMAC_Config_REQ	ca_CMAC_CfgInfo(p_CellId, tsc_P_CCPCH, c_UE_Info (-,-) , c_TrChInfoBCH1, c_TrLogMappingBCH1)		mapping BCCH to BCH
14					

2) S-CCPCH1: Change modified table (ts_SS_PCH_FACH_CCCH_Cfg) of section 0 as follows:

From:

Test Step Name		ts_SS_PCH_FACH_CCCH_Cfg (p_CellId : INTEGER)			
Group		BasicM_SS_Configuration_Steps/			
Objective		To configure a secondary CCPCH (tsc_S_CCPCH1), then connect PCH and FACH to the secondary CCPCH .(34.108 cl. 4.2.1), finally to map PCCH to PCH and CCCH to FACH.			
Default		SS_Def			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			
2		px_RAT = fdd]			
3		CPHY!CPHY_RL_Setup_REQ	ca_sCCPCH_Info(p_CellId, tsc_S_CCPCH1, tsc_S_CCPCH_2ndScrCode, tsc_S_CCPCH1_ChC, tcv_TmpCellInfo.slotFormatsCCPCH1, (tcv_TmpCellInfo.powersCCPCH1), tcv_TmpCellInfo.timingsCCPCH1)		s-CCPCH1
4		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf(p_CellId, tsc_S_CCPCH1)		
5		CPHY!CPHY_TrCH_Config_REQ	ca_PCH_2_FACH_InfoActNow (p_CellId, tsc_S_CCPCH1)		connect PCH and FACH to s- CCPCH1
6		CPHY ? CPHY_TrCH_Config_CNF	ca_TrChCfgCnf(p_CellId, tsc_S_CCPCH1)		
7		CMAC ! CMAC_Config_REQ	ca_CMAC_CfgInfo (p_CellId, tsc_S_CCPCH1, c_UE_Info (tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI) , c_TrChInfoPCH_FACH, c_TrLogMappingPCH_FACH_CellDCH)		map PCCH to PCH
8		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf(p_CellId, tsc_S_CCPCH1)		
9		CPHY!CPHY_RL_Setup_REQ	ca_PICH_Info(p_CellId, c_PichInfo, (tcv_TmpCellInfo.powerPICH))		PICH
10		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf(p_CellId, tsc_PICH1)		
11	ERR1	[px_RAT = tdd]			
12	ERR2	[TRUE]			

to:

Test Step Name		ts_SS_PCH_FACH_CCCH_Cfg (p_CellId : INTEGER)			
Group		BasicM_SS_Configuration_Steps/			
Objective		To configure a secondary CCPCH (tsc_S_CCPCH1), then connect PCH and FACH to the secondary CCPCH .(34.108 cl. 4.2.1), finally to map PCCH to PCH and CCCH to FACH.			
Default		SS_Def			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			
2		px_RAT = fdd]			
3		CPHY!CPHY_RL_Setup_REQ	ca_sCCPCH_Info(p_CellId, tsc_S_CCPCH1, tsc_S_CCPCH_2ndScrCode, tsc_S_CCPCH1_ChC, tcv_TmpCellInfo.slotFormatsCCPCH1, (tcv_TmpCellInfo.powersCCPCH1), tcv_TmpCellInfo.timingsCCPCH1)		s-CCPCH1
4		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf(p_CellId, tsc_S_CCPCH1)		
5		CPHY!CPHY_TrCH_Config_REQ	ca_PCH_2_FACH_InfoActNow (p_CellId, tsc_S_CCPCH1)		connect PCH and FACH to s-CCPCH1
6		CPHY ? CPHY_TrCH_Config_CNF	ca_TrChCfgCnf(p_CellId, tsc_S_CCPCH1)		
7		CMAC ! CMAC_Config_REQ	ca_CMAC_CfgInfo (p_CellId, tsc_S_CCPCH1, c_UE_Info (-,-), c_TrChInfoPCH_FACH, c_TrLogMappingPCH_FACH_CellDCH)		map PCCH to PCH
8		CMAC ? CMAC_Config_CNF	ca_CMAC_CfgCnf(p_CellId, tsc_S_CCPCH1)		
9		CPHY!CPHY_RL_Setup_REQ	ca_PICH_Info(p_CellId, c_PichInfo, (tcv_TmpCellInfo.powerPICH))		PICH
10		CPHY?CPHY_RL_Setup_CNF	ca_RL_SetupCnf(p_CellId, tsc_PICH1)		
11	ERR1	[px_RAT = tdd]			
12	ERR2	[TRUE]			

3) PRACH1:

Change:

Test Step Name		ts_SS_RACH_CCCH_Cfg (p_CellId : INTEGER)			
Group					
Objective		To configure AICH and PRACH physical channels and connect RACH onto PRACH, then map one logical channel (CCCH) to RACH			
Default		SS_Def			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
8					
9		CMAC ! CMAC_Config_REQ	ca_CMAC_CfgInfo(p_CellId, tsc_PRACH1, c_UE_Info(tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI), cb_TrChInfoRACH1, cb_TrLogMappingRACH2)		
10					

to:

Test Step Name		ts_SS_RACH_CCCH_Cfg (p_CellId : INTEGER)			
Group					
Objective		To configure AICH and PRACH physical channels and connect RACH onto PRACH, then map one logical channel (CCCH) to RACH			
Default		SS_Def			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments

8		.....		
9		CMAC ! CMAC_Config_REQ	ca_CMAC_CfgInfo(p_CellId, tsc_PRACH1, c_UE_Info(-;-), cb_TrChInfoRACH1, cb_TrLogMappingRACH2)		
10		.....		

4) DL_DPCH1 and UL_DPCH1: Changes for both channels are in same test step, hence:
Change:

Test Step Name		ts_SS_1DCH_DCCH_Cfg (p_CellId : INTEGER)			
Group		BasicM_SS_Configuration_Steps/			
Objective		to configure physical channel DPCH1 and connect DCH5 to the physical channel, then map DCCH1-4 on to the DCH5 transport channel. Used for setting up stand-alone UL:13.6 DL:13.6 kbps SRBs			
Default		SS_Def			
Comments		The transport channel DCH5 carries only dedicated control channels. MAC-d is configured with cellId -1 (tsc_CellDedicated).			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			
2		px_RAT = fdd]			
...			
8		CMAC ! CMAC_Config_REQ	ca_CMAC_CfgInfo (tsc_CellDedicated, tsc_DL_DPCH1, c_UE_Info (tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI), c_TrChInfoDL_13_6_StandAlone, c_TrLogMappingDL_4DCCH)		3.
...			
14		CMAC ! CMAC_Config_REQ	ca_CMAC_CfgInfo (tsc_CellDedicated, tsc_UL_DPCH1, c_UE_Info (tcv_TmpCellInfo.uRNTI, tcv_TmpCellInfo.cRNTI), c_TrChInfoUL_13_6_StandAlone, c_TrLogMappingUL_4DCCH)		3.
...			
16	ERR1	[px_RAT = tdd]			
17	ERR2	[TRUE]			

to:

Test Step Name		ts_SS_1DCH_DCCH_Cfg (p_CellId : INTEGER)			
Group		BasicM_SS_Configuration_Steps/			
Objective		to configure physical channel DPCH1 and connect DCH5 to the physical channel, then map DCCH1-4 on to the DCH5 transport channel. Used for setting up stand-alone UL:13.6 DL:13.6 kbps SRBs			
Default		SS_Def			
Comments		The transport channel DCH5 carries only dedicated control channels. MAC-d is configured with cellId -1 (tsc_CellDedicated).			
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			
2		px_RAT = fdd]			
...			
8		CMAC ! CMAC_Config_REQ	ca_CMAC_CfgInfo (tsc_CellDedicated, tsc_DL_DPCH1, c_UE_Info (-;-), c_TrChInfoDL_13_6_StandAlone, c_TrLogMappingDL_4DCCH)		3.
...			
14		CMAC ! CMAC_Config_REQ	ca_CMAC_CfgInfo (tsc_CellDedicated, tsc_UL_DPCH1, c_UE_Info (-;-), c_TrChInfoUL_13_6_StandAlone, c_TrLogMappingUL_4DCCH)		3.
...			
16	ERR1	[px_RAT = tdd]			
17	ERR2	[TRUE]			

Consequence if not approved: ca_CMAC_CfgInfo will fail for those channels.

SIB11 & SIB12 cause problems

Domain: Suite – TTCN RRCv140

Reason for change: ETSI (Shicheng's email to the T1/SIG reflector 15/10/02) proposed a new version of SIB11 and SIB12 where the default values are omitted. Such changes are being incorporated for TTCN 150 but some relevant changes have been backfitted here.

Summary of Change: SIB11 and SIB12 are modified according to ETSI's proposal as illustrated below.

1) SIB11: change

Constraint Name	c_SIB11_Def (p_ActiveCellInfo, p_IntraCellInfo2, p_IntraCellInfo3, p_IntraCellInfo4, p_IntraCellInfo5, p_InterCellInfo6, p_InterCellInfo7, p_InterCellInfo8 : CellInfoCfg)
ASP TYpe	SysInfoType11
Derivation Path	
Comments	Default system information block type 11. To be used by cell A,B,C,G and H (5 intra and 3 inter)
Constraint Value	
<pre> { sib12indicator TRUE, measurementControlSysInfo { use_of_HCS hcs_not_used: { cellSelectQualityMeasure cpich_RSCP: { intraFreqMeasurementSysInfo { intraFreqMeasurementID 1, intraFreqCellInfoSI_List { removedIntraFreqCellList removeNoIntraFreqCells: NULL, newIntraFreqCellList { intraFreqCellID p_ActiveCellInfo.cellId, cellInfo { cellIndividualOffset 0, referenceTimeDifferenceToCell OMIT, modeSpecificInfo fdd: { primaryCPICH_Info { primaryScramblingCode p_ActiveCellInfo.priScrmCode }, readSFN_Indicator TRUE, tx_DiversityIndicator FALSE }, cellSelectionReselectionInfo OMIT }, }, { intraFreqCellID p_IntraCellInfo2.cellId, cellInfo { cellIndividualOffset 0, referenceTimeDifferenceToCell OMIT, modeSpecificInfo fdd: { primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo2.priScrmCode }, readSFN_Indicator TRUE, tx_DiversityIndicator FALSE }, cellSelectionReselectionInfo { q_OffsetS_N 0, maxAllowedUL_TX_Power 21, modeSpecificInfo fdd: { q_QualMin -24 , q_RxlevMin -39 -- IE*2+1 = -79 } } }, }, { intraFreqCellID p_IntraCellInfo3.cellId, cellInfo { cellIndividualOffset 0, referenceTimeDifferenceToCell OMIT, modeSpecificInfo fdd: { </pre>	

```

primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo3.priScrmCode },
readSFN_Indicator TRUE,
tx_DiversityIndicator FALSE
},
cellSelectionReselectionInfo {
  q_OffsetS_N 0,
  maxAllowedUL_TX_Power 21,
  modeSpecificInfo fdd :
  {
    q_QualMin -24 ,
    q_RxlevMin -39 -- IE*2+1 = -79
  }
}
},
{
intraFreqCellID p_IntraCellInfo4.cellId,
cellInfo {
  cellIndividualOffset 0,
  referenceTimeDifferenceToCell OMIT,
  modeSpecificInfo fdd : {
    primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo4.priScrmCode },
    readSFN_Indicator TRUE,
    tx_DiversityIndicator FALSE
  },
  cellSelectionReselectionInfo {
    q_OffsetS_N 0,
    maxAllowedUL_TX_Power 21,
    modeSpecificInfo fdd :
    {
      q_QualMin -24 ,
      q_RxlevMin -39 -- IE*2+1 = -79
    }
  }
},
{
intraFreqCellID p_IntraCellInfo5.cellId,
cellInfo {
  cellIndividualOffset 0,
  referenceTimeDifferenceToCell OMIT,
  modeSpecificInfo fdd : {
    primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo5.priScrmCode },
    readSFN_Indicator TRUE,
    tx_DiversityIndicator FALSE
  },
  cellSelectionReselectionInfo {
    q_OffsetS_N 0,
    maxAllowedUL_TX_Power 21,
    modeSpecificInfo fdd :
    {
      q_QualMin -24 ,
      q_RxlevMin -39 -- IE*2+1 = -79
    }
  }
}
}}
},
intraFreqMeasQuantity {
  filterCoefficient fc0,
  modeSpecificInfo fdd : {
    intraFreqMeasQuantity_FDD cpich_RSCP
  }
},
reportingInfoForCellDCH {
  intraFreqReportingQuantity {
    activeSetReportingQuantities {
      sfn_SFN_OTD_Type noReport,
      cellIdentity_reportingIndicator TRUE,
      cellSynchronisationInfoReportingIndicator FALSE,
      modeSpecificInfo fdd : {
        cpich_Ec_N0_reportingIndicator FALSE,
        cpich_RSCP_reportingIndicator TRUE,
        pathloss_reportingIndicator FALSE }
      },
  }
}
}

```

```

monitoredSetReportingQuantities {
  sfn_SFN_OTD_Type noReport,
  cellIdentity_reportingIndicator TRUE,
  cellSynchronisationInfoReportingIndicator TRUE,
  modeSpecificInfo fdd : {
    cpich_Ec_N0_reportingIndicator FALSE,
    cpich_RSCP_reportingIndicator TRUE,
    pathloss_reportingIndicator FALSE }
  }
},
measurementReportingMode {
  measurementReportTransferMode acknowledgedModeRLC,
  periodicalOrEventTrigger eventTrigger
},
reportCriteria intraFreqReportingCriteria : {
  eventCriteriaList {
    event e1a : {
      triggeringCondition activeSetAndMonitoredSetCells,
      reportingRange 5,
      w 1,
      reportDeactivationThreshold t2,
      reportingAmount ra4,
      reportingInterval ri4
    },
    hysteresis 0,
    timeToTrigger ttt640,
    reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
  },
  {
    event e1b : {
      triggeringCondition activeSetAndMonitoredSetCells,
      reportingRange 5,
      forbiddenAffectCellList OMIT,
      w 1,
      hysteresis 0,
      timeToTrigger ttt640,
      reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
    },
    {
      event e1c : {
        replacementActivationThreshold t3,
        reportingAmount ra4,
        reportingInterval ri4
      },
      hysteresis 0,
      timeToTrigger ttt640,
      reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
    }
  }
}
},
interFreqMeasurementSysInfo
{
  interFreqCellInfoSI_List {
    removedInterFreqCellList OMIT,
    newInterFreqCellList {
      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 {
          q_OffsetS_N 0,
          maxAllowedUL_TX_Power 21,
          modeSpecificInfo fdd :
          {
            q_QualMin -24 ,
            q_RxlevMin -39 -- IE*2+1 = -79
          }
        }
      }
    }
  }
}

```

```

    }
  },
  {
    interFreqCellID p_InterCellInfo7.cellId,
    frequencyInfo p_InterCellInfo7.frequencyInfo,
    cellInfo {
      cellIndividualOffset 0,
      referenceTimeDifferenceToCell OMIT,
      modeSpecificInfo fdd : {
        primaryCPICH_Info { primaryScramblingCode p_InterCellInfo7.priScrmCode },
        readSFN_Indicator TRUE,
        tx_DiversityIndicator FALSE
      },
      cellSelectionReselectionInfo {
        q_OffsetS_N 0,
        maxAllowedUL_TX_Power 21,
        modeSpecificInfo fdd :
        {
          q_QualMin -24 ,
          q_RxlevMin -39 -- IE*2+1 = -79
        }
      }
    },
  }
  {
    interFreqCellID p_InterCellInfo8.cellId,
    frequencyInfo p_InterCellInfo8.frequencyInfo,
    cellInfo {
      cellIndividualOffset 0,
      referenceTimeDifferenceToCell OMIT,
      modeSpecificInfo fdd : {
        primaryCPICH_Info { primaryScramblingCode p_InterCellInfo8.priScrmCode },
        readSFN_Indicator TRUE,
        tx_DiversityIndicator FALSE
      },
      cellSelectionReselectionInfo {
        q_OffsetS_N 0,
        maxAllowedUL_TX_Power 21,
        modeSpecificInfo fdd :
        {
          q_QualMin -24 ,
          q_RxlevMin -39 -- IE*2+1 = -79
        }
      }
    }
  }
}
}
}},
nonCriticalExtensions {}
}

```

to:

Constraint Name	c_SIB11_Def (p_ActiveCellInfo, p_IntraCellInfo2, p_IntraCellInfo3, p_IntraCellInfo4, p_IntraCellInfo5, p_InterCellInfo6, p_InterCellInfo7, p_InterCellInfo8 : CellInfoCfg)
ASP TYpe	SysInfoType11
Derivation Path	
Comments	Default system information block type 11. To be used by cell A,B,C,G and H (5 intra and 3 inter)
Constraint Value	
<pre> { sib12indicator TRUE, measurementControlSysInfo { use_of_HCS hcs_not_used: { cellSelectQualityMeasure cpich_RSCP : { intraFreqMeasurementSysInfo { intraFreqMeasurementID OMIT } intraFreqCellInfoSI_List { removedIntraFreqCellList removeNoIntraFreqCells : NULL, newIntraFreqCellList {} } } } } } </pre>	

```

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 OMIT,
  modeSpecificInfo fdd : {
    primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo2.priScrmCode },
    readSFN_Indicator TRUE,
    tx_DiversityIndicator FALSE
  },
  cellSelectionReselectionInfo {
    q_OffsetS_N OMIT,
    maxAllowedUL_TX_Power 21,
    modeSpecificInfo fdd :
    {
      q_QualMin -24 ,
      q_RxlevMin -39 -- IE*2+1 = -79
    }
  }
},
{
intraFreqCellID p_IntraCellInfo3.cellId,
cellInfo {
  cellIndividualOffset OMIT,
  referenceTimeDifferenceToCell OMIT,
  modeSpecificInfo fdd : {
    primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo3.priScrmCode },
    readSFN_Indicator TRUE,
    tx_DiversityIndicator FALSE
  },
  cellSelectionReselectionInfo {
    q_OffsetS_N OMIT,
    maxAllowedUL_TX_Power 21,
    modeSpecificInfo fdd :
    {
      q_QualMin -24 ,
      q_RxlevMin -39 -- IE*2+1 = -79
    }
  }
},
{
intraFreqCellID p_IntraCellInfo4.cellId,
cellInfo {
  cellIndividualOffset OMIT,
  referenceTimeDifferenceToCell OMIT,
  modeSpecificInfo fdd : {
    primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo4.priScrmCode },
    readSFN_Indicator TRUE,
    tx_DiversityIndicator FALSE
  },
  cellSelectionReselectionInfo {
    q_OffsetS_N OMIT,
    maxAllowedUL_TX_Power 21,
    modeSpecificInfo fdd :
    {
      q_QualMin -24 ,
      q_RxlevMin -39 -- IE*2+1 = -79
    }
  }
},
}

```



```

{
  intraFreqCellID p_IntraCellInfo5.cellId,
  cellInfo {
    cellIndividualOffset OMIT,
    referenceTimeDifferenceToCell OMIT,
    modeSpecificInfo fdd : {
      primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo5.priScrmCode },
      readSFN_Indicator TRUE,
      tx_DiversityIndicator FALSE
    },
    cellSelectionReselectionInfo {
      q_OffsetS_N OMIT,
      maxAllowedUL_TX_Power 21,
      modeSpecificInfo fdd :
      {
        {
          q_QualMin -24 ,
          q_RxlevMin -39 -- IE*2+1 = -79
        }
      }
    }
  }
},
intraFreqMeasQuantity {
  filterCoefficient OMIT,
  modeSpecificInfo fdd : {
    intraFreqMeasQuantity_FDD cpich_RSCP
  }
},
reportingInfoForCellDCH {
  intraFreqReportingQuantity {
    activeSetReportingQuantities {
      sfn_SFN_OTD_Type noReport,
      cellIdentity_reportingIndicator TRUE,
      cellSynchronisationInfoReportingIndicator FALSE,
      modeSpecificInfo fdd : {
        cpich_Ec_N0_reportingIndicator FALSE,
        cpich_RSCP_reportingIndicator TRUE,
        pathloss_reportingIndicator FALSE }
      },
    monitoredSetReportingQuantities {
      sfn_SFN_OTD_Type noReport,
      cellIdentity_reportingIndicator TRUE,
      cellSynchronisationInfoReportingIndicator TRUE,
      modeSpecificInfo fdd : {
        cpich_Ec_N0_reportingIndicator FALSE,
        cpich_RSCP_reportingIndicator TRUE,
        pathloss_reportingIndicator FALSE }
      }
    },
  measurementReportingMode {
    measurementReportTransferMode acknowledgedModeRLC,
    periodicalOrEventTrigger eventTrigger
  },
  reportCriteria intraFreqReportingCriteria : {
    eventCriteriaList {
      event e1a : {
        triggeringCondition activeSetAndMonitoredSetCells,
        reportingRange 5,
        w 1,
        reportDeactivationThreshold t2,
        reportingAmount ra4,
        reportingInterval ri4
      },
      hysteresis 0,
      timeToTrigger ttt640,
      reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
    },
    {
      event e1b : {
        triggeringCondition activeSetAndMonitoredSetCells,
        reportingRange 5,
        forbiddenAffectCellList OMIT,
        w 1},
      hysteresis 0,
      timeToTrigger ttt640,
    }
  }
}

```

```

        reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
    },
    {
        event e1c : {
            replacementActivationThreshold t3,
            reportingAmount ra4,
            reportingInterval ri4
        },
        hysteresis 0,
        timeToTrigger ttt640,
        reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
    }
}

},
interFreqMeasurementSysInfo
{
interFreqCellInfoSI_List {
    removedInterFreqCellList OMIT,
    newInterFreqCellList {{
        interFreqCellID p_InterCellInfo6.cellId,
        frequencyInfo p_InterCellInfo6.frequencyInfo,
        cellInfo {
            cellIndividualOffset OMIT,
            referenceTimeDifferenceToCell OMIT,
            modeSpecificInfo fdd : {
                primaryCPICH_Info { primaryScramblingCode p_InterCellInfo6.priScrmCode },
                readSFN_Indicator TRUE,
                tx_DiversityIndicator FALSE
            },
            cellSelectionReselectionInfo {
                q_OffsetS_N OMIT,
                maxAllowedUL_TX_Power 21,
                modeSpecificInfo fdd :
                {
                    q_QualMin -24 ,
                    q_RxlevMin -39 -- IE*2+1 = -79
                }
            }
        },
    },
    {
        interFreqCellID p_InterCellInfo7.cellId,
        frequencyInfo p_InterCellInfo7.frequencyInfo,
        cellInfo {
            cellIndividualOffset OMIT,
            referenceTimeDifferenceToCell OMIT,
            modeSpecificInfo fdd : {
                primaryCPICH_Info { primaryScramblingCode p_InterCellInfo7.priScrmCode },
                readSFN_Indicator TRUE,
                tx_DiversityIndicator FALSE
            },
            cellSelectionReselectionInfo {
                q_OffsetS_N OMIT,
                maxAllowedUL_TX_Power 21,
                modeSpecificInfo fdd :
                {
                    q_QualMin -24 ,
                    q_RxlevMin -39 -- IE*2+1 = -79
                }
            }
        },
    },
    {
        interFreqCellID p_InterCellInfo8.cellId,
        frequencyInfo p_InterCellInfo8.frequencyInfo,
        cellInfo {
            cellIndividualOffset OMIT,
            referenceTimeDifferenceToCell OMIT,
            modeSpecificInfo fdd : {
                primaryCPICH_Info { primaryScramblingCode p_InterCellInfo8.priScrmCode },
                readSFN_Indicator TRUE,
                tx_DiversityIndicator FALSE
            },
        },
    }
}
}

```



```

    }
  }
},
{
  intraFreqCellID p_IntraCellInfo4.cellId,
  cellInfo {
    cellIndividualOffset 0,
    referenceTimeDifferenceToCell OMIT,
    modeSpecificInfo fdd : {
      primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo4.priScrmCode },
      readSFN_Indicator TRUE,
      tx_DiversityIndicator FALSE
    },
    cellSelectionReselectionInfo {
      q_OffsetS_N 0,
      maxAllowedUL_TX_Power 21,
      modeSpecificInfo fdd :
      {
        q_QualMin -24 ,
        q_RxlevMin -39 -- IE*2+1 = -79
      }
    }
  },
}
{
  intraFreqCellID p_IntraCellInfo5.cellId,
  cellInfo {
    cellIndividualOffset 0,
    referenceTimeDifferenceToCell OMIT,
    modeSpecificInfo fdd : {
      primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo5.priScrmCode },
      readSFN_Indicator TRUE,
      tx_DiversityIndicator FALSE
    },
    cellSelectionReselectionInfo {
      q_OffsetS_N 0,
      maxAllowedUL_TX_Power 21,
      modeSpecificInfo fdd :
      {
        q_QualMin -24 ,
        q_RxlevMin -39 -- IE*2+1 = -79
      }
    }
  }
}
},
intraFreqMeasQuantity {
  filterCoefficient fc0,
  modeSpecificInfo fdd : {
    intraFreqMeasQuantity_FDD cpich_RSCP
  }
},
reportingInfoForCellDCH {
  intraFreqReportingQuantity {
    activeSetReportingQuantities {
      sfn_SFN_OTD_Type noReport,
      cellIdentity_reportingIndicator TRUE,
      cellSynchronisationInfoReportingIndicator FALSE,
      modeSpecificInfo fdd : {
        cpich_Ec_N0_reportingIndicator FALSE,
        cpich_RSCP_reportingIndicator TRUE,
        pathloss_reportingIndicator FALSE }
      },
    monitoredSetReportingQuantities {
      sfn_SFN_OTD_Type noReport,
      cellIdentity_reportingIndicator TRUE,
      cellSynchronisationInfoReportingIndicator TRUE,
      modeSpecificInfo fdd : {
        cpich_Ec_N0_reportingIndicator FALSE,
        cpich_RSCP_reportingIndicator TRUE,
        pathloss_reportingIndicator FALSE }
      }
    },
  measurementReportingMode {

```

```

measurementReportTransferMode acknowledgedModeRLC,
periodicalOrEventTrigger eventTrigger
},
reportCriteria intraFreqReportingCriteria : {
  eventCriteriaList {
    event e1a : {
      triggeringCondition activeSetAndMonitoredSetCells,
      reportingRange 5,
      forbiddenAffectCellList OMIT,
      w 1,
      reportDeactivationThreshold t2,
      reportingAmount ra4,
      reportingInterval noPeriodicalreporting
    },
    hysteresis 0,
    timeToTrigger ttt640,
    reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
  },
  {
    event e1b : {
      triggeringCondition activeSetAndMonitoredSetCells,
      reportingRange 5,
      w 1,
      hysteresis 0,
      timeToTrigger ttt640,
      reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
    },
    {
      event e1c : {
        replacementActivationThreshold t3,
        reportingAmount ra4,
        reportingInterval ri4
      },
      hysteresis 0,
      timeToTrigger ttt640,
      reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
    }
  }
}
},
interFreqMeasurementSysInfo
{
interFreqCellInfoSI_List {
  removedInterFreqCellList OMIT,
  newInterFreqCellList {
    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 {
      q_OffsetS_N 0,
      maxAllowedUL_TX_Power 21,
      modeSpecificInfo fdd :
      {
        q_QualMin -24 ,
        q_RxlevMin -39 -- IE*2+1 = -79
      }
    }
  },
}
{
  interFreqCellID p_InterCellInfo7.cellId,
  frequencyInfo p_InterCellInfo7.frequencyInfo,
  cellInfo {
    cellIndividualOffset 0,
    referenceTimeDifferenceToCell OMIT,
    modeSpecificInfo fdd : {
      primaryCPICH_Info { primaryScramblingCode p_InterCellInfo7.priScrmCode },

```

```

        readSFN_Indicator TRUE,
        tx_DiversityIndicator FALSE
    },
    cellSelectionReselectionInfo {
        q_OffsetS_N 0,
        maxAllowedUL_TX_Power 21,
        modeSpecificInfo fdd :
        {
            q_QualMin -24 ,
            q_RxlevMin -39 -- IE*2+1 = -79
        }
    }
},
{
    interFreqCellID p_InterCellInfo8.cellId,
    frequencyInfo p_InterCellInfo8.frequencyInfo,
    cellInfo {
        cellIndividualOffset 0,
        referenceTimeDifferenceToCell OMIT,
        modeSpecificInfo fdd : {
            primaryCPICH_Info { primaryScramblingCode p_InterCellInfo8.priScrmCode },
            readSFN_Indicator TRUE,
            tx_DiversityIndicator FALSE
        },
        cellSelectionReselectionInfo {
            q_OffsetS_N 0,
            maxAllowedUL_TX_Power 21,
            modeSpecificInfo fdd :
            {
                q_QualMin -24 ,
                q_RxlevMin -39 -- IE*2+1 = -79
            }
        }
    }
}
}
}},
nonCriticalExtensions {}
}

```

to:

Constraint Name	c_SIB12_Def (p_IntraCellInfo2, p_IntraCellInfo3, p_IntraCellInfo4, p_IntraCellInfo5, p_InterCellInfo6, p_InterCellInfo7, p_InterCellInfo8 : CellInfoCfg)
ASP TYPe	SysInfoType12
Derivation Path	
Comments	Default system information block type 12, used in connected mode. To be used by cell A,B,C,G and H (5 intra and 3 inter)
Constraint Value	
<pre> { measurementControlSysInfo { use_of_HCS hcs_not_used : { cellSelectQualityMeasure cpich_RSCP : { intraFreqMeasurementSysInfo { intraFreqMeasurementID OMIT } intraFreqCellInfoSI_List { removedIntraFreqCellList removeNoIntraFreqCells : NULL, newIntraFreqCellList { { intraFreqCellID p_IntraCellInfo2.cellId, cellInfo { cellIndividualOffset OMIT, referenceTimeDifferenceToCell OMIT, modeSpecificInfo fdd : { primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo2.priScrmCode }, readSFN_Indicator TRUE, tx_DiversityIndicator FALSE }, cellSelectionReselectionInfo { q_OffsetS_N OMIT, maxAllowedUL_TX_Power 21, } } } } } } } } } </pre>	

```

        modeSpecificInfo fdd :
        {
            q_QualMin -24 ,
            q_RxlevMin -39 -- IE*2+1 = -79
        }
    },
    {
        intraFreqCellID p_IntraCellInfo3.cellId,
        cellInfo {
            cellIndividualOffset OMIT,
            referenceTimeDifferenceToCell OMIT,
            modeSpecificInfo fdd : {
                primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo3.priScrmCode },
                readSFN_Indicator TRUE,
                tx_DiversityIndicator FALSE
            },
            cellSelectionReselectionInfo {
                q_OffsetS_N OMIT,
                maxAllowedUL_TX_Power 21,
                modeSpecificInfo fdd :
                {
                    q_QualMin -24 ,
                    q_RxlevMin -39 -- IE*2+1 = -79
                }
            }
        },
    {
        intraFreqCellID p_IntraCellInfo4.cellId,
        cellInfo {
            cellIndividualOffset OMIT,
            referenceTimeDifferenceToCell OMIT,
            modeSpecificInfo fdd : {
                primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo4.priScrmCode },
                readSFN_Indicator TRUE,
                tx_DiversityIndicator FALSE
            },
            cellSelectionReselectionInfo {
                q_OffsetS_N OMIT,
                maxAllowedUL_TX_Power 21,
                modeSpecificInfo fdd :
                {
                    q_QualMin -24 ,
                    q_RxlevMin -39 -- IE*2+1 = -79
                }
            }
        },
    {
        intraFreqCellID p_IntraCellInfo5.cellId,
        cellInfo {
            cellIndividualOffset OMIT,
            referenceTimeDifferenceToCell OMIT,
            modeSpecificInfo fdd : {
                primaryCPICH_Info { primaryScramblingCode p_IntraCellInfo5.priScrmCode },
                readSFN_Indicator TRUE,
                tx_DiversityIndicator FALSE
            },
            cellSelectionReselectionInfo {
                q_OffsetS_N OMIT,
                maxAllowedUL_TX_Power 21,
                modeSpecificInfo fdd :
                {
                    q_QualMin -24 ,
                    q_RxlevMin -39 -- IE*2+1 = -79
                }
            }
        }
    }
},
intraFreqMeasQuantity {
    filterCoefficient OMIT,
    modeSpecificInfo fdd : {

```

```

    intraFreqMeasQuantity_FDD cpich_RSCP
  }
},
reportingInfoForCellDCH {
  intraFreqReportingQuantity {
    activeSetReportingQuantities {
      sfn_SFN_OTD_Type noReport,
      cellIdentity_reportingIndicator TRUE,
      cellSynchronisationInfoReportingIndicator FALSE,
      modeSpecificInfo fdd : {
        cpich_Ec_N0_reportingIndicator FALSE,
        cpich_RSCP_reportingIndicator TRUE,
        pathloss_reportingIndicator FALSE }
      },
    monitoredSetReportingQuantities {
      sfn_SFN_OTD_Type noReport,
      cellIdentity_reportingIndicator TRUE,
      cellSynchronisationInfoReportingIndicator TRUE,
      modeSpecificInfo fdd : {
        cpich_Ec_N0_reportingIndicator FALSE,
        cpich_RSCP_reportingIndicator TRUE,
        pathloss_reportingIndicator FALSE }
      }
    },
  measurementReportingMode {
    measurementReportTransferMode acknowledgedModeRLC,
    periodicalOrEventTrigger eventTrigger
  },
  reportCriteria intraFreqReportingCriteria : {
    eventCriteriaList {
      event e1a : {
        triggeringCondition activeSetAndMonitoredSetCells,
        reportingRange 5,
        forbiddenAffectCellList OMIT,
        w 1,
        reportDeactivationThreshold t2,
        reportingAmount ra4,
        reportingInterval noPeriodicalreporting
      },
      hysteresis 0,
      timeToTrigger ttt640,
      reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
    },
    {
      event e1b : {
        triggeringCondition activeSetAndMonitoredSetCells,
        reportingRange 5,
        w 1},
        hysteresis 0,
        timeToTrigger ttt640,
        reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
      },
      {
        event e1c : {
          replacementActivationThreshold t3,
          reportingAmount ra4,
          reportingInterval ri4
        },
        hysteresis 0,
        timeToTrigger ttt640,
        reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
      }
    }
  }
},
interFreqMeasurementSysInfo
{
  interFreqCellInfoSI_List {
    removedInterFreqCellList OMIT,
    newInterFreqCellList {
      interFreqCellID p_InterCellInfo6.cellId,
      frequencyInfo p_InterCellInfo6.frequencyInfo,
      cellInfo {
        cellIndividualOffset OMIT

```



```

referenceTimeDifferenceToCell OMIT,
modeSpecificInfo fdd : {
  primaryCPICH_Info { primaryScramblingCode p_InterCellInfo6.priScrmCode },
  readSFN_Indicator TRUE,
  tx_DiversityIndicator FALSE
},
cellSelectionReselectionInfo {
  q_OffsetS_N OMIT
  maxAllowedUL_TX_Power 21,
  modeSpecificInfo fdd :
  {
    q_QualMin -24 ,
    q_RxlevMin -39 -- IE*2+1 = -79
  }
}
},
{
  interFreqCellID p_InterCellInfo7.cellId,
  frequencyInfo p_InterCellInfo7.frequencyInfo,
  cellInfo {
    cellIndividualOffset OMIT,
    referenceTimeDifferenceToCell OMIT,
    modeSpecificInfo fdd : {
      primaryCPICH_Info { primaryScramblingCode p_InterCellInfo7.priScrmCode },
      readSFN_Indicator TRUE,
      tx_DiversityIndicator FALSE
    },
    cellSelectionReselectionInfo {
      q_OffsetS_N OMIT
      maxAllowedUL_TX_Power 21,
      modeSpecificInfo fdd :
      {
        q_QualMin -24 ,
        q_RxlevMin -39 -- IE*2+1 = -79
      }
    }
  }
},
{
  interFreqCellID p_InterCellInfo8.cellId,
  frequencyInfo p_InterCellInfo8.frequencyInfo,
  cellInfo {
    cellIndividualOffset OMIT,
    referenceTimeDifferenceToCell OMIT,
    modeSpecificInfo fdd : {
      primaryCPICH_Info { primaryScramblingCode p_InterCellInfo8.priScrmCode },
      readSFN_Indicator TRUE,
      tx_DiversityIndicator FALSE
    },
    cellSelectionReselectionInfo {
      q_OffsetS_N OMIT
      maxAllowedUL_TX_Power 21,
      modeSpecificInfo fdd :
      {
        q_QualMin -24 ,
        q_RxlevMin -39 -- IE*2+1 = -79
      }
    }
  }
}
}
}},
nonCriticalExtensions {}
}

```

Consequence if not approved: Test case misaligned with 34.108.

SCCPCH Slot format pixit value Inconsistent with 34.108v3.8.0 13.6K standalone SRB
Domain: Suite – TTCN RRCv140

Reason for change: The S-CCPCH slot format pixit value is 4 whereas in 34.108v3.8.0 it is 8.

Summary of Change: px_SlotFormatsCCPCH1 pixit value need to be changed from 4 to 8. Also change comment in px_SlotFormatsCCPCH1 table.

Change:

Parameter Name	px_SlotFormatsCCPCH1
Type	SCCPCHSlotFormat
PICS/PXIT Ref	PIXIT Table B.1
Comments	channelization code for secondary CCPCH1 when spreading factor = 64, default value is 4. Default value: 4

to:

Parameter Name	px_SlotFormatsCCPCH1
Type	SCCPCHSlotFormat
PICS/PXIT Ref	PIXIT Table B.1
Comments	channelization code for secondary CCPCH1 when spreading factor = 64, default value is 8. Default value: 8

Consequence if not approved: Inconsistent implementation (TTCN) with specifications (34.108).

CRLC_Config_REQ Inconsistent with 34.108v3.8.0 13.6K standalone SRB

Domain: Suite – TTCN RRCv140

Reason for change: rrcConnectionSetup PDU (13.6K standalone SRB) has inconsistencies with 34.108 v3.80.

Summary of Change: The following changes are required:

1) ca_RB_AM_Info: change:

Constraint Name	ca_RB_AM_Info(p_CellId: INTEGER; p_RB_Id: INTEGER;p_TimerPollProhibit:TimerPollProhibit; p_Timer_poll: TimerPoll; p_PollSDU: Poll_SDU; p_PollWindow: PollWindow; p_LogChMapping : RB_LogCH_Mapping; p_PayLoad : INTEGER)
ASP TYPe	CRLC_Config_REQ
Derivation Path	
Comments	Used to setup AM RLC entity
Constraint Value	
<pre> { cellIdentity p_CellId, routingInfo rB_Identity: p_RB_Id, ratType fdd, configMessage setup : { sS_rlc_Info { sS_ul_RLC_Mode dl_AM_RLC_Mode :{ inSequenceDelivery TRUE, receivingWindowSize rw8, --from 34.123-1 dl_RLC_StatusInfo { timerStatusProhibit tsp200, -- from 34.123-1 timerEPC te200, missingPDU_Indicator TRUE -- from 34.123-1 } sS_dl_RLC_Mode { dl_PayloadSize p_PayLoad, </pre>	

```

ul_AM_RLC_Mode :{
    dl_RLCModeInfo
    transmissionRLC_Discard    maxDAT_Retransmissions : {
    maxDAT    dat4,
    timerMRW    te100,
    maxMRW    mm4
    },
    transmissionWindowSize    tw8,
    timerRST
    tr500,
    max_RST
    rst4,
    pollingInfo
    {
    timerPollProhibit    p_TimerPollProhbt,
    timerPoll    p_Timer_poll,
    poll_SDU    p_PollSDU,
    lastTransmissionPDU_Poll    TRUE,
    lastRetransmissionPDU_Poll    TRUE,
    pollWindow    p_PollWindw
    }
    }
    },
    rB_LogCH_Mapping    p_LogChMapping
    }
}
    
```

to:

Constraint Name	ca_RB_AM_Info(p_CellId: INTEGER; p_RB_Id: INTEGER;p_TimerPollProhbt :TimerPollProhibit; p_Timer_poll: TimerPoll; p_PollSDU: Poll_SDU; p_PollWindw: PollWindow; p_LogChMapping : RB_LogCH_Mapping; p_PayLoad : INTEGER)
ASP TYpe	CRLC_Config_REQ
Derivation Path	
Comments	Used to setup AM RLC entity
Constraint Value	
<pre> { cellIdentity p_CellId, routingInfo rB_Identity: p_RB_Id, ratType fdd, configMessage setup : { sS_rlc_Info { sS_ul_RLC_Mode dl_AM_RLC_Mode :{ inSequenceDelivery TRUE, receivingWindowSize rw128, --from 34.123-1 dl_RLC_StatusInfo { timerStatusProhibit tsp200, -- from 34.123-1 } } </pre>	

```

timerEPC OMIT;

missingPDU_Indicator TRUE -- from 34.123-1
}

sS_dl_RLC_Mode {
    dl_PayloadSize p_PayLoad,
    dl_RLCModeInfo
},

ul_AM_RLC_Mode :{
    transmissionRLC_Discard noDiscard : dat15;
    transmissionWindowSize tw128;
    tr500,
    rst4,
    timerRST
    max_RST
    pollingInfo
    {
        timerPollProhibit p_TimerPollProhbt,
        timerPoll p_Timer_poll,
        poll_SDU p_PollSDU,
        lastTransmissionPDU_Poll TRUE,
        lastRetransmissionPDU_Poll TRUE,
        pollWindow p_PollWindw
    }
}

rB_LogCH_Mapping p_LogChMapping
}
    
```

2) tsc_UL_DPDCH_SF_SRB: change:

Constant Name	tsc_UL_DPDCH_SF_SRB
Type	SpreadingFactor
Value	sf256
Comments	Channelization code for UL DPDCH for a stand-alone SRB connection

to:

Constant Name	tsc_UL_DPDCH_SF_SRB
Type	SpreadingFactor
Value	sf64
Comments	Channelization code for UL DPDCH for a stand-alone SRB connection

3) tsc_DL_DPCH1_SFP_SRB: change:

Constant Name	tsc_DL_DPCH1_SFP_SRB
Type	SF512_AndPilot
Value	sfd256:pb4
Comments	Spreading factor and pilot bits for tsc_DL_DPCH1 for a stand-alone SRB connection

to:

Constant Name	tsc_DL_DPCH1_SFP_SRB
Type	SF512_AndPilot
Value	sfd128:pb4
Comments	Spreading factor and pilot bits for tsc_DL_DPCH1 for a stand-alone SRB connection

1) tsc_DL_DPCH1_ChC_SRB: change:

Constant Name	tsc_DL_DPCH1_ChC_SRB
Type	SF512_AndCodeNumber
Value	sf256:0
Comments	Channelization code for tsc_DL_DPCH1 for a stand-alone SRB connection

to:

Constant Name	tsc_DL_DPCH1_ChC_SRB
Type	SF512_AndCodeNumber
Value	sf128:0
Comments	Channelization code for tsc_DL_DPCH1 for a stand-alone SRB connection

Consequence if not approved: Inconsistent implementation (TTCN) with specifications (34.108).

Ambiguous use of Wildcards causes Authentication Response Failure

Domain: Suite – TTCN RRCv140

Reason for change: Authentication response message fails TTCN ETS comparison. Errors were found in c_AuthRspExtAnyAss.

Firstly the field **iei** has value '?'O which could be expressed more meaningfully as '??'O for one OCTET STRING or more generally as ? to designate one OCTET STRING of any length.

Secondly the field **rES** need to be changed from '**'B to ?* as the ~~latter includes the OMIT situation~~ IE must be present.

Summary of Change: Change **iei** and **rES** fields in c_AuthRspExtAnyAss as follows:

Change:

Constraint Name	c_AuthRspExtAnyAss		
Structured Type	AuthRspExt		
Derivation Path			
Encoding Variation			
Comments	Constraint to be used in the assignment of a test case variable		
Element Name	Element Value	Element Encoding	Comments
iei	'00100001'B		'00100001'B
iei	'?'O		
rES	'**'B		

To:

Constraint Name	c_AuthRspExtAnyAss		
Structured Type	AuthRspExt		
Derivation Path			
Encoding Variation			
Comments	Constraint to be used in the assignment of a test case variable		
Element Name	Element Value	Element Encoding	Comments
iei	'00100001'B		'00100001'B
iei	?		
rES	?*		

Consequence if not approved: Authentication response message failure.

PIXIT qualifier logic error with respect to integrity and ciphering

Domain: Suite – TTCN RRCv140

Reason for change: Following the test step sequence:

ts_IdleUpdated->ts_MM_IdleUpdated->ts_MM_SecurityOn->ts_RRC_security

The test steps called are:

Test Step Name		ts_RRC_Security (p_CellId : INTEGER; p_OnOff : BOOLEAN; p_KC : KeyCipherng; p_IK : IntegrityKey; p_GSM_ck : GSM_CipherngKey; p_NewKey : BOOLEAN; p_CN_Domain : CN_DomainIdentity)			
Group		BasicM_Security_Steps/			
Objective		Configure and Activate (or deactivate) cipherng for all concerned RBs			
Default		RRC_Def1			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_SetTmpCellInfo (p_CellId)			
2		+lt_RRC_InitVariables			
3		+ts_SS_DownloadSecurityKey (p_CellId,p_KC,p_IK,p_GSM_ck,p_CN_Domain)			Suspend SRBs 1, 3 and 4
4		+ts_CRLC_SuspendSecurity (p_CellId)			
5		+lt_ActivateSecurity_DL_SS			
6		+lt_StartSecurity_UE			
7		+ts_CRLC_ResumeSecurity (p_CellId)			
		lt_StartSecurity_UE			
8				

Apart from ts_SetTmpCellInfo all the other test steps deal with security but are always called regardless of px_CipherngOnOff and px_IntegrityOnOff being set to TRUE or FALSE respectively. So a mechanism is needed to bypass the security steps when the Cipherng/Integrity flags are OFF.

Summary of Change: ts_RRC_security should be changed (from the above) to:

Test Step Name		ts_RRC_Security (p_CellId : INTEGER; p_OnOff : BOOLEAN; p_KC : KeyCipherng; p_IK : IntegrityKey; p_GSM_ck : GSM_CipherngKey; p_NewKey : BOOLEAN; p_CN_Domain : CN_DomainIdentity)			
Group		BasicM_Security_Steps/			
Objective		Configure and Activate (or deactivate) cipherng for all concerned RBs			
Default		RRC_Def1			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		px_CipherngOnOff OR px_IntegrityOnOff			
2		+ts_SetTmpCellInfo (p_CellId)			
3		+lt_RRC_InitVariables			
4		+ts_SS_DownloadSecurityKey (p_CellId,p_KC,p_IK,p_GSM_ck,p_CN_Domain)			Suspend SRBs 1, 3 and 4
5		+ts_CRLC_SuspendSecurity (p_CellId)			
6		+lt_ActivateSecurity_DL_SS			
7		+lt_StartSecurity_UE			
8		+ts_CRLC_ResumeSecurity (p_CellId)			
9		NOT px_CipherngOnOff AND NOT px_IntegrityOnOff			
		lt_StartSecurity_UE			
10				

Consequence if not approved: If Integrity and/or Ciphering are OFF (both Flags OFF) some security features are still enabled and cause problems.

UE transmits RACH before SS is ready causes failure

Domain: Suite – TTCN RRCv140

Reason for change: If the UE transmits a RACH preamble before the System simulator is ready the test switches to a default behaviour returning a failure. The proposed change below solves the problem. Also sending a paging a type1 message to inform UE of System information Changes at the start should be removed as UE need to read all system information when powered on.

Summary of Change: Test step forcing a delay of 5 seconds should be removed.

1) Removed forced 5 seconds delay, hence:

Change:

Test Step Name	ts_SendPage1_ModifySI (p_CellId:INTEGER; p_mib_valuetag: MIB_ValueTag) p_NewKey : BOOLEAN; p_CN_Domain : CN_DomainIdentity)				
Group	BasicM_Security_Steps/				
Objective	Transmit Paging Type 1 with IE "BCCH modification info" on the PCCH, to informed UE the change of System Information.				
Default	InitOtherwiseFail				
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_RRC_Delay(tsc_WaitBeforePaging)			Give delay before paging
2		+ts_CMAC_Pag1_Cfg(p_CellId)			
3		TM! RLC_TR_DATA_REQ	cas_PagingType1 (p_CellId, tsc_RB_PCCH, cs_RRC_PagingType1_ModifySI (p_mib_valuetag))		SS sends PAGING TYPE1 message containing IE "BCCH modification info"on the PCCH to inform UE the change of system information.

to:

Group	BasicM_Security_Steps/				
Objective	Transmit Paging Type 1 with IE "BCCH modification info" on the PCCH, to informed UE the change of System Information.				
Default	InitOtherwiseFail				
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		+ts_CMAC_Pag1_Cfg(p_CellId)			
2		TM! RLC_TR_DATA_REQ	cas_PagingType1 (p_CellId, tsc_RB_PCCH, cs_RRC_PagingType1_ModifySI (p_mib_valuetag))		SS sends PAGING TYPE1 message containing IE "BCCH modification info"on the PCCH to inform UE the

					change of system information.
--	--	--	--	--	-------------------------------

Consequence if not approved: Test case fails if RACH preamble is received before the system is ready to process.

Special LI for UM Downlink RLC

Domain: Suite – TTCN RRCv140

Reason for change: A special Length indicator is required for Downlink Unacknowledge mode RLC To signal the start of a PDU.

Summary of Change: Add a special LI field RLC_UM_DATA_REQ as follows:

1) Change:

Constraint Name	cas_RRC_ConnRelDCCH(p_CellId: INTEGER; p_RB_Id: INTEGER; p_Pdu: DL_DCCH_Message)
ASP TType	RLC_UM_DATA_REQ
Derivation Path	
Comments	
{	
cellId	p_CellId,
routingInfo	rB_Identity: p_RB_Id,
uM_message	dL_DCCH_Message : p_Pdu
}	

To:

Constraint Name	cas_RRC_ConnRelDCCH(p_CellId: INTEGER; p_RB_Id: INTEGER; p_Pdu: DL_DCCH_Message)
ASP TType	RLC_UM_DATA_REQ
Derivation Path	
Comments	
{	
cellId	p_CellId,
routingInfo	rB_Identity: p_RB_Id,
uM_message	dL_DCCH_Message : p_Pdu,
specialLI	FALSE
}	

2) Change:

Constraint Name	cas_RRC_ConnSetup(p_CellId: INTEGER; p_RB_Id: INTEGER; p_Pdu: DL_DCCH_Message)
ASP TType	RLC_UM_DATA_REQ
Derivation Path	
Comments	
{	
cellId	p_CellId,
routingInfo	rB_Identity: p_RB_Id,
uM_message	dL_DCCH_Message : p_Pdu
}	

To:

Constraint Name	cas_RRC_ConnSetup(p_CellId: INTEGER; p_RB_Id: INTEGER; p_Pdu: DL_DCCH_Message)
ASP TType	RLC_UM_DATA_REQ
Derivation Path	
Comments	


```
{
    cellId          p_CellId,
    routingInfo     rB_Identity: p_RB_Id,
    uM_message      dL_DCCH_Message : p_Pdu,
    specialLI       TRUE
}
```

3) Change:

Constraint Name	cas_RRC_ConnRelCCCH(p_CellId: INTEGER; p_RB_Id: INTEGER; p_Pdu: DL_CCCH_Message)
ASP TYpe	RLC_UM_DATA_REQ
Derivation Path	
Comments	
<pre>{ cellId p_CellId, routingInfo rB_Identity: p_RB_Id, uM_message dL_DCCH_Message : p_Pdu }</pre>	

To:

Constraint Name	cas_RRC_ConnRelCCCH (p_CellId: INTEGER; p_RB_Id: INTEGER; p_Pdu: DL_CCCH_Message)
ASP TYpe	RLC_UM_DATA_REQ
Derivation Path	
Comments	
<pre>{ cellId p_CellId, routingInfo rB_Identity: p_RB_Id, uM_message dL_DCCH_Message : p_Pdu, specialLI FALSE }</pre>	

4) Change:

ASPName	RLC_UM_DATA_REQ
PCO TYpe	DSAP
Comments	To request to transmit DATA using unacknowledged mode
<pre>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 } }</pre>	

To:

ASPName	RLC_UM_DATA_REQ
PCO TYpe	DSAP
Comments	To request to transmit DATA using unacknowledged mode

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
		};
	specialLI	BOOLEAN
}		

Consequence if not approved: DL UM data transfer will suffer and majority of test cases will not work.

Order of PCH and FACH Channels according to SIB5

Domain: Suite – TTCN RRCv140

Reason for change: CMAC_Config_Req (for S-CCPCH) requires that the Transport Channels Ids to follow the chronological order of PCH0, FACH0 and FACH1 to function correctly. This is the order in which they appear in SIB5.

Summary of Change: In c_TrChInfoPCH_FACH as follows:

Change:

Constraint Name	c_TrChInfoPCH_FACH
ASP TType	TrChInfo
Derivation Path	
Comments	For FDD mode only
	<pre> { dlconnectedTrChList { { trchid transportChannellInfo tsc_FACH2, c_FACH_TFS_PS }, { trchid transportChannellInfo tsc_PCH1, c_PCH_TFS }, { trchid transportChannellInfo tsc_FACH1, c_FACH_TFS } }, dlTFCS c_TFCS_CmplFACH_Tx (c_PowerOffsetInfoBelow64k) - - sent to SS } </pre>

to:

Constraint Name	c_TrChInfoPCH_FACH
ASP TType	TrChInfo
Derivation Path	
Comments	For FDD mode only
	<pre> { dlconnectedTrChList { { trchid transportChannellInfo tsc_PCH1, c_PCH_TFS }, { trchid transportChannellInfo tsc_FACH1, c_FACH_TFS }, { trchid transportChannellInfo tsc_FACH2, c_FACH_TFS_PS } }, dlTFCS c_TFCS_CmplFACH_Tx (c_PowerOffsetInfoBelow64k) - - sent to SS } </pre>

	}
--	---

Consequence if not approved: Inconsistency with SIB5.

Local area ID inconsistent with SIB1

Domain: Suite – TTCN RRCv140

Reason for change: tsc_LAC_Def, used in c_LocAreaIdDef_v, has value '0001' in SIB 1 it is hard coded as '0080'.

Summary of Change: Change hardcoded value '0080' in cb_SIB1_Def by test case constant tsc_LAC_Def. Also change value of tsc_LAC_Def from '0001'O to '0080'O as illustrated below.

1) Change:

Constraint Name	cb_SIB1_Def (p_CellInfo : CellInfoCfg)
ASP TType	SysInfoType1
Derivation Path	
Comments	MCC= '234', MNC='001', T3212= '00'H, ATT is on
	<pre> { cn_CommonGSM_MAP_NAS_SysInfo '0080'O, cn_DomainSysInfoList {{cn_DomainIdentity ps_domain, cn_Type gsm_MAP: '0000'O, cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_PS_DRX_CycleLength }, {cn_DomainIdentity cs_domain, cn_Type gsm_MAP: '1E01'O, cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_CS_DRX_CycleLength } }, </pre>

to:

Constraint Name	cb_SIB1_Def (p_CellInfo : CellInfoCfg)
ASP Type	SysInfoType1
Derivation Path	
Comments	MCC= '234', MNC='001', T3212= '00'H, ATT is on
	<pre> { cn_CommonGSM_MAP_NAS_SysInfo tsc_LAC_Def, cn_DomainSysInfoList {{cn_DomainIdentity ps_domain, cn_Type gsm_MAP: '0000'O, cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_PS_DRX_CycleLength }, {cn_DomainIdentity cs_domain, cn_Type gsm_MAP: '1E01'O, cn_DRX_CycleLengthCoeff p_CellInfo.dRX_CycleLength.cN_CS_DRX_CycleLength } }, </pre>

2) change:

Constant Name	tsc_LAC_Def
Type	OCTETSTRING
Value	'0001'O
Comments	

to:

Constant Name	tsc_LAC_Def
Type	OCTETSTRING
Value	00800
Comments	

Consequence if not approved: Test case cannot run.

Support for single RAT UE

Domain: Suite – TTCN RRCv140

Reason for change: Error in test case which prevents single RAT UEs being tested.

Summary of Change:

1) Change:

Constraint Name	c_InterSysMsgGSM
ASN1 TYPe	InterRAT_UE_RadioAccessCapabilityList
Derivation Path	
Encoding Variation	
Comments	
	{ gsm:? }

to:

Constraint Name	c_InterSysMsgGSM
ASN1 TYPe	InterRAT_UE_RadioAccessCapabilityList
Derivation Path	
Encoding Variation	
Comments	
	{ gsm: }

2) change:

Test Case Name	tc_8_1_2_1				
Group	RRC/RRC_ConnMgmt/				
Purpose	To confirm that the UE leaves the Idle Mode and correctly establishes signalling radio bearers on the DCCH. To confirm that the UE indicates the requested UE radio access capabilities and UE system specific capabilities (may be used by UTRAN e.g. to configure				
Configuration					
Default	RRC_DefConnEst				
Comments					
Selection Ref	FDD_Mode				
Description	RRC Connection Establishment in CELL_DCH state: Success				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
20				
21	TBP3	AM?RLC_AM_DATA_IND (tcv_StartList := RLC_AM_DATA_IND.aM_message.uL_D CCH_Message.message.rrcConnectionSetupComplete.startList)	car_RRC_ConnSetupCmpl (tsc_CellDedicated , tsc_RB2, cr_RRC_RrcConnSetupCmplRadioCap (tcv_RRC_Ti, cr_RadioAccessCapabilityDef(tcv_PDCP_Capability, tcv_DL_TurboSupport, tcv_UL_TurboSupport, tcv_SimultaneousSCCPCH_DPC H_Reception, {cipheringAlgorithmCap	(P)	step 6

			<pre> tcv_CellIndInfo.cipheringAlgorithm Capability, integrityProtectionAlgorithmCap tsc_IntegrProtAlgCap}), c_InterSysMsgGSM)) </pre>		
22		.....		

To:

Test Case Name	tc_8_1_2_1				
Group	RRC/RRC_ConnMgmt/				
Purpose	To confirm that the UE leaves the Idle Mode and correctly establishes signalling radio bearers on the DCCH. To confirm that the UE indicates the requested UE radio access capabilities and UE system specific capabilities (may be used by UTRAN e.g. to configure				
Configuration					
Default	RRC_DefConnEst				
Comments					
Selection Ref	FDD_Mode				
Description	RRC Connection Establishment in CELL_DCH state: Success				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
20		.....		
21	TBP3	<pre> AM?RLC_AM_DATA_IND (tcv_StartList := RLC_AM_DATA_IND.aM_message.uL_D CCH_Message.message.rrcConnectionSet upComplete.startList) </pre>	<pre> car_RRC_ConnSetupCmpl (tsc_CellDedicated , tsc_RB2, cr_RRC_RrcConnSetupCmplRadi oCap (tcv_RRC_Ti, cr_RadioAccessCapabilityDef(tcv_PDCP_Capability, tcv_DL_TurboSupport, tcv_UL_TurboSupport, tcv_SimultaneousSCCPCH_DPC H_Reception, {cipheringAlgorithmCap tcv_CellIndInfo.cipheringAlgorithm Capability, integrityProtectionAlgorithmCap tsc_IntegrProtAlgCap}),)) </pre>	(P)	step 6
22		.....		

Consequence if not approved: Single RAT UEs cannot be tested.

Initial Direct Transfer must be used

Domain: Suite – TTCN RRCv140

Reason for change: According to 3G core specifications (25.331) when initiating a signalling connection and to transfer a NAS message an Initial Direct Transfer message is send by the UE. The Uplink direct transfer message is used on all subsequent uplink NAS messages. The constraint car_UplinkDirectTransfer () in ts_NAS_ConnRejectMO must therefore be replaced by car_InitDirectTransfer ().

Summary of Change: Replace car_UplinkDirectTransfer by car_InitDirectTransfer in ts_NAS_ConnRejectMO under both cs domain and ps domain; as illustrated below.

Change:

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_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_ServiceRequest (c_ServiceType_v(?), c_MobileIdAny_lv))		SERVICE REQUEST
3			
4		[tcv_CN_Domain = cs_domain]			
5		Dc?RRC_DataInd	car_UplinkDirectTransfer (tsc_CellDedicated , tsc_RB3, cb_CM_ServReqAny)		Any CM SERVICE REQUEST
				

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_InitDirectTransfer (tsc_CellDedicated , tsc_RB3, cr_ServiceRequest (c_ServiceType_v(?), c_MobileIdAny_lv))		SERVICE REQUEST
3			
4		[tcv_CN_Domain = cs_domain]			
5		Dc?RRC_DataInd	car_InitDirectTransfer (tsc_CellDedicated , tsc_RB3, cb_CM_ServReqAny)		Any CM SERVICE REQUEST
				

Consequence if not approved: Test case does not work.

Changes from T1S-020762

Redundant statements in test step ts_SendSIB7

- Test step** ts_SendSIB7
- Reason for change** In line 1 test case variable tcv_SIB7 was initialised p_SIB which is absolutely identical to tcv_SIB7; this assignment is misleading and not necessary
- Summary of change** Statement tcv_SIB7 := p_SIB was removed

Changed ATS:

Test Step						
Test Step ID: ts_SendSIB7; p_SIB: SIB7Type7; p_CellId: INTEGER; p_Timing: INTEGER						
Test Step Group Ref: BasicM_SIB7Handling_SIBs/Default						
Objective: To deliver the SIB to SS						
Details: int(XSendSIB(a))						
Comments: Single SIB7 or concatenated with SIB3 or SIB4 or SIB16, default scheduling described in 3GPP TS 14.123-3 clause 9.4.3						
Inst	Label	Behaviour Description	Constraint Ref	Verdict	Comments	
1		tcv_Segs := a_SIB_SegmentList(a_SIB_PER_Encoding (sIB7: p_SIB7))		1		
2		tcv_Segs := segCount (tcv_Segs)		2		
3		ts_Schedule(p_CellId, 6, 2, p_Timing)		3		
4		CMAC7CMAC_SIBINFO_Confg_ONP	ca_SymbIOGConfig_CellId, Inc_PBS_BCCH)	4		
5		+R_ConcatSIB(sIB7)				
6		+R_ConcatSIB(sIB3)				
7		+R_ConcatSIB(sIB4)				
R_CompleteSIB(p_SIBType: SIB_Type)						

Incorrect release order of channels configured in the SS

- Test step** ts_SS_Rel
- Reason for change** The release order of channels configured in the SS was incorrect; all channels depending on P-CPICH have to be released before releasing P-CPICH
- Summary of change** The release order of physical channels was reversed considering the dependencies between channels: DPCH1 is released first, then PRACH + AICH, SCCPCH + PICH, P-CCPCH + SSCH + PSCH, PCPICH at last

Changed ATS:

Test Step					
Test Step ID:	TS_SS_Rel (a_Cell; INTE=CH)				
Test Step Group Ref:	BASKM_SS_Configuration_SRP01				
Objective:	To release all channels that are configured in the SS.				
Default:	SS_Def				
Comments:					
Id	Label	Behavior Description	Cons.	Verdict	Comments
0		+ ts_SetTmptCellCfg (p_Cell)			
1		{(ts_TmpCellRelCellCfg = cell_DCH_StandAloneSRB) OR (ts_TmpCellRelCellCfg = cell_DCH_StandAloneSRB_N sCell) OR (ts_TmpCellRelCellCfg = cell_DCH_Speed) OR (ts_TmpCellRelCellCfg = cell_DCH_B4HCS_RAB_SRB) OR (ts_TmpCellRelCellCfg = cell_DCH_57_B4CS_RAB_S R) OR (ts_TmpCellRelCellCfg = cell_DCH_B4HPS_RAB_SRB) OR (ts_TmpCellRelCellCfg = cell_RLC_DCH_AM_RAB_15 Ls) OR (ts_TmpCellRelCellCfg = cell_RLC_DCH_AM_RAB_TL s) OR (ts_TmpCellRelCellCfg = cell_RLC_DCH_UM_RAB_15 Ls) OR (ts_TmpCellRelCellCfg = cell_RLC_DCH_UM_RAB_RL ts) OR (ts_TmpCellRelCellCfg = cell_FQCP_AM_RAB) OR (ts_TmpCellRelCellCfg = cell_FQCP_UM_RAB) OR (ts_TmpCellRelCellCfg = cell_FQCP_AM_UM_RAB) O R (ts_TmpCellRelCellCfg = cell_DCH_MAC_3AM_PSI)}			
2		+ ts_SS_RelOPCH (p_Cell)			f
3		+ ts_ReleaseCommonCh			
4		+ ts_Release_BCCH			
5		+ ts_GetCellCfg (p_Cell; cell_NotConfigured)			

Incorrect length indication in c_AuthFailParamAny

Constraint name c_AuthFailParamAny

Reason for change Information element 'iel' defines the length of the following AUTS; the length '10' was incorrect: as a result the authentication failure message did not match

Summary of change Changed iel from '10' to '0E'

Changed ATS:

Structured Type Constraint Declaration				
Constraint Name:	c_AuthFailParamAny			
Group:				
Type Name:	AuthFailParam			
Derivation Path:				
Encoding Variations:				
Comments:				
Element Name	Element Value	Type Encoding	Comments	
iel	0E000010			
iel	0E0			
#AUTS	7			

Title	Changes to TC_8_1_1_1 required for approval
Source	Anritsu
Agenda Item	
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

Overview

This document details the changes needed to fix problems in the TTCN implementation of TC_8_1_1_1. 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 8.1.1.1.

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Introduction

This document describes the changes required to make test case tc_8_1_1_1 (ATS-v140) run correctly with a real UE.

Changes required for test-case 8.1.1.1

Initial Direct Transfer error

Domain: Suite – TTCN RRCv140

Reason for change: UE implementations must send something in an initial direct transfer for the field v3a0NonCriticalExtensions which is omitted according to the constraint cr_InitDirectTransferGSM_MapRoutingIMSI. To make UE implementations pass it is recommended to use the correct value instead.

Summary of Change: In cr_InitDirectTransferGSM_MapRoutingIMSI change the OMIT value of v3a0NonCriticalExtensions as shown below:

Change:

Constraint Name	cr_InitDirectTransferGSM_MapRoutingIMSI (p_iMSIresponsetopaging: RoutingParameter)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	<pre> { integrityCheckInfo *, message initialDirectTransfer : { cn_DomainIdentity *, intraDomainNasNodeSelector { version release99 : { cn_Type gsm_Map_IDNNS : { routingbasis iMSIresponsetopaging : { routingparameter p_iMSIresponsetopaging }, enteredparameter FALSE } }, nas_Message *, measuredResultsOnRACH *, v3a0NonCriticalExtensions OMIT } } </pre>

to:

Constraint Name	cr_InitDirectTransferGSM_MapRoutingIMSI (p_iMSIresponsetopaging: RoutingParameter)
PDU Type	UL_DCCH_Message
Derivation Path	
Encoding Rule Name	
Encoding Variation	
Comment	<pre> { integrityCheckInfo *, message initialDirectTransfer : { cn_DomainIdentity *, intraDomainNasNodeSelector { version release99 : { cn_Type gsm_Map_IDNNS : { routingbasis iMSIresponsetopaging : { routingparameter p_iMSIresponsetopaging </pre>

```

        },
        enteredparameter FALSE
    }
},
nas_Message *,
measuredResultsOnRACH *,
v3a0NonCriticalExtensions
initialDirectTransfer_v3a0ext { start_Value ? },
nonCriticalExtensions
}
}

```

Consequence if not approved: UE implementations will unnecessarily fail the test.

Math overflow problem when dealing with 64-bit longs affects paging calculations

Domain: Suite – TTCN RRCv140

Reason for change: tcv_RoutingParameterIMSResponsePaging := INT_TO_BIT ((((HEX_TO_INT (px_IMSI_Def)) / 10) MOD 1000),10)) introduces a runtime error.

Summary of Change: Changes are illustrated below.

1) Add Special TSO to do the calculations accurately:

Operation Name	o_RoutingParameterIMSResponsePaging(p_IMSI : HEXSTRING)
Result Type	RoutingParameter
Comment	
	The input parameter p_Imsi is a BCD string (subset of HEXSTRING), the result is of type RoutingParameter.

2) initialise tcv_RoutingParameterIMSResponsePaging via the TSO:

Change:

Variable Name	tcv_RoutingParameterIMSResponsePaging
Type	RoutingParameter
Value	INT_TO_BIT ((((HEX_TO_INT ('001010123456063H)) / 10) MOD 1000),10)
Comments	Calculation of Routing parameter based on IMSI paging response, default value make use of px_IMSI_Def Default

to:

Variable Name	tcv_RoutingParameterIMSResponsePaging
Type	RoutingParameter
Value	p_RoutingParameterIMSResponsePaging('001010123456063H')
Comments	Calculation of Routing parameter based on IMSI paging response, default value make use of px_IMSI_Def Default

3) Use new TSO:

Change:

Test Case Name	tc_8_1_1_1				
Group	RRC/RRC_Paging/				
Purpose	To confirm that the UE establishes an RRC connection after it receives a PAGING TYPE 1 message which includes IE "Paging Record"(UE identity) set to the IMSI of the UE.				
Configuration					
Default	RRC_Def1				
Comments					
Selection Ref	FDD_Mode				
Description	Paging for Connection in idle mode				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
10				
11		(tcv_RoutingParameterIMSResponsePaging := INT_TO_BIT ((((HEX_TO_INT (px_IMSI_Def)) / 10) MOD 1000),10))			Calculation of Routing parameter (bit string of 10) to be

					checked in step 7 Reference: TS 25.331, IE Intra Domain NAS Node Selector IMSI Response to paging
12		.....		

to:

Test Case Name		tc_8_1_1_1			
Group		RRC/RRC_Paging/			
Purpose		To confirm that the UE establishes an RRC connection after it receives a PAGING TYPE 1 message which includes IE "Paging Record"(UE identity) set to the IMSI of the UE.			
Configuration					
Default		RRC_Def1			
Comments					
Selection Ref		FDD_Mode			
Description		Paging for Connection in idle mode			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
10				
11		(tcv_RoutingParameterIMSIResponsePaging := o_RoutingParameterIMSIResponsePaging(px_IMSI_Def)			Calculation of Routing parameter (bit string of 10) to be checked in step 7 Reference: TS 25.331, IE Intra Domain NAS Node Selector IMSI Response to paging
12				

Consequence if not approved: Paging calculations are wrong and UE may not see the paging message.

Wrong State used when reconfiguring to RB minus16

Domain: Suite – TTCN RRCv140

Reason for change: In ts_SS_SetConfigRRC_RB3 the state value cell_DCH_StandAloneSRB is used wrongly instead of the correct value cell_DCH_StandAloneSRB_NoConn.

Summary of Change: In ts_SS_SetConfigRRC_RB3 replace cell_DCH_StandAloneSRB (Line 7) by cell_DCH_StandAloneSRB_NoConn. The Changes are illustrated below.

Change:

Test Step Name		ts_SS_SetConfigRRC_RB3 (p_CellId : INTEGER)			
Group		RRMC_SS_Steps/			
Objective		Reconfigure SS for routing UL NAS message in the AM PCO. RB3 is reconfigured to tsc_RB3_DCCH_RRC (RB-16)			
Default		SS_Def			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
				
7		[tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB]			
8				

to:

Test Step Name		ts_SS_SetConfigRRC_RB3 (p_CellId : INTEGER)			
Group		RRMC_SS_Steps/			
Objective		Reconfigure SS for routing UL NAS message in the AM PCO. RB3 is reconfigured to tsc_RB3_DCCH_RRC (RB-16)			
Default		SS_Def			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
7		[(tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB_NoConn) OR (tcv_TmpCellInfo.cellConfig = cell_DCH_StandAloneSRB)]			
8			

Consequence if not approved: Test case fails.

Special LI

Domain: Suite – TTCN RRCv140

Reason for change: Addition to special LI for test case 8_1_2_1 requires this change for overall compatibility.

Summary of Change: Add Special LI field for constraint cas_RRC_ConnRej.

Change:

Constraint Name	cas_RRC_ConnRej (p_CellId: INTEGER; p_RB_Id: INTEGER ; p_Pdu: DL_CCCH_Message)
ASP Type	RLC_UM_DATA_REQ
Derivation Path	
Comment	
	{ cellId p_CellId, routingInfo rB_Identity: p_RB_Id, uM_message dL_CCCH_Message : p_Pdu }

to:

Constraint Name	cas_RRC_ConnRej (p_CellId: INTEGER; p_RB_Id: INTEGER ; p_Pdu: DL_CCCH_Message)
ASP Type	RLC_UM_DATA_REQ
Derivation Path	
Comment	
	{ cellId p_CellId, routingInfo rB_Identity: p_RB_Id, uM_message dL_CCCH_Message : p_Pdu specialLI TRUE }

Consequence if not approved: Test case cannot be analysed.

TSG-T Working Group1 SWG SIG meeting #26

Luton, UK

5th – 8th November 2002

Title	Changes to TC_8_1_3_1 required for approval
Source	Anritsu
Agenda Item	
Document for	Approval
Contact	Dan Fox (Anritsu) dan.fox@eu.anritsu.com Tel: +44 1582 433357

Overview

This document details the changes needed to fix problems in the TTCN implementation of TC_8_1_3_1. 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 8.1.3.1.

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Introduction

This document describes the changes required to make test case tc_8_1_3_1 (ATS-v140) run correctly with a real UE.

Changes required for test-case 8.1.3.1

Removal of Paging Type 1 Modify Message

Domain: Suite – TTCN RRCv140 (fixed in RRCv151)

Reason for change: Sending of Paging Type 1 Modify Message prior to the initial UE power cycle serve no purpose

Summary of Change: removed ts_SendPage1_ModifySI in ts_SendDefSysInfo

Change:

Test Step Name	ts_SendDefSysInfo (p_CellId: INTEGER)				
Group	BasicM_SysInfoHandling_Steps/Default/				
Objective	To broadcast default system information.				
Default	InitOtherwiseFail				
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
				
19		+ts_SendMIB(tcv_MIB, p_CellId, tsc_Now)			
20		+ts_SendPage1_ModifySI(p_CellId, tcv_MIB.mib_ValueTag)			remove test step
21	ERR1	[px_RAT = tdd]			
				

to:

Test Step Name	ts_SendDefSysInfo (p_CellId: INTEGER)				
Group	BasicM_SysInfoHandling_Steps/Default/				
Objective	To broadcast default system infomation.				
Default	InitOtherwiseFail				
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
				
19		+ts_SendMIB(tcv_MIB, p_CellId, tsc_Now)			
20	ERR1	[px_RAT = tdd]			
				

Consequence if not approved: No effect

Missing Registration Preamble

Domain: Suite – TTCN RRCv140 (fixed in RRCv151)

Reason for change: Registration preamble was missing. Absence of ts_IdleUpdated causing the UE not to register

Summary of Change: Add ts_IdleUpdated in tc_8_1_3_1 main body

Change:

Test Case Name	tc_8_1_3_1
Group	RRC/RRC_ConnRelease/
Purpose	To confirm that the UE releases the L2 signalling link and dedicated resources and goes back to the idle state after it receives an RRC CONNECTION RELEASE message from the SS and transmits an RRC CONNECTON RELEASE COMPLETE message to the SS for N308 times at the interval specified by the value of T308 timer.
Configuration	

Default		RRC_Def1			
Comments					
Selection Ref		FDD_Mode			
Description		RRC Connection Release in CELL_DCH state: Success			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
4				
5		+ts_SendDefSysInfo(tsc_CellA)			Sends the default system information in CellA
6		+ ts_GotoState6_1_Or6_3_MO (tsc_CellA)			
7				

to:

Test Case Name		tc_8_1_3_1			
Group		RRC/RRC_ConnRelease/			
Purpose		To confirm that the UE releases the L2 signalling link and dedicated resources and goes back to the idle state after it receives an RRC CONNECTION RELEASE message from the SS and transmits an RRC CONNECTON RELEASE COMPLETE message to the SS for N308 times at the interval specified by the value of T308 timer.			
Configuration					
Default		RRC_Def1			
Comments					
Selection Ref		FDD_Mode			
Description		RRC Connection Release in CELL_DCH state: Success			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
4				
5		+ts_SendDefSysInfo(tsc_CellA)			Sends the default system information in CellA
6		+ ts_IdleUpdated (tsc_CellA)			missing preamble
7		+ ts_GotoState6_1_Or6_3_MO (tsc_CellA)			
8				

Consequence if not approved: UE will not register and the test case will not work.

Duplicate Reception of CM_SERVICE_REQ

Domain: Suite – TTCN RRCv140 (fixed in RRCv151)

Reason for change: Duplicate receptions of CM_SERVICE_REQ; ts_GotoState6_1_Or6_3_MO contains ts_RRC_ConnEstCS_MO_P3_P4 and ts_NAS_ConnRejectMO . Both test step contains a reception of CM_SERVICE_REQ. Replaced ts_NAS_ConnRejectMO with ts_NAS_ServiceRejectMO (as done in RRCv151) to fix the problem.

Summary of Change: Changes in ts_GotoState6_1_Or6_3_MO as illustrated below.

Change:

Test Step Name		ts_GotoState6_1_Or6_3_MO (p_CellId: INTEGER)			
Group		RRCM_Steps			
Objective		To bring UE to state 6-1 for CS or 6-3 for PS on Cell_DCH using a MO Call			
Default		RRC_Def1			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[px_RAT= fdd]			FDD Specific

					behaviour
2		+ts_AT_InitConnection(p_CellId)			
3		[tcv_CN_Domain = ps_domain]			
4		+ts_RRC_ConnEstPS_MO_P5_P6 (p_CellId)			
5		+ts_NAS_ConnRejectMO (p_CellId)			
6		[tcv_CN_Domain = cs_domain]			
7		+ts_RRC_ConnEstCS_MO_P3_P4 (p_CellId)			
8		+ts_NAS_ConnRejectMO (p_CellId)			
9		[px_RAT= tdd]			TDD Specific behaviour
10		[TRUE]			

to:

Test Step Name		ts_GotoState6_1_Or6_3_MO (p_CellId: INTEGER)			
Group		RRCM_Steps			
Objective		To bring UE to state 6-1 for CS or 6-3 for PS on Cell_DCH using a MO Call			
Default		RRC_Def1			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[px_RAT= fdd]			FDD Specific behaviour
2		+ts_AT_InitConnection(p_CellId)			
3		[tcv_CN_Domain = ps_domain]			
4		+ts_RRC_ConnEstPS_MO_P5_P6 (p_CellId)			
5		+ts_NAS_ServiceRejectMO (p_CellId)			
6		[tcv_CN_Domain = cs_domain]			
7		+ts_RRC_ConnEstCS_MO_P3_P4 (p_CellId)			
8		+ts_NAS_ServiceRejectMO (p_CellId)			
9		[px_RAT= tdd]			TDD Specific behaviour
10		[TRUE]			

Consequence if not approved: TTCN test case will not work..

Insertion of a delay to prevent message racing between NAS message CMserviceReject and RRC message RRCconnectionRelease

Domain: Suite – TTCN RRCv140

Reason for change: Insertion of a delay to prevent message racing between a leading NAS CMserviceReject message and an immediate trailing RRC RRCconnectionRelease message .

Summary of Change: Changes in ts_GotoState6_1_Or6_3_MO as illustrated below (including changes of previous section).

Change:

Test Step Name		ts_GotoState6_1_Or6_3_MO (p_CellId: INTEGER)			
Group		RRCM_Steps			
Objective		To bring UE to state 6-1 for CS or 6-3 for PS on Cell_DCH using a MO Call			
Default		RRC_Def1			
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[px_RAT= fdd]			FDD Specific behaviour
2		+ts_AT_InitConnection(p_CellId)			
3		[tcv_CN_Domain = ps_domain]			
4		+ts_RRC_ConnEstPS_MO_P5_P6 (p_CellId)			
5		+ts_NAS_ServiceRejectMO(p_CellId)			
6		[tcv_CN_Domain = cs_domain]			
7		+ts_RRC_ConnEstCS_MO_P3_P4 (p_CellId)			
8		+ts_NAS_ServiceRejectMO(p_CellId)			
9		[px_RAT= tdd]			TDD Specific behaviour

10		[TRUE]		
----	--	--------	--	--

to:

Test Step Name	ts_GotoState6_1_Or6_3_MO (p_CellId: INTEGER)				
Group	RRCM_Steps				
Objective	To bring UE to state 6-1 for CS or 6-3 for PS on Cell_DCH using a MO Call				
Default	RRC_Def1				
Comments					
Description					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
1		[px_RAT= fdd]			FDD Specific behaviour
2		+ts_AT_InitConnection(p_CellId)			
3		[tcv_CN_Domain = ps_domain]			
4		+ts_RRC_ConnEstPS_MO_P5_P6 (p_CellId)			
5		+ts_NAS_ServiceRejectMO(p_CellId)			
6		+ts_RRC_Delay(100)			
7		[tcv_CN_Domain = cs_domain]			
8		+ts_RRC_ConnEstCS_MO_P3_P4 (p_CellId)			
9		+ts_NAS_ServiceRejectMO(p_CellId)			
10		+ts_RRC_Delay(100)			
11		[px_RAT= tdd]			TDD Specific behaviour
12		[TRUE]			

Consequence if not approved: May cause intermittent failure.

Incorrect Paging message content and Incorrect Establishment Cause parameter

Domain: Suite – TTCN RRCv140 (fixed in RRCv151)

Reason for change: Incorrect Paging message content, i.e. missing pagingRecordList. cas_PagingType1 carried a 'tcv_InitialUE_Id.imsi' as pagingRecordList. However the use of this tcv does not work.

Incorrect Establishment Cause parameter for ts_CheckUE_Idle. The parameter passed to ts_CheckUE_Idle is used in the reception of RRCconnectionRequest sent from the UE after Paging. tcv_RRC_EstCau**MO**.

Summary of Change: Replaced ts_CheckUE_Idle with ts_C1_CheckIdleMode introduced in RRCv151 fixed the problems. ts_C1_CheckIdleMode needs the following items to be imported from RRCv151:

TEST STEPS:

- ts_PTMSI_TMSI_Assignment
- ts_RRC_PagType1_TMSI_PTMSI_Cau
- ts_NAS_PagingRsp

CONSTRAINTS:

- c_PagRsp
- c_MobileIdPTMSI_lv – Used as an input parameter to cr_ServiceRequest (p_sType : ServiceType_v; p_PTMSI : MS_Identity_lv). The constraint's type needs to be changed from MS_Identity_lv to MobileId_lv (which incidentally holds exactly the same fields).
- c_PagingType1_TMSI
- c_PagingType1_P_TMSI
- cs_RRC_PagingType1_TMSI
- cs_RRC_PagingType1_PTMSI

TYPE DEF:

- MS_Identity_lv
- PAGINGRESPONSE

TEST CASE VARIABLES:

- tcv_PTMSI_TMSI

Change:

Test Case Name		tc_8_1_3_1			
Group		RRC/RRC_ConnRelease/			
Purpose		To confirm that the UE releases the L2 signalling link and dedicated resources and goes back to the idle state after it receives an RRC CONNECTION RELEASE message from the SS and transmits an RRC CONNECTION RELEASE COMPLETE message to the SS for N308 times at the interval specified by the value of T308 timer.			
Configuration					
Default		RRC_Def1			
Comments					
Selection Ref		FDD_Mode			
Description		RRC Connection Release in CELL_DCH state: Success			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
				
20		(tcv_CellInfoA.cellConfig := cell_DCH_StandAloneSRB_NoConn)			
21		+ ts_CheckUE_Idle (tsc_CellA , tcv_RRC_PagingCau, tcv_RRC_EstCauMT)			
22		[TRUE]			
				

to:

Test Case Name		tc_8_1_3_1			
Group		RRC/RRC_ConnRelease/			
Purpose		To confirm that the UE releases the L2 signalling link and dedicated resources and goes back to the idle state after it receives an RRC CONNECTION RELEASE message from the SS and transmits an RRC CONNECTION RELEASE COMPLETE message to the SS for N308 times at the interval specified by the value of T308 timer.			
Configuration					
Default		RRC_Def1			
Comments					
Selection Ref		FDD_Mode			
Description		RRC Connection Release in CELL_DCH state: Success			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
				
20		(tcv_CellInfoA.cellConfig := cell_DCH_StandAloneSRB_NoConn)			
21		+ ts_C1_CheckIdleMode (tsc_CellA)			Import from RRCv151
22		[TRUE]			
				

Consequence if not approved: Test case will not work.

Missing CRLC Reset

Domain: Suite – TTCN RRCv140

Reason for change: Missing test step to reset the RLC engine prior to Check UE in Idle Mode

Summary of Change: Added ts_SS_ResetRLC_SRB (but renamed as in v150 as ts_CRLC_RelReconfSRB) prior to ts_C1_CheckIdleMode.

Change:

Test Case Name		tc_8_1_3_1			
Group		RRC/RRC_ConnRelease/			
Purpose		To confirm that the UE releases the L2 signalling link and dedicated resources and goes back to the idle state after it receives an RRC CONNECTION RELEASE message from the SS and transmits an RRC CONNECTION RELEASE COMPLETE message to the SS for N308 times at the interval			

	specified by the value of T308 timer.				
Configuration					
Default RRC_Def1					
Comments					
Selection Ref FDD_Mode					
Description RRC Connection Release in CELL_DCH state: Success					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
				
20		(tcv_CellInfoA.cellConfig := cell_DCH_StandAloneSRB_NoConn)			
21		+ ts_C1_CheckIdleMode (tsc_CellA)			Import from RRCv151
22		[TRUE]			
				

to:

Test Case Name tc_8_1_3_1					
Group RRC/RRC_ConnRelease/					
Purpose To confirm that the UE releases the L2 signalling link and dedicated resources and goes back to the idle state after it receives an RRC CONNECTION RELEASE message from the SS and transmits an RRC CONNECTION RELEASE COMPLETE message to the SS for N308 times at the interval specified by the value of T308 timer.					
Configuration					
Default RRC_Def1					
Comments					
Selection Ref FDD_Mode					
Description RRC Connection Release in CELL_DCH state: Success					
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
				
20		+ ts_CRLC_RelReconfSRB (tsc_CellA)			Must reset the RLC engine
21		(tcv_CellInfoA.cellConfig := cell_DCH_StandAloneSRB_NoConn)			
22		+ ts_C1_CheckIdleMode (tsc_CellA)			Import from RRCv151
23		[TRUE]			
				

Consequence if not approved: Test case will not work.

Incorrect logic in It_TestBody

Domain: Suite – TTCN RRCv140

Reason for change: Incorrect logic.

Summary of Change: Changes are illustrated below based on ETSI feedback but with comments on such a feedback.

- RRCconnectionReleaseComplete (T308/N308) loop incorrectly implemented. Start of timer t_UpperBound was done right after sending of RRCconnectionRelease message. Start of the timer was moved to the line after reception of the first RRCconnectionReleaseComplete message. Furthermore, the timer needs to be restarted in every REPEAT loop iteration, as long as tcv_K < tcv_N308+1.
- Incorrect logic for PASS/FAIL check. If the (T308/N308) REPEAT loop stops due to N308 rather than T308 the UE should PASS. The qualifier [(tcv_K = (tcv_N308+1)) AND tcv_TimedOut] should then read [(tcv_K = (tcv_N308+1)) AND **NOT** tcv_TimedOut]

Change:

Test Case Name tc_8_1_3_1					
Group RRC/RRC_ConnRelease/					
Purpose To confirm that the UE releases the L2 signalling link and dedicated resources and goes back to the					

		idle state after it receives an RRC CONNECTION RELEASE message from the SS and transmits an RRC CONNECTON RELEASE COMPLETE message to the SS for N308 times at the interval specified by the value of T308 timer.			
Configuration					
Default		RRC_Def1			
Comments					
Selection Ref		FDD_Mode			
Description		RRC Connection Release in CELL_DCH state: Success			
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
				
		lt_TestBody			
14		(tcv_N308:=6)			
15		UM ! RLC_UM_DATA_REQ (tcv_K := 1, tcv_TimedOut := FALSE)	cas_RRC_ConnRelDCCH (tsc_CellDedicated , tsc_RB1, cs_RRC_RrcConnRelDCCH_Cau (tcv_CellIndInfo.integrityCheckInfo, tcv_RRC_Ti, tcv_N308, normalEvent))		
16		START t_UpperBound tsc_T308_MaxSRB_DCH		(P)	
17	TBP1	UM?RLC_UM_DATA_IND	car_RRC_ConnRelCmplUM (tsc_CellDedicated , tsc_RB1, cr_108_RRC_ConnRelCmpl (tcv_CellIndInfo.integrityCheckInfo, tcv_RRC_Ti))		
18		REPEAT lt_RptRcv UNTIL [(tcv_K = (tcv_N308+1)) OR tcv_TimedOut]			
19		[(tcv_K = (tcv_N308+1)) AND tcv_TimedOut]		(P)	
20		+ ts_CRLC_RelReconfSRB (tsc_CellA)			
21		(tcv_CellInfoA.cellConfig := cell_DCH_StandAloneSRB_NoConn)			
22		+ts_C1_CheckIdleMode (tsc_CellA)			
23		[TRUE]		(F)	
		lt_RptRcv			
24		? TIMEOUT t_UpperBound (tcv_TimedOut := TRUE)			
25		UM ? RLC_UM_DATA_IND	car_RRC_ConnRelCmplUM (tsc_CellDedicated , tsc_RB1, cr_108_RRC_ConnRelCmpl (tcv_CellIndInfo.integrityCheckInfo, tcv_RRC_Ti))		
26		(tcv_K := tcv_K+1)			

to:

Test Case Name	tc_8_1_3_1				
Group	RRC/RRC_ConnRelease/				
Purpose	To confirm that the UE releases the L2 signalling link and dedicated resources and goes back to the idle state after it receives an RRC CONNECTION RELEASE message from the SS and transmits an RRC CONNECTON RELEASE COMPLETE message to the SS for N308 times at the interval specified by the value of T308 timer.				
Configuration					
Default	RRC_Def1				
Comments					
Selection Ref	FDD_Mode				
Description	RRC Connection Release in CELL_DCH state: Success				
Nr	Label	Behaviour Description	Constraint Ref	Verdict	Comments
				

		It_TestBody			
14		(tcv_N308 := 6)			tcv_N308 can be between 4 and 8 according to TS34.123 clause 8.1.3.1.4
15		UM ! RLC_UM_DATA_REQ (tcv_K := 1, tcv_TimedOut := FALSE)	cas_RRC_ConnRelDCCH (tsc_CellDedicated , tsc_RB1 , cs_RRC_ConnRelDCCH_Cau (tcv_CellIndInfo.dl_IntegrityCheckInfo , tcv_RRC_Ti , tcv_N308 , normalEvent))		step 2
16	TBP1	UM ? RLC_UM_DATA_IND	car_RRC_ConnRelCmplUM (tsc_CellDedicated , tsc_RB1 , cr_108_RRC_ConnRelCmpl (tcv_RRC_Ti))	(P)	
17		START t_UpperBound (tsc_T308_MaxSRB_DCH)			
18		REPEAT It_RptRcv UNTIL [(tcv_K = (tcv_N308+1)) OR tcv_TimedOut]			UE sends RRC Connection Release Complete for N308 times
19	TBP2	[(tcv_K = (tcv_N308+1))]		(P)	The time between the transmissions of N308+1 messages is equal to T308 timer value considering timer tolerance
20		CANCEL t_UpperBound			
21		+tsc_CRLC_RelReconfSRB (tsc_CellA)			
22		(tcv_CellInfoA.cellConfig := cell_DCH_StandAloneSRB_NoConn)			
23		+ts_C1_CheckIdleMode (tsc_CellA)			Step 4; step 5
24	TBF1	[TRUE]		(F)	The time between the transmissions of one message is not equal to T308 timer value
25		(tcv_CellInfoA.cellConfig := cell_DCH_StandAloneSRB_NoConn)			
26		It_RptRcv ? TIMEOUT t_UpperBound (tcv_TimedOut := TRUE)			
27		UM ? RLC_UM_DATA_IND CANCEL t_UpperBound	car_RRC_ConnRelCmplUM (tsc_CellDedicated , tsc_RB1 , cr_108_RRC_ConnRelCmpl (tcv_RRC_Ti))		step 3 Retransmission
28		(tcv_K := tcv_K+1)			
29		START t_UpperBound (tsc_T308_MaxSRB_DCH)			

Consequence if not approved: Test case will not work.