Source: **T1**

Title: **CR's to TS 34.123-3 v.3.5.2 for approval**

Agenda item: **5.1.3**

Document for: **Approval**

This document contains the CRs to TS 34.123-3 v.3.5.2. These CRs have been agreed by T1 and are put forward to TSG T for approval.

Tdoc #	Title	CR#	Release	cat	Version in	Version out
T1-040761	Clarification of Section 8.5.1 Authentication: Explicitly stating that Authentication after IDT is an optional/dependent procedure.	233	R99	F	3.5.2	3.6.0
T1-040940	GERAN generic procedures and TTCN encoding rules for CSN.1 specific encoding	234	R99	F	3.5.2	3.6.0

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR** 233 ⌘**rev** - ⌘ Current version: **3.5.2** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME **X** Radio Access Network ☐ Core Network ☐

Title: ⌘	Clarification of Section 8.5.1 Authentication: Explicitly stating that Authentication after IDT is an optional/dependent procedure.
Source: ⌘	Anite
Work item code:⌘	TEI *Date:* ⌘ 04/05/2004
Category: ⌘	**F** *Release:* ⌘ R99

Use one of the following categories:
F (correction)
A (corresponds to a correction in an earlier release)
B (addition of feature),
C (functional modification of feature)
D (editorial modification)
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘	As per the "summary" statement in the 3GPP Secretary's record of discussion of T1-040178 at the T1#22 meeting,
	"Use of Authentication before an IDT message is optional. It was agreed this should be left to the test case implementation and not specified in the prose. approved note shall be added to TS34.123-3 to state the decision made in the T1 TTCN. It was further agreed that use of authentication should not be a reason to fail validation of a test case".
	Note: It is assumed that the statement contains a typographical error and should have read *"Use of Authentication **after** an IDT message is optional ...."* and this Tdoc has been prepared based upon that assumption.
Summary of change:⌘	An explicit note is added to TS 34.123-3 Section 8.5.1 to make authentication after IDT an optional procedure.
Consequences if not approved: ⌘	Inconsistency between test prose and TTCN implementation with respect to performing authentication.

Clauses affected: ⌘	8.5.1

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

Other comments: ⌘	

How to create CRs using this form:

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

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

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

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

CMAC_PCO: CMAC_SYSINFO_CONFIG_REQ (6, 22)
TM_PCO: SIB5 (segment 3 of 4)
CMAC_PCO: CMAC_SYSINFO_CONFIG_REQ (6, 23)
TM_PCO: SIB5 (segment 4 of 4)
CMAC_PCO: CMAC_SYSINFO_CONFIG_REQ (6, 26)
TM_PCO: SIB7 + SIB4 (concatenation)
CMAC_PCO: CMAC_SYSINFO_CONFIG_REQ (6, 27)
TM_PCO: No segment
CMAC_PCO: CMAC_SYSINFO_CONFIG_REQ (6, 29)
TM_PCO: SIB11 (segment 1 of 3)
CMAC_PCO: CMAC_SYSINFO_CONFIG_REQ (6, 30)
TM_PCO: SIB11 (segment 3 of 3)
CMAC_PCO: CMAC_SYSINFO_CONFIG_REQ (6, 31)
TM_PCO: SIB11 (segment 3 of 3)

8.5   Security in testing

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

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

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

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

8.5.1   Authentication

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

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

If the UE has valid authentication parameters (CKSN/KSI), for the respective domain, use of the Authentication procedure after an INITIAL DIRECT TRANSFER message is optional. Authentication in this case will be left to the test case implementation and need not be specified in the prose. However, in the case where the UE does not have valid authentication parameters the Authentication procedure shall be performed.

8.5.2   Ciphering

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

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-3 CR 234** ⌘ **rev** ⌘ Current version: **3.5.2** ⌘

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

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

Title: ⌘	GERAN generic procedures and TTCN encoding rules for CSN.1 specific encoding	
Source: ⌘	MCC task 160	
Work item code: ⌘	TEI	***Date:*** ⌘ 24/04/2004

Category: ⌘	F	***Release:*** ⌘ R99

Use <u>one</u> of the following categories:
F (correction)
A (corresponds to a correction in an earlier release)
B (addition of feature),
C (functional modification of feature)
D (editorial modification)
Detailed explanations of the above categories can
be found in 3GPP <u>TR 21.900</u>.

Use <u>one</u> of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘	1. Define generic RLC/MAC GPRS procedures for carrying NAS signalling and SS configuring (this is a revised part of T1-040055 on the basis of Nokia and Ericsson). 2. Document a missing ASP G_CL2_Release_IND and document a missing IE field in RLC_UM_DATA_REQ to align with the TTCN. Further unused or obsolete IE should be cleaned up in the ASP definition. 3. Manually coding L|H bit(s) of the CSN.1convention and spare bits according "2B"O in TTCN is error prone. This coding appears at the GERAN -> UTRAN HO tests in the messages as Immediate Assignment Rest Octets, SI 2ter Rest Octets, SI 3 Rest Octets, SI 4 Rest Octets, SI 13 Rest Octets, SI 1 Rest Octets. The tools for automatic filling these bits are available. A TTCN convention should be defined, in order to make use of these tools in TTCN. 4. Remove unnecessary PIXIT for RAB test data and turbo coding. 5. Document TSOs used in InterSystem Handover 6. Correct the sequence of the GSM ciphering mode control procedure 7. A few key parameters in +CGEQMIN have different interpretations. The AT command is not necessary used for the PS test and should be removed. 8. Correct a reference. 9. The current SS Tx power level can be max. attenuated down 30 db. In a number of test cases this attenuation range is not enough to turn off the SS transmitter. It is needed to add a specific value, large enough to turn off Tx.

Summary of change:	⌘	1. Generic procedures for GPRS attach and cell change order are added in new clauses 6.10.2.7.1 and 6.10.2.7.2.
		2. GERAN ASP corrections:
		2.1. Add G_CL2_Release_IND in 7.3.4.3.2.2,
		2.2. correct timing advance from the type bitstring [7] to bitstring [8] in 7.3.4.3.2.2
		2.3 add the specialLI field in RLC_UM_DATA_REQ in 7.3.2.2.35
		2.4 Correction of N_PDU_Number as type OCTETSTRING[1] in 7.3.4.3.1.4
		2.5 The obsolete IE RlcMacEntityId is removed in 7.3.4.3.2.3 as single RLC/MAC entity exists per cell.
		2.6 The unnecessary timeslot IE in ASP G_RLC_ definitions is removed in 7.3.4.3.1.2
		3. Add a new clause 6.10.2.9 to clarify the L|H convention and bit padding.
		4. The RAB PIXIT for RAB test data are removed. These PIXIT are replaced with the constants in TTCN. These parameters in Annex B.1.1 and B.1.9 are removed. The turbo coding in B1.5 is replaced with a PICS.
		5. Add new TSOs used in InterSystem Handover in 8.7.4.
		6. Move the CipheringControl ASP to before sending the CipheringModeCommand to ensure that the 3 step procedure is followed correctly in 6.10.2.8.
		7. +CGEQMIN is removed in 8.8, the related parameters are removed in 8.10.
		8. The reference in clause 8.3.2 and the same one in 8.3.17 are corrected.
		9. A specific attenuation value is added in CPHY_Cell_TxPower_Modify in 7.3.2.2.5.
Consequences if not approved:	⌘	GERAN to UTRAN HO and cell order change tests cannot be drafted in more generic way.

Clauses affected:	⌘	6.10.2.7.1, 6.10.2.7.2, 6.10.2.8, 6.10.2.9, 7.3.2.2.5, 7.3.2.2.35, 7.3.4.3.1.2, 7.3.4.3.1.4, 7.3.4.3.2.1, 7.3.4.3.2.2, 7.3.4.3.2.3, 8.3.2, 8.3.17, 8.7.4, 8.8, 8.10, B.1.1, B.1.2, B.1.3, B.1.5, B.1.9

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

Other comments:	⌘	

CR page 2

## 6.10.2.7	~~Configuration examples~~Generic procedures for GPRS ~~operation~~signalling

Two channel combinations are applied to configure a GERAN cell for the GPRS signalling:

The channel combinations 5 + 13, (FCCH + SCH + BCCH + CCCH + SDCCH/4(0..3) + SACCH/C4(0..3)) + (PBCCH+PCCCH+PDTCH/F+PACCH/F+PTCCH/F), are considered as default at the interRAT tests.

The channel combinations 5 + 11, (FCCH + SCH + BCCH + CCCH + SDCCH/4(0..3) + SACCH/C4(0..3)) + (PDTCH/F+PACCH/F+PTCCH/F), are applied to the clause 42.4.7.

The following ~~examples~~generic procedures show the usages of GPRS ASP's~~. The first one is~~ for the GPRS generic attach procedures~~,~~ the ~~second one is the~~ generic cell change order within a TBF and~~,~~ the ~~third one is~~GSM ciphering procedure.

### 6.10.2.7.1	~~Example of~~ GPRS generic attach procedures and ciphering mode control

#### 6.10.2.7.1.1	GPRS attach procedure in channel combinations 5 and 13

~~tbd~~

Direction	ASP	message	Comments
SS	G_CL1_CreateCell_REQ		Create the cell
SS	G_CL1_CreateBasicPhyCh_REQ		Create the physical channel combination 5 for FCCH+SCH+BCCH+CCCH+SDCCH/4(0..3)+SACCH/C4(0..3)
SS	G_CL1_CreateBasicPhyCh_REQ		Create the physical channel combination 13 for PDTCH/F+PACCH/F+PTCCH/F
SS -> MS	G_L2_SYSINFO_REQ	SYSTEM INFORMATION TYPE1, SYSTEM INFORMATION TYPE2, SYSTEM INFORMATION TYPE2quater, SYSTEM INFORMATION TYPE3, SYSTEM INFORMATION TYPE4, SYSTEM INFORMATION TYPE13	Broadcast system information messages : SI 1~4; SI 13
SS	G_CRLC_CreateRLC_MAC_REQ		Create RLC/MAC emulation entity
SS	G_CLLC_CreateLLE_REQ		Create LLC emulation entity
SS	MMI_CmdReq		Power on the UE/MS
MS-> SS	G_L2_ACCESS_IND	CHANNEL REQUEST	RACH, TBF establishment with Establishment Cause = one phase packet access.
SS	G_CRLC_UL_TBF_Config_REQ		Set up uplink TBF in RLC/MAC entity in SS, this TBF is corresponding to what indicated in IMMEDIATE ASSIGNMENT.
SS -> MS	G_L2_UNITDATA_REQ	IMMEDIATE ASSIGNMENT	Assign the uplink resources (uplink TBF) to MS. Polling bit and Starting Time are set
MS -> SS	G_RLC_ControlMsg_IND	PACKET CONTROL ACKNOWLEDGEMENT	

Direction	ASP	message	Comments
SS	G_CLLC_ Assign_REQ		Assign TLLI, ciphering key and algorithm. The ciphering algorithm = "ciphering not used". The value of ciphering key shall be the one generated in the following authentication procedure. If there is no user data traffic in acknowledged mode before authemtication procedure the ciphering algorithm may be set to one of the GPRS ciphering algorithm, and the late G_CLLC_Assign_REQ shall be not used.
MS -> SS	G_LLC_UNITDATA_IND	ATTACH REQUEST	MS uses the assigned uplink TBF to transmit the L3 message to SS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically according the countdown procedure. The SS reassembles the received data blocks into the L3 message and passes it to the LLC DATA PCO G_LLC.
SS	G_CRLC_DL_TBF_Config_REQ		Set up downlink TBF in RLC/MAC entity in SS Downlink TBF establishment
SS -> MS	G_L2_Paging_REQ	IMMEDIATE ASSIGNMENT	
SS -> MS	G_LLC_UNITDATA_REQ	AUTHENTICATION AND CIPHERING REQUEST	
MS-> SS	G_L2_ACCESS_IND	CHANNEL REQUEST	RACH, TBF establishment with Establishment Cause = one phase packet access.
SS	G_CRLC_UL_TBF_Config_REQ		Set up uplink TBF in RLC/MAC entity in SS, this TBF is corresponding to what indicated in IMMEDIATE ASSIGNMENT.
SS -> MS	G_L2_UNITDATA_REQ	IMMEDIATE ASSIGNMENT	Assign the uplink resources (uplink TBF) to MS. Polling bit and Starting Time are set
MS -> SS	G_RLC_ControlMsg_IND	PACKET CONTROL ACKNOWLEDGEMENT	
SS	G_CLLC_ Assign_REQ		Assign TLLI, if changed
MS -> SS	G_LLC_UNITDATA_IND	AUTHENTICATION AND CIPHERING RESPONSE	
SS	G_CLLC_ Assign_REQ		Keep TLLI unchanged, ciphering algorithm = one of the GPRS ciphering algorithm. The value of ciphering key shall be the one generated in the authentication procedure. If no user data traffic in acknowledged mode before authentication procedure, this ASP is not needed.

Direction	ASP	message	Comments
SS	G_CRLC_DL_TBF_Config_REQ		Set up downlink TBF in RLC/MAC entity in SS
SS -> MS	G_L2_Paging_REQ	IMMEDIATE ASSIGNMENT	Downlink TBF establishment
SS -> MS	G_LLC_UNITDATA_REQ	ATTACH ACCEPT	SS uses the established downlink TBF to transmit the L3 message to MS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically after all data blocks of the L3 message are transmitted
MS-> SS	G_L2_ACCESS_IND	CHANNEL REQUEST	RACH, TBF establishment with Establishment Cause = one phase packet access.
SS	G_CRLC_UL_TBF_Config_REQ		Set up uplink TBF in RLC/MAC entity in SS
SS -> MS	G_L2_UNITDATA_REQ	IMMEDIATE ASSIGNMENT	Assign the uplink resources (uplink TBF) to MS. Polling bit and Starting Time are set
MS -> SS	G_RLC_ControlMsg_IND	PACKET CONTROL ACKNOWLEDGEMENT	
SS	G_CLLC_ Assign_REQ		Assign new TLLI
MS -> SS	G_LLC_UNITDATA_IND	ATTACH COMPLETE	MS uses the assigned uplink TBF to transmit the L3 message to SS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically according the countdown procedure
SS	G_CRLC_DeleteRLC_MAC_REQ		Release resources in the SS for RLC/MAC emulation entity
SS	G_CLLC_DeleteLLE_REQ		Release resources in the SS for LLC emulation entity
SS	G_CL1_DeleteChannel_REQ		Release SS resources of channel combination 13
SS	G_CL1_DeleteChannel_REQ		Release SS resources of channel combination 5
SS	G_CL1_DeleteCell_REQ		

6.10.2.7.1.2 GPRS attach procedure in channel combinations 5 and 11

Direction	ASP	message	Comments
SS	G_CL1_CreateCell_REQ		Create the cell
SS	G_CL1_CreateBasicPhyCh_REQ		Create the physical channel combination 5 for FCCH+SCH+BCCH+CCCH+SDCCH/4(0..3)+SACCH/C4(0..3)
SS	G_CL1_CreateBasicPhyCh_REQ		Create the physical channel combination 11 for PBCCH+PCCCH+PDTCH+PACCH

Direction	ASP	message	Comments
SS -> MS	G_L2_SYSINFO_REQ	SYSTEM INFORMATION TYPE1, SYSTEM INFORMATION TYPE2, SYSTEM INFORMATION TYPE2quater, SYSTEM INFORMATION TYPE3, SYSTEM INFORMATION TYPE4, SYSTEM INFORMATION TYPE13	Broadcast system information messages: SI 1~4; SI 13
SS	G_CRLC_CreateRLC_MAC_REQ		Create RLC/MAC emulation entity
SS -> MS	G_RLC_PSI_REQ	PACKET SYSTEM INFORMATION TYPE1, PACKET SYSTEM INFORMATION TYPE2, PACKET SYSTEM INFORMATION TYPE3, PACKET SYSTEM INFORMATION TYPE3bis, PACKET SYSTEM INFORMATION TYPE5	Broadcast packet system information messages: PSI 1~3bis and if measurement order tests PSI5
SS	G_CLLC_CreateLLE_REQ		Create LLC emulation entity
SS	MMI_CmdReq		Power on the UE/MS
MS-> SS	G_RLC_ACCESS_IND	PACKET CHANNEL REQUEST	PRACH, TBF establishment with MM procedure
SS	G_CRLC_UL_TBF_Config_REQ		Set up uplink TBF in RLC/MAC entity in SS, this TBF is corresponding to what indicated in PACKET UPLINK ASSIGNMENT next
SS -> MS	G_RLC_ControlMsg_REQ	PACKET UPLINK ASSIGNMENT	Assign the uplink resources (uplink TBF) to MS. S/P bit set
MS-> SS	G_RLC_ControlMsg_IND	PACKET CONTROL ACKNOWLEDGEMENT	
SS	G_CLLC_ Assign_REQ		Assign TLLI, ciphering key and algorithm. The ciphering algorithm = "ciphering not used". The value of ciphering key shall be the one generated in the following authentication procedure. If there is no user data traffic in acknowledged mode before authemtication procedure the ciphering algorithm may be set to one of the GPRS ciphering algorithm, and the late G_CLLC_Assing_REQ shall be not used.
MS -> SS	G_LLC_UNITDATA_IND	ATTACH REQUEST	MS uses the assigned uplink TBF to transmit the L3 message to SS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically according the countdown procedure. The SS reassembles the received data blocks into the L3 message and passes it to the LLC DATA PCO G_LLC.

Direction	ASP	message	Comments
SS	G_CRLC_DL_TBF_Config_REQ		Set up downlink TBF in RLC/MAC entity in SS
SS -> MS	G_RLC_ControlMsg_REQ	PACKET DOWNLINK ASSIGNMENT	Downlink TBF establishment S/P bit is set
MS-> SS	G_RLC_ControlMsg_IND	PACKET CONTROL ACKNOWLEDGEMENT	
SS -> MS	G_LLC_UNITDATA_REQ	AUTHENTICATION AND CIPHERING REQUEST	
MS-> SS	G_RLC_ACCESS_IND	PACKET CHANNEL REQUEST	PRACH, TBF establishment with MM procedure
SS	G_CRLC_UL_TBF_Config_REQ		Set up uplink TBF in RLC/MAC entity in SS, this TBF is corresponding to what indicated in PACKET UPLINK ASSIGNMENT next
SS -> MS	G_RLC_ControlMsg_REQ	PACKET UPLINK ASSIGNMENT	Assign the uplink resources (uplink TBF) to MS. S/P bit is set
MS-> SS	G_RLC_ControlMsg_IND	PACKET CONTROL ACKNOWLEDGEMENT	
SS	G_CLLC__Assign_REQ		Assign TLLI, if changed
MS -> SS	G_LLC_UNITDATA_IND	AUTHENTICATION AND CIPHERING RESPONSE	
SS	G_CLLC__Assign_REQ		Keep TLLI unchanged, ciphering algorithm = one of the GPRS ciphering algorithm. The value of ciphering key shall be the one generated in the authentication procedure. If no user data traffic in acknowledged mode before authentication procedure, this ASP is not needed.
SS	G_CRLC_DL_TBF_Config_REQ		Set up downlink TBF in RLC/MAC entity in SS
SS -> MS	G_RLC_ControlMsg_REQ	PACKET DOWNLINK ASSIGNMENT	Downlink TBF establishment S/P bit is set.
MS-> SS	G_RLC_ControlMsg_IND	PACKET CONTROL ACKNOWLEDGEMENT	
SS -> MS	G_LLC_UNITDATA_REQ	ATTACH ACCEPT	SS uses the established downlink TBF to transmit the L3 message to MS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically after all data blocks of the L3 message are transmitted
MS-> SS	G_RLC_ACCESS_IND	PACKET CHANNEL REQUEST	PRACH, TBF establishment with MM procedure
SS	G_CRLC_UL_TBF_Config_REQ		Set up uplink TBF in RLC/MAC entity in SS
SS -> MS	G_RLC_ControlMsg_REQ	PACKET UPLINK ASSIGNMENT	Assign the uplink resources (uplink TBF) to MS. S/P bit is set
MS-> SS	G_RLC_ControlMsg_IND	PACKET CONTROL ACKNOWLEDGEMENT	
SS	G_CLLC__Assign_REQ		Assign new TLLI, ciphering key and algorithm unchanged

Direction	ASP	message	Comments
MS -> SS	G_LLC_UNITDATA_IND	ATTACH COMPLETE	MS uses the assigned uplink TBF to transmit the L3 message to SS, the SS manages the operation of the TBF without TTCN intervention and releases the TBF automatically according the countdown procedure
SS	G_CRLC_DeleteRLC_MAC_REQ		Release resources in the SS for RLC/MAC emulation entity
SS	G_CLLC_DeleteLLE_REQ		Release resources in the SS for LLC emulation entity
SS	G_CL1_DeleteChannel_REQ		Release SS resources of channel combination 11
SS	G_CL1_DeleteChannel_REQ		Release SS resources of channel combination 5
SS	G_CL1_DeleteCell_REQ		

6.10.2.7.2 Cell change order within a TBF

6.10.2.7.2.1 Cell change order procedure in channel combinations 5 and 13

Direction	ASP	message	Comments
SS	G_CL1_CreateCell_REQ		
SS	G_CL1_CreateBasicPhyCh_REQ		Create the physical channel combination 5 for FCCH+SCH+BCCH+CCCH+SDCCH/4(0..3)+SACCH/C4(0..3)
SS	G_CL1_CreateBasicPhyCh_REQ		Create the physical channel combination 13 for PDTCH/F+PACCH/F+PTCH/F
SS -> MS	G_L2_SYSINFO_REQ	SYSTEM INFORMATION TYPE1, SYSTEM INFORMATION TYPE2, SYSTEM INFORMATION TYPE2quater, SYSTEM INFORMATION TYPE3, SYSTEM INFORMATION TYPE4, SYSTEM INFORMATION TYPE13	Broadcast system information messages: SI 1~4; SI 13
SS	G_CRLC_CreateRLC_MAC_REQ		Create RLC/MAC emulation entity
SS	G_CLLC_CreateLLE_REQ		Create LLC emulation entity
SS	G_CLLC_Assign_REQ		Assign TLLI, ciphering key and algorithm
MS			MS is GPRS attached, PDP context activated, then trigger MS to send two SNDCP PDU on LLC SAPI 3, each with 500 bytes user data.
MS-> SS	G_L2_ACCESS_IND	CHANNEL REQUEST	RACH, TBF establishment with Establishment Cause = one phase packet access.

Direction	ASP	message	Comments
SS	G_CRLC_UL_TBF_Config_REQ		Set up uplink TBF in RLC/MAC entity in SS, this TBF is corresponding to what indicated in the next IMMEDIATE ASSIGNMENT. The USFRate is set to 5 USF per second.
SS -> MS	G_L2_UNITDATA_REQ	IMMEDIATE ASSIGNMENT	Assign the uplink resources (uplink TBF) to MS
MS -> SS	G_LLC_UNITDATA_IND	User data on SAPI 3, the first SNDCP PDU	The TBF shall not be in countdown process
SS -> MS	G_RLC_ControlMsg_REQ	PACKET MEASUREMENT ORDER	This is within the TBF established above, which is in the process handling the second SNDCP PDU REPORT_TYPE = 1
MS -> SS	G_RLC_ControlMsg_IND	PACKET_MEASUREMENT REPORT	MS sends the PACKET MEASUREMENT REPORT
SS -> MS	G_RLC_ControlMsg_REQ	PACKET CELL CHANGE ORDER	This is within the TBF established above what follows are in UTRAN cell, not present here

6.10.2.7.2.2　　　　　　Cell change order procedure in channel combinations 5 and 11

Direction	ASP	message	Comments
SS	G_CL1_CreateCell_REQ		
SS	G_CL1_CreateBasicPhyCh_REQ		Create the physical channel combination 5 for FCCH+SCH+BCCH+CCCH +SDCCH/4(0..3)+SACCH/C 4(0..3)
SS	G_CL1_CreateBasicPhyCh_REQ		Create the physical channel combination 11 for PBCCH+PCCCH+PDTCH+ PACCH
SS -> MS	G_L2_SYSINFO_REQ	SYSTEM INFORMATION TYPE1, SYSTEM INFORMATION TYPE2, SYSTEM INFORMATION TYPE2quater, SYSTEM INFORMATION TYPE3, SYSTEM INFORMATION TYPE4, SYSTEM INFORMATION TYPE13	Broadcast system information messages: SI 1~4; SI 13
SS	G_CRLC_CreateRLC_MAC_REQ		Create RLC/MAC emulation entity
SS -> MS	G_RLC_PSI_REQ	PACKET SYSTEM INFORMATION TYPE1, PACKET SYSTEM INFORMATION TYPE2, PACKET SYSTEM INFORMATION TYPE3, PACKET SYSTEM INFORMATION TYPE3bis, PACKET SYSTEM INFORMATION TYPE5	Broadcast packet system information messages : PSI 1~3bis, and PSI 5
SS	G_CLLC_CreateLLE_REQ		Create LLC emulation entity
SS	G_CLLC_Assign_REQ		Assign TLLI, ciphering key and algorithm

Direction	ASP	message	Comments
MS			MS is GPRS attached, PDP context activated, then trigger MS to send two SNDCP PDU on LLC SAPI 3, each with 500 bytes user data.
MS-> SS	G_RLC_ACCESS_IND	PACKET CHANNEL REQUEST	PRACH, TBF establishment with one phase or two phase access
SS -> MS	G_RLC_ControlMsg_REQ	PACKET UPLINK ASSIGNMENT	PCCCH, Single block allocation
MS -> SS	G_RLC_ControlMsg_IND	PACKET RESOURCE REQUEST	
SS	G_CRLC_UL_TBF_Config_REQ		Set up uplink TBF in RLC/MAC entity in SS, this TBF is corresponding to what indicated in PACKET UPLINK ASSIGNMENT next. The USFRate is set to 5 USF per second.
SS -> MS	G_RLC_ControlMsg_REQ	PACKET UPLINK ASSIGNMENT	Assign the uplink resources (uplink TBF) to MS
MS -> SS	G_LLC_UNITDATA_IND	User data on SAPI 3, the first SNDCP PDU	The TBF shall not be in countdown process
SS -> MS	G_RLC_ControlMsg_REQ	PACKET MEASUREMENT ORDER	This is within the TBF established above, which is in the process handling the second SNDCP PDU REPORT_TYPE = 0
MS -> SS	G_RLC_ControlMsg_IND	PACKET ENHANCED MEASUREMENT REPORT	MS sends control message
SS -> MS	G_RLC_ControlMsg_REQ	PACKET CELL CHANGE ORDER	This is within the TBF established above what follows are in UTRAN cell, not present here

6.10.2.8 Generic Cconfiguration example procedure for GSM ciphering mode control

Direction	ASP	message	Comments
	. . .		Other necessary configuration ASP's
SS	G_CL1_CreateBasicPhyCh_REQ		Create a dedicated physical channel, e.g. combination 1 with ciphering not started: This ASP download Kc and ciphering algorithm to the SS with startingCiph = 0 in cipherMode. If there is no authenticantion procedure before CIPHERING MODE COMMAND, the value of Kc in this ASP shall be the one generated in previous authentication procedure, otherwise the value of Kc shall be the one generated by forthcoming authentication procedure.
	. . .		Any other signaling message sending/receiving or configuration ASP's
SS	G_CL1_CipheringControl_REQ		rcvCipherMode ='1' , the SS starts ciphering on receiving
SS	G_CL1_CipheringControl_CNF		
SS -> MS	G_L2_DATA_REQ	CIPHERING MODE COMMAND	Sent without ciphering
SS			Before this point both transmitting and receiving in the SS are not ciphered.
SS	G_CL1_CipheringControl_REQ		rcvCipherMode ='1' , the SS starts ciphering on receiving
SS	G_CL1_CipheringControl_CNF		
MS -> SS	G_L2_DATA_IND . . .	CIPHERING MODE COMPLETE	After receiveing this message the SS shall start ciphering on transmitting, The CIPHERING MODE COMPLETE is ciphered Any signaling message or user data sending/receiving in ciphered mode

6.10.2.9 L|H bits convention and bit padding in DL

6.10.2.9.1 GERAN DL RLC/MAC message bit padding

The length of a GPRS RLC/MAC control messages is an integer number of RLC/MAC control blocks. Padding bits are necessary to fill the message up to the desired length. The padding bits may be the 'null' string. Otherwise, the padding bits starts with bit '0', followed by 'spare padding'. The padding sequence used for 'spare padding' in this specification, is a repetition of octet '00101011', starting on an octet boundary.

$$< padding\ bits > ::= \{\ null\ |\ 0 < spare\ padding >$$

$$\text{"}<spare\ padding> ::= <spare\ L> \{null\ |\ < spare\ padding>\}\text{"}$$

In the TTCN a specific encoding variation – encoding rule 1 - is defined according to the rules described above. This shall be used in the definition of the message itself. No 'padding bits' field will be defined in the TTCN. The implementation shall ensure that after encoding the message contents defined in the TTCN, the remainder of the message shall be filled with 'padding bits'.

6.10.2.9.2 GSM DL message spare padding

A number of GPRS information elements are defined in the rest octets of certain GSM DL messages, for instance, IA Rest Octets, SI 2quater Rest Octets, SI 3 Rest Octets, SI 4 Rest Octets, SI 13 Rest Octets, etc. These rest octets were filled in a repetition of bit padding '00101011' or '2B'O, starting on an octet boundary to a certain length.

In the TTCN, a second encoding variation – encoding rule 2 – shall be used in the definition of the message itself, which shall be of a fixed length (always 23 octets). No 'spare padding' field will be defined in the TTCN. The implementation shall ensure that after encoding the message contents defined in the TTCN, the remainder of the message, up to the defined fixed length, shall be filled with 'spare padding'.

6.10.2.9.3 L | H convention in rest octets of GSM DL messages

A number of GPRS information elements are defined in the rest octets of certain GSM DL messages. The special notations "L" and "H" are used to denote respectively the bit's logical value corresponding to the padding spare bit for that position, and the other value. The actual value of the bit transmitted by SS therefore depends upon its position within the octet – this involves counting bits.

In the TTCN a third encoding variation - encoding rule 3 - is defined for this purpose. This encoding veriation is applied to those specific TTCN Rest Octets definitions which contain the L|H convention.

6.10.2.9.4 Spare Bits

Where the IE definition of RLC/MAC blocks contains bits defined to be 'spare bits', these bits shall set to the value '0' by the TTCN writers, according to the defined length indicator.

7.3.2.2.5 CPHY_Cell_TxPower_Modify

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

SEQUENCE   {
      cellId   INTEGER(0..63)
}	

ASN.1 ASP Type Definition	
Type Name	CPHY_Cell_TxPower_Modify_REQ
PCO Type	CSAP
Comment	To request to change the DL power If the Tx attenuation level value is set to 123, the cell becomes a non-suitable off cell (CPICH_Ec ≤ -122 dBm/3.84 MHz of an off cell).
Type Definition	

SEQUENCE   {
      cellId   INTEGER(0..63),
      dLTxAttenuationLevel   INTEGER(0..30, 123)
}	

7.3.2.2.35　　RLC_UM_DATA

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

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

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

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

7.3.4.3.1.2 ASPs for data transmission and reception through GERAN RLC

ASP Name	G_RLC_PSI_REQ	
PCO Type	G_DSAP	
Comments	The ASP is used to send packet system information messages to the lower layer emulator.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
physicalChId	PhysicalChId	
g_LogicChType	G_LogicChType	PBCCH or PACCH or PCCCH
~~timeslot~~	~~TN~~	~~Time slot number of the physical channel~~
packetSysInfoCategory	PSI_Category	PSI1 or high repetition rate or low repetition rate. Type of this field is INTEGER: 0-- PSI1; 1--high repetition category; 2--low repetition category.
positionInList	PositionInList	Position in the high repetition rate list or the low repetition rate list, for PSI1 this field is not applicable and set to 31. Type of this field is INTEGER, the order of the position is from 0, 1, ... 0 indicates the first position, 1 the second, and so on.
msg	PDU	This field contains PACKET SYSTEM INFORMATION message, see 3GPP TS 04.60 or 3GPP TS 44.060 [**Error! Reference source not found.**] clauses 11.2.18 to 11.2.25 for the message definitions
Detailed Comments	On PBCCH, the lower layer emulator shall store the PACKET SYSTEM INFORMATION's, and transmit them periodically according to the rules specified in clause 6.3.2.4 of 3GPP TS 05.02 or 3GPP TS 45.002 [**Error! Reference source not found.**]. The msg shall override the same type packet system information message previous stored in the lower layer. Multiple instances of a PSI shall be put in the same list and in ascending order of the message instance number	

Type Name	PSI_Category
Type Definition	INTEGER
Type Encoding	
Comments	3GPP TS 05.02 or 3GPP TS 45.002 [**Error! Reference source not found.**] clause 6.3.2.4

Type Name	PositionInList
Type Definition	INTEGER
Type Encoding	
Comments	0 is the first position; 1 is the second, and so on.

ASP Name	G_RLC_ControlMsg_REQ	
PCO Type	G_DSAP	
Comments	The ASP is used to transmit a RLC/MAC control message to the UE/MS on the specified channel.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
physicalChId	PhysicalChId	
g_LogicChType	G_LogicChType	PCCCH or PACCH or PTCCH
timeslot	TN	Time slot number of the physical channel
tBF_Direction	INTEGER	1-downlink TBF; 0-uplink TBF
tFI	TFI	Temporary flow identity
rRBP	RRBP	Relative reserved block period
s_P_Bit	S_P_Bit	Supplementary/polling bit
rfn	RFN	The reduced frame number of the first frame on which this message is sent. This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.
pagingGroup	PAGING_GROUP	for message other than PACKET PAGING REQUEST this field shall be omitted
pagingMode	PagingMode	0 -- normal paging; 1-- exteded paging; 3 -- paging reorganization. this field is valid only for PACKET PAGING REQUEST control message, for message other than PACKET PAGING REQUEST this field shall be omitted
msg	PDU	Down link RLC/MAC control message
Detailed Comments	This ASP provides values for "RRBP" and "S/P" fields in MAC header for TTCN controlling the response from the UE, the value for "PayloadType" and "USF" fields in MAC header shall be filled by the SS. If a RLC/MAC control message can not be fitted into one RLC/MAC control block, the SS RLC/MAC entity shall take the responsibility of segmentation of the message, and set the correct "PayloadType" and optional octet1 (and optional octet2). PTCCH is valid for PACKET TIMING ADVANCE/POWER CONTROL message if sending PACKET PAGING REQUEST. The required 52-multiframe occurs when: pagingGroup div (M div 64) = (FN div 52) mod 64 The index to the required paging block in the 51-multiframe determined above: Paging block index = pagingGroup mod (M div 64) M = (12 - BS_PAG_BLKS_RES - BS_PBCCH_BLKS) × 64	

Type Name	RRBP
Type Definition	BITSTRING[2]
Type Encoding	
Comments	3GPP TS 04.60 or 3GPP TS 44.060 [**Error! Reference source not found.**] clause 10.4.5

Type Name	S_P_Bit
Type Definition	BITSTRING[1]
Type Encoding	
Comments	0 - RRBP field is not valid; 1 - RRBP field is valid.

ASP Name	G_RLC_ControlMsg_IND		
PCO Type	G_DSAP		
Comments	The ASP is used to receive an uplink RLC/MAC control block sent by the UE/MS on the specified channel.		
Parameter Name	**Parameter Type**		**Comments**
cellId	CellId		
physicalChId	PhysicalChId		
g_LogicChType	G_LogicChType		PACCH or PDTCH
~~timeslot~~	~~TN~~		~~Time slot number of the physical channel~~
tBF_Direction	INTEGER		1 - downlink TBF; 0 - uplink TBF
tFI	TFI		Temporary flow identity
rfn	RFN		The reduced frame number of the frame carrying the message
msg	PDU		Uplink RLC/MAC control message
Detailed Comments	Logical channel type PDTCH is valid for PACKET ENHANCED MEARSUREMENT REPORT message only. The ASP is not used to receive PACKET CHANNEL REQUEST, EGPRS PACKET CHANNEL REQUEST and burst format of PACKET CONTROL ACKNOWLEDGEMENT which are received by G_RLC_ACCESS_IND.		

ASP Name	G_RLC_ACCESS_IND		
PCO Type	G_DSAP		
Comments	The ASP is used to receive an access burst sent by the UE/MS on the specified channel.		
Parameter Name	**Parameter Type**		**Comments**
cellId	CellId		
physicalChId	PhysicalChId		
g_LogicChType	G_LogicChType		PRACH or PACCH or PTCCH
~~timeslot~~	~~TN~~		~~Time slot number of the physical channe~~
rfn	RFN		The reduced frame number of the frame carrying the burst
retryBit	BITSTRING[1]		For access bursts on PRACH, RACH. For PACCH, this field is no meaning
burst	PDU		8-bit or 11-bit access burst
Detailed Comments	PACKET CHANNEL REQUEST, EGPRS PACKET CHANNEL REQUEST and burst format of PACKET CONTROL ACKNOWLEDGEMENT are access bursts.		

7.3.4.3.1.4 ASPs for data transmission and reception through GERAN SNDCP

ASP Name	G_SN_DATA_REQ		
PCO Type	G_DSAP		
Comments	The ASP is used to send a valid IP datagram on the specified NSAPI to the UE/MS by acknowledged transmission.		
Parameter Name	**Parameter Type**		**Comments**
sNDCPId	SNDCPId		
nSAPI	NSAPI		5 to 15
n_PDU_Number	~~N_PDU_Number~~OCTETSTRING[1]		
n_PDU	N_PDU		Valid IPv4 or IPv6 datagram
Detailed Comments	Acknowledged transmission mode		

ASP Name	G_SN_DATA_IND		
PCO Type	G_DSAP		
Comments	The ASP is used to receive an IP datagram on the specified NASPI from the UE/MS in acknowledged transmission mode.		
Parameter Name	**Parameter Type**		**Comments**
sNDCPId	SNDCPId		
nSAPI	NSAPI		5 to 15
n_PDU	N_PDU		IPv4 or IPv6 datagram
Detailed Comments	Acknowledged transmission mode		

ASP Name	G_SN_UNIDATA_REQ		
PCO Type	G_DSAP		
Comments	The ASP is used to send a valid IP datagram on the specified NSAPI to the UE/MS by unacknowledged transmission.		
Parameter Name	**Parameter Type**		**Comments**
sNDCPId	SNDCPId		
nSAPI	NSAPI		5 to 15
n_PDU	N_PDU		Valid IPv4 or IPv6 datagram
Detailed Comments	Unacknowledged transmission mode		

ASP Name	G_SN_UNITDATA_IND		
PCO Type	G_DSAP		
Comments	The ASP is used to receive an IP datagram on the specified NASPI from the UE/MS in unacknowledged transmission mode.		
Parameter Name	**Parameter Type**		**Comments**
sNDCPId	SNDCPId		
nSAPI	NSAPI		5 to 15
n_PDU	N_PDU		IPv4 or IPv6 datagram
Detailed Comments	Unacknowledged transmission mode		

ASP Name	G_SN_XID_REQ		
PCO Type	G_DSAP		
Comments	The ASP is used to send the requested XID parameters to the UE/MS.		
Parameter Name	**Parameter Type**		**Comments**
sNDCPId	SNDCPId		
xID_Info	XID_Info		XID parameters requested
Detailed Comments			

ASP Name	G_SN_XID_IND		
PCO Type	G_DSAP		
Comments	The ASP is used to receive the XID parameters requested by the UE/MS.		
Parameter Name	**Parameter Type**		**Comments**
sNDCPId	SNDCPId		
xID_Info	XID_Info		XID parameters requested by the UE/MS
Detailed Comments			

ASP Name	G_SN_XID_CNF		
PCO Type	G_DSAP		
Comments	The ASP is used to receive the negotiated XID parameters agreed by the UE/MS.		
Parameter Name	**Parameter Type**		**Comments**
sNDCPId	SNDCPId		
xID_Info	XID_Info		The negotiated XID parameters agreed by the UE/MS
Detailed Comments			

ASP Name	G_SN_XID_RES		
PCO Type	G_DSAP		
Comments	The ASP sends to the UE/MS the negotiated XID parameters agreed by the SS.		
Parameter Name	**Parameter Type**		**Comments**
sNDCPId	SNDCPId		
xID_Info	XID_Info		The negotiated XID parameters agreed by the SS
Detailed Comments			

Type Name	SNDCPId
Type Definition	INTEGER
Type Encoding	
Comments	The identifier of the SNDCP entity in SGSN

7.3.4.3.2.1 ASPs for configuration and control of GERAN L1

ASP Name	G_CL1_CreateCell_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to create a cell in GERAN	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
baseId	BITSTRING[6]	base transceiver station identity code = NCC+BCC. see 3GPP TS 23.003 [**Error! Reference source not found.**]
timingAdvance	BITSTRING[87]	The SS sets the timing of uplink direction in advance of downlink direction timing by this value.
Detailed Comments		

ASP Name	G_CL1_CreateCell_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_CreateCell_REQ	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The cell created
Detailed Comments		

ASP Name	G_CL1_DeleteCell_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to delete a cell in GERAN	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The cell to be deleted
Detailed Comments		

ASP Name	G_CL1_DeleteCell_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_DeleteCell_REQ	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The cell deleted
Detailed Comments		

ASP Name	G_CL1_CreateBasicPhyCh_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to create a basic physical channel in GERAN	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The cell which the channel to be created belongs to
physicalChId	PhysicalChId	identifier of the physical channel in the SS.
channelCombination	ChannelCombination	Logical channels combined onto the basic physical channel.
frqInfo	FrqInfo	Parameters for Description of the physical channel in frequency domain
timeSlot	TN	The timeslot number of the physical channel
tsc	TSC	Training sequence code. For common control and broadcast channels the value of tsc must be equal to BCC (base station colour code)
channelSpecificInfo	ChannelSpecificInfo	Specific parameters related to individual channel
txPower	TX_Power	The transmission power level in dBµVemf()
bandIndicator	BITSTRING[1]	Parameter for DCS or PCS frequency band selection. A value 0 for frqInfo.arfcn interpreted as DCS1800. A value 1 for frqInfo.arfcn interpreted as PCS1900. If omitted, the value in frqInfo.arfcn interpreted as DCS1800.
Detailed Comments	The value of channelCombination permitted currently: 1 TCH/F + FACCH/F + SACCH/TF 2 TCH/H(0,1) + FACCH/H(0,1) + SACCH/TH(0,1) 3 TCH/H(0,0) + FACCH/H(0,1) + SACCH/TH(0,1) + TCH/H(1,1) 4 FCCH + SCH + BCCH + CCCH 5 FCCH + SCH + BCCH + CCCH + SDCCH/4(0..3) + SACCH/C4(0..3) 6 BCCH + CCCH 7 SDCCH/8(0..7) + SACCH/C8(0.. 7) 8 TCH/F + FACCH/F + SACCH/M 9 TCH/F + SACCH/M 10 TCH/FD + SACCH/MD 11 PBCCH+PCCCH+PDTCH/F+PACCH/F+PTCCH/F 12 PCCCH+PDTCH/F+PACCH/F+PTCCH/F 13 PDTCH/F+PACCH/F+PTCCH/F 18 E-TCH/F + E-IACCH/F + E-FACCH/F + SACCH/TF 19 E-TCH/F + E-IACCH/F + E-FACCH/F + SACCH/M 20 E-TCH/F + E-IACCH/F + SACCH/M 21 E-TCH/FD + E-IACCH/F + SACCH/MD	

ASP Name	G_CL1_CreateBasicPhyCh_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_CreateBasicPhyCh_REQ	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The cell which the created channel belongs to
physicalChId	PhysicalChId	The physical channel created.
Detailed Comments		

Type Name	FrqInfo		
Encoding Variation			
Comments	Parameters for Description of basic physical channel in frequency domain.		
Element Name	**Type Definition**	**Field Encoding**	**Comments**
h	BITSTRING[1]		h=1:hopping channel h=0: non-hopping channel
spr	BITSTRING [3]		'000'B
spr1	BITSTRING [2]		'00'B if h = 0, otherwise OMIT
maio	BITSTRING [6]		mobile allocation index offset if h = 1, otherwise OMIT
hsn	BITSTRING [6]		hopping sequence number if h = 1, otherwise OMIT
arfcn	BITSTRING [10]		absolute RF channel number if h = 0, otherwise OMIT
hoppingFreqList	FrequencyList		hopping frequency list if h = 1, otherwise OMIT. The definition see 3GPP TS 44.018 [**Error! Reference source not found.**] or 3GPP TS 04.18, clause 10.5.2.13
Detailed Comments			

Type Name	ChannelSpecificInfo		
Encoding Variation			
Comments	Parameters for individual channel		
Element Name	**Type Definition**	**Field Encoding**	**Comments**
dedCH_Info	DedCH_Info		Parameters for dedicated channel. Valid for combination:1, 2, 3, 5, 7, 8, 9, 10 This field is omitted if DedCH_Info does not apply for the channelCombination
cCCH_Info	CCCH_Info		Parameters for common control channels: PCH, SCH, etc. Valid for combination: 4, 5, 6 This field is omitted if CCCH_Info does not apply for the channelCombination
pCCCH_Info	PCCCH_Info		Parameters for packet common control channels: PCCCH, PPCH,… Valid for combination: 11, 12 This field is omitted if PCCCH_Info does not apply for the channelCombination
pBCCH_Info	PBCCH_Info		Parameters for packet broadcast channels: PBCCH Valid for combination: 11 This field is omitted if PBCCH_Info does not apply for the channelCombination
Detailed Comments			

Type Name	DedCH_Info		
Encoding Variation			
Comments	Parameters for dedicated channel		
Element Name	**Type Definition**	**Field Encoding**	**Comments**
chMod	ChMode		Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [**Error! Reference source not found.**] clause 10.5.2.6
cipherMode	CipherModeSetting		Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [**Error! Reference source not found.**] clause 10.5.2.9
cipherKey	BITSTRING[64]		
powerLevel	BITSTRING[5]		Initial MS uplink transmission power level. This value is used in the L1 header of SACCH.
timingAdvance	BITSTRING[8~~7~~]		Initial timing advance. This value is used in the L1 header of SACCH. This field shall be set to the same value as in timingAdvance of G_CL1_CreateCell_REQ.
Detailed Comments	In addition to ciphering algorithm the cipherMode specifies the initial ciphering mode of the physical channel in both transmission and receiving direction.by startingCiph bit. During ciphering mode setting procedure the ciphering mode of receiving direction can be changed by G_CL1_CipheringControl_REQ.		

Type Name	CCCH_Info		
Encoding Variation			
Comments	Parameters for common control channels		
Element Name	**Type Definition**	**Field Encoding**	**Comments**
bS_PA_MFRMS	BITSTRING[3]		the number of 51-multiframes between transmissions of paging messages. Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [**Error! Reference source not found.**] clause 10.5.2.11
bS_AG_BLKS_RES	BITSTRING[3]		the number of blocks on each common control channel reserved for access grant messages. Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [**Error! Reference source not found.**] clause 10.5.2.11
Detailed Comments			

Type Name	PCCCH_Info		
Encoding Variation			
Comments	Parameters for packet common control channels		
Element Name	**Type Definition**	**Field Encoding**	**Comments**
bS_PBCCH_BLKS	BITSTRING[2]		3GPP TS 04.60 or 3GPP TS 44.060 [**Error! Reference source not found.**] clause 12.25
bS_PAG_BLKS_RES	BITSTRING[4]		3GPP TS 04.60 or 3GPP TS 44.060 [**Error! Reference source not found.**] clause 12.25
bS_PRACH_BLKS	BITSTRING[4]		3GPP TS 04.60 or 3GPP TS 44.060 [**Error! Reference source not found.**] clause 12.25
Detailed Comments			

Type Name	PBCCH_Info		
Encoding Variation			
Comments	Parameters for packet broadcast channel		
Element Name	**Type Definition**	**Field Encoding**	**Comments**
pSI1_REPEAT_PERIOD	BITSTRING[4]		The repeat period of packet system information Type 1. See 3GPP TS 04.60 or 3GPP TS 44.060 [**Error! Reference source not found.**] clause 11.2.18
pSI_COUNT_HR	BITSTRING[4]		The number of PSI message instances sent with high repetition rate. See 3GPP TS 04.60 or 3GPP TS 44.060 [**Error! Reference source not found.**] clause 11.2.18
pSI_COUNT_LR	BITSTRING[6]		The number of PSI message instances sent with low repetition rate. See 3GPP TS 04.60 or 3GPP TS 44.060 [**Error! Reference source not found.**] clause 11.2.18
Detailed Comments			

ASP Name	G_CL1_CreateMultiSlotConfig_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to create a multi-slot configuration in GERAN and should be preceded with G_CL1_CreateBasicPhyCh_REQ in order to create a basic physical channel with single timeslot.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The cell which the configuration to be created belongs to
mainChannel	PhysicalChId	identifier of the main physical channel of this multi-slot configuration.
multiSlotAllocation	MultiSlotAllocation	The timeslot allocation of the configuration
Detailed Comments	This ASP is to add a multi-slot configuration to the physical channel created in G_CL1_CreateBasicPhyCh_REQ ASP. For multi-slot configuration refer 3GPP TS 05.02 or 3GPP TS 45.002 [**Error! Reference source not found.**] clause 6.4.2.	

ASP Name	G_CL1_CreateMultiSlotConfig_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_CreateMultiSlotConfig_REQ	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The cell which the created multi-slot configuration belongs to.
physicalChId	PhysicalChId	The main physical channel identifier.
Detailed Comments		

Type Name	MultiSlotAllocation		
Encoding Variation			
Comments	Used in multi-slot configuration		
Element Name	**Type Definition**	**Field Encoding**	**Comments**
tN0	BOOLEAN		TRUE - time slot 0 is allocated; FALSE -- not allocated
channelCombination0	ChannelCombination		Channel combination fortime slot 0; not applicable if tN0 = FALSE
tN1	BOOLEAN		TRUE - time slot 1 is allocated; FALSE -- not allocated
channelCombination 1	ChannelCombination		Channel Combination fortime slot 1; not applicable if tN1 = FALSE
tN2	BOOLEAN		TRUE - time slot 2 is allocated; FALSE -- not allocated
channelCombination 2	ChannelCombination		Channel Combination fortime slot 2; not applicable if tN2 = FALSE
tN3	BOOLEAN		TRUE - time slot 3 is allocated; FALSE -- not allocated
channelCombination 3	ChannelCombination		Channel Combination fortime slot 3; not applicable if tN3 = FALSE
tN4	BOOLEAN		TRUE - time slot 4 is allocated; FALSE -- not allocated
channelCombination 4	ChannelCombination		Channel Combination for time slot 4; not applicable if tN4 = FALSE
tN5	BOOLEAN		TRUE - time slot 5 is allocated; FALSE -- not allocated
channelCombination 5	ChannelCombination		Channel Combination fortime slot 5; not applicable if tN5 = FALSE
tN6	BOOLEAN		TRUE - time slot 6 is allocated; FALSE -- not allocated
channelCombination 6	ChannelCombination		Channel Combination fortime slot 6; not applicable if tN6 = FALSE
tN7	BOOLEAN		TRUE - time slot 7 is allocated; FALSE -- not allocated
channelCombination 7	ChannelCombination		Channel Combination for time slot 7; not applicable if tN7 = FALSE
Detailed Comments	Multislot configuration is referred to 3GPP TS 05.02 or 3GPP TS 45.002 [**Error! Reference source not found.**] clause 6.4.2. The timeslot for which G_CL1_CreateBasicPhyCh_REQ has set the channel combination shall be set to FALSE.		

ASP Name	G_CL1_CipheringControl_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to set the ciphering mode of the physical channel in receiving direction, the kc and ciphering algorithm was set by the G_CL1_CreateBasicPhyCh_REQ for the physical channel before calling the ASP.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
rcvCipherMode	BITSTRING[1]	Ciphering Mode in SS receiving direction: 0→ not ciphered 1→ ciphered
Detailed Comments	For GSM dedicated physical channel, the ciphering mode of the SS shall be changed in three steps: (3GPP TS 44.018 [**Error! Reference source not found.**], clause 3.4.7) Before the SS sending CIPHERING MODE COMMAND the SS is transmitting and receiving in old ciphering mode (for example, not ciphered), after the SS sending CIPHERING MODE COMMAND the SS changes its receiving ciphering mode to new ciphering mode (for example, ciphered) and keeps transmitting in old ciphering mode; then after receiving CIPHERING MODE COMPLETE or any correct L2 frame in new ciphering mode the SS changes the transmitting ciphering mode to the new mode. TTCN writer shall use this ASP ~~after~~ before ~~the SS~~ sending the CIPHERING MODE COMMAND to ensure ~~change~~ the ciphering mode of the physical channel, in sufficient time, according to the 3 step procedure outlined above. ~~in receiving direction, the ciphering mode change in transmission direction is the responsibility of the SS without TTCN ASP.~~	

ASP Name	G_CL1_CipheringControl_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to confirm that the G_CL1_CipheringControl_REQ is executed correctly.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
Detailed Comments		

ASP Name	G_CL1_ComingFN_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to request lower layer return the reduced frame number (FN modulo 42432) which is far enough in the future from current frame number and is able to carry L3 message on the specified channel. The requirement of "far enough" is that there is enough time left for TTCN to prepare a L3 message to send before that frame. The ASP could also be used in the calculation of a value for starting time	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL1_ComingFN_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to receive the result of G_CL1_ComingFN_REQ.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
rfn	RFN	the reduced frame number (FN modulo 42432) which is about 5 seconds later than current frame number and is able to carry L3 message on the channel specified by "physicalChId"+"G_LogicChType"+"subChannel"
Detailed Comments		

ASP Name	G_CL1_L1Header_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to request lower layer return the L1 header of SACCH.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	SACCH
subChannel	SubChannelNumber	Valid only for logical channel types: SACCH/TH, SACCH/C8, and SACCH/C4 This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL1_L1Header_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to receive the result of G_CL1_L1Header_REQ.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	SACCH
subChannel	SubChannelNumber	Valid only for logical channel types: SACCH/TH, SACCH/C8, and SACCH/C4 This field is not applicable and the SS shall ignore it if this field is coded as 15.
l1Header	L1HD	Power level and timing advance
Detailed Comments		

ASP Name	G_CL1_DeleteChannel_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to delete a basic physical channel or an multi-slot configuration	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The identifier of the cell which the channel to be deleted belongs to
physicalChId	PhysicalChId	The physical channel or the multi-slot configuration to be deleted.
Detailed Comments		

ASP Name	G_CL1_DeleteChannel_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_DeleteChannel_REQ	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The identifier of the cell which the deleted channel belongs to
physicalChId	PhysicalChId	The physical channel or multi-slot configuration deleted.
Detailed Comments		

ASP Name	G_CL1_ChModeModify_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to modify the channel mode of a dedicated channel	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
chMode	ChMode	Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [**Error! Reference source not found.**] clause 10.5.2.1b
Detailed Comments		

ASP Name	G_CL1_ChModeModify_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_ChModeModify_REQ	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL1_SetNewKey_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to set new cipher key for a dedicated channel	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	The channel which uses the new key
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
cipherKey	BITSTRING[64]	
Detailed Comments		

ASP Name	G_CL1_SetNewKey_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_SetNewKey_REQ	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL1_CipherModeModify_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to modify cipher mode of a dedicated channel	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
cipherMode	CipherModeSetting	The new cipher mode. Definition see 3GPP TS 04.18 or 3GPP TS 44.018 [**Error! Reference source not found.**] clause 10.5.2.9
Detailed Comments		

ASP Name	G_CL1_CipherModeModify_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_CipherModeModify_REQ	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); For SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3). This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL1_ChangePowerLevel_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to change the transmission power level of a physical channel	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The identifier of the cell which the physical channel belongs to
physicalChId	PhysicalChId	Channel using the new transmission power level
txPower	TX_Power	The new transmission power level in dBµVemf()
Detailed Comments		

ASP Name	G_CL1_ChangePowerLevel_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CL1_ChangePowerLevel_REQ	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The identifier of the cell
physicalChId	PhysicalChId	The physical channel which uses the new transmission power level
Detailed Comments		

7.3.4.3.2.2 ASPs for configuration and control of GERAN L2

ASP Name	G_CL2_HoldPhyInfo_REQ	
PCO Type	G_CSAP	
Comments	The ASP commands the SS to hold the PHYSICAL INFORMATION message, which will be sent on PCO G_L2 following the current ASP. The PHYSICAL INFORMATION message shall be sent to the UE/MS within T3124 from the time when the SS has received n handover access bursts.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4, This field is not applicable and the SS shall ignore it if this field is coded as 15.
n	INTEGER	The number of handover access bursts to be received
Detailed Comments	T3124 is defined in 3GPP TS 04.18 or 3GPP TS 44.018 [**Error! Reference source not found.**] clauses 3.4.4.2.2 and 11.1.1	

ASP Name	G_CL2_HoldPhyInfo_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get a confirmation of the G_CL2_HoldPhyInfo_REQ.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4. This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL2_NoUAforSABM_REQ	
PCO Type	G_CSAP	
Comments	The ASP commands the SS not to send UA response to the UE when it receives SABM from the UE on the specified channel.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4, This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL2_NoUAforSABM_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get a confirmation of the G_CL2_NoUAforSABM_REQ.	
Parameter Name	Parameter Type	Comments
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4. This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL2_Release_IND	
PCO Type	G_DSAP	
Comments	The ASP is used to receive an indication of the termination of an established multiple frame operation or an indication of an unsuccessful establishment attempt.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
sAPI	SAPI	0
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: TCH/H, FACCH/H, SACCH/TH, SDCCH/8, SACCH/C8, SDCCH/4, and SACCH/C4. For TCH/H, FACCH/H and SACCH/TH value is (0..1); for SDCCH/8 and SACCH/C8 value is (0..7); for SDCCH/4 and SACCH/C4 value is (0..3).
releaseMode	BITSTRING[1]	0 = normal release; 1 = local end release
outstanding_Indicator	BOOLEAN	whether or not there are outstanding acknowledgements or unsolved G_L2_DATA_REQ primitives.
Detailed Comments		

ASP Name	G_CL2_ResumeUAforSABM_REQ	
PCO Type	G_CSAP	
Comments	The ASP commands the SS to send UA response to the UE when it receives SABM from the UE on the specified channel. This ASP is used after G_CL2_NoUAforSABM_REQ to resume the normal multiframe operation of L2	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4, This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

ASP Name	G_CL2_ResumeUAforSABM_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get a confirmation of the G_CL2_ResumeUAforSABM_REQ.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
physicalChId	PhysicalChId	Channel identifier
g_LogicChType	G_LogicChType	
subChannel	SubChannelNumber	Valid only for logical channel types: FACCH/H, SDCCH/8 and SDCCH/4. This field is not applicable and the SS shall ignore it if this field is coded as 15.
Detailed Comments		

7.3.4.3.2.3 ASPs for configuration and control of GERAN RLC/MAC

ASP Name	G_CRLC_CreateRLC_MAC_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to create a RLC/MAC entity in GERAN RLC/MAC emulation module.	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	The identifier of the cell
Detailed Comments	One RLC/MAC entity per cell can exist, cellId will be used for couping LLC layer module to the RLC/MAC emulation module.. The packet channel description given in the ChannelSpecificInfo of G_CL1_CreateBasicPhyCh_REQ shall be used to configure this layer. This ASP shall be called after the G_CL1_CreateBasicPhyCh_REQ ASP.	

ASP Name	G_CRLC_CreateRLC_MAC_CNF		
PCO Type	G_CSAP		
Comments	The ASP is used to confirm the G_CRLC_CreateRLC_MAC_REQ		
Parameter Name	**Parameter Type**		**Comments**
cellId	CellId		The identifier of the cell
~~rlcMacEntityId~~	~~RlcMacEntityId~~		
Detailed Comments			

~~Type Name~~	~~RlcMacEntityId~~
~~Type Definition~~	~~INTEGER~~
~~Type Encoding~~	
~~Comments~~	~~The identifier of the RLC/MAC Entity in a cell~~

ASP Name	G_CRLC_DeleteRLC_MAC_REQ		
PCO Type	G_CSAP		
Comments	The ASP is used to delete a RLC/MAC entity in GERAN emulation module.		
Parameter Name	**Parameter Type**		**Comments**
cellId	CellId		The identifier of the cell
~~rlcMacEntityId~~	~~RlcMacEntityId~~		~~The identifier of RLC/MAC Entity in a cell~~.
Detailed Comments	This ASP is used to release any resource used for the RLC/MAC emulation entity in the SS.		

ASP Name	G_CRLC_DeleteRLC_MAC_CNF		
PCO Type	G_CSAP		
Comments	The ASP is used to confirm the G_CRLC_CreateRLC_MAC_REQ		
Parameter Name	**Parameter Type**		**Comments**
cellId	CellId		The identifier of the cell
~~rlcMacEntityId~~	~~RlcMacEntityId~~		
Detailed Comments			

ASP Name	G_CRLC_UL_TBF_Config_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to configure a TBF used for uplink packet data transfer	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
tFI	TFI	
tBF_Mode	BITSTRING[1]	0 - GPRS; 1 - EGPRS
channelCoding	ChannelCoding	
tLLI_BlockChannelCoding	BITSTRING[1]	0 - CS-1 or MCS-1(EGPRS); 1 - same as channelCoding
rLC_Mode	BITSTRING[1]	0 - acknowledged mode; 1 - unacknowledged mode
startingTime	RFN	This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.
uSF_Rate	INTEGER	This parameter controls the speed of the UL TBF transferring data blocks by controlling the USF rate: 1---> implementation dependent. TTCN does not specify the USF generating rate; 2---> 10 USF's per second; 3---> 5 USF's per second; 4---> 1 USF per second; 5---> 1 USF per 2 seconds; 6---> 1 USF per 3 seconds; 7---> 1 USF per 4 seconds.
dynamicAllocation	dynamicAllocation	dynamic allocation and other parameters.
Detailed Comments	For GPRS channel coding can be: CS-1, CS-2, CS-3 and CS-4; For EGPRS channel coding can be : MCS-1, MCS-2, MCS-3, MCS-4, MCS-5, MCS-6, MCS-7, MCS-8, MCS-9, MCS-5-7 and MCS-6-9. Due to one cell currently has only one RLC/MAC emulation module, this ASP does not contain RLC/MAC identity parameter to indicate which RLC/MAC emulation module this TBF is established for, instead, the parameter cellId implicitly indicates the RLC/MAC module, which is created by G_CRLC_CreateRLC_MAC_REQ and has identifier RlcMacEntityId in the cell. The higher layer (LLC emulation module) uses rLC/MAC_MappingInfo (with type of CellId) to address the RLC/MAC emulation module to which it connects	

ASP Name	G_CRLC_UL_TBF_Config_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CRLC_UL_TBF_Config_REQ	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
tFI	TFI	
Detailed Comments		

Type Name	ChannelCoding
Type Definition	INTEGER
Type Encoding	
Comments	1 - CS-1; 2 - CS-2; 3 - CS-3; 4 -- CS-4; 5 - MCS-1; 6 - MCS-2; 7 - MCS-3; 8 - MCS-4; 9 - MCS-5; 10 - MCS-6; 11 - MCS-7; 12 - MCS-8; 13 - MCS-9; 14 - MCS-5-7; 15 - MCS-6-9

Type Name	DynamicAllocation		
Encoding Variation			
Comments	Used for up link TBF; dynamic allocation or extended dynamic allocation		
Element Name	**Type Definition**	**Field Encoding**	**Comments**
extendedAllocation	BITSTRING[1]		0 - dynamic allocation; 1 - extended dynamic allocation
uSFGranularity	BITSTRING[1]		0 - one block; 1 - four blocks
physicalChId	PhysicalChId		Single PDCH or multislot-configured PDCHs
tN0	BOOLEAN		TRUE - time slot 0 is allocated; FALSE -- not allocated
uSF_TN0	BITSTRING[3]		USF value for slot 0
tN1	BOOLEAN		TRUE - time slot 1 is allocated; FALSE -- not allocated
uSF_TN1	BITSTRING[3]		USF value for slot 1
tN2	BOOLEAN		TRUE - time slot 2 is allocated; FALSE -- not allocated
uSF_TN2	BITSTRING[3]		USF value for slot 2
tN3	BOOLEAN		TRUE - time slot 3 is allocated; FALSE -- not allocated
uSF_TN3	BITSTRING[3]		USF value for slot 3
tN4	BOOLEAN		TRUE - time slot 4 is allocated; FALSE -- not allocated
uSF_TN4	BITSTRING[3]		USF value for slot 4
tN5	BOOLEAN		TRUE - time slot 5 is allocated; FALSE -- not allocated
uSF_TN5	BITSTRING[3]		USF value for slot 5
tN6	BOOLEAN		TRUE - time slot 6 is allocated; FALSE -- not allocated
uSF_TN6	BITSTRING[3]		USF value for slot 6
tN7	BOOLEAN		TRUE - time slot 7 is allocated; FALSE -- not allocated
uSF_TN7	BITSTRING[3]		USF value for slot 7
Detailed Comments	The uSF_TNx field is not applicable when tNx = FALSE.		

ASP Name	G_CRLC_DL_TBF_Config_REQ	
PCO Type	G_CSAP	
Comments	The ASP is used to configure a TBF used for down link packet data transfer	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
tFI	TFI	
tBF_Mode	BITSTRING[1]	0 - GPRS; 1 - EGPRS
channelCoding	ChannelCoding	
rLC_Mode	BITSTRING[1]	0 - acknowledged mode; 1 - unacknowledged mode
timeSlotAllocation	TimeSlotAllocation	Downlink TBF time slot allocation
startingTime	RFN	This field is not applicable and the SS shall ignore it if the field t2 of rfn is coded as '11111'B.
dataBlockRate	INTEGER	This parameter controls the speed of the DL TBF sending RLC/MAC data blocks on the assigned PDCH's: 1---> implementation dependent. TTCN does not specify the data block rate; 2---> 10 data blocks per second; 3---> 5 data blocks per second; 4---> 1 data block per second; 5---> 1 data block per 2 seconds; 6---> 1 data block per 3 seconds; 7---> 1 data block per 4 seconds.
Detailed Comments	For GPRS channel coding can be: CS-1, CS-2, CS-3 and CS-4; For EGPRS channel coding can be : MCS-1, MCS-2, MCS-3, MCS-4, MCS-5, MCS-6, MCS-7, MCS-8, MCS-9, MCS-5-7 and MCS-6-9.	

ASP Name	G_CRLC_DL_TBF_Config_CNF	
PCO Type	G_CSAP	
Comments	The ASP is used to get the confirmation of a G_CRLC_DL_TBF_Config_REQ	
Parameter Name	**Parameter Type**	**Comments**
cellId	CellId	
tFI	TFI	
Detailed Comments		

Type Name	TimeSlotAllocation		
Encoding Variation			
Comments	Used for downlink and up link TBF		
Element Name	**Type Definition**	**Field Encoding**	**Comments**
physicalChId	PhysicalChId		single PDCH or multislot-configured PDCHs
tN0	BOOLEAN		Timeslot 0; TRUE - allocated; FALSE - not allocated.
tN1	BOOLEAN		Timeslot 1; TRUE - allocated; FALSE - not allocated.
tN2	BOOLEAN		Timeslot 2; TRUE - allocated; FALSE - not allocated.
tN3	BOOLEAN		Timeslot 3; TRUE - allocated; FALSE - not allocated.
tN4	BOOLEAN		Timeslot 4; TRUE - allocated; FALSE - not allocated.
tN5	BOOLEAN		Timeslot 5; TRUE - allocated; FALSE - not allocated.
tN6	BOOLEAN		Timeslot 6; TRUE - allocated; FALSE - not allocated.
tN7	BOOLEAN		Timeslot 7; TRUE - allocated; FALSE - not allocated.
Detailed Comments			

8.3.2　Configuration of Cell_DCH_StandAloneSRB

The configuration is based on 3GPP TS 34.108 [**Error! Reference source not found.**], clause 6.10.2.4.1.3~~2~~. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [**Error! Reference source not found.**], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [**Error! Reference source not found.**], clause 6.10.2.4.4.1.1.1. The configuration is applied to the RRC and NAS signalling tests in the DCH state without RAB.

Table 1: Uplink configuration of Cell_DCH_StandAloneSRB

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

Table 2: Downlink configuration of Cell_DCH_StandAloneSRB

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

8.3.17　Configuration of Cell_DCH_MAC_SRB

The configuration is based on 3GPP TS 34.108 [**Error! Reference source not found.**], clause 6.10.2.4.1.3~~2~~. The RB0/UM-CCCH is referred to 3GPP TS 34.108 [**Error! Reference source not found.**], clause 6.10.2.4.3.2.1.2 and RB0/TM-CCCH is referred to 3GPP TS 34.108 [**Error! Reference source not found.**], clause 6.10.2.4.4.1.1.1; except that RB3 is mapped on TM mode.

The configuration is applied to the MAC tests.

Table 3: Uplink configuration of Cell_DCH_MAC_SRB

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

Table 4: Downlink configuration of Cell_DCH_MAC_SRB

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

8.7.4 Specific test suite operation for InterSystem Handover testing

Table 5: TSO definitions for InterSystem testing

TSO Name	Description
o_GSM_ToUTRANHO_PER_Encoding	**Type of the result:** OCTETSTRING **Parameters:** p_Msg : HandoverToUTRANCommand p_Len : O1 **Description:** It returns the aligned PER encoding of the input downlink message p_Msg (with "Encoder added (1-7) bits padding") of p_Len octets.
o_LengthofHO_Cmd	**Type of the result:** INTEGER **Parameters:** p_Msg : HandoverToUTRANCommand **Description:** it returns the no. of octets of the input downlink message p_Msg
o_HO_PER_Encoding	**Type of the result:** BITSTRING **Parameters:** p_Msg : DL_DCCH_Message **Description:** It returns the unaligned PER encoding (BIT STRING) of the input downlink DCCH message p_Msg (without "Encoder added (1-7) bits padding").
OC_LeastBits	**Type of the result:** BITSTRING **Parameters:** bstring : BITSTRING lg : INTEGER **Description:** It returns the `lg` least significant bits of the original `bstring`. for example: OC_LeastBits('110011000101010'B, 3) = '010'B, OC_LeastBits('110011000101010'B, 6) = '101010'B.
OC_MostBits	**Type of the result:** BITSTRING **Parameters:** bstring : BITSTRING lg : INTEGER **Description:** It returns the `lg` most significant bits of the original `bstring`. for example: OC_ MostBits ('110011000101010'B, 3) = '010'B, OC_ MostBits ('110011000101010'B, 6) = '101010'B.
o_PacketPagingGroupCalculate	**Type of the result:** INTEGER **Parameters:** IMSI : HEXSTRING KC_Conf : INTEGER M : INTEGER N : INTEGER SplitPGCycle : B8 **Description:** It returns the calculated Packet Paging Group, according to:

PAGING_GROUP (0 ... M-1) = (((IMSI mod 1000) div (KC*N)) * N + (IMSI mod 1000) mod N + Max((m * M) div SPLIT_PG_CYCLE, m)) mod M
for m = 0, ... , Min(M, SPLIT_PG_CYCLE) -1
where
KC = number of (P)CCCH in the cell = BS_PCC_CHANS for PCCCH or BS_CC_CHANS for CCCH

M = number of paging blocks "available" on one (P)CCCH =
(12 - BS_PAG_BLKS_RES - BS_PBCCH_BLKS) * 64 for PCCCH
(9 - BS_AG_BLKS_RES) * 64 for CCCH not combined
(3 - BS_AG_BLKS_RES) * 64 for CCCH + SDCCH combined

N=
1 for PCCCH
(9 - BS_AG_BLKS_RES)*BS_PA_MFRMS for CCCH not combined
(3 - BS_AG_BLKS_RES)*BS_PA_MFRMS for CCCH/SDCCH combined

SPLIT_PG_CYCLE is an MS specific parameter negotiated at GPRS attach (see 3GPP TS 04.60)
IMSI = International Mobile Subscriber Identity, as defined in 3GPP TS 03.03.

8.8   AT commands

Table 6 shows a list of AT commands. By using these commands the ATSs communicate with the SS for an automatic execution. The column "ATS" indicates in which ATS the command is used.

Table 6: AT commands used in 3GPP ATSs

Command	Reference	ATS
+CGACT	3GPP TS 27.007 [**Error! Reference source not found.**]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGATT	3GPP TS 27.007 [**Error! Reference source not found.**]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGCMOD	3GPP TS 27.007 [**Error! Reference source not found.**]	NAS
+CGDCONT	3GPP TS 27.007 [**Error! Reference source not found.**]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGDSCONT	3GPP TS 27.007 [**Error! Reference source not found.**]	NAS
+CGEQREQ	3GPP TS 27.007 [**Error! Reference source not found.**]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGEQMIN	3GPP TS 27.007 [23]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CLCC	3GPP TS 27.007 [**Error! Reference source not found.**]	NAS
+VTS	3GPP TS 27.007 [**Error! Reference source not found.**]	NAS
H	3GPP TS 27.007 [**Error! Reference source not found.**]	NAS, RAB, RRC, SMS
+CBST	3GPP TS 27.007 [**Error! Reference source not found.**]	NAS, RAB, RRC, SMS
+CMOD	3GPP TS 27.007 [**Error! Reference source not found.**]	NAS, RAB, RRC, SMS

A	3GPP TS 27.007 [**Error! Reference source not found.**]	NAS, RAB, RRC, SMS
D	3GPP TS 27.007 [**Error! Reference source not found.**]	BMC, MAC, NAS, RAB, RLC, RRC, PDCP, SMS
+CGMD	3GPP TS 27.005 [**Error! Reference source not found.**]	SMS
+CGMF	3GPP TS 27.005 [**Error! Reference source not found.**]	SMS
+CGMR	3GPP TS 27.005 [**Error! Reference source not found.**]	SMS
+CMGW	3GPP TS 27.005 [**Error! Reference source not found.**]	SMS
+CMSS	3GPP TS 27.005 [**Error! Reference source not found.**]	NAS, RAB, RRC, SMS
+CPMS	3GPP TS 27.005 [**Error! Reference source not found.**]	SMS
+CSCA	3GPP TS 27.005 [**Error! Reference source not found.**]	SMS
+CSCS	3GPP TS 27.005 [**Error! Reference source not found.**]	SMS
+CSMS	3GPP TS 27.005 [**Error! Reference source not found.**]	SMS

8.10 Test PDP contexts

Tables 7 to defines test PDP contexts used in the generic procedures for the PS establishment and other SM tests. The test PDP contextDch1 is the default Test PDP context used in the test cases where no particular Test PDP contexts are specified and UE is in DCH state. The test PDP contextFach is the default Test PDP context used in the test cases where no particular Test PDP contexts are specified and UE is in FACH state.

QoSmin is specified for entering AT commands.

Table 7: Test PDP contexts

	PDP ContextDch	PDP ContextFach	PDP Context3
NSAPI	Selected by UE in Activate PDP Context Request	Selected by UE in Activate PDP Context Request	Selected by UE in Activate PDP Context Request
LLC SAPI	0	0	0
QoS	QoSDch-UL64kAM-DL64kAM	QoSFach- UL32kAM-DL32kAM	QoS- UL8kAM-DL8kAM
PDP address	PIXIT	PIXIT	PIXIT
Radio Priority	1	1	1
Access Point Name	PIXIT	PIXIT	PIXIT
Protocol configuration options	-	-	-
Packet Flow Identifier	Best Effort	Best Effort	Best Effort

Table 8: Test QoS

	QoSDch-UL64kAM-DL64kAM	QoSFach- UL32kAM-DL32kAM	QoS- UL8kAM-DL8kAM
Reliability class	'011'B Unacknowledged GTP, LLC, and acknowledged RLC; Protected data	'011'B Unacknowledged GTP, LLC, and acknowledged RLC; Protected data	'001' Acknowledged GTP, LLC, and RLC; Protected data
Delay class	'011'B / '100'B 3 / 4 (Best effort)	'011'B / '100'B 3 / 4 (Best effort)	'100' Best effort
Precedence class	UL:'000'B, Subscribed DL:'011'B Class 3	UL:'000'B, Subscribed DL:'011'B Class 3	'100' Normal Class
Peak throughput	'0100'B 8 000 Octets/s	'0011' Up to 4 000 octet/s	'0110' Up to 32 000 octet/s
Mean throughput	'11111'B Best Effort	'11111'B Best Effort	'11111'B Best Effort
Delivery of erroneous SDU	'010' B Erroneous SDUs are delivered ('yes')	'010' B Erroneous SDUs are delivered ('yes')	'010' B Erroneous SDUs are delivered ('yes')
Delivery order	'01'B With delivery order ('yes')	'01'B With delivery order ('yes')	'01'B With delivery order ('yes')
Traffic class	'011' B / '100'B Interactive / Background	'011' B / '100'B Interactive / Background	'011' B Interactive class
Maximum SDU size	'20' O 320 bits]	'20'O 320 bits	'20'O 320 bits
Maximum bit rate for uplink	'40' O 64 kbps	'20'O 32 kbps	'08'O 32 kbps
Maximum bit rate for downlink	'40' O 64 kbps	'20'O 32 kbps	'08'O 32 kbps
Residual BER	'0111' 1X10E-5	'0111' 1X10E-5	'1001' 6X10E-3
SDU error ratio	'0100'B 1X10E-4	'0100'B 1X10E-4	'0011' 1X10E-3
Traffic Handling priority	UL: '00'B for Interactive, Any for Background DL: '11' B (for Interactive, for Background to be neglected by UE)	UL: '00'B for Interactive, Any for Background DL: '11' B (for Interactive, for Background to be neglected by UE)	'11' B Needs to be neglected by UE
Transfer delay	UL: Any DL: '111111' B spare (not applicable for Interactive / Background)	UL: Any DL: '111111' B spare (not applicable for Interactive / Background)	'111111' B spare (not applicable for Interactive / Background)
Guaranteed bit rate for uplink	UL: Any DL: '10' O 16 kbps	UL: Any DL: '10'O 32 kbps	'08'O 32 kbps
Guaranteed bit rate for downlink	UL: Any DL: '10' O 16 kbps	UL: Any DL: '10'O 16 kbps	'08'O 8 kbps
NOTE: Residual BER 1X10E-5 corresponds to CRC 16.			

Table 129: QoSmin for AT command

	QoSminDef- UL32kAM- DL32kAM		
Reliability class	'100'B Unacknowledged GTP, LLC, and RLC, Protected data		
Delay class	'011' / '100'B 3 / 4 (Best effort)		
Precedence class	'000'B, Subscribed		
Peak throughput	'0010'B Up to 2 000 octet/s		
Mean throughput	'11111'B Best Effort		
Delivery of erroneous SDU	'010' B Erroneous SDUs are delivered ('yes')		
Delivery order	'01'B With delivery order ('yes')		
Traffic class	'011' B / '100'B Interactive / Background		
Maximum SDU size	'20'O 320 octets		
Maximum bit rate for uplink	'40'O 64 kbps		
Maximum bit rate for downlink	'40'O 64 kbps		
Residual BER	'0110'B 4X10E-3		
SDU error ratio	'0011'B 1X10E-3		
Traffic Handling priority	UL: Any		
Transfer delay	UL: Any		
Guaranteed bit rate for uplink	UL: Any		
Guaranteed bit rate for downlink	UL: Any		
NOTE: Residual BER 4X10E-3 corresponds to CRC 8.			

B.1 Parameter values

B.1.1 BasicM test suite parameter declarations

The following parameters are common to all ATSs.

Table B.1: BasicM PIXIT

Parameter name	Description	Type	Default value	Supported value
px_PDP_IP_AddrInfoDCH	A string parameter that identifies the MT in the address space applicable to the PDP for DCH.	IA5String	"200.1.1.80"	
px_PDP_IP_AddrInfoFACH	A string parameter that identifies the MT in the address space applicable to the PDP for FACH.	IA5String	"200.1.1.90"	
px_AuthAMF	Authentication Management Field (16 bits). The value shall be different from '1111 1111 1111 1111'B (AMFresynch).	BITSTRING	See note 2	
px_AuthK	Authentication Key (128 bits)	BITSTRING	'0101111001001 0101011001101 0110001001000 1001101110101	

Parameter name	Description	Type	Default value	Supported value
			1101001010101 1101110100000 0100101110011 0011111000011 0000100110100 11000101001'B	
px_AuthN	Value of n to initialize tcv_Auth_n (length of extended response) min 31, max 127 (3GPP TS 34.108 [**Error! Reference source not found.**] clause 8.1.2)	INTEGER	127	
px_AuthRAND	Random Challenge (128 bits)	BITSTRING	'01010101…01'B	
px_CC_CallDiallingDigits	Dialling digits used to initiate a CC MO call (used with the AT dial D command).	IA5String	"0123456902"	
px_CipheringOnOff	Security mode - TRUE if ciphering is applicable	BOOLEAN	TRUE	
px_CN_DomainTested	CN domain to be tested. This parameter is used in test cases that handle both PS and CS domains.	CN_DomainIdentity	cs_domain	
px_FRESH	Value for FRESH	Fresh	See note 1	
px_IMEI_Def	Default IMEI value	HEXSTRING	See note 1	
px_IMEISV_Def	Default IMEISV value	HEXSTRING	See note 1	
px_IMSI_Def	Default IMSI value	HEXSTRING	'001010123456063'H	
px_IMSI_Diff	Different IMSI from the IMSI stored in the USIM	HEXSTRING	'001010654321063'H	
px_PriScrmCode	Primary scrambling code	PrimaryScramblingCode	100	
px_PTMSI_Def	default PTMSI	OCTETSTRING	'12345678'O	
px_PTMSI_SigDef	default PTMSI signature (3 octets, 3GPP 24.008 [**Error! Reference source not found.**], clause 10.5.5.8).	OCTETSTRING	'AB1234'O	
px_RAT	This parameter is used to specify which radio access technology is being used for the current test execution. Valid values: fdd and tdd	RatType	fdd	
px_RB_Background_64	Data to be sent for RB test TC_14_2_26.	BITSTRING	INT_TO_BIT (17378987476987465213313265 0, 1344)	
px_RB_DataConversational_64	Data to be sent for RB test TC_14_2_13.	BITSTRING	INT_TO_BIT (89412032145809654789322116 84654654, 2560)	
px_RB_DataSpeech_12_2	Data to be sent for RB test TC_14_2_4.	BITSTRING	INT_TO_BIT (15896423213132132, 103)	
px_RB_DataStreaming_57_6	Data to be sent for RB test TC_14_2_17.	BITSTRING	INT_TO_BIT (12358987456987465213213265 0, 2304)	
px_RB_Interactive_64	Data to be sent for RB test TC_14_2_26.	BITSTRING	INT_TO_BIT (15358987456987465213313265 0, 1344)	
px_RRC_CS_ServTested	CS service to be tested for RRC test cases.	RRC_ServTested	Speech	
px_RRC_PS_ServTested	PS service to be tested for RRC test cases.	RRC_ServTested	Speech	
px_SRNC_Id	SRNC Id	SRNC_Identity	'0000 0000 0001'B	
px_SRNC_IdDiff	Different value for SRNC Id than in px_SRNCId	SRNC_Identity	'0000 0000 0010'B	

Parameter name	Description	Type	Default value	Supported value
px_SRNTI	S RNTI	S_RNTI	'0000 0000 0000 0000 0001'B	
px_SRNTI_Diff	Different value for S RNTI than in px_SRNTI	S_RNTI	'0000 0000 0000 0000 0010'B	
px_TCellA	TCell value for cell A	Tcell	0	
px_TCellB	TCell value for cell B	Tcell	512	
px_TCellC	TCell value for cell C	Tcell	1536	
px_TCellD	TCell value for cell D	Tcell	321	
px_TCellE	TCell value for cell E	Tcell	833	
px_TCellF	TCell value for cell F	Tcell	6577	
px_TCellG	TCell value for cell G	Tcell	7253	
px_TCellH	TCell value for cell H	Tcell	4351	
px_TMSI_Def	Default TMSI	OCTETSTRING	'12345678'O	
px_UARFCN_D_Mid	Mid Range downlink UARFCN value	INTEGER	10700	
px_UARFCN_D_Low	Low Range downlink UARFCN value	INTEGER	10563	
px_UARFCN_D_High	High Range downlink UARFCN value	INTEGER	10837	
px_UARFCN_U_High	High Range uplink UARFCN value. This value shall be set based on the operation band supported.	INTEGER	9887	
px_UARFCN_U_Low	Low Range uplink UARFCN value. This value shall be set based on the operation band supported.	INTEGER	9613	
px_UARFCN_U_Mid	Mid Range uplink UARFCN value. This value shall be set based on the operation band supported.	INTEGER	9750	
px_UE_OpModeDef	Default UE operation mode (either opModeA or opModeC). (For most UEs this corresponds class-A or class-C, and can not be changed by the user)	UE_OperationMode	opModeA	
px_UL_ScramblingCode	UL scrambling code value to be used by UE.	UL_ScramblingCode	0	
px_UTRAN_GERAN	This parameter is used to specify for which environment region the system information blocks are broadcast in the test execution. Valid values: "UTRAN only" and "UTRAN and GERAN".	Region	"UTRAN and GERAN"	
px_DeltaSS_DelayTime	Tdelta value (refer to 34.108 clause 4.2.3) in ms.	INTEGER	55ms	
NOTE 1: No default value can be proposed (Manufacturer defined value).				
NOTE 2: No default value can be proposed, because not enough information is available in 3GPP TS 34.109 [**Error! Reference source not found.**] clause 8.1.2.				

B.1.2 L3M test suite parameters declarations

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

Table B.2: L3M PIXIT

Parameter name	Description	Type	Default value	Supported value
px_BcapDataCompression	Data compression supported (used in the Bearer Capability)	B1	'0'B	
px_BcapFNUR	Fixed Network User rate supported: '00001'B: FNUR 9.6 kbit/s '00010'B: FNUR 14.4 kbit/s '00011'B: FNUR 19.2 kbit/s '00100'B: FNUR 28.8 kbit/s '00101'B: FNUR 38.4 kbit/s '00110'B: FNUR 48.0 kbit/s '00111'B: FNUR 56.0 kbit/s '01000'B: FNUR 64.0 kbit/s '01001'B: FNUR 33.6 kbit/s '01010'B: FNUR 32.0 kbit/s	B5	'00001'B	

Parameter name	Description	Type	Default value	Supported value
px_BcapITC	Information transfer capability supported (used for the generation of the Bearer Capability) 0 - UDI 1 - RDI 2 - 31 kHz Audio 3 - Other	ItcInt	2	
px_BcapModemType	Modem type supported (used in the Bearer Capability)	B5	'00110'B	
px_BcapNumberDataBits	Number of data bits supported (used in the Bearer Capability)	B1	'1'B	
px_BcapNumberStopBits	Number of Stops bits supported (used in the Bearer Capability)	B1	'1'B	
px_BcapOtherModemType	Other modem type supported (used in the Bearer Capability)	B2	'10'B	
px_BcapParity	Parity supported (used in the Bearer Capability)	B3	'011'B	
px_BcapSACP	Signalling access protocol supported (used in the Bearer Capability)	B3	'001'B	
px_BcapSyncAsync	Synchronous '0'B or Asynchronous '1'B mode supported by IUT	B1	'1'B	
px_BcapUeFlowControl	UE flow control. 0-outband, 1-inband, 2-no flow control. 3- X.25 4- X.75 Default: 0, outband flow control	FlowControl	0	
px_CC_Serv	Service selected for Mobile Originated calls and Mobile Terminated calls. The possible values are ("Telephony", "EmergencyCall", "31kHz", "V110", "V120", "PIAFS", "FTM", "X31", "BTM", "MmediaCall")	Services	"31kHz"	
px_NwOrgPDP_Support	This indicates if the UE implementation supports network originated PDP Context. TRUE indicates, supported FALSE indicate, not supported	BOOLEAN	FALSE	
px_PTMSI_2	Second PTMSI used for testing.	OCTETSTRING	'09876543'O	
px_PTMSI_Sig2	Second PTMSI signature used for testing.	OCTETSTRING	'AB1234'O	
px_TMSI_2	Second TMSI value for testing	OCTETSTRING	'09876543'O	

B.1.3 NAS test suite parameters declarations

The following parameters are commonly used in the NAS ATS.

Table B.3: NAS PIXIT

Parameter name	Description	Type	Default value	Supported value
px_AuthRAND_2	A second Random Challenge (128 bits)	BITSTRING	'1010101…10'B	
px_AutocallingBlacklistNumber	Number of B-party numbers that can be stored in the list of blacklisted numbers	INTEGER	20	
px_AutocallingCause1or2	Cause value of category 1 or 2 to be used in TC_17_1_3	INTEGER	18	
px_AutocallingNumber	Called number to be used for auto calling	IA5String	"0613454120"	
px_AutocallingRepeatCat1or2	Number of repeat attempt done for the category 1 or 2 to be used in	INTEGER	10	

Parameter name	Description	Type	Default value	Supported value
	TC_17_1_3			
px_CC_ServNotSupp	Not supported service selected for Mobile Originated calls and Mobile Terminated calls. The possible values are ("Telephony", "EmergencyCall", "31kHz", "V110", "V120", "PIAFS", "FTM", "X31", "BTM", "MmediaCall")	Services	"BTM"	
px_DTMF_BasicCharSet	TRUE if DMTF Chars 0-9, *, # supported	BOOLEAN	TRUE	
px_DTMF_OtherCharSet	TRUE if DMTF Chars A, B, C, D supported	BOOLEAN	TRUE	
px_DTMF_ToneInd	TRUE if UE support DTMF tone indication	BOOLEAN	TRUE	
px_EmergencyCallNumber	Emergency Number used by UE to initiate an emergency call	EmergencyNumber	"112"	
px_NoNwOrgPDP_ContextSupp	This indicates the number of network originated PDP context supported by the UE	INTEGER (0..7)	7	
px_SecPDP_Support	This indicates if the UE supports Secondary PDP Context or not.	BOOLEAN	TRUE	
~~px_TMSI_2~~	~~Second TMSI value~~	~~OCTETSTRING~~	~~'09876543'O~~	
px_UuInfo	User-user information for TC 10_3	OCTETSTRING	'01020304'O	
px_Uupd	User-user protocol discriminator for TC 10_3	B8	'00000100'B	
~~px_PTMSI_2~~	~~Second PTMSI used for testing.~~	~~OCTETSTRING~~	~~'09876543'O~~	
~~px_PTMSI_Sig2~~	~~Second PTMSI signature used for testing.~~	~~OCTETSTRING~~	~~'AB1234'O~~	
px_VTS_AT_CommandSupp	TRUE if the AT command +VTS is supported	BOOLEAN	TRUE	

B.1.5   RRC_M test suite parameters declarations

These parameters are used in the RRC and RAB ATS.

Table B.5: RRC and RAB PIXIT

Parameter name	Description	Type	Default value	Supported value
px_DL_MaxCC_TB_bits	Maximum sum of number of bits of all convolutionally coded transport blocks being received at an arbitrary time instant.	MaxNoBits	b163840	
px_DL_MaxCCTrCH	Maximum number of Simultaneous CCTrCH for downlink	MaxSimultaneousCCTrCH_Count	8	
px_DL_MaxTB_bits	Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant.	MaxNoBits	b163840	
px_DL_MaxTC_TB_bits	Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant.	MaxNoBits	b163840	
px_DL_MaxTF	Maximum number of TF for downlink	MaxNumberOfTF	tf1024	
px_DL_MaxTFS	Maximum number of TFC in the TFCS for downlink	MaxNumberOfTFC_DL	tfc1024	
px_DL_MaxTrCHs	Maximum number of simultaneous transport channels for downlink.	MaxSimultaneousTransChsDL	e32	
px_DL_MaxTTI_TB	Maximum total number of transport blocks received within TTIs that end	MaxTransportBlocksDL	tb512	

Parameter name	Description	Type	Default value	Supported value
	within the same 10 ms interval.			
px_MaxAM_EntityNumberRLC_Cap	Maximum AM Entity Number for RLC.	MaximumAM_EntityNumberRLC_Cap	am30	
px_MaxHcContextSpace	MaxHcContextSpace if RFC 2507 [**Error! Reference source not found.**] is supported.	MaxHcContextSpace	by512	
px_MaxNoDPCH_PDSCH_Codes	Part of DL_PhysChCapabilityFDD. INTEGER (1..8).	INTEGER	8	
px_MaxNoDPDCH_BitsTransmitted	Part of UL_PhysChCapabilityFDD.	MaxNoDPDCH_BitsTransmitted	b57600	
px_MaxNoPhysChBitsReceived	Part of DL_PhysChCapabilityFDD.	MaxNoPhysChBitsReceived	b76800	
px_MaxNoSCCPCH_RL	Part of SimultaneousSCCPCH_DPCH_Reception.	MaxNoSCCPCH_RL	rl1	
px_MaxRLC_WindowSize	Maximum RLC window size.	MaximumRLC_WindowSize	mws4095	
px_TotalRLC_AM_BufferSize	Total RLC AM buffer size.	TotalRLC_AM_BufferSize	NA	
px_UE_PowerClass	UE_PowerClass value.	UE_PowerClass	1	
px_UL_MaxCC_TB_bits	Maximum sum of number of bits of all convolutionally coded transport blocks being transmitted at an arbitrary time instant.	MaxNoBits	b163840	
px_UL_MaxTB_bits	Maximum sum of number of bits of all transport blocks being transmitted at an arbitrary time instant.	MaxNoBits	b163840	
px_UL_MaxTC_TB_bits	Maximum sum of number of bits of all turbo coded transport blocks being transmitted at an arbitrary time instant.	MaxNoBits	b163840	
px_UL_MaxTF	Maximum number of TF for uplink.	MaxNumberOfTF	tf1024	
px_UL_MaxTFS	Maximum number of TFC in the TFCS for uplink.	MaxNumberOfTFC_DL	tfc1024	
px_UL_MaxTrCHs	Maximum number of simultaneous transport channels for uplink.	MaxSimultaneousTransChsUL	e32	
px_UL_MaxTTI_TB	Maximum total number of transport blocks transmitted within TTIs that start at the same time.	MaxTransportBlocksUL	tb512	
px_UL_TC	Support for turbo encoding for uplink.	BOOLEAN	TRUE	
px_UE_PositioningNetworkAssistedGPS_Sup	UE positioning capability: supports network assisted by GPS	NetworkAssistedGPS_Supported	networkBased	

B.1.9 RAB test suite parameters declarations

These parameters are used in the RAB ATS.

Table B.9: RAB PIXIT

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_Background_128	Data to be sent for RB test TC_14_2_28.	BITSTRING	INT_TO_BIT (1737898747698 74652133132650, 2688)	
px_RB_Background_128_2048	Data to be sent for RB test	BITSTRING	INT_TO_BIT	

Parameter Name	Description	Type	Default Value	Supported Value
	TC_14_2_36.		(1737898747698 74652133132650 ,41984)	
px_RB_Background_128_384	Data to be sent for RB test TC_14_2_33.	BITSTRING	INT_TO_BIT (1737898747698 74652133132650 ,8064)	
px_RB_Background_144	Data to be sent for RB test TC_14_2_30.	BITSTRING	INT_TO_BIT (1737898747698 74652133132650 ,3024)	
px_RB_Background_16k	Data to be sent for RB test TC_14_2_23b.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,672)	
px_RB_Background_32	Data to be sent for RB test TC_14_2_23d.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,672)	
px_RB_Background_32_64	Data to be sent for RB test TC_14_2_25.	BITSTRING	INT_TO_BIT (17378987476987 4652133132650, 1344)	
px_RB_Background_32_8	Data to be sent for RB test TC_14_2_23.	BITSTRING	INT_TO_BIT (1737898747698 74652133132650 ,672)	
px_RB_Background_384	Data to be sent for RB test TC_14_2_34.	BITSTRING	INT_TO_BIT (1737898747698 74652133132650 ,8064)	
px_RB_Background_384_2048	Data to be sent for RB test TC_14_2_37	BITSTRING	INT_TO_BIT (1737898747698 74652133132650 ,41984)	
px_RB_Background_64_128	Data to be sent for RB test TC_14_2_27.	BITSTRING	INT_TO_BIT (1737898747698 74652133132650 ,2688)	
px_RB_Background_64_144	Data to be sent for RB test TC_14_2_29.	BITSTRING	INT_TO_BIT (1737898747698 74652133132650 ,3024)	
px_RB_Background_64_2048	Data to be sent for RB test TC_14_2_35.	BITSTRING	INT_TO_BIT (1737898747698 74652133132650 ,41984)	
px_RB_Background_64_256	Data to be sent for RB test TC_14_2_31.	BITSTRING	INT_TO_BIT (1737898747698 74652133132650 ,5376)	
px_RB_Background_64_384	Data to be sent for RB test TC_14_2_32.	BITSTRING	INT_TO_BIT (1737898747698 74652133132650 ,8064)	
px_RB_Background_64_8	Data to be sent for RB test TC_14_2_24.	BITSTRING	INT_TO_BIT (1737898747698 74652133132650 ,1344)	
px_RB_Background_8_40	Data to be sent for RB test TC_14_2_56.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,340)	

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_Background_8k	Data to be sent for RB test TC_14_2_23a.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 336)	
px_RB_ConvUnknown_64_ConvUnknown_64	Data to be sent for RB test TC_14_2_50	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 2560)	
px_RB_DataConversational_14_4	Data to be sent for RB test TC_14_2_15.	BITSTRING	INT_TO_BIT (2473304159874 563214258, 576)	
px_RB_DataConversational_28_8	Data to be sent for RB test TC_14_2_12.	BITSTRING	INT_TO_BIT (5896632514789 54114444778845 4777, 1152)	
px_RB_DataConversational_32	Data to be sent for RB test TC_14_2_14.	BITSTRING	INT_TO_BIT (1245789632541 24555488512323 565565465, 1280)	
px_RB_DataSpeech_10_2	Data to be sent for RB test TC_14_2_5.	BITSTRING	INT_TO_BIT (123456789, 99)	
px_RB_DataSpeech_4_75	Data to be sent for RB test TC_14_2_11.	BITSTRING	INT_TO_BIT (9007195689745 888, 53)	
px_RB_DataSpeech_5_15	Data to be sent for RB test TC_14_2_10.	BITSTRING	INT_TO_BIT (1523402589632 104555, 54)	
px_RB_DataSpeech_5_9	Data to be sent for RB test TC_14_2_9.	BITSTRING	INT_TO_BIT (1234564787987 987901247, 64)	
px_RB_DataSpeech_6_7	Data to be sent for RB test TC_14_2_8.	BITSTRING	INT_TO_BIT (2589647589645 46546546, 76)	
px_RB_DataSpeech_7_4	Data to be sent for RB test TC_14_2_7.	BITSTRING	INT_TO_BIT (7894561234560 4, 87)	
px_RB_DataSpeech_7_95	Data to be sent for RB test TC_14_2_6.	BITSTRING	INT_TO_BIT (9876542569874 56987455, 84)	
px_RB_DataStreaming_128_0	Data to be sent for RB test TC_14_2_21	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 576)	
px_RB_DataStreaming_28_8	Data to be sent for RB test TC_14_2_16.	BITSTRING	INT_TO_BIT (1238974566954 10231546875465 4654654654654, 1152)	
px_RB_DataStreaming_64_0	Data to be sent for RB test TC_14_2_19	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 576)	
px_RB_Interact_8_40	Data to be sent for RB test TC_14_2_56.	BITSTRING	INT_TO_BIT (12358987456987 4652132132650, 340)	
px_RB_Interactive_128	Data to be sent for RB test TC_14_2_28.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 2688)	
px_RB_Interactive_128_2048	Data to be sent for RB test TC_14_2_36.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 20992)	

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_Interactive_128_384	Data to be sent for RB test TC_14_2_33.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 4032)	
px_RB_Interactive_144	Data to be sent for RB test TC_14_2_30.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 3024)	
px_RB_Interactive_16k	Data to be sent for RB test TC_14_2_23b.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 672)	
px_RB_Interactive_32	Data to be sent for RB test TC_14_2_23d.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 672)	
px_RB_Interactive_32_64	Data to be sent for RB test TC_14_2_25.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 1344)	
px_RB_Interactive_32_8	Data to be sent for RB test TC_14_2_23.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 336)	
px_RB_Interactive_384	Data to be sent for RB test TC_14_2_34.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 4032)	
px_RB_Interactive_384_2048	Data to be sent for RB test TC_14_2_37	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 20992)	
px_RB_Interactive_64_128	Data to be sent for RB test TC_14_2_27.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 2688)	
px_RB_Interactive_64_144	Data to be sent for RB test TC_14_2_29.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 3024)	
px_RB_Interactive_64_2048	Data to be sent for RB test TC_14_2_35.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 20992)	
px_RB_Interactive_64_256	Data to be sent for RB test TC_14_2_31.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 2688)	
px_RB_Interactive_64_384	Data to be sent for RB test TC_14_2_32.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 4032)	
px_RB_Interactive_64_8	Data to be sent for RB test TC_14_2_24.	BITSTRING	INT_TO_BIT (1535898745698 74652133132650 , 1344)	
px_RB_Interactive_8k	Data to be sent for RB test TC_14_2_23a.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 336)	
px_RB_Speech_12_2_ConvUnkno wn_64	Data to be sent for RB test TC_14_2_49.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 2560)	

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_Speech_12_2_StreamUnknown_57_6	Data to be sent for RB test TC_14_2_45.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 2304)	
px_RB_Speech_12_2k_7_95k_5_9k_4_75k_Background_16k	Data to be sent for RB test TC_14_2_38g.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 672)	
px_RB_Speech_12_2k_7_95k_5_9k_4_75k_Background_32k	Data to be sent for RB test TC_14_2_38h.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 1344)	
px_RB_Speech_12_2k_7_95k_5_9k_4_75k_Interactive_16k	Data to be sent for RB test TC_14_2_38g.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 672)	
px_RB_Speech_12_2k_7_95k_5_9k_4_75k_Interactive_32k	Data to be sent for RB test TC_14_2_38h.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 1344)	
px_RB_Speech_12_2k_Background_8k	Data to be sent for RB test TC_14_2_38b.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 336)	
px_RB_Speech_12_2k_Interactive_8k	Data to be sent for RB test TC_14_2_38b.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 336)	
px_RB_StreamingUnknown_16_64_Background_8	Data to be sent for RB test TC_14_2_58.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 2624)	
px_RB_StreamingUnknown_16_64_Interactive_8	Data to be sent for RB test TC_14_2_58.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 2624)	
px_TMSI_2	TMSI 2.	OCTETSTRING	'09876543'O	
px_RB_DataStreaming_0_64	Data to be sent for RB test TC_14_2_18.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 2560)	
px_RB_DataStreaming_0_128	Data to be sent for RB test TC_14_2_20.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 5120)	
px_RB_DataStreaming_0_384	Data to be sent for RB test TC_14_2_22.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 15360)	
px_RB_Speech_12_2_Interactive_32_8	Data to be sent for RB test TC_14_2_38.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 672)	
px_RB_Speech_12_2_Interactive_64	Data to be sent for RB test TC_14_2_38d.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 1360)	
px_RB_Speech_12_2_Background_32_8	Data to be sent for RB test TC_14_2_38.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 672)	
px_RB_Speech_12_2_Background_64	Data to be sent for RB test TC_14_2_38d.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 1360)	

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_Speech_12_2_Interactive_32_64	Data to be sent for RB test TC_14_2_39.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 1344)	
px_RB_Speech_12_2_Background_32_64	Data to be sent for RB test TC_14_2_39.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 1344)	
px_RB_Speech_12_2_Interactive_64_64	Data to be sent for RB test TC_14_2_40.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 1344)	
px_RB_Speech_12_2_Background_64_64	Data to be sent for RB test TC_14_2_40.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 1344)	
px_RB_Speech_12_2_Interactive_64_128	Data to be sent for RB test TC_14_2_41.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 2688)	
px_RB_Speech_12_2_Background_64_128	Data to be sent for RB test TC_14_2_41.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 2688)	
px_RB_Speech_12_2_Interactive_64_256	Data to be sent for RB test TC_14_2_42.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 5376)	
px_RB_Speech_12_2_Background_64_256	Data to be sent for RB test TC_14_2_42.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 5376)	
px_RB_Speech_12_2_Interactive_64_384	Data to be sent for RB test TC_14_2_43.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 8064)	
px_RB_Speech_12_2_Background_64_384	Data to be sent for RB test TC_14_2_43.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 8064)	
px_RB_Speech_12_2_Interactive_128_2048	Data to be sent for RB test TC_14_2_44.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 41984)	
px_RB_Speech_12_2_Background_128_2048	Data to be sent for RB test TC_14_2_44.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 41984)	
px_RB_Speech_12_2_StreamUnknown_0_64	Data to be sent for RB test TC_14_2_46.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 2560)	
px_RB_Speech_12_2_StreamUnknown_0_128	Data to be sent for RB test TC_14_2_47.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 5120)	
px_RB_Speech_12_2_StreamUnknown_0_384	Data to be sent for RB test TC_14_2_48.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 15360)	
px_RB_ConvUnknown_64_Interactive_64	Data to be sent for RB test TC_14_2_51.	BITSTRING	INT_TO_BIT (12358987456987465213213 2650, 2560)	

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_ConvUnknown_64_Background_64	Data to be sent for RB test TC_14_2_51.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,2560)	
px_RB_ConvUnknown_64_Background_16k_64k_20	Data to be sent for RB test TC_14_2_51b.1.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,1280)	
px_RB_ConvUnknown_64_Background_16k_64k_40	Data to be sent for RB test TC_14_2_51b.2.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,2560)	
px_RB_ConvUnknown_64_Background_64_20	Data to be sent for RB test TC_14_2_51.1.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,1344)	
px_RB_ConvUnknown_64_Background_8k_20	Data to be sent for RB test TC_14_2_51a.1.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,1280)	
px_RB_ConvUnknown_64_Background_8k_40	Data to be sent for RB test TC_14_2_51a.2.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,2560)	
px_RB_ConvUnknown_64_Interactive_16k_64k_20	Data to be sent for RB test TC_14_2_51b.1.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,1280)	
px_RB_ConvUnknown_64_Interactive_16k_64k_40	Data to be sent for RB test TC_14_2_51b.2.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,2560)	
px_RB_ConvUnknown_64_Interactive_64_128	Data to be sent for RB test TC_14_2_52.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,2688)	
px_RB_ConvUnknown_64_Interactive_64_20	Data to be sent for RB test TC_14_2_51.1.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,1344)	
px_RB_ConvUnknown_64_Interactive_8k_20	Data to be sent for RB test TC_14_2_51a.1.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,1280)	
px_RB_ConvUnknown_64_Interactive_8k_40	Data to be sent for RB test TC_14_2_51a.2.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,2560)	
px_RB_ConvUnknown_64_Background_64_128	Data to be sent for RB test TC_14_2_52.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,2688)	
px_RB_ConvUnknown_64_Interactive_128_128	Data to be sent for RB test TC_14_2_53.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,2688)	
px_RB_ConvUnknown_64_Background_128_128	Data to be sent for RB test TC_14_2_53.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,2688)	
px_RB_Interactive_64_128StreamingUnknown_0k_64k	Data to be sent for RB test TC_14_2_54.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 ,2688)	

Parameter Name	Description	Type	Default Value	Supported Value
px_RB_Background_64_128_StreamingUnknown_0k_64k	Data to be sent for RB test TC_14_2_54.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 2688)	
px_RB_Interactive_64_128StreamingUnknown_0k_128k	Data to be sent for RB test TC_14_2_55.	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 5120	
px_RB_Background_64_128_StreamingUnknown_0k_128k	Data to be sent for RB test TC_14_2_55	BITSTRING	INT_TO_BIT (1235898745698 74652132132650 , 5120)	
Px_RB_Background_64k_64k_20	Data to be sent for RB test TC_14_2_57	BITSTRING	INT_TO_BIT(123 45678987456987 4652132132650, 2560)	