

# I

## Test Suite Overview

### Test Suite Structure

**Suite Name** : DLC

**Standards Ref** : EN 300 175-4

**PICS Ref** : ETS 300 476-2 for Portable Termination – EN 300 476-5 for Fixed Termination

**PIXIT Ref** : EN 300 497-5 Annex B

**Test Method(s)** : Remote Layer Embedded

**Comments** : This ATS is part of the DECT Common Interface Test Case Library (TCL) EN 300 497.  
This ATS is the TTCN part of EN 300 497 Part 5, TCL DLC layer

ETSI files reference: 497p5cv11.mp, 497p5v11.ps

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DECT-GAP ITA version: V11  
Last revision date: 5.08.98

Changes made since the last version ITA\_V09:

See the Change Requests recorded for EN 300 497-5 on the Docbox server

**PROCEDURE IN CASE OF AN ERROR DETECTION:**  
If you detect an error in this ATS you are most welcome to address your observations to the ETSI contact address mentioned above. Such observations will be analysed by the DECT Project Teams and they will be considered for the next DECT-GAP ITA version release.

Test Group Reference	Selection Ref	Test Group Objective	Page Nr
C_Plane/	Mandatory	Conformance of C-plane generic behaviours.	83
C_Plane/ClassU/	ClassU_mandatory	Conformance of C-plane Class U behaviours.	83
C_Plane/ClassU/CA/	ClassU_mandatory	Conformance of C-plane Class U capability behaviours.	83
C_Plane/ClassU/BI/	ClassU_mandatory	Conformance of C-plane Class U invalid behaviours.	86
C_Plane/ClassA/	ClassA_mandatory	Conformance of C-plane Class A behaviours.	94
C_Plane/ClassA/CA/	ClassA_mandatory	Conformance of C-plane Class A capability behaviours.	94
C_Plane/ClassA/BV/	ClassA_mandatory	Conformance of C-plane Class A valid behaviours.	102
C_Plane/ClassA/BI/	ClassA_mandatory	Conformance of C-plane Class A invalid behaviours.	109
C_Plane/ClassA/BO/	ClassA_mandatory	Conformance of C-plane Class A inopportune behaviours.	122
C_Plane/Lb/	Lb_mandatory	Conformance of C-plane Broadcast behaviours.	126
C_Plane/Lb/CA/	Lb_mandatory	Conformance of C-plane Broadcast capability behaviours.	126
U_Plane/	Mandatory	Conformance of U-plane generic behaviours.	128
U_Plane/Class0/	Class0_mandatory	Conformance of U-plane Class 0 behaviours.	128
U_Plane/Class0/CA/	Class0_mandatory	Conformance of U-plane Class 0 capability behaviours.	128
U_Plane/Class1/	Class1_mandatory	Conformance of U-plane Class 1 behaviours.	129
U_Plane/Class1/CA/	Class1_mandatory	Conformance of U-plane Class 1 capability behaviours.	129

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<b>Test Suite Structure</b>			
<b>Test Group Reference</b>	<b>Selection Ref</b>	<b>Test Group Objective</b>	<b>Page Nr</b>
U_Plane/Class1/BV/	Class1_mandatory	Conformance of U-plane Class 1 valid behaviours.	132
U_Plane/Class1/BI/	Class1_mandatory	Conformance of U-plane Class 1 invalid behaviours.	135
<b>Detailed Comments :</b>			

Test Case Index				
Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
C_Plane/ClassU/CA/	TC_U_CA_000	ClassU_snd	Verify that the IUT is able to generate an UI frame by using MAC connectionless services.	83
C_Plane/ClassU/CA/	TC_U_CA_002	ClassU_rec	Verify that the IUT is able to receive an UI frame over connectionless MAC services.	84
C_Plane/ClassU/CA/	TC_U_CA_003	ClassU_rec_on_co	Verify that the IUT is able to receive an UI frame over an open MAC connection.	85
C_Plane/ClassU/BI/	TC_U_BI_000	ClassU_rec	Verify that the IUT, on receipt of an UI frame with P bit set to '1', accepts this erroneous frame. the UI frame is transmitted over connectionless MAC services.	86
C_Plane/ClassU/BI/	TC_U_BI_001	ClassU_rec_on_co	Verify that the IUT, on receipt of an UI frame with P bit set to '1', accepts this erroneous frame. the UI frame is transmitted over an open MAC connection.	87
C_Plane/ClassU/BI/	TC_U_BI_002	ClassU_rec	Verify that the IUT, on receipt of an UI frame with NLF bit set to '1', accepts this erroneous frame. The UI frame is transmitted over connectionless MAC services.	88
C_Plane/ClassU/BI/	TC_U_BI_003	ClassU_rec_on_co	Verify that the IUT, on receipt of an UI frame with NLF bit set to '1', accepts this erroneous frame. the UI frame is transmitted over an open MAC connection.	89
C_Plane/ClassU/BI/	TC_U_BI_004	ClassU_rec	Verify that the IUT discards a UI frame with improper LLN (not Class U operation). The UI frame is transmitted over connectionless MAC services.	90
C_Plane/ClassU/BI/	TC_U_BI_005	ClassU_rec_on_co	Verify that the IUT discards a UI frame with improper LLN (not Class U operation). The UI frame is transmitted over an open MAC connection.	91

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Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
C_Plane/ClassU/BI/	TC_U_BI_006	ClassU_rec	Verify that the IUT discards a UI frame with improper SAPI (not 'connectionless'). The UI frame is transmitted over connectionless MAC services.	92
C_Plane/ClassU/BI/	TC_U_BI_007	ClassU_rec_on_co	Verify that the IUT discards a UI frame with improper SAPI (not 'connection oriented'). The UI frame is transmitted over an open MAC connection.	93
C_Plane/ClassA/CA/	TC_A_CA_000	ClassA_establish	To check the IUT re-transmission of the link establishment I-Frame request N250 times.	94
C_Plane/ClassA/CA/	TC_A_CA_001	ClassA_establish	Verify that the IUT, on receipt of a valid RR frame response to the link establishment request it has sent, enters established state.	95
C_Plane/ClassA/CA/	TC_A_CA_002	ClassA_re_establish_invo ke	To check the IUT re-transmission of the link re-establishment request N250 times.	96
C_Plane/ClassA/CA/	TC_A_CA_003	ClassA_re_establish_invo ke	Verify that the IUT, on receipt of a valid RR frame response to the link re-establishment request it has sent, enters established state.	97
C_Plane/ClassA/CA/	TC_A_CA_005	ClassA_info_transfer	Verify that the IUT acknowledges rightly a valid received I-Frame within timer <DL-04>.	98
C_Plane/ClassA/CA/	TC_A_CA_006	ClassA_info_transfer	To check the IUT re-transmission of an I-Frame N250 times.	99
C_Plane/ClassA/CA/	TC_A_CA_007	ClassA_accept_est_req	Verify that the IUT, refuses a Class B link establishment request by sending RR response frame with the reserved LLN value "Class A operation" and NLF bit set to "1", and enters into the Class A established state.	100
C_Plane/ClassA/CA/	TC_A_CA_008	ClassA_accept_est_req	Verify that the IUT responds and enters into Class A established state , on receipt of a establishment request.	101

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Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
C_Plane/ClassA/BV/	TC_A_BV_000	ClassA_send_and_accept_est_req	Verify that the IUT reacts correctly in case of collision of establishment requests.	102
C_Plane/ClassA/BV/	TC_A_BV_002	ClassA_info_transfer	Verify that the IUT accepts a RR response frame with correct N(R) value as an acknowledgement.	103
C_Plane/ClassA/BV/	TC_A_BV_003	ClassA_info_transfer	Verify that the IUT accepts an I-Frame command with correct N(S) and N(R) values as an acknowledgement.	104
C_Plane/ClassA/BV/	TC_A_BV_005	ClassA_info_transfer	Verify that, in timer recovery phase, the IUT accepts a RR response frame with correct N(R) value as an acknowledgement.	105
C_Plane/ClassA/BV/	TC_A_BV_006	ClassA_info_transfer	Verify that, in timer recovery phase, the IUT accepts an I-Frame command with correct N(S) and N(R) values as an acknowledgement.	106
C_Plane/ClassA/BV/	TC_A_BV_007	Intracell_connection_ho	Verify that the IUT manages rightly the PT intracell procedure for connection handover.	107
C_Plane/ClassA/BV/	TC_A_BV_008	Interacell_connection_ho	Verify that the IUT manages rightly the PT intercell procedure for connection handover.	108
C_Plane/ClassA/BI/	TC_A_BI_000	ClassA_establish	Verify that the IUT, in establishment pending state, discards a received RR class B response frame with NLF bit set to '1', and re-transmits the establishment request.	109
C_Plane/ClassA/BI/	TC_A_BI_001	ClassA_establish	Verify that the IUT, in establishment pending state, discards a received RR response frame with NLF bit set to '1' and invalid N(R), and re-transmits the establishment request.	110
C_Plane/ClassA/BI/	TC_A_BI_002	ClassA_re_establish_invo ke	Verify that the IUT, in re-establishment pending state, discards a received RR class B response frame with NLF bit set to '1', and re-transmits the re-establishment request.	111

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Test Case Index				
Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
C_Plane/ClassA/BI/	TC_A_BI_003	ClassA_re_establish_invo ke	Verify that the IUT, in re-establishment pending state, discards a received RR response frame with NLF bit set to '1' and invalid N(R), and re-transmits the re-establishment request.	112
C_Plane/ClassA/BI/	TC_A_BI_004	ClassA_info_transfer	Verify that the IUT, in information transfer phase, discards a received RR class B response frame with NLF bit set to '0' and re-transmits the unacknowledged I-Frame.	113
C_Plane/ClassA/BI/	TC_A_BI_005	ClassA_info_transfer	Verify that the IUT, in information transfer phase, discards a received RR response frame with NLF bit set to '0' and invalid N(R) and re-transmits the unacknowledged I-Frame.	114
C_Plane/ClassA/BI/	TC_A_BI_006	ClassA_info_transfer	Verify that the IUT, accepts a received I-Frame with invalid N(R) and, on expiration of <DL-04>, re-transmits the unacknowledged I-Frame with updated N(R).	115
C_Plane/ClassA/BI/	TC_A_BI_007	ClassA_info_transfer	On receipt of an I-Frame with invalid N(S), the IUT indicates the expected N(S) by sending RR response frame or I-Frame and stops, if necessary, DL_04 according to the received N(R).	116
C_Plane/ClassA/BI/	TC_A_BI_008	ClassA_info_transfer	On receipt of an I-Frame with invalid N(S) and invalid N(R), the IUT indicates the expected N(S) by sending a RR response frame with expected N(S) and re-transmits the unacknowledged I-Frame.	117
C_Plane/ClassA/BI/	TC_A_BI_009	ClassA_info_transfer	Verify that the IUT, in timer recovery phase, discards a received RR class B response frame with NLF bit set to '0', and re-transmits the unacknowledged I-Frame.	118

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Test Case Index				
Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
C_Plane/ClassA/BI/	TC_A_BI_011	ClassA_info_transfer	Verify that the IUT, in timer recovery phase, accepts a received I-Frame with invalid N(R) and, on expiration of <DL-04>, re-transmits the unacknowledged I-Frame with updated N(R).	119
C_Plane/ClassA/BI/	TC_A_BI_012	ClassA_info_transfer	The IUT, in timer recovery phase and on receipt of an I-Frame with invalid N(S), indicates the expected N(S) by sending a RR response frame, and leaves timer recovery phase.	120
C_Plane/ClassA/BI/	TC_A_BI_013	ClassA_info_transfer	In timer recovery phase and on receipt of an I-Frame with invalid N(S) and invalid N(R), the IUT indicates the expected N(S) by sending a RR response frame and re-transmits the unacknowledged I-Frame.	121
C_Plane/ClassA/BO/	TC_A_BO_000	ClassA_establish	Verify that the IUT, in establishment pending state, discards a received I-Frame with NLF bit set to '0', and re-transmits the establishment request.	122
C_Plane/ClassA/BO/	TC_A_BO_001	ClassA_establish	Verify that the IUT, in establishment pending state, discards a received RR response frame with NLF bit set to '0', and re-transmits the establishment request.	123
C_Plane/ClassA/BO/	TC_A_BO_002	ClassA_re_establish_invo ke	Verify that the IUT, in re-establishment pending state, discards a received I-Frame with NLF bit set to '0', and re-transmits the establishment request.	124
C_Plane/ClassA/BO/	TC_A_BO_003	ClassA_re_establish_invo ke	Verify that the IUT, in re-establishment pending state, discards a received RR response frame with NLF bit set to '0', and re-transmits the establishment request.	125
C_Plane/Lb/CA/	TC_L_CA_000	Lb_short_frame	Verify that the IUT is able to generate/to receive a short broadcast frame (3 octets).	126

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Test Case Index				
Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
C_Plane/Lb/CA/	TC_L_CA_001	Lb_long_frame	Verify that the IUT is able to generate/to receive a long broadcast frame (5 octets).	127
U_Plane/Class0/CA/	TC_0_CA_000	Class0_snd	Verify that the IUT is able to transmit a correct U-plane Class 0 frame.	128
U_Plane/Class0/CA/	TC_0_CA_001	Class0_rec	Verify that the IUT is able to receive a correct U-plane Class 0 frame.	128
U_Plane/Class1/CA/	TC_1_CA_000	Class1_snd	Verify that the IUT is able to transmit a correct U-plane Class 1 frame.	129
U_Plane/Class1/CA/	TC_1_CA_001	Class1_snd	Verify that the IUT treats a received frame including an RN with the A/N bit set to '1', as an acknowledgement for all frames up to and including frame number RN.	130
U_Plane/Class1/CA/	TC_1_CA_002	Class1_mandatory	Verify that the IUT correctly acknowledges received frame(s) with appropriate send sequence number(s). (In-sequence frames)	131
U_Plane/Class1/BV/	TC_1_BV_000	Class1_snd	Verify that the IUT disconnects the U-plane link, at the event of expiration of timer <DLU-01> without receiving the requested acknowledgement.	132
U_Plane/Class1/BV/	TC_1_BV_001	Class1_snd	Verify that the IUT resets timer <DLU-01> on receipt of a valid acknowledgement.	133
U_Plane/Class1/BV/	TC_1_BV_002	Class1_snd	Verify that the IUT maintains the <DLU-01> timer whenever the window size is reached (thereby halting further transmissions).	134
U_Plane/Class1/BI/	TC_1_BI_000	Class1_mandatory	Verify that the IUT discards a received frame with an I/R bit set to '0'.	135
U_Plane/Class1/BI/	TC_1_BI_001	Class1_mandatory	Verify that the IUT discards a received frame with an A/N bit set to '0'.	135
U_Plane/Class1/BI/	TC_1_BI_002	Class1_mandatory	Verify that the IUT correctly acknowledges received frame(s) with erroneous send sequence number(s) after waiting for L(R) TDMA frames. (Out-of-sequence frames)	136
Detailed Comments :				

Test Step Index			
Test Step Group Reference	Test Step Id	Description	Page Nr
Preamble/C_plane/	PR_ca_establishment_pending	The IUT sends ClassA establishment request in an open MAC connection.	137
Preamble/C_plane/	PR_ca_information_transfer	To bring the IUT into information transfer phase.	138
Preamble/C_plane/	PR_ca_re_establishment_pending	The IUT, in Class A information transfer phase, sends the establishment request.	139
Preamble/C_plane/	PR_ca_timer_recovery	To bring the IUT into Class A timer recovery phase.	140
Preamble/C_plane/	PR_ca_unacknowledged_i_frame	To bring the IUT into information transfer phase with its $V(S) = V(A) + 1$ .	141
Preamble/C_plane/	PR_ca_unacknowledged_i_frame_tdl04	Tester brings the IUT into Class A information transfer phase with its $V(S) = V(A) + 1$ , and starts timers TDL_04_min and TDL_04_max	142
Preamble/U_plane/	PR_inmin_mac_connect	Establishment between Tester and IUT of an IN minimum delay basic MAC connection.	143
Preamble/U_plane/	PR_ip_mac_connect	Establishment between Tester and IUT of an IP error correct basic MAC connection.	144
Preamble/General/	PR_basic_mac_connect	Tester establishes a MAC connection with the IUT	145
Teststeps/C_plane/	STP_ca_check_info_transfer	Check that the IUT is in Class A information transfer phase	146
Teststeps/C_plane/	STP_ft_connection_handover	The IUT (as FT part) creates a new connection for intracell connection handover.	147
Teststeps/C_plane/	STP_ft_intercell_connection_handover	The IUT (as FT part) creates a new connection for intercell connection handover.	147
Teststeps/C_plane/	STP_invoke_downlink_data	Implicit Send: The IUT as FT part transmits connectionless data on downlink service.	148
Teststeps/C_plane/	STP_invoke_uplink_data	Implicit Send: The IUT as PT part transmits connectionless data on uplink service.	148
Teststeps/C_plane/	STP_invoke_ca_establishment	Implicit Send: The IUT transmits the Class A establishment request.	149
Teststeps/C_plane/	STP_invoke_ca_re_establishment	Implicit Send: The IUT transmits the Class A re-establishment request.	150
Teststeps/C_plane/	STP_invoke_pt_connection_handover	The IUT (as PT part) creates a new connection for intracell connection handover.	150
Teststeps/C_plane/	STP_invoke_pt_intercell_connection_handover	The IUT (as PT part) creates a new connection for intercell connection handover.	151
Teststeps/C_plane/	STP_invoke_long_page	Implicit Send: The IUT as FT part transmits a correct LCE-REQUEST-PAGE in long length format.	152
Teststeps/C_plane/	STP_invoke_short_page	Implicit Send: The IUT as FT part transmits a correct LCE-REQUEST-PAGE in short length format.	152

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Test Step Index			
Test Step Group Reference	Test Step Id	Description	Page Nr
Teststeps/C_plane/	STP_set_tsv_chn	Initialise the variable TSV_chn to select slow or fast signalling channel	153
Teststeps/C_plane/	STP_set_bit_a38_to_0		153
Teststeps/U_plane/	STP_c1_iut_transmit_fu5	In Class 1 operation, forces the IUT to send a parametrised number of FU5 frame.	154
Teststeps/U_plane/	STP_invoke_fu1_frame	Implicit Send: the IUT shall transmit a FU1 frame.	155
Teststeps/U_plane/	STP_invoke_fu5_frame	Implicit Send: the IUT shall transmit a FU5 frame.	155
Postamble/	PO_empty	When IUT is in stable MAC disconnection state before postamble	156
Postamble/	PO_mac_disconnect	Tester disconnects the MAC connection used by the current test case	156
Detailed Comments :			

Default Index			
Default Group Reference	Default Id	Description	Page Nr
	DF_handle_accepted_mac_events	Handling of unexpected accepted MAC ASPs events.	157
	DF_handle_rejected_mac_events	Handling of unexpected rejected MAC ASPs events.	158
	DF_handle_nwk_msg		159
	DF_handle_nwk_u_plane_services		159
Detailed Comments :			

## **II**

### **Declarations Part**

Simple Type Definitions			
Type Name	Type Definition	Type Encoding	Comments
NLF	BITSTRING[1]		New Link Flag
LLN	BITSTRING[3]		Logical Link Number
SAPI	BITSTRING[2]		Service Access Point Identifier
CR_BIT	BITSTRING[1]		Command/Response bit
RES	BITSTRING[1]		REServed bit = 1
NR	BITSTRING[3]		Receive sequence Number
P_BIT	BITSTRING[1]		Poll bit
PF_BIT	BITSTRING[1]		Poll/Final bit
NS	BITSTRING[3]		Send sequence Number
I_FRAME_ID	BITSTRING[1]		Information frame indicator
LI	BITSTRING[6]		Length for C-plane frame
LIU	BITSTRING[7]		Length for U-plane frame
M_BIT	BITSTRING[1]		More data bit, Segmenting
N_BIT	BITSTRING[1]		extended indicator
FILLU	OCTETSTRING[0..80]		Fill field for U plane frame
CHECKSUM	OCTETSTRING[2]		Checksum
U_FIELD1	BITSTRING[3]		Unnumbered function field 1
U_FIELD2	BITSTRING[2]		Unnumbered function field 2
U_FRAME_ID	BITSTRING[2]		Unnumbered information frame
RR_ID	BITSTRING[2]		Receive Ready identifier
S_FRAME_ID	BITSTRING[2]		Supervisory frame indicator
PROTOCOL_DISCRIMINATOR	BITSTRING[4]		Protocol discriminator
TRANSACTION_IDENTIFIER	BITSTRING[3]		M: See Table 7 of ETS 300 175-5
TRANSACTION_FLAG	BITSTRING[1]		Transaction side
EXTENDED_TRANSACTION_VALUE	BITSTRING[8]		Extended transaction value
MESSAGE_TYPE	BITSTRING[8]		See Table 7.4 of ETS 300 175-5
PORTABLE_IDENTITY	OCTETSTRING[5..20]		See ETS 300 175-5 § 7.7.30
FIXED_IDENTITY	OCTETSTRING[5..20]		See ETS 300 175-5 § 7.7.18
NWK_ASGN_IDENTITY	OCTETSTRING[5..20]		See ETS 300 175-5 § 7.7.28
BASIC_SERVICE	HEXSTRING[4]		See ETS 300 175-5 § 7.6.4
CIPHER_INFO	OCTETSTRING[4..5]		See ETS 300 175-5 § 7.7.10
DONT_CARE	BITSTRING[4]		All four bits values allowed.
W	BITSTRING[1]		IPUI address element
LCE_HEADER	BITSTRING[3]		LCE header
IPUI_CLASS	BITSTRING[4]		IPUI class
ADDRESS_I	BITSTRING[28]		lowest 28 bits of IPUI
ADDRESS_T	BITSTRING[16]		lowest 16 bits of TPUI
MCEI	INTEGER		MAC Connection Endpoint Identifier

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Simple Type Definitions			
Type Name	Type Definition	Type Encoding	Comments
OLD_MCEI	INTEGER		Connection_Handover for "basic".
CONNECTION_TYPE	INTEGER		Basic or Advanced
ECN	INTEGER		Exchange Connection Number (for advanced connection only)
FMID	BITSTRING[12]		Fixed mac identity = least 12 bits of RFPI
PMID	BITSTRING[20]		Portable mac identity, 20 bits derived from individual TPUI or a default TPUI
CONNECTION_HANDOVER	BOOLEAN		Connection request for handover
CF_REQUIRED	BOOLEAN		CF channel required.
SLOT_TYPE	INTEGER		Double, Full, Half
SERVICE_TYPE	INTEGER		IN, IP or C-channel only service
MAX_LIFETIME	INTEGER		For IP error correction service
CONNECTION	INTEGER		Asymmetric uplink connection Asymmetric downlink connection Symmetric single bearer connection Symmetric multi bearer connection
RPN	INTEGER		RFP number
CHANNEL_TYPE	INTEGER		GF, CS, CF, IN, IP, CLF, CLS, SIN
CRC_RESULT	INTEGER		Report of CRC computation
REASON	INTEGER		Reason value for disconnection
STATUS	INTEGER		Report of abstract primitive execution
ARI	BITSTRING[36]		Access Rights
LONG_FLAG	BOOLEAN		For paging services
CLUSTER_ID	INTEGER		Cluster identification
PAGE_TYPE	INTEGER		Normal or Fast paging
G	BITSTRING[1]		Flag. Link originator = 0
ULN	BITSTRING[3]		Link number
UCN	BITSTRING[3]		Channel number
I_R	BITSTRING[1]		Initial or retransmission bit
E_S	BITSTRING[7]		Send number
A_N	BITSTRING[1]		Acknowledgement or not bit
E_R	BITSTRING[7]		Receive number
FU_STRING	OCTETSTRING[0..76]		FU frame information field
L3INFO	BITSTRING		UI frame information field
Detailed Comments :			

Structured Type Definition			
<b>Type Name</b> : FILLSTRING <b>Encoding Variation</b> : <b>Comments</b> : Fill field (to force the frame length to be modulo 5 or 8 channel dependent). Structured type.			
Element Name	Type Definition	Field Encoding	Comments
filloctet1	BITSTRING[8]		1 fill octet (modulo 5 or 8)
filloctet2	BITSTRING[8]		2 fill octet (modulo 5 or 8)
filloctet3	BITSTRING[8]		3 fill octet (modulo 5 or 8)
filloctet4	BITSTRING[8]		4 fill octet (modulo 5 or 8)
filloctet5	BITSTRING[8]		5 fill octet (modulo 5 or 8)
filloctet6	BITSTRING[8]		6 fill octet (modulo 5 or 8)
filloctet7	BITSTRING[8]		7 fill octet (modulo 5 or 8)
<b>Detailed Comments</b> :			



Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_between(value,vmin,vmax,modulus:INTEGER)
<b>Result Type</b>	: BOOLEAN
<b>Comments</b>	: Detrmine if value is between vmin and vmax with value, vmin, vmax according to modulus.
Description	
<pre> IF (vmax &lt; vmin) THEN BEGIN IF ((value &gt;= vmin) AND (value &lt; modulus)) OR ((value &lt;= 0) AND (value &gt;= vmax)) THEN RETURN TRUE ELSE RETURN FALSE END ELSE BEGIN IF (value &gt;= vmin) AND (value &lt;= vmax) THEN RETURN TRUE ELSE RETURN FALSE END </pre>	
<b>Detailed Comments</b>	:

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_cid_checksum
<b>Result Type</b>	: OCTETSTRING
<b>Comments</b>	: Compute the value of the checksum field for C plane Class A frame according to the frame sent.
Description	
Compute the value of the checksum according to ETS 300 175-4 subclause 7.10 and Annex B.	
<b>Detailed Comments</b>	:

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_check_checksum
<b>Result Type</b>	: OCTETSTRING
<b>Comments</b>	: Check the value of the checksum field for C plane Class A frame according to the frame received.
Description	
Verify the correct value of the checksum according to ETS 300 175-4 subclause 7.10 and Annex B.	
<b>Detailed Comments</b>	:

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_compute_li(nwkmsg:PDU)
<b>Result Type</b>	: INTEGER
<b>Comments</b>	: Determine the length of the PDU passed in parameter.
Description	
Determine the length of the PDU passed in parameter. Standard LENGTH_OF TTCN function is not applicable for PDU.	
<b>Detailed Comments</b>	:

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_cid_fill(chn : BOOLEAN; length : INTEGER)
<b>Result Type</b>	: FILLSTRING
<b>Comments</b>	: Fill 0 to 7 octets with the fill field '11110000'B according to the channel (Cs or Cf) and the parameter length (length of the PDU).
Description	
<pre> IF (chn = TRUE) THEN /* Cf channel */ BEGIN fill (8 - (length MOD 8)) number of octet with value '11110000'B END ELSE /* Cs channel */ BEGIN fill (5 - (length MOD 5)) number of octet with value '11110000'B END </pre>	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_cid_fillu(slot,length:INTEGER)
<b>Result Type</b>	: FILLU
<b>Comments</b>	: Force the U plane frame length to be equal to 8 octets for half slot, 32 octets for full slot and 80 octets for double slot.
Description	
<pre> IF (slot = half slot) THEN fill (8 - length) octets with '11110000'B IF (slot = full slot) THEN fill (32 - length) octets with '11110000'B IF (slot = double slot) THEN fill (80 - length) octets with '11110000'B </pre>	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_flag
<b>Result Type</b>	: INTEGER
<b>Comments</b>	: Determine the value of G bit of U plane FU5 frame for IP error correction service.
Description	
<pre> IF (IUT is a PT part) THEN BEGIN IF (the frame is received by the Tester) THEN RETURN 0 /* IUT as PT part is the originator of the U plane link */ ELSE RETURN 1 /* Tester as FT part is the destination of the U plane link */ END ELSE /* IUT is a FT part */ BEGIN IF (the frame is received by the Tester) THEN RETURN 1 /* IUT as FT part is the destination of the U plane link */ ELSE RETURN 0 /* Tester as PT part is the originator of the U plane link */ END </pre>	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_iut_in_received
<b>Result Type</b>	: BOOLEAN
<b>Comments</b>	: PIXIT operation described by the manufacturer to inform if IN data are received (or not) by the IUT.
Description	
IF IN data received RETURN TRUE ELSE RETURN FALSE	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_iut_ui_received
<b>Result Type</b>	: BOOLEAN
<b>Comments</b>	: PIXIT operation described by the manufacturer to inform if one UI frame is received (or not) by the IUT.
Description	
IF ui received RETURN TRUE ELSE RETURN FALSE	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_cid_lowest(nb:INTEGER;string:BITSTRING)
<b>Result Type</b>	: BITSTRING
<b>Comments</b>	: Extracting of the "nb" lowest bits of the string "string".
Description	
This test suite operation extracts the "nb" lowest bits of the bitstring passed in parameter. ex: TSO_cid_lowest(4,'0101010101011100'B) return '1100'B	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_cid_return_cr_value( iut_type, frame_type, send_constr : BOOLEAN)
<b>Result Type</b>	: INTEGER
<b>Comments</b>	: Determine the value of the CR_bit for C plane FA frame according to the type of the IUT (FT or PT) and the wanted type of frame (Command or Response).
Description	
<pre> IF (send_constr = TRUE) THEN   BEGIN /* a send constraint */     IF (iut_type = TRUE) THEN       BEGIN /* IUT is a PT */         IF (frame_type = TRUE) THEN RETURN 1 /* this is a command frame */         ELSE RETURN 0 /* this is a response frame */       END     ELSE       BEGIN /* IUT is an FT */         IF (frame_type = TRUE) THEN RETURN 0 /* this is a command frame */         ELSE RETURN 1 /* this is a response frame */       END     END   END ELSE   BEGIN /* a receive constraint */     IF (iut_type = TRUE) THEN       BEGIN /* IUT is a PT */         IF (frame_type = TRUE) THEN RETURN 0 /* this is a command frame */         ELSE RETURN 1 /* this is a response frame */       END     ELSE       BEGIN /* IUT is an FT */         IF (frame_type = TRUE) THEN RETURN 1 /* this is a command frame */         ELSE RETURN 0 /* this is a response frame */       END     END   END END </pre>	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_set_bit_a38_to_0
<b>Result Type</b>	: BOOLEAN
<b>Comments</b>	: The TSO sets the value of the broadcasted "higher layer capabilities" bit a38 to '0'
Description	
The result of the operation will be TRUE, assuming that the operation has been completed successfully	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_jam_traffic_bearer
<b>Result Type</b>	: BOOLEAN
<b>Comments</b>	: Jam the currently occupied channel, {RF-carrier; slot}, to force an intracell connection handover.
Description	
The result of the operation will be TRUE, assuming that the operation has been completed successfully.	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_power_down_rfp( rpn : RPN; decay_rate : INTEGER)
<b>Result Type</b>	: BOOLEAN
<b>Comments</b>	: Power down the signal strength of the RFP with the RPN specified in the first parameter stepwise by ramp gradient value (parameter decay_rate) to force handover to a different RFP (intercell connection handover).
Description	
The result of the operation will be TRUE, assuming that the operation has been completed successfully.	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_ignore_bearer_handover( rpn : RPN)
<b>Result Type</b>	: BOOLEAN
<b>Comments</b>	: On the RFP using the RPN specified in the parameter, transmit, at the next pportunity, Pt bearer handover information stating that neither intercell nor intracell BHO is allowed. Futhermore, ingnore any "beearewr_handover_request" messages received.
Description	
The result of this operation will be TRUE, assuming that the operation has been completed successfully.	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_inhibit_intracell_handover
<b>Result Type</b>	: BOOLEAN
<b>Comments</b>	: Same action as TSC_action24 for MAC PT ATS.
Description	
The result of this operation will be TRUE, assuming that the operation has been completed successfully.	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_establish_new_dummy( rpn : RPN)
<b>Result Type</b>	: BOOLEAN
<b>Comments</b>	: Establish a new dummy bearer on a free cell using the RPN specified in the parameter.
Description	
The result of this operation will be TRUE, assuming that the operation has been completed successfully.	
<b>Detailed Comments</b> :	

Test Suite Operation Definition	
<b>Operation Name</b>	: TSO_cho_blind_slot_info
<b>Result Type</b>	: BOOLEAN
<b>Comments</b>	: Transmit blind slot information for the position of the dummy bearers and the slots on either sides of the dummy bearers on both cells so that a traffic bearer cannot be set up on one cell at the same slot of the dummy bearer of another cell thus preventing an IUT for finding the second dummy bearer.
Description	
The result of this operation will be TRUE, assuming that the operation has been completed successfully.	
<b>Detailed Comments</b>	:

Test Suite Parameter Declarations			
Parameter Name	Type	PICS/PIXIT Ref	Comments
TSPC_class0	BOOLEAN	PICS item A.18/1	TRUE = U plane Class 0 services implemented. LU1 service, used together with TSPC_fu1.
TSPC_class1	BOOLEAN	PICS item A.11/2 AND PICS item A.42/4 AND PICS item A.43/4, or 5 or 6	TRUE = U plane Class 1 services implemented. LU2 service, used together with TSPC_fu5. Connection type shall be IP error correct, and transmission class shall be Class 1.
TSPC_classU	BOOLEAN	PICS item A.10/1	TRUE = Class U services implemented
TSPC_classA	BOOLEAN	PICS item A.10/2	TRUE = Class A services implemented
TSPC_Lb	BOOLEAN	PICS item A.10/4	TRUE = Broadcast services implemented
TSPC_fu1	BOOLEAN	PICS item A.18/3	TRUE = FU1 frame type implemented
TSPC_fu5	BOOLEAN	PICS item A.41/2	TRUE = FU5 frame type implemented
TSPC_ca_info_transfer	BOOLEAN	PICS item A.15/2	TRUE = Class A link acknowledged information transfer supported
TSPC_ca_re_establish	BOOLEAN	PICS item A.15/4	TRUE = Class A link re-establishment supported
TSPC_intracell_ho	BOOLEAN	PICS item A.12/4a	TRUE = Intracell handover is supported
TSPC_intercell_ho	BOOLEAN	PICS item A.12/4b	TRUE = Intercell handover is supported
TSPC_Lb_short_frame	BOOLEAN	PICS item A.54/1	TRUE = Short broadcast frame format supported
TSPC_Lb_long_frame	BOOLEAN	PICS item A.54/2	TRUE = Long broadcast frame format supported
TSPX_pt	BOOLEAN	PIXIT item B.7.1	The IUT is a PT = TRUE, a FT = FALSE
TSPX_chn	BOOLEAN	PIXIT item B.7.2	CF required = TRUE
TSPX_slot	SLOT_TYPE	PIXIT item B.7.3	0 = Half slot testing, 1 = Full slot testing, 2 = Double slot testing
TSPX_n250	INTEGER	PIXIT item B.8.1	Number of re-transmission
TSPX_k1	INTEGER	PIXIT item B.8.2	Value of Class 1 sending window of the IUT
TSPX_rpn	RPN	PIXIT item B.8.3	Value for RPN to used in the MAC_CON_REQ primitive.
TSPX_rpn1	RPN	PIXIT item B.8.4	Value for RPN to used in case of intercell handover. Shall be different from the value used in the MAC_CON_REQ primitive.
TSPX_dummy_bearer_duration	INTEGER	PIXIT item B.8.5	Value of wait timer to delay the test case after setting up a second dummy bearer and used for intercell handover

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Test Suite Parameter Declarations			
Parameter Name	Type	PICS/PIXIT Ref	Comments
TSPX_intracell_behaviour	INTEGER	PIXIT item B.8.6	Value 0,1 for handling intracell bearer handover 0 = Normal tester behaviour 1 = Force tester to ignore all intracell handover request.
TSPX_decay_rate	INTEGER	PIXIT item B.8.7	Value of the ramp gradient for decreasing power. Shall be between 1 dB/s and 10 dB/s.
TSPX_dl04_value	INTEGER	PIXIT item B.9.1	Value of DL-04 timer
TSPX_dl07_value	INTEGER	PIXIT item B.9.2	Value of DL-07 timer
TSPX_dlu01_value	INTEGER	PIXIT item B.9.3	Value of DLU-01 timer
TSPX_ari	ARI	PIXIT item B.10.1	ARI
TSPX_pmid_assigned	PMID	PIXIT item B.10.2	Portable MAC Identity
TSPX_fid	FIXED_IDENTITY	PIXIT item B.10.3	Fixed Identity
TSPX_pid	PORTABLE_IDENTITY	PIXIT item B.10.4	Portable Identity
TSPX_ipui_class	IPUI_CLASS	PIXIT item B.10.5	Class of IPUI
TSPX_ipui	BITSTRING	PIXIT item B.10.6	international portable id
TSPX_cu_receive_on_co	BOOLEAN	PIXIT item B.11.1	TRUE = Class U information receiving supported over an open MAC connection
TSPX_cu_rec_proc_defined	BOOLEAN	PIXIT item B.11.2	TRUE = A procedure is defined to determine the reception of Class U information frame on the IUT
TSPX_ui_pdu_on_co	BITSTRING	PIXIT item B.11.3	UI frame to send to the IUT over connection oriented MAC services for having a possible procedure to determine the reception of this UI frame
TSPX_ui_pdu_on_cl	BITSTRING	PIXIT item B.11.4	UI frame to send to the IUT over connectionless MAC services for having a possible procedure to determine the reception of this UI frame
TSPX_cu_snd_proc_defined	BOOLEAN	PIXIT item B.12.1	TRUE = A procedure is defined to transmit a Class U information frame on the IUT
TSPX_ca_accept_est	BOOLEAN	PIXIT item B.13.1	TRUE = IUT accepts the receipt of the Class A establishment request
TSPX_ca_re_establish_invoke	BOOLEAN	PIXIT item B.13.2	TRUE = IUT supports invocation of Class A link re-establishment
TSPX_ca_initiate_est	BOOLEAN	PIXIT item B.13.3	TRUE = Class A link establishment supported
TSPX_lbs_proc_defined	BOOLEAN	PIXIT item B.14.1	TRUE = A procedure is defined to transmit a short page request frame on the IUT

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Test Suite Parameter Declarations			
Parameter Name	Type	PICS/PIXIT Ref	Comments
TSPX_lbl_proc_defined	BOOLEAN	PIXIT item B.14.2	TRUE = A procedure is defined to transmit a long page request frame on the IUT
TSPX_in_rec_proc_defined	BOOLEAN	PIXIT item B.15.1	TRUE = A procedure is defined to determine the reception of Class 0 FU1 IN frame on the IUT
TSPX_in_pdu	OCTETSTRING	PIXIT item B.15.2	FU1 frame to send to the IUT for having a possible procedure to determine the reception of this FU1 frame
TSPX_fu1_snd_pr_defined	BOOLEAN	PIXIT item B.15.3	TRUE = A procedure is defined to transmit a FU1 frame on the IUT
TSPX_uln	ULN	PIXIT item B.16.1	Value of U plane link number
TSPX_lrc1_value	INTEGER	PIXIT item B.16.2	Value of L(R) Class 1 duration
TSPX_fu5_snd_pr_defined	BOOLEAN	PIXIT item B.16.3	TRUE = A procedure is defined to transmit a FU5 frame on the IUT
Detailed Comments :			

Test Case Selection Expression Definitions		
Expression Name	Selection Expression	Comments
Mandatory	TRUE	For mandatory tests
ClassU_mandatory	TSPC_classU	For C-plane Class U group tests
ClassA_mandatory	TSPC_classA	For C-plane Class A group tests
Lb_mandatory	TSPC_Lb	For C-plane Broadcast group tests
Class0_mandatory	TSPC_class0 AND TSPC_fu1	For U-plane Class 0 group tests
Class0_rec	Class0_mandatory AND TSPX_in_rec_proc_defined	If it is possible to determine the reception of an IN Class 0 FU1 frame
Class0_snd	Class0_mandatory AND TSPX_fu1_snd_pr_defined	For IUT that is able to send an FU1 by using a PIXIT procedure
Class1_mandatory	TSPC_class1 AND TSPC_fu5	For U-plane Class 1 group tests
Class1_snd	Class1_mandatory AND TSPX_fu5_snd_pr_defined	For IUT that is able to send an FU5 by using a PIXIT procedure
ClassA_establish	TSPC_classA AND TSPX_ca_initiate_est	For IUT able to establish the link
ClassA_accept_est_req	TSPC_classA AND TSPX_ca_accept_est	For IUT able to receive establishment request of the link
ClassA_send_and_accept_est_req	TSPC_classA AND TSPX_ca_initiate_est AND TSPX_ca_accept_est	For IUT able to send and receive establishment request of the link
ClassA_info_transfer	TSPC_classA AND TSPC_ca_info_transfer	For IUT able to perform acknowledged information transfer
ClassA_re_establish_invoke	TSPC_classA AND TSPC_ca_re_establish AND TSPX_ca_re_establish_invoke	For IUT able to invoke re-establishment of the Class A link
ClassU_rec	ClassU_mandatory AND TSPX_cu_rec_proc_defined	If it is possible to determine the reception of an UI frame over an MAC connectionless service
ClassU_rec_on_co	TSPC_classU AND TSPX_cu_receive_on_co AND TSPX_cu_rec_proc_defined	If it is possible to determine the reception of an UI frame over an open MAC connection
ClassU_snd	ClassU_mandatory AND TSPX_cu_snd_proc_defined	For IUT that is able to send an UI frame over an MAC connectionless service by using a PIXIT procedure
Intracell_connection_ho	ClassA_info_transfer AND ((TSPX_pt) OR (NOT TSPX_pt AND TSPC_intracell_ho))	For IUT that is able to perform an intracell connection handover in a Class A information transfer state
Intercell_connection_ho	ClassA_info_transfer AND ((TSPX_pt) OR (NOT TSPX_pt AND TSPC_intercell_ho))	For IUT that is able to perform an intercell connection handover in a Class A information transfer state
Lb_short_frame	TSPC_Lb_short_frame AND ((TSPX_pt) OR (TSPX_lbs_proc_defined))	For IUT able to generate (FT) or to receive (PT) a short broadcast frame
Lb_long_frame	TSPC_Lb_long_frame AND ((TSPX_pt) OR (TSPX_lbl_proc_defined))	For IUT able to generate (FT) or to receive (PT) a long broadcast frame
Detailed Comments :		

Test Suite Constant Declarations			
Constant Name	Type	Value	Comments
TSC_lln_cu	INTEGER	0	Class U LLN
TSC_lln_ca	INTEGER	1	Class A LLN
TSC_lln_unassigned	INTEGER	7	Class B unassigned LLN
TSC_connection_sapi	INTEGER	0	Connection oriented SAPI
TSC_connectionless_sapi	INTEGER	3	ConnectionLess SAPI
TSC_command	BOOLEAN	TRUE	For command frame
TSC_response	BOOLEAN	FALSE	For response frame
TSC_send	BOOLEAN	TRUE	For sent constraint
TSC_receive	BOOLEAN	FALSE	For receive constraint
TSC_nlf0	INTEGER	0	New link flag for noermal transmission
TSC_nlf1	INTEGER	1	New link flag for establishment
TSC_cs	INTEGER	1	Number of CS channel
TSC_cf	INTEGER	2	Number of CF channel
TSC_c_only	SERVICE_TYPE	2	MAC Connection with only C channel
TSC_in	SERVICE_TYPE	3	Number of IN channel
TSC_ip	SERVICE_TYPE	4	Number of IP channel
TSC_cls	SERVICE_TYPE	5	Number of CLS channel
TSC_sbcon	CONNECTION	2	Symmetric single bearer connection
TSC_normal_paging	INTEGER	0	For normal paging request
TSC_p0	INTEGER	0	Poll bit = 0
TSC_p1	INTEGER	1	Poll bit = 1
TSC_pmid_arbitrary	PMID	'11100001001000110100'B	Arbitrary PMID
Detailed Comments :			

Test Suite Variable Declarations			
Variable Name	Type	Value	Comments
RC	INTEGER	0	Re-transmission counter
VR	INTEGER	0	To store the N(S) of the next expected I-Frame
VS	INTEGER	0	To store the N(S) of the next I-Frame to be sent
VA	INTEGER	0	To store the N(R) of the last received I-Frame
TR	INTEGER	0	Dummy V(R) or RN variable
TS	INTEGER	0	Dummy V(S) or SN variable
AN	INTEGER	0	U plane last received RN
SN	INTEGER	0	U plane current send number
RN	INTEGER	0	U plane current receive number
UTMP	INTEGER	0	U plane temporary variable
TSV_mcei1	MCEI	0	First connection MCEI
TSV_mcei2	MCEI	0	Connection handover MCEI
TSV_mcei3	MCEI	0	Working connection MCEI
TSV_rpn	RPN	0	To store the courent RPN in use.
TSV_rpn1	RPN	0	To store the RPN of the connection handover bearer.
TSV_chn	INTEGER	0	CF or CS channel according to value of TSPX_chn boolean parameter
Detailed Comments :			

Test Case Variable Declarations			
Variable Name	Type	Value	Comments
TCV_cf_required	CF_REQUIRED	FALSE	For testing cf_required parameter of MAC_CON_IND ASP
TCV_mcei	MCEI		For extracting MCEI parameter of MAC_CON_IND ASP
TCV_service_type	SERVICE_TYPE		For testing service_type parameter of MAC_CON_IND ASP
TCV_received	BOOLEAN	FALSE	For testing response of boolean procedure described in the PIXIT
TCV_bool	BOOLEAN	FALSE	For return status of repeat statement
TCV_bool1	BOOLEAN	FALSE	For exit of repeat statement
TCV_count	INTEGER	0	For test loop counting
TCV_fu5	FU5		For extracting field from FU5 frame received
TCV_result	BOOLEAN	TRUE	To carry the return value from TSO_set_bit_a38_to_0
Detailed Comments :			

PCO Type Declarations		
PCO Type	Role	Comments
M_SAP	LT	
Detailed Comments :		

PCO Declarations			
PCO Name	PCO Type	Role	Comments
LMAC	M_SAP	LT	
Detailed Comments :			

Timer Declarations			
Timer Name	Duration	Unit	Comments
TDL_04_min	$TSPX\_dl04\_value - (5 * (TSPX\_dl04\_value / 100))$	ms	DL-04 - 5%
TDL_04_max	$TSPX\_dl04\_value + (5 * (TSPX\_dl04\_value / 100))$	ms	DL-04 + 5%
TDL_07_min	$TSPX\_dl07\_value - (5 * (TSPX\_dl07\_value / 100))$	ms	DL-07 - 5%
TDL_07_max	$TSPX\_dl07\_value + (5 * (TSPX\_dl07\_value / 100))$	ms	DL-07 + 5%
TDLU_01_max	$TSPX\_dlu01\_value + (5 * (TSPX\_dlu01\_value / 100))$	ms	DLU-01 + 5%
T_LR_c1	TSPX_lrc1_value	ms	L(R) TDMA for Class 1
T_dummy_wait	TSPX_dummy_bearer_duration	ms	Wait timer after establishing a dummy bearer.
T_640_ms	640	ms	Wait time to ensure that a Pt message is received and processed.
T_wait	$10 * TSPX\_dl04\_value$	ms	For implicit send
T_net	$10 * TSPX\_dl07\_value$	ms	Network response timer
Detailed Comments :			



ASP Type Definition		
<b>ASP Name</b> : MAC_CON_CFM <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
mcei	MCEI	M: MAC Connection Endpoint Identifier
connection_type	CONNECTION_TYPE	M: Basic or Advanced
ecn	ECN	M: Exchange Connection Number (for advanced connection only)
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_CON_IND <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
mcei	MCEI	M: MAC Connection Endpoint Identifier
fmid	FMID	M: Only needed for fixed part initiated "Fast Setup". Fixed mac identity = least 12 bits of RFPI
pmid	PMID	M: Portable mac identity, 20 bits derived from individual TPUI or a default TPUI
connection_handover	CONNECTION_HANDOVER	M: Connection request for handover = YES, NO otherwise.
old_mcei	OLD_MCEI	M: Only needed if Connection_Handover = YES and previous connection is "basic".
cf_required	CF_REQUIRED	M: CF channel required = YES, NO otherwise.
slot_type	SLOT_TYPE	M: Double, Full, Half
service_type	SERVICE_TYPE	M: IN, IP or C-channel only service
max_lifetime	MAX_LIFETIME	M: Only for IP error correction service
connection	CONNECTION	M: Asymmetric uplink connection Asymmetric downlink connection Symmetric single bearer connection Symmetric multi bearer connection
connection_type	CONNECTION_TYPE	M: Basic or Advanced
ecn	ECN	M: Exchange Connection Number (for advanced connection only)
rpn	RPN	RFP used for this connection
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_CON_REQ <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
mcei	MCEI	M: MAC Connection Endpoint Identifier
fmid	FMID	M: Only needed for fixed part initiated "Fast Setup". Fixed mac identity = least 12 bits of RFPI
pmid	PMID	M: Portable mac identity, 20 bits derived from individual TPUI or a default TPUI
connection_handover	CONNECTION_HANDOVER	M: Connection request for handover = YES, NO otherwise.
old_mcei	OLD_MCEI	M: Only needed if Connection_Handover = YES and previous connection is "basic".
cf_required	CF_REQUIRED	M: CF channel required = YES, NO otherwise.
slot_type	SLOT_TYPE	M: Double, Full, Half
service_type	SERVICE_TYPE	M: IN, IP or C-channel only service
max_lifetime	MAX_LIFETIME	Only for IP error correction service
connection	CONNECTION	Asymmetric uplink connection Asymmetric downlink connection Symmetric single bearer connection Symmetric multi bearer connection
rpn	RPN	Forces connection to a specific RFP
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_DATA_IND <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
mcei	MCEI	M: MAC Connection Endpoint Identifier
receive_channel_type	CHANNEL_TYPE	M: GF, CS, CF, IN, IP
sdu	PDU	M: message unit
crc_results	CRC_RESULT	Optional field
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_DATA_REQ <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
mcei	MCEI	M: MAC Connection Endpoint Identifier
transmit_channel_type	CHANNEL_TYPE	M: GF, CS, CF, IN, IP
sdu	PDU	M:
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_DIS_IND <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
mcei	MCEI	M: MAC Connection Endpoint Identifier
reason	REASON	Normal, Abnormal
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_DIS_REQ <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
mcei	MCEI	M: MAC Connection Endpoint Identifier
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_DOWN_DATA_IND <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
channel_type	CHANNEL_TYPE	M: CLS, CLF, SIN
ari	ARI	M:
sdu	PDU	M: message unit
status	STATUS	Data contains error or not
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_DOWN_DATA_REQ <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
channel_type	CHANNEL_TYPE	M: CLS, CLF, SIN
sdu	PDU	M: message unit
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_PAGE_IND <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
cluster_id	CLUSTER_ID	M:
long_flag	LONG_FLAG	M: Needed if data length is 36
sdu	PDU	M:
crc_results	CRC_RESULT	Optional field
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_PAGE_REQ <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
page_type	PAGE_TYPE	M: Normal or Fast
sdu	PDU	M: message
long_flag	LONG_FLAG	Needed if data length is 36
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_UP_DATA_CFM <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
status	STATUS	M: Data transmitted or if not: error code
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_UP_DATA_IND <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
pmid	PMID	M: portable mac identity
sdu	PDU	M: message unit
status	STATUS	Data contains error or not
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : MAC_UP_DATA_REQ <b>PCO Type</b> : M_SAP <b>Comments</b> :		
Parameter Name	Parameter Type	Comments
sdu	PDU	M: message unit
<b>Detailed Comments</b> :		

PDU Type Definition			
<b>PDU Name</b> : CC_SETUP <b>PCO Type</b> : M_SAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 6.3.2.1 CC-SETUP			
Field Name	Field Type	Field Encoding	Comments
transaction_flag	TRANSACTION_FLAG		M: 0 = Transaction originator
transaction_identifier	TRANSACTION_IDENTIFIER		M: See Table 7 of ETS 300 175-5
protocol_discriminator	PROTOCOL_DISCRIMINATOR		M: CC
extended_transaction_value	EXTENDED_TRANSACTION_VALUE		if Transaction Identifier = '111'B
message_type	MESSAGE_TYPE		M: See Table 7.4 of ETS 300 175-5
portable_identity	PORTABLE_IDENTITY		M: See ETS 300 175-5 § 7.7.30
fixed_identity	FIXED_IDENTITY		M: See ETS 300 175-5 § 7.7.18
basic_service	BASIC_SERVICE		M: See ETS 300 175-5 § 7.6.4
<b>Detailed Comments</b> : Generic CC-SETUP Network Layer message			

PDU Type Definition			
<b>PDU Name</b> : FU1 <b>PCO Type</b> : M_SAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4: § 13 Element of procedure and formats of fields for U-plane peer to peer communication. § 12.2 FU1 frame structure			
Field Name	Field Type	Field Encoding	Comments
higher_layer_info	OCTETSTRING[0..INFINITY]		M: Higher layer info
<b>Detailed Comments</b> :			

PDU Type Definition			
<b>PDU Name</b> : FU5 <b>PCO Type</b> : M_SAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4: § 13 Element of procedure and formats of fields for U-plane peer to peer communication. § 12.6 FU5 frame structure			
Field Name	Field Type	Field Encoding	Comments
g	G		M: Flag. Link originator = 0
uln	ULN		M: Link number
ucn	UCN		M: Channel number
res	RES		M: Reserved bit = 1
li	LIU		M: Length
m_bit	M_BIT		M: More data bit, Segmenting = 1
i_r	I_R		M: Initial or retransmission bit
e_s	E_S		M: send number
a_n	A_N		M: Acknowledgement or not bit
e_r	E_R		M: Receive number
data	FU_STRING		M: information field
fill	FILLU		M: Fill field (to force the frame length to be equal to 8 octets/half slot, 32 octets/full slot and 80 octets/double slot)
<b>Detailed Comments</b> :			

PDU Type Definition			
<b>PDU Name</b> : INFORMATION <b>PCO Type</b> : M_SAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4: § 7 Element of procedure and formats of fields for C-plane peer to peer communication			
Field Name	Field Type	Field Encoding	Comments
nlf	NLF		M: New Link Flag
lln	LLN		M: Logical Link Number
sapi	SAPI		M: Service Access Point Identifier
cr_bit	CR_BIT		M: Command/Response bit
res	RES		M: REServed bit = 1
n_r	NR		M: Receive sequence Number
p_bit	P_BIT		M: Poll bit
n_s	NS		M: Send sequence Number
iframe_id	I_FRAME_ID		M: Information frame indicator = 0
li	LI		M: Length
m_bit	M_BIT		M: More data bit, Segmenting = 1
n_bit	N_BIT		M: extended indicator, no extension = 1
data	PDU		M: Data
fill	FILLSTRING		M: Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	CHECKSUM		M: Checksum
<b>Detailed Comments</b> :			



PDU Type Definition			
<b>PDU Name</b> : LCE_PAGE_RESPONSE <b>PCO Type</b> : M_SAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 6.3.7.1 LCE-PAGE-RESPONSE			
Field Name	Field Type	Field Encoding	Comments
transaction_flag	TRANSACTION_FLAG		M: 0 = Transaction originator
transaction_identifier	TRANSACTION_IDENTIFIER		M: See Table 7 of ETS 300 175-5
protocol_discriminator	PROTOCOL_DISCRIMINATOR		M: LCE
extended_transaction_value	EXTENDED_TRANSACTION_VALUE		if Transaction Identifier = '111'B
message_type	MESSAGE_TYPE		M: See Table 7.4 of ETS 300 175-5
portable_identity	PORTABLE_IDENTITY		M: See ETS 300 175-5 § 7.7.30
fixed_identity	FIXED_IDENTITY		See ETS 300 175-5 § 7.7.18
nwk_assigned_identity	NWK_ASGN_IDENTITY		See ETS 300 175-5 § 7.7.28
cipher_info	CIPHER_INFO		See ETS 300 175-5 § 7.7.10
<b>Detailed Comments</b> :			

PDU Type Definition			
<b>PDU Name</b> : LCE_SHORT_REQUEST_PAGE <b>PCO Type</b> : M_SAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 8.2 LCE request paging messages			
Field Name	Field Type	Field Encoding	Comments
dont_care	DONT_CARE		M: All values allowed.
w	W		M: type of derived address
lce_header	LCE_HEADER		M: LCE header
address	ADDRESS_T		M: w = 1 lowest 16 bits of assigned TPUI, w = 0 lowest 16 bits of default individual TPUI
<b>Detailed Comments</b> :			

PDU Type Definition			
<b>PDU Name</b> : LCE_LONG_REQUEST_PAGE <b>PCO Type</b> : M_SAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 8.2 LCE request paging messages			
Field Name	Field Type	Field Encoding	Comments
dont_care	DONT_CARE		M: All values allowed.
w	W		M: 0 = IPUI adress element
lce_header	LCE_HEADER		M: LCE header
ipui_class	IPUI_CLASS		M: IPUI class
address	ADDRESS_I		M: lowest 28 bits of IPUI
<b>Detailed Comments</b> :			

PDU Type Definition			
<b>PDU Name</b> : L3_MESSAGE <b>PCO Type</b> : M_SAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 7 S-FORMAT message structures			
Field Name	Field Type	Field Encoding	Comments
transaction_flag	TRANSACTION_FLAG		M: 0 = Transation originator
transaction_identifier	TRANSACTION_IDENTIFIE R		M: See Table 7 of ETS 300 175-5
protocol_discriminator	PROTOCOL_DISCRIMINAT OR		M: LCE,CC,CISS,MM,CLMS,C OMS
extended_transaction_value	EXTENDED_TRANSACTIO N_VALUE		if Transation Identifier = '111'B
message_type	MESSAGE_TYPE		M: See Table 7.4 of ETS 300 175-5
other_elements	OCTETSTRING[0..INFINITY]		Other elememts if required
<b>Detailed Comments</b> : Generic Network Layer S-FORMAT message			

PDU Type Definition			
<b>PDU Name</b> : RR <b>PCO Type</b> : M_SAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4 7 Element of procedure and formats of fields for C-plane peer to peer communication			
Field Name	Field Type	Field Encoding	Comments
nlf	NLF		M: New Link Flag
lln	LLN		M: Logical Link Number
sapi	SAPI		M: Service Access Point Identifier
cr_bit	CR_BIT		M: Command/Response bit
res	RES		M: REServed bit = 1
n_r	NR		M: Receive sequence Number
pf_bit	PF_BIT		M: Poll/Final bit
rr_id	RR_ID		M: Receive Ready identifier = 00
sframe_id	S_FRAME_ID		M: Supervisory frame indicator = 01
li	LI		M: Length
m_bit	M_BIT		M: More data bit, shall be 0
n_bit	N_BIT		M: extended indicator, shall be 1
fill	FILLSTRING		M: Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	CHECKSUM		M: Checksum
<b>Detailed Comments</b> :			

PDU Type Definition			
<b>PDU Name</b> : UI_PDU <b>PCO Type</b> : M_SAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : To simulate the Network Layer PDU included in an UI frame.			
Field Name	Field Type	Field Encoding	Comments
info	L3INFO		M: info from Network Layer
<b>Detailed Comments</b> :			

PDU Type Definition			
<b>PDU Name</b> : UNNUMBERED_INFORMATION <b>PCO Type</b> : M_SAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4: § 7 Element of procedure and formats of fields for C-plane peer to peer communication			
Field Name	Field Type	Field Encoding	Comments
nlf	NLF		M: New Link Flag
lln	LLN		M: Logical Link Number
sapi	SAPI		M: Service Access Point Identifier
cr_bit	CR_BIT		M: Command/Response bit
res	RES		M: REServed bit = 1
ufield1	U_FIELD1		M: Unnumbered function field 1= 000
p_bit	P_BIT		M: Poll bit
ufield2	U_FIELD2		M: Unnumbered function field 2 = 00
uframe_id	U_FRAME_ID		M: Unnumbered information = 11
li	LI		M: Length
m_bit	M_BIT		M: More data bit, Segmenting = 1
n_bit	N_BIT		M: extended indicator, no extension = 1
data	PDU		M: message unit
fill	FILLSTRING		M: Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	CHECKSUM		M: Checksum
<b>Detailed Comments</b> :			

# **III**

## **Constraints Part**

Structured Type Constraint Declaration			
<b>Constraint Name</b> : Fillstring <b>Structured Type</b> : FILLSTRING <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Fill field (to force the frame length to be modulo 5 or 8 channel dependent). Structured constraint.			
Element Name	Element Value	Element Encoding	Comments
filloctet1	'11110000'B IF_PRESENT		1 fill octet (modulo 5 or 8)
filloctet2	'11110000'B IF_PRESENT		2 fill octet (modulo 5 or 8)
filloctet3	'11110000'B IF_PRESENT		3 fill octet (modulo 5 or 8)
filloctet4	'11110000'B IF_PRESENT		4 fill octet (modulo 5 or 8)
filloctet5	'11110000'B IF_PRESENT		5 fill octet (modulo 5 or 8)
filloctet6	'11110000'B IF_PRESENT		6 fill octet (modulo 5 or 8)
filloctet7	'11110000'B IF_PRESENT		7 fill octet (modulo 5 or 8)
<b>Detailed Comments</b> :			

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_con_cfm(mcei_:INTEGER) <b>ASP Type</b> : MAC_CON_CFM <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connection confirmation from lower layer.		
Parameter Name	Parameter Value	Comments
mcei	mcei_	MAC Connection Endpoint Identifier
connection_type	?	Basic or Advanced
ecn	?	Exchange Connection Number (for advanced connection only)
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_con_cfm_receive_any <b>ASP Type</b> : MAC_CON_CFM <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connection confirmation from lower layer.		
Parameter Name	Parameter Value	Comments
mcei	?	MAC Connection Endpoint Identifier
connection_type	?	Basic or Advanced
ecn	?	Exchange Connection Number (for advanced connection only)
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_con_ind <b>ASP Type</b> : MAC_CON_IND <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connection indication from lower layer. A new MAC connection is created by IUT side.		
Parameter Name	Parameter Value	Comments
mcei	?	MAC Connection Endpoint Identifier
fmid	?	Only needed for fixed part initiated "Fast Setup". Fixed mac identity = least 12 bits of RFPI
pmid	?	Portable mac identity, 20 bits derived from individual TPUI or a default TPUI
connection_handover	?	Connection request for handover = YES, NO otherwise.
old_mcei	?	Only needed if Connection_Handover = YES and previous connection is "basic".
cf_required	?	CF channel required = YES, NO otherwise.
slot_type	?	Double, Full, Half
service_type	?	IN, IP or C-channel only service
max_lifetime	?	Only for IP error correction service
connection	?	Asymmetric uplink connection Asymmetric downlink connection Symmetric single bearer connection Symmetric multi bearer connection
connection_type	?	Basic or Advanced
ecn	?	Exchange Connection Number (for advanced connection only)
rpn	*	RFP used for this connection
<b>Detailed Comments</b> :		



ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_con_ind_mcei(mcei_:INTEGER) <b>ASP Type</b> : MAC_CON_IND <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connection indication from lower layer. A new MAC connection is created by IUT side. Only for MCEI used in the test cases.		
Parameter Name	Parameter Value	Comments
mcei	mcei_	MAC Connection Endpoint Identifier
fmid	?	Only needed for fixed part initiated "Fast Setup". Fixed mac identity = least 12 bits of RFPI
pmid	?	Portable mac identity, 20 bits derived from individual TPUI or a default TPUI
connection_handover	?	Connection request for handover = YES, NO otherwise.
old_mcei	?	Only needed if Connection_Handover = YES and previous connection is "basic".
cf_required	?	CF channel required = YES, NO otherwise.
slot_type	?	Double, Full, Half
service_type	?	IN, IP or C-channel only service
max_lifetime	?	Only for IP error correction service
connection	?	Asymmetric uplink connection Asymmetric downlink connection Symmetric single bearer connection Symmetric multi bearer connection
connection_type	?	Basic or Advanced
ecn	?	Exchange Connection Number (for advanced connection only)
rpn	?	RFP used for this connection
<b>Detailed Comments</b> :		

### ASP Constraint Declaration

**Constraint Name** : Mac\_con\_ind\_mcei\_ch(mcei\_:INTEGER)

**ASP Type** : MAC\_CON\_IND

**Derivation Path** :

**Comments** : Abstract primitive: MAC connection indication from lower layer. A new MAC connection for connection handover is created by IUT side. Only for MCEI used in the test cases.

Parameter Name	Parameter Value	Comments
mcei	?	MAC Connection Endpoint Identifier
fmid	?	Only needed for fixed part initiated "Fast Setup". Fixed mac identity = least 12 bits of RFPI
pmid	?	Portable mac identity, 20 bits derived from individual TPUI or a default TPUI
connection_handover	TRUE	Connection request for handover = YES, NO otherwise.
old_mcei	mcei_	Only needed if Connection_Handover = YES and previous connection is "basic".
cf_required	?	CF channel required = YES, NO otherwise.
slot_type	?	Double, Full, Half
service_type	?	IN, IP or C-channel only service
max_lifetime	?	Only for IP error correction service
connection	?	Asymmetric uplink connection Asymmetric downlink connection Symmetric single bearer connection Symmetric multi bearer connection
connection_type	?	Basic or Advanced
ecn	?	Exchange Connection Number (for advanced connection only)
rpn	?	RFP used for this connection

**Detailed Comments** :

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_con_ind_mcei_intercell_ch(mcei_:INTEGER; rpn_ : RPN) <b>ASP Type</b> : MAC_CON_IND <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connection indication from lower layer. A new MAC connection for connection handover is created by IUT side. Only for MCEI used in the test cases.		
Parameter Name	Parameter Value	Comments
mcei	?	MAC Connection Endpoint Identifier
fmid	?	Only needed for fixed part initiated "Fast Setup". Fixed mac identity = least 12 bits of RFPI
pmid	?	Portable mac identity, 20 bits derived from individual TPUI or a default TPUI
connection_handover	TRUE	Connection request for handover = YES, NO otherwise.
old_mcei	mcei_	Only needed if Connection_Handover = YES and previous connection is "basic".
cf_required	?	CF channel required = YES, NO otherwise.
slot_type	?	Double, Full, Half
service_type	?	IN, IP or C-channel only service
max_lifetime	?	Only for IP error correction service
connection	?	Asymmetric uplink connection Asymmetric downlink connection Symmetric single bearer connection Symmetric multi bearer connection
connection_type	?	Basic or Advanced
ecn	?	Exchange Connection Number (for advanced connection only)
rpn	rpn_	RFP used for this connection
<b>Detailed Comments</b> :		

### ASP Constraint Declaration

**Constraint Name** : Mac\_con\_ind\_other\_mcei(mcei\_:INTEGER)  
**ASP Type** : MAC\_CON\_IND  
**Derivation Path** :  
**Comments** : Abstract primitive: MAC connection indication from lower layer. A new MAC connection is created by IUT side. Only for MCEI not used in the test cases.

Parameter Name	Parameter Value	Comments
mcei	COMPLEMENT (mcei_)	MAC Connection Endpoint Identifier
fmid	?	Only needed for fixed part initiated "Fast Setup". Fixed mac identity = least 12 bits of RFPI
pmid	?	Portable mac identity, 20 bits derived from individual TPUI or a default TPUI
connection_handover	?	Connection request for handover = YES, NO otherwise.
old_mcei	?	Only needed if Connection_Handover = YES and previous connection is "basic".
cf_required	?	CF channel required = YES, NO otherwise.
slot_type	?	Double, Full, Half
service_type	?	IN, IP or C-channel only service
max_lifetime	?	Only for IP error correction service
connection	?	Asymmetric uplink connection Asymmetric downlink connection Symmetric single bearer connection Symmetric multi bearer connection
connection_type	?	Basic or Advanced
ecn	?	Exchange Connection Number (for advanced connection only)
rpn	?	RFP used for this connection

**Detailed Comments** :

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_con_req(mcei_:MCEI;pmid_:PMID;cho_:CONNECTION_HANDOVER;omcei_:OLD_MCEI;cfr_:CF_REQUIRED;slt_:SLOT_TYPE;svt_:SERVICE_TYPE;mlt_:MAX_LIFETIME;cn_:CONNECTION;rpn_:RPN) <b>ASP Type</b> : MAC_CON_REQ <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connection request to lower layer. Tester uses this primitive to obtain a new MAC connection		
Parameter Name	Parameter Value	Comments
mcei	mcei_	MAC Connection Endpoint Identifier
fmid	'000000000000'B	Only needed for fixed part initiated "Fast Setup". Fixed mac identity = least 12 bits of RFPI
pmid	pmid_	Portable mac identity, 20 bits derived from individual TPUI or a default TPUI
connection_handover	cho_	Connection request for handover = YES, NO otherwise.
old_mcei	omcei_	Only needed if Connection_Handover = YES and previous connection is "basic".
cf_required	cfr_	CF channel required = YES, NO otherwise.
slot_type	slt_	Double, Full, Half
service_type	svt_	IN, IP or C-channel only service
max_lifetime	mlt_	Only for IP error correction service
connection	cn_	Asymmetric uplink connection Asymmetric downlink connection Symmetric single bearer connection Symmetric multi bearer connection
rpn	rpn_	Forces connection to a specific RFP
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_data_ind(mcei_,rct_:INTEGER;data:PDU) <b>ASP Type</b> : MAC_DATA_IND <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC data indication reception on one specified connection from lower layer.		
Parameter Name	Parameter Value	Comments
mcei	mcei_	MAC Connection Endpoint Identifier
receive_channel_type	rct_	GF, CS, CF, IN, IP
sdu	data	
crc_results	*	Optional field
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_data_ind_any_pdu(mcei_,rct_:INTEGER)		
<b>ASP Type</b> : MAC_DATA_IND		
<b>Derivation Path</b> :		
<b>Comments</b> : Abstract primitive: MAC data indication reception on one specified connection from lower layer with any PDU accepted.		
Parameter Name	Parameter Value	Comments
mcei	mcei_	MAC Connection Endpoint Identifier GF, CS, CF, IN, IP
receive_channel_type	rct_	
sdu	?	Optional field
crc_results	*	
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_data_ind_mcei(mcei_:INTEGER)		
<b>ASP Type</b> : MAC_DATA_IND		
<b>Derivation Path</b> :		
<b>Comments</b> : Abstract primitive: MAC data indication reception with any value of all field accepted. Only for MCEI used in the test cases.		
Parameter Name	Parameter Value	Comments
mcei	mcei_	MAC Connection Endpoint Identifier GF, CS, CF, IN, IP
receive_channel_type	?	
sdu	*	Optional field
crc_results	*	
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_data_ind_other_mcei(mcei_:INTEGER)		
<b>ASP Type</b> : MAC_DATA_IND		
<b>Derivation Path</b> :		
<b>Comments</b> : Abstract primitive: MAC data indication reception with any value of all field accepted. Only for MCEI not used in the test cases.		
Parameter Name	Parameter Value	Comments
mcei	COMPLEMENT (mcei_)	MAC Connection Endpoint Identifier GF, CS, CF, IN, IP
receive_channel_type	?	
sdu	*	Optional field
crc_results	*	
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_data_req(mcei_,tct_:INTEGER;data:PDU) <b>ASP Type</b> : MAC_DATA_REQ <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC data sending request on one specified connection to lower layer.		
Parameter Name	Parameter Value	Comments
mcei transmit_channel_type sdu	mcei_ tct_ data	MAC Connection Endpoint Identifier GF, CS, CF, IN, IP Data
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_dis_ind(mcei_:INTEGER) <b>ASP Type</b> : MAC_DIS_IND <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC disconnection indication on one specified connection from lower layer.		
Parameter Name	Parameter Value	Comments
mcei reason	mcei_ ?	MAC Connection Endpoint Identifier Normal, Abnormal
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_dis_ind_mcei(mcei_:INTEGER) <b>ASP Type</b> : MAC_DIS_IND <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC disconnection indication. Only for MCEI used in the test cases.		
Parameter Name	Parameter Value	Comments
mcei reason	mcei_ ?	MAC Connection Endpoint Identifier Normal, Abnormal
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_dis_ind_other_mcei(mcei_:INTEGER) <b>ASP Type</b> : MAC_DIS_IND <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC disconnection indication. Only for MCEI not used in the test cases.		
Parameter Name	Parameter Value	Comments
mcei reason	COMPLEMENT (mcei_) ?	MAC Connection Endpoint Identifier Normal, Abnormal
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_dis_req(mcei_:INTEGER) <b>ASP Type</b> : MAC_DIS_REQ <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC disconnection request of one specified connection to lower layer.		
Parameter Name	Parameter Value	Comments
mcei	mcei_	MAC Connection Endpoint Identifier
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_down_data_ind(data:PDU) <b>ASP Type</b> : MAC_DOWN_DATA_IND <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connectionless data received from FT (downlink). Indication from lower layer.		
Parameter Name	Parameter Value	Comments
channel_type	?	CLS, CLF, SIN
ari	TSPX_ari	
sdu	data	message unit
status	?	Data contains error or not
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_down_data_ind_any <b>ASP Type</b> : MAC_DOWN_DATA_IND <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connectionless data received from FT (downlink). Indication from lower layer with any message unit accepted.		
Parameter Name	Parameter Value	Comments
channel_type	?	CLS, CLF, SIN
ari	TSPX_ari	
sdu	?	message unit
status	?	Data contains error or not
<b>Detailed Comments</b> :		



ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_down_data_req(data:PDU) <b>ASP Type</b> : MAC_DOWN_DATA_REQ <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connectionless data sending request to lower layer. Tester as FT part sends connectionless downlink data to the IUT as a PT part.		
Parameter Name	Parameter Value	Comments
channel_type	TSC_cls	CLS
sdu	data	message unit
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_page_ind(data:PDU)		
<b>ASP Type</b> : MAC_PAGE_IND		
<b>Derivation Path</b> :		
<b>Comments</b> : Abstract primitive: MAC broadcast data received indication from lower layer.		
Parameter Name	Parameter Value	Comments
cluster_id	?	Needed if data length is 36
long_flag	?	
sdu	data	Optional field
crc_results	*	
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_page_ind_any_data		
<b>ASP Type</b> : MAC_PAGE_IND		
<b>Derivation Path</b> :		
<b>Comments</b> : Abstract primitive: MAC broadcast data received indication from lower layer.		
Parameter Name	Parameter Value	Comments
cluster_id	?	Needed if data length is 36
long_flag	?	
sdu	?	
crc_results	*	Optional field
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_page_req(pt_:INTEGER;data:PDU) <b>ASP Type</b> : MAC_PAGE_REQ <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC broadcast data sending request to from lower layer.		
Parameter Name	Parameter Value	Comments
page_type	pt_	Normal or Fast
sdu	data	broadcast message
long_flag	FALSE	Needed if data length is 36
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_up_data_cfm <b>ASP Type</b> : MAC_UP_DATA_CFM <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connectionless data sending confirmation from lower layer. Tester as PT part has sent connectionless uplink data to the IUT as a FT part and lower layer of the Tester reports the result of its statement.		
Parameter Name	Parameter Value	Comments
status	?	Data transmitted or if not: error code
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_up_data_ind(data:PDU) <b>ASP Type</b> : MAC_UP_DATA_IND <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connectionless data received from PT (uplink). Indication from lower layer.		
Parameter Name	Parameter Value	Comments
pmid	?	portable mac identity
sdu	data	message unit
status	?	Data contains error or not
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_up_data_ind_any <b>ASP Type</b> : MAC_UP_DATA_IND <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connectionless data received from PT (uplink). Indication from lower layer with any message unit accepted.		
Parameter Name	Parameter Value	Comments
pmid	?	portable mac identity
sdu	?	message unit
status	?	Data contains error or not
<b>Detailed Comments</b> :		

ASP Constraint Declaration		
<b>Constraint Name</b> : Mac_up_data_req(data:PDU) <b>ASP Type</b> : MAC_UP_DATA_REQ <b>Derivation Path</b> : <b>Comments</b> : Abstract primitive: MAC connectionless data sending request to lower layer. Tester as PT part sends connectionless uplink data to the IUT as a FT part.		
Parameter Name	Parameter Value	Comments
sdu	data	message unit
<b>Detailed Comments</b> :		

PDU Constraint Declaration			
<b>Constraint Name</b> : Cc_setup_valid <b>PDU Type</b> : CC_SETUP <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 6.3.2.1 CC-SETUP			
Field Name	Field Value	Field Encoding	Comments
transaction_flag	'0'B		Transation originator
transaction_identifier	'000'B		Transation 0
protocol_discriminator	'0011'B		Call Control message
extended_transaction_value	–		Not existing
message_type	'00000101'B		CC_SETUP message type coding
portable_identity	TSPX_pid		Test suite parameter from PIXIT
fixed_identity	TSPX_fid		Test suite parameter from PIXIT
basic_service	'E080'H		(1)
<b>Detailed Comments</b> : (1) ETS 300 175-5 § 7.6.4 Basic Service E0 : Basic service information element code. 80 : DECT standard coding – Call class : Normal call setup – Service : Default.			

PDU Constraint Declaration			
<b>Constraint Name</b> : Fu1r <b>PDU Type</b> : FU1 <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4: § 13 Element of procedure and formats of fields for U-plane peer to peer communication. § 12.2 FU1 frame structure			
Field Name	Field Value	Field Encoding	Comments
higher_layer_info	?		Higher layer info
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Fu1s(data_:OCTETSTRING) <b>PDU Type</b> : FU1 <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4: § 13 Element of procedure and formats of fields for U-plane peer to peer communication. § 12.2 FU1 frame structure			
Field Name	Field Value	Field Encoding	Comments
higher_layer_info	data_		Higher layer info
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Fu5r(e_s_,e_r_:INTEGER) <b>PDU Type</b> : FU5 <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4: § 13 Element of procedure and formats of fields for U-plane peer to peer communication. § 12.6 FU5 frame structure			
Field Name	Field Value	Field Encoding	Comments
g	INT_TO_BIT(TSO_flag(),1)		Flag.
uln	?		Link number
ucn	'000'B		Channel number
res	'1'B		Reserved bit
li	?		Length
m_bit	'0'B		More data bit
i_r	'1'B		Initial transmission
e_s	INT_TO_BIT(e_s_,7)		send number
a_n	'1'B		Acknowledgement
e_r	INT_TO_BIT(e_r_,7)		Receive number
data	?		Information field
fill	*		Fill field (to force the frame length to be equal to 8 octets/half slot, 32 octets/full slot and 80 octets/double slot)
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Fu5r_any_ack(e_s_:INTEGER) <b>PDU Type</b> : FU5 <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4: § 13 Element of procedure and formats of fields for U-plane peer to peer communication. § 12.6 FU5 frame structure			
Field Name	Field Value	Field Encoding	Comments
g	INT_TO_BIT(TSO_flag(),1)		Flag.
uln	?		Link number
ucn	'000'B		Channel number
res	'1'B		Reserved bit
li	?		Length
m_bit	'0'B		More data bit
i_r	'1'B		Initial transmission
e_s	INT_TO_BIT(e_s_,7)		send number
a_n	'1'B		Acknowledgement
e_r	?		Receive number
data	?		Information field
fill	*		Fill field (to force the frame length to be equal to 8 octets/half slot, 32 octets/full slot and 80 octets/double slot)
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Fu5s(e_s_,e_r_:INTEGER) <b>PDU Type</b> : FU5 <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4: § 13 Element of procedure and formats of fields for U-plane peer to peer communication. § 12.6 FU5 frame structure			
Field Name	Field Value	Field Encoding	Comments
g	INT_TO_BIT(TSO_flag(),1)		Flag.
uln	TSPX_uln		Link number
ucn	'000'B		Channel number
res	'1'B		Reserved bit
li	INT_TO_BIT(4,7)		Length
m_bit	'0'B		More data bit
i_r	'1'B		Initial transmission
e_s	INT_TO_BIT(e_s_,7)		send number
a_n	'1'B		Acknowledgement
e_r	INT_TO_BIT(e_r_,7)		Receive number
data	'41414141'O		Information field
fill	TSO_cid_fillu(TSPX_slot,4)		Fill field (to force the frame length to be equal to 8 octets/half slot, 32 octets/full slot and 80 octets/double slot)
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Fu5s_nack(e_s_,e_r_:INTEGER) <b>PDU Type</b> : FU5 <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4: § 13 Element of procedure and formats of fields for U-plane peer to peer communication. § 12.6 FU5 frame structure			
Field Name	Field Value	Field Encoding	Comments
g	INT_TO_BIT(TSO_flag(),1)		Flag.
uln	TSPX_uln		Link number
ucn	'000'B		Channel number
res	'1'B		Reserved bit
li	INT_TO_BIT(4,7)		Length
m_bit	'0'B		More data bit
i_r	'1'B		Initial transmission
e_s	INT_TO_BIT(e_s_,7)		send number
a_n	'0'B		Negative acknowledgement
e_r	INT_TO_BIT(e_r_,7)		Receive number
data	'41414141'O		Information field
fill	TSO_cid_fillu(TSPX_slot,4)		Fill field (to force the frame length to be equal to 8 octets/half slot, 32 octets/full slot and 80 octets/double slot)
<b>Detailed Comments</b> :			



PDU Constraint Declaration			
<b>Constraint Name</b> : Fu5s_retransmit(e_s_,e_r_:INTEGER) <b>PDU Type</b> : FU5 <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-4: § 13 Element of procedure and formats of fields for U-plane peer to peer communication. § 12.6 FU5 frame structure			
Field Name	Field Value	Field Encoding	Comments
g	INT_TO_BIT(TSO_flag(),1)		Flag.
uln	TSPX_uln		Link number
ucn	'000'B		Channel number
res	'1'B		Reserved bit
li	INT_TO_BIT(4,7)		Length
m_bit	'0'B		More data bit
i_r	'0'B		Retranmission
e_s	INT_TO_BIT(e_s_,7)		send number
a_n	'1'B		Acknowledgement
e_r	INT_TO_BIT(e_r_,7)		Receive number
data	'41414141'O		Information field
fill	TSO_cid_fillu(TSPX_slot,4)		Fill field (to force the frame length to be equal to 8 octets/half slot, 32 octets/full slot and 80 octets/double slot)
<b>Detailed Comments</b> :			

### PDU Constraint Declaration

**Constraint Name** : lr\_ca(nlf\_,nr\_,ns\_:INTEGER;NWKMSG:PDU)  
**PDU Type** : INFORMATION  
**Derivation Path** :  
**Encoding Rule Name** :  
**Encoding Variation** :  
**Comments** : Information Class A frame with L3 PDU parametrised, Receiving constraint.

Field Name	Field Value	Field Encoding	Comments
nlf	INT_TO_BIT(nlf_,1)		New Link Flag
lln	INT_TO_BIT(TSC_lln_ca,3)		Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt, TSC_command, TSC_receive),1)		Command/Response bit
res	'1'B		REServed bit = 1
n_r	INT_TO_BIT(nr_,3)		Receive sequence Number
p_bit	'0'B		Poll bit
n_s	INT_TO_BIT(ns_,3)		Send sequence Number
iframe_id	'0'B		Information frame indicator = 0
li	?		Length
m_bit	'0'B		More data bit, Segmenting = 1
n_bit	'1'B		extended indicator, no extension = 1
data	NWKMSG		Data
fill	Fillstring		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_check_checksum()		Check value of Checksum

**Detailed Comments** :

PDU Constraint Declaration			
<b>Constraint Name</b> : lr_ca_anyornone_pdu(nlf_,nr_,ns_:INTEGER) <b>PDU Type</b> : INFORMATION <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Information Class A frame with any or no L3 PDU accepted, Receiving constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	INT_TO_BIT(nlf_,1)		New Link Flag
lln	INT_TO_BIT(TSC_lln_ca,3)		Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt,TSC_command,TSC_receive),1)		Command/Response bit
res	'1'B		REServed bit = 1
n_r	INT_TO_BIT(nr_,3)		Receive sequence Number
p_bit	'0'B		Poll bit
n_s	INT_TO_BIT(ns_,3)		Send sequence Number
iframe_id	'0'B		Information frame indicator = 0
li	?		Length
m_bit	'0'B		More data bit, Segmenting = 1
n_bit	'1'B		extended indicator, no extension = 1
data	*		Data
fill	Fillstring		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_check_checksum()		Check value of Checksum
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : lr_ca_any_pdu(nlf_,nr_,ns_:INTEGER) <b>PDU Type</b> : INFORMATION <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Information Class A frame with any L3 PDU accepted, Receiving constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	INT_TO_BIT(nlf_,1)		New Link Flag
lln	INT_TO_BIT(TSC_lln_ca,3)		Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt, TSC_command, TSC_receive),1)		Command/Response bit
res	'1'B		REServed bit = 1
n_r	INT_TO_BIT(nr_,3)		Receive sequence Number
p_bit	'0'B		Poll bit
n_s	INT_TO_BIT(ns_,3)		Send sequence Number
iframe_id	'0'B		Information frame indicator = 0
li	?		Length
m_bit	'0'B		More data bit, Segmenting = 1
n_bit	'1'B		extended indicator, no extension = 1
data	?		Data
fill	Fillstring		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_check_checksum()		Check value of Checksum
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : lr_ca_no_pdu(nlf_,nr_,ns_:INTEGER) <b>PDU Type</b> : INFORMATION <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Information Class A frame with no L3 PDU accepted, Receiving constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	INT_TO_BIT(nlf_,1)		New Link Flag
lln	INT_TO_BIT(TSC_lln_ca,3)		Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt,TSC_command,TSC_receive),1)		Command/Response bit
res	'1'B		REServed bit = 1
n_r	INT_TO_BIT(nr_,3)		Receive sequence Number
p_bit	'0'B		Poll bit
n_s	INT_TO_BIT(ns_,3)		Send sequence Number
iframe_id	'0'B		Information frame indicator = 0
li	'000000'B		Length
m_bit	'0'B		More data bit, Segmenting = 1
n_bit	'1'B		extended indicator, no extension = 1
data	–		Data
fill	Fillstring		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_check_checksum()		Check value of Checksum
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : ls_ca(nlf_,nr_,ns_:INTEGER;NWKMSG:PDU) <b>PDU Type</b> : INFORMATION <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Information Class A frame with L3 PDU parametrised, Sending constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	INT_TO_BIT(nlf_,1)		New Link Flag
lln	INT_TO_BIT(TSC_lln_ca,3)		Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt,TSC_command,TSC_send),1)		Command/Response bit
res	'1'B		REServed bit = 1
n_r	INT_TO_BIT(nr_,3)		Receive sequence Number
p_bit	'0'B		Poll bit
n_s	INT_TO_BIT(ns_,3)		Send sequence Number
iframe_id	'0'B		Information frame indicator = 0
li	INT_TO_BIT(TSO_compute_li(NWKMSG),6)		Length
m_bit	'0'B		More data bit, Segmenting = 1
n_bit	'1'B		extended indicator, no extension = 1
data	NWKMSG		Data
fill	TSO_cid_fill(TSPX_chn, TSO_compute_li(NWKMSG))		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_cid_checksum()		Checksum
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : ls_ca_no_pdu(nlf_,nr_,ns_:INTEGER) <b>PDU Type</b> : INFORMATION <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Information Class A frame with no L3 PDU included, Sending constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	INT_TO_BIT(nlf_,1)		New Link Flag
lln	INT_TO_BIT(TSC_lln_ca,3)		Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt,TSC_command,TSC_send),1)		Command/Response bit
res	'1'B		REServed bit = 1
n_r	INT_TO_BIT(nr_,3)		Receive sequence Number
p_bit	'0'B		Poll bit
n_s	INT_TO_BIT(ns_,3)		Send sequence Number
iframe_id	'0'B		Information frame indicator = 0
li	INT_TO_BIT(0,6)		Length
m_bit	'0'B		More data bit, Segmenting = 1
n_bit	'1'B		extended indicator, no extension = 1
data	–		Data
fill	TSO_cid_fill(TSPX_chn,0)		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_cid_checksum()		Checksum
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : ls_cb(nlf_,nr_,ns_,lln_:INTEGER) <b>PDU Type</b> : INFORMATION <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Information Class B frame with no L3 PDU included, Sending constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	INT_TO_BIT(nlf_,1)		New Link Flag
lln	INT_TO_BIT(lln_,3)		Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt,TSC_command,TSC_send),1)		Command/Response bit
res	'1'B		REServed bit = 1
n_r	INT_TO_BIT(nr_,3)		Receive sequence Number
p_bit	'0'B		Poll bit
n_s	INT_TO_BIT(ns_,3)		Send sequence Number
iframe_id	'0'B		Information frame indicator = 0
li	INT_TO_BIT(0,6)		Length
m_bit	'0'B		More data bit, Segmenting = 1
n_bit	'1'B		extended indicator, no extension = 1
data	–		Data
fill	TSO_cid_fill(TSPX_chn,0)		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_cid_checksum()		Checksum
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Lces_long_request_page <b>PDU Type</b> : LCE_LONG_REQUEST_PAGE <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 8.2 LCE request paging messages			
Field Name	Field Value	Field Encoding	Comments
dont_care	'0000'B		
w	'0'B		adress is the lowest 28 bits of IPUI
lce_header	'000'B		Basic connection required
ipui_class	TSPX_ipui_class		IPUI class
address	TSO_cid_lowest(28,TSPX_ipui)		Lowest 28 bits of IPUI
<b>Detailed Comments</b> :			



PDU Constraint Declaration			
<b>Constraint Name</b> : Lcer_long_request_page <b>PDU Type</b> : LCE_LONG_REQUEST_PAGE <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 8.2 LCE request paging messages			
Field Name	Field Value	Field Encoding	Comments
dont_care	?		
w	?		adress is the lowest 28 bits of IPUI
lce_header	'?00'B		Basic connection required
ipui_class	TSPX_ipui_class		IPUI class
address	TSO_cid_lowest(28,TSPX_ipui)		Lowest 28 bits of IPUI
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Lce_page_response <b>PDU Type</b> : LCE_PAGE_RESPONSE <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 6.3.7.1 LCE-PAGE-RESPONSE			
Field Name	Field Value	Field Encoding	Comments
transaction_flag	'0'B		Transation originator
transaction_identifier	'000'B		Transation 0
protocol_discriminator	'0000'B		LCE message
extended_transaction_value	—		Not existing
message_type	'01110001'B		LCE-PAGE-RESPONSE message type coding
portable_identity	*		Test suite parameter from PIXIT
fixed_identity	*		Test suite parameter from PIXIT
nwk_assigned_identity	*		Test suite parameter from PIXIT
cipher_info	*		Test suite parameter from PIXIT
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Lces_short_request_page <b>PDU Type</b> : LCE_SHORT_REQUEST_PAGE <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 8.2 LCE request paging messages.			
Field Name	Field Value	Field Encoding	Comments
dont_care	'0000'B		MAC BS channel is 20 bits for short page paging and short LCE request paging message is 3 octets = ignore these 4 bits
w	'0'B		adress is the lowest 16 bits of default individual TPUI
lce_header	'000'B		Basic connection required
address	TSO_cid_lowest(16,TSPX_ipui)		Lowest 16 bits of default individual TPUI
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Lcer_short_request_page <b>PDU Type</b> : LCE_SHORT_REQUEST_PAGE <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 8.2 LCE request paging messages.			
Field Name	Field Value	Field Encoding	Comments
dont_care	?		MAC BS channel is 20 bits for short page paging and short LCE request paging message is 3 octets = ignore these 4 bits
w	?		adress is the lowest 16 bits of default individual TPUI
lce_header	'?00'B		Basic connection required
address	(TSO_cid_lowest( 16, TSPX_ipui), TSO_cid_lowest( 16, TSPX_pmid_assigned))		Lowest 16 bits of default or assigned individual TPUI
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Lce_short_request_page_in <b>PDU Type</b> : LCE_SHORT_REQUEST_PAGE <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 8.2 LCE request paging messages.			
Field Name	Field Value	Field Encoding	Comments
dont_care	'0000'B		MAC BS channel is 20 bits for short page paging and short LCE request paging message is 3 octets = ignore these 4 bits
w	'0'B		adress is the lowest 16 bits of default individual TPUI
lce_header	'100'B		In minimum delay service required
address	TSO_cid_lowest(16,TSPX_i pui)		Lowest 16 bits of default individual TPUI
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Lce_short_request_page_ip <b>PDU Type</b> : LCE_SHORT_REQUEST_PAGE <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 8.2 LCE request paging messages.			
Field Name	Field Value	Field Encoding	Comments
dont_care	'0000'B		MAC BS channel is 20 bits for short page paging and short LCE request paging message is 3 octets = ignore these 4 bits
w	'0'B		adress is the lowest 16 bits of default individual TPUI
lce_header	'111'B		IP error correct service required
address	TSO_cid_lowest(16,TSPX_i pui)		Lowest 16 bits of default individual TPUI
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : L3_unknow <b>PDU Type</b> : L3_MESSAGE <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : ETS 300 175-5: § 7 S-FORMAT message structures			
Field Name	Field Value	Field Encoding	Comments
transaction_flag	'0'B		Transation originator
transaction_identifier	'000'B		Transation 0
protocol_discriminator	'1000'B		Unknow entity
extended_transaction_value	–		Not existing
message_type	'00000000'B		Unknown message type
other_elements	–		Not existing
<b>Detailed Comments</b> : L3 message for unknow protocol entity. This message shall be ignored by the receiving side			

PDU Constraint Declaration			
<b>Constraint Name</b> : Rrr_ca(nlf_,nr_:INTEGER) <b>PDU Type</b> : RR <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Receive Ready Class A frame, Receiving constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	INT_TO_BIT(nlf_,1)		New Link Flag
lln	INT_TO_BIT(TSC_lln_ca,3)		Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt,TSC_response,TSC_receive),1)		Command/Response bit
res	'1'B		REServed bit = 1
n_r	INT_TO_BIT(nr_,3)		Receive sequence Number
pf_bit	'0'B		Poll/Final bit
rr_id	'00'B		Receive Ready identifier = 00
sframe_id	'01'B		Supervisory frame indicator = 01
li	?		Length
m_bit	'0'B		More data bit, shall be 0
n_bit	'1'B		extended indicator, shall be 1
fill	Fillstring		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_check_checksum()		Check value of Checksum
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Rrr_ca_any <b>PDU Type</b> : RR <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Receive Ready Class A frame, Receiving constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	'0'B		New Link Flag
lln	INT_TO_BIT( TSC_lln_ca, 3)		Logical Link Number
sapi	INT_TO_BIT( TSC_connection_sapi, 2)		Service Access Point Identifier
cr_bit	INT_TO_BIT( TSO_cid_return_cr_value( TSPX_pt, TSC_command, TSC_receive),1)		Command/Response bit
res	'1'B		REServed bit = 1
n_r	?		Receive sequence Number
pf_bit	'0'B		Poll/Final bit
rr_id	'00'B		Receive Ready identifier = 00
sframe_id	'01'B		Supervisory frame indicator = 01
li	'000000'B		Length
m_bit	'0'B		More data bit, shall be 0
n_bit	'1'B		extended indicator, shall be 1
fill	Fillstring		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_check_checksum()		Check value of Checksum
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Rrs_ca(nlf_,nr_:INTEGER) <b>PDU Type</b> : RR <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Receive Ready Class A frame, Sending constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	INT_TO_BIT(nlf_,1)		New Link Flag
lln	INT_TO_BIT(TSC_lln_ca,3)		Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt,TSC_response,TSC_send),1)		Command/Response bit
res	'1'B		REServed bit = 1
n_r	INT_TO_BIT(nr_,3)		Receive sequence Number
pf_bit	'0'B		Poll/Final bit
rr_id	'00'B		Receive Ready identifier = 00
sframe_id	'01'B		Supervisory frame indicator = 01
li	'000000'B		Length
m_bit	'0'B		More data bit, shall be 0
n_bit	'1'B		extended indicator, shall be 1
fill	TSO_cid_fill(TSPX_chn,0)		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_cid_checksum()		Checksum
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Rrs_cb(nlf_,nr_:INTEGER) <b>PDU Type</b> : RR <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Receive Ready Class B frame, Sending constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	INT_TO_BIT(nlf_,1)		New Link Flag
lln	INT_TO_BIT(TSC_lln_unassigned,3)		Logical Link Number
sapi	INT_TO_BIT(TSC_connection_sapi,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt,TSC_response,TSC_send),1)		Command/Response bit
res	'1'B		REServed bit = 1
n_r	INT_TO_BIT(nr_,3)		Receive sequence Number
pf_bit	'0'B		Poll/Final bit
rr_id	'00'B		Receive Ready identifier = 00
sframe_id	'01'B		Supervisory frame indicator = 01
li	'000000'B		Length
m_bit	'0'B		More data bit, shall be 0
n_bit	'1'B		extended indicator, shall be 1
fill	TSO_cid_fill(TSPX_chn,0)		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_cid_checksum()		Checksum
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Ui_pdu_on_cl <b>PDU Type</b> : UI_PDU <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Network Layer PDU included in an UI frame for transfer over a connectionless MAC service.			
Field Name	Field Value	Field Encoding	Comments
info	TSPX_ui_pdu_on_cl		Info from Network Layer
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Ui_pdu_on_co <b>PDU Type</b> : UI_PDU <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Network Layer PDU included in an UI frame for transfer over a connection oriented MAC service.			
Field Name	Field Value	Field Encoding	Comments
info	TSPX_ui_pdu_on_co		Info from Network Layer
<b>Detailed Comments</b> :			

PDU Constraint Declaration			
<b>Constraint Name</b> : Uir_cu_any_pdu(sapi_:INTEGER) <b>PDU Type</b> : UNNUMBERED_INFORMATION <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Unnumbered information Class U frame with any L3 PDU accepted, Receiving constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	'0'B		New Link Flag
lln	INT_TO_BIT(TSC_lln_cu,3)		Logical Link Number
sapi	INT_TO_BIT(sapi_,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt,TSC_command,TSC_receive),1)		Command/Response bit
res	'1'B		REServed bit = 1
ufield1	'000'B		Unnumbered function field 1
p_bit	'0'B		Poll bit
ufield2	'00'B		Unnumbered function field 2
uframe_id	'11'B		Unnumbered information indicator
li	?		Length
m_bit	'0'B		More data bit, Segmenting = 1
n_bit	'1'B		extended indicator, no extension = 1
data	?		Data
fill	Fillstring		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_check_checksum()		Check value of Checksum
<b>Detailed Comments</b> :			



PDU Constraint Declaration			
<b>Constraint Name</b> : Uis_cu(nlf_,lln_,sapi_,p_:INTEGER;data_:PDU) <b>PDU Type</b> : UNNUMBERED_INFORMATION <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Unnumbered information Class U frame with L3 PDU parametrised, Sending constraint.			
Field Name	Field Value	Field Encoding	Comments
nlf	INT_TO_BIT(nlf_,1)		New Link Flag
lln	INT_TO_BIT(lln_,3)		Logical Link Number
sapi	INT_TO_BIT(sapi_,2)		Service Access Point Identifier
cr_bit	INT_TO_BIT(TSO_cid_return_cr_value(TSPX_pt,TSC_command,TSC_send),1)		Command/Response bit
res	'1'B		REServed bit = 1
ufield1	'000'B		Unnumbered function field 1
p_bit	INT_TO_BIT(p_,1)		Poll bit
ufield2	'00'B		Unnumbered function field 2
uframe_id	'11'B		Unnumbered information indicator
li	INT_TO_BIT(TSO_compute_li(data_),6)		Length
m_bit	'0'B		More data bit, Segmenting = 1
n_bit	'1'B		extended indicator, no extension = 1
data	data_		Data
fill	TSO_cid_fill(TSPX_chn, TSO_compute_li(data_))		Fill field (to force the frame length to be modulo 5 or 8 channel dependent)
checksum	TSO_cid_checksum()		Checksum
<b>Detailed Comments</b> :			

## **IV**

### **Dynamic Part**

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_U_CA_000 <b>Group</b> : C_Plane/ClassU/CA/ <b>Purpose</b> : Verify that the IUT is able to generate an UI frame by using MAC connectionless services. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.3 Unacknowledged operation Only applicable when a procedure is specified in the PIXIT to force the IUT to send an UI frame.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSPX_pt]			
2		+STP_set_bit_a38_to_0			
3		+STP_invoke_uplink_data			( 1 )
4		[NOT TSPX_pt]			
5		+STP_invoke_downlink_data			( 2 )
<b>Detailed Comments</b> : ( 1 ) IUT is a PT. Implicit request for UI frame over MAC connectionless service (Uplink). ( 2 ) IUT is a FT. Implicit request for UI frame over MAC connectionless service (Downlink).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_U\_CA\_002  
**Group** : C\_Plane/ClassU/CA/  
**Purpose** : Verify that the IUT is able to receive an UI frame over connectionless MAC services.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.3 Unacknowledged operation.  
Only applicable when a procedure is specified in the PIXIT to determine UI frame reception.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSPX_pt]			
2		+STP_set_bit_a38_to_0			
3		LMAC ! MAC_DOWN_DATA_REQ START T_wait	Mac_down_data_req( Uis_cu(TSC_nlf0, TSC_lfn_cu, TSC_connectionless_sapi, TSC_p0, Ui_pdu_on_cl))		( 1)
4		?TIMEOUT T_wait			
5		+LTS_test_iut_reception			( 2)
6		[NOT TSPX_pt]			
7		LMAC ! MAC_UP_DATA_REQ START T_wait	Mac_up_data_req( Uis_cu(TSC_nlf0, TSC_lfn_cu, TSC_connectionless_sapi, TSC_p0, Ui_pdu_on_cl))		( 3)
8		LMAC ? MAC_UP_DATA_CFM	Mac_up_data_cfm		( 4)
9		?TIMEOUT T_wait			
10		+LTS_test_iut_reception			( 5)
11		LTS_test_iut_reception (TCV_received := TSO_iut_ui_received())			
12	TB01	[TCV_received]		(PASS)	( 6)
13		+PO_empty			
14	TB02	[NOT TCV_received]		(FAIL)	( 7)
15		+PO_empty			

**Detailed Comments** : ( 1) IUT is a PT. Tester sends an UI frame on the connectionless Downlink.  
( 2) Tester checks for IUT reception.  
( 3) IUT is a FT. Tester sends an UI frame on the connectionless Uplink.  
( 4) Tester receives a confirmation for its request from the MAC layer.  
( 5) Tester checks for IUT reception.  
( 6) Expected Behaviour: The IUT received the UI frame sent.  
( 7) The IUT did not receive the UI frame sent.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_U_CA_003 <b>Group</b> : C_Plane/ClassU/CA/ <b>Purpose</b> : Verify that the IUT is able to receive an UI frame over an open MAC connection. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.3 Unacknowledged operation. Only applicable when a procedure is specified in the PIXIT to determine UI frame reception.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_information_transfer			( 1)
2		LMAC ! MAC_DATA_REQ START T_wait	Mac_data_req( TSV_mcei1, TSV_chn, Uis_cu(TSC_nlf0, TSC_lIn_cu, TSC_connection_sapi, TSC_p0, Ui_pdu_on_co))		( 2)
3		?TIMEOUT T_wait			
4		+LTS_test_iut_reception			( 3)
		LTS_test_iut_reception			
5		(TCV_received := TSO_iut_ui_received())			
6	TB01	[TCV_received]		(PASS)	( 4)
7		+PO_mac_disconnect			****
8	TB02	[NOT TCV_received]		(FAIL)	( 5)
9		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition: Establishment of a MAC connection. ( 2) Tester sends an UI frame on the open MAC connection. ( 3) Tester checks for IUT reception. ( 4) Expected Behaviour: The IUT received the UI frame sent. ( 5) The IUT did not receive the UI frame sent. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_U\_BI\_000  
**Group** : C\_Plane/ClassU/BI/  
**Purpose** : Verify that the IUT, on receipt of an UI frame with P bit set to '1', accepts this erroneous frame. the UI frame is transmitted over connectionless MAC services.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.3.3.2 Reception of unacknowledged information.  
Only applicable when a procedure is specified in the PIXIT to determine UI frame reception.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSPX_pt]			
2		+STP_set_bit_a38_to_0			
3		LMAC ! MAC_DOWN_DATA_REQ START T_wait	Mac_down_data_req( Uis_cu(TSC_nlf0, TSC_lln_cu, TSC_connectionless_sapi, TSC_p1, Ui_pdu_on_cl))		( 1 )
4		?TIMEOUT T_wait			
5		+LTS_test_iut_reception			( 2 )
6		[NOT TSPX_pt]			
7		LMAC ! MAC_UP_DATA_REQ START T_wait	Mac_up_data_req( Uis_cu(TSC_nlf0, TSC_lln_cu, TSC_connectionless_sapi, TSC_p1, Ui_pdu_on_cl))		( 3 )
8		LMAC ? MAC_UP_DATA_CFM	Mac_up_data_cfm		( 4 )
9		?TIMEOUT T_wait			
10		+LTS_test_iut_reception			( 5 )
11		LTS_test_iut_reception (TCV_received := TSO_iut_ui_received())			
12	TB01	[TCV_received]		(PASS)	( 6 )
13		+PO_empty			
14	TB02	[NOT TCV_received]		(FAIL)	( 7 )
15		+PO_empty			

**Detailed Comments** : ( 1 ) IUT is a PT. Tester sends an UI frame with P bit = 1 on the connectionless Downlink.  
( 2 ) Tester checks for IUT reception.  
( 3 ) IUT is a FT. Tester sends an UI frame with P bit = 1 on the connectionless Uplink.  
( 4 ) Tester receives a confirmation for its request from the MAC layer.  
( 5 ) Tester checks for IUT reception.  
( 6 ) Expected Behaviour: The IUT received the UI frame sent.  
( 7 ) The IUT did not receive the UI frame sent.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_U_BI_001 <b>Group</b> : C_Plane/ClassU/BI/ <b>Purpose</b> : Verify that the IUT, on receipt of an UI frame with P bit set to '1', accepts this erroneous frame. the UI frame is transmitted over an open MAC connection. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.3.3.2 Reception of unacknowledged information. Only applicable when a procedure is specified in the PIXIT to determine UI frame reception.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_information_transfer			( 1)
2		LMAC ! MAC_DATA_REQ START T_wait	Mac_data_req( TSV_mcei1, TSV_chn, Uis_cu(TSC_nlf0, TSC_lln_cu, TSC_connection_sapi, TSC_p1, Ui_pdu_on_co))		( 2)
3		?TIMEOUT T_wait			
4		+LTS_test_iut_reception			( 3)
		LTS_test_iut_reception			
5		(TCV_received := TSO_iut_ui_received())			
6	TB01	[TCV_received]		(PASS)	( 4)
7		+PO_mac_disconnect			****
8	TB02	[NOT TCV_received]		(FAIL)	( 5)
9		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition: Establishment of a MAC connection. ( 2) Tester sends an UI frame with P bit = 1 on the open MAC connection. ( 3) Tester checks for IUT reception. ( 4) Expected Behaviour: The IUT received the UI frame sent. ( 5) The IUT did not receive the UI frame sent. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_U\_BI\_002  
**Group** : C\_Plane/ClassU/BI/  
**Purpose** : Verify that the IUT, on receipt of an UI frame with NLF bit set to '1', accepts this erroneous frame.  
The UI frame is transmitted over connectionless MAC services.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.3.3.2 Reception of unacknowledged information.  
Only applicable when a procedure is specified in the PIXIT to determine UI frame reception.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSPX_pt]			
2		+STP_set_bit_a38_to_0			
3		LMAC ! MAC_DOWN_DATA_REQ START T_wait	Mac_down_data_req( Uis_cu(TSC_nlf1, TSC_lln_cu, TSC_connectionless_sapi, TSC_p0, Ui_pdu_on_cl))		( 1 )
4		?TIMEOUT T_wait			
5		+LTS_test_iut_reception			( 2 )
6		[NOT TSPX_pt]			
7		LMAC ! MAC_UP_DATA_REQ START T_wait	Mac_up_data_req( Uis_cu(TSC_nlf1, TSC_lln_cu, TSC_connectionless_sapi, TSC_p0, Ui_pdu_on_cl))		( 3 )
8		LMAC ? MAC_UP_DATA_CFM	Mac_up_data_cfm		( 4 )
9		?TIMEOUT T_wait			
10		+LTS_test_iut_reception			( 5 )
11		LTS_test_iut_reception (TCV_received := TSO_iut_ui_received())			
12	TB01	[TCV_received]		(PASS)	( 6 )
13		+PO_empty			
14	TB02	[NOT TCV_received]		(FAIL)	( 7 )
15		+PO_empty			

**Detailed Comments** : ( 1 ) IUT is a PT. Tester sends an UI frame with NLF bit = 1 on the connectionless Downlink.  
( 2 ) Tester checks for IUT reception.  
( 3 ) IUT is a FT. Tester sends an UI frame with NLF bit = 1 on the connectionless Uplink.  
( 4 ) Tester receives a confirmation for its request from the MAC layer.  
( 5 ) Tester checks for IUT reception.  
( 6 ) Expected Behaviour: The IUT received the UI frame sent.  
( 7 ) The IUT did not receive the UI frame sent.



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_U_BI_003 <b>Group</b> : C_Plane/ClassU/BI/ <b>Purpose</b> : Verify that the IUT, on receipt of an UI frame with NLF bit set to '1', accepts this erroneous frame. the UI frame is transmitted over an open MAC connection. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.3.3.2 Reception of unacknowledged information. Only applicable when a procedure is specified in the PIXIT to determine UI frame reception.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_information_transfer			( 1)
2		LMAC ! MAC_DATA_REQ START T_wait	Mac_data_req( TSV_mcei1, TSV_chn, Uis_cu(TSC_nlf1, TSC_lln_cu, TSC_connection_sapi, TSC_p0, Ui_pdu_on_co))		( 2)
3		?TIMEOUT T_wait			
4		+LTS_test_iut_reception			( 3)
		LTS_test_iut_reception			
5		(TCV_received := TSO_iut_ui_received())			
6	TB01	[TCV_received]		(PASS)	( 4)
7		+PO_mac_disconnect			****
8	TB02	[NOT TCV_received]		(FAIL)	( 5)
9		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition: Establishment of a MAC connection. ( 2) Tester sends an UI frame with NLF bit = 1 on the open MAC connection. ( 3) Tester checks for IUT reception. ( 4) Expected Behaviour: The IUT received the UI frame sent. ( 5) The IUT did not receive the UI frame sent. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_U\_BI\_004  
**Group** : C\_Plane/ClassU/BI/  
**Purpose** : Verify that the IUT discards a UI frame with improper LLN (not Class U operation). The UI frame is transmitted over connectionless MAC services.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.3.3.2 Reception of unacknowledged information.  
Only applicable when a procedure is specified in the PIXIT to determine UI frame reception.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSPX_pt]			
2		+STP_set_bit_a38_to_0			
3		LMAC ! MAC_DOWN_DATA_REQ START T_wait	Mac_down_data_req( Uis_cu(TSC_nlf0, TSC_lln_ca, TSC_connectionless_sapi, TSC_p0, Ui_pdu_on_cl))		( 1)
4		?TIMEOUT T_wait			
5		+LTS_test_iut_reception			( 2)
6		[NOT TSPX_pt]			
7		LMAC ! MAC_UP_DATA_REQ START T_wait	Mac_up_data_req( Uis_cu(TSC_nlf0, TSC_lln_ca, TSC_connectionless_sapi, TSC_p0, Ui_pdu_on_cl))		( 3)
8		LMAC ? MAC_UP_DATA_CFM	Mac_up_data_cfm		( 4)
9		?TIMEOUT T_wait			
10		+LTS_test_iut_reception			( 5)
11		LTS_test_iut_reception (TCV_received := TSO_iut_ui_received())			
12	TB01	[TCV_received]		(FAIL)	( 6)
13		+PO_empty			
14	TB02	[NOT TCV_received]		(PASS)	( 7)
15		+PO_empty			

**Detailed Comments** : ( 1) IUT is a PT. Tester sends an UI frame with improper LLN on the connectionless Downlink.  
( 2) Tester checks for IUT reception.  
( 3) IUT is a FT. Tester sends an UI frame with improper LLN on the connectionless Uplink.  
( 4) Tester receives a confirmation for its request from the MAC layer.  
( 5) Tester checks for IUT reception.  
( 6) Error: The IUT accepted the UI frame sent.  
( 7) Expected Behaviour: The IUT discarded the UI frame sent.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_U_BI_005 <b>Group</b> : C_Plane/ClassU/BI/ <b>Purpose</b> : Verify that the IUT discards a UI frame with improper LLN (not Class U operation). The UI frame is transmitted over an open MAC connection. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.3.3.2 Reception of unacknowledged information. Only applicable when a procedure is specified in the PIXIT to determine UI frame reception.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_information_transfer			( 1)
2		LMAC ! MAC_DATA_REQ START T_wait	Mac_data_req( TSV_mcei1, TSV_chn, Uis_cu(TSC_nlf0, TSC_lln_ca, TSC_connection_sapi, TSC_p0, Ui_pdu_on_co))		( 2)
3		?TIMEOUT T_wait			
4		+LTS_test_iut_reception			( 3)
		LTS_test_iut_reception			
5		(TCV_received := TSO_iut_ui_received())			
6	TB01	[TCV_received]		(FAIL)	( 4)
7		+PO_mac_disconnect			****
8	TB02	[NOT TCV_received]		(PASS)	( 5)
9		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition: Establishment of a MAC connection. ( 2) Tester sends an UI frame with improper LLN on the open MAC connection. ( 3) Tester checks for IUT reception. ( 4) Error: The IUT accepted the UI frame sent. ( 5) Expected Behaviour: The IUT discarded the IU frame sent. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_U\_BI\_006  
**Group** : C\_Plane/ClassU/BI/  
**Purpose** : Verify that the IUT discards a UI frame with improper SAPI (not 'connectionless'). The UI frame is transmitted over connectionless MAC services.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.3.3.2 Reception of unacknowledged information.  
Only applicable when a procedure is specified in the PIXIT to determine UI frame reception.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSPX_pt]			
2		+STP_set_bit_a38_to_0			
3		LMAC ! MAC_DOWN_DATA_REQ START T_wait	Mac_down_data_req( Uis_cu(TSC_nlf0, TSC_lln_cu, TSC_connection_sapi, TSC_p0, Ui_pdu_on_cl))		( 1)
4		?TIMEOUT T_wait			
5		+LTS_test_iut_reception			( 2)
6		[NOT TSPX_pt]			
7		LMAC ! MAC_UP_DATA_REQ START T_wait	Mac_up_data_req( Uis_cu(TSC_nlf0, TSC_lln_cu, TSC_connection_sapi, TSC_p0, Ui_pdu_on_cl))		( 3)
8		LMAC ? MAC_UP_DATA_CFM	Mac_up_data_cfm		( 4)
9		?TIMEOUT T_wait			
10		+LTS_test_iut_reception			( 5)
11		LTS_test_iut_reception (TCV_received := TSO_iut_ui_received())			
12	TB01	[TCV_received]		(FAIL)	( 6)
13		+PO_empty			
14	TB02	[NOT TCV_received]		(PASS)	( 7)
15		+PO_empty			

**Detailed Comments** : ( 1) IUT is a PT. Tester sends an UI frame with improper SAPI on the connectionless Downlink.  
( 2) Tester checks for IUT reception.  
( 3) IUT is a FT. Tester sends an UI frame with improper SAPI on the connectionless Uplink.  
( 4) Tester receives a confirmation for its request from the MAC layer.  
( 5) Tester checks for IUT reception.  
( 6) Error: The IUT accepted the UI frame sent.  
( 7) Expected Behaviour: The IUT discarded the UI frame sent.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_U_BI_007 <b>Group</b> : C_Plane/ClassU/BI/ <b>Purpose</b> : Verify that the IUT discards a UI frame with improper SAPI (not 'connection oriented'). The UI frame is transmitted over an open MAC connection. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.3.3.2 Reception of unacknowledged information. Only applicable when a procedure is specified in the PIXIT to determine UI frame reception.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_information_transfer			( 1)
2		LMAC ! MAC_DATA_REQ START T_wait	Mac_data_req( TSV_mcei1, TSV_chn, Uis_cu(TSC_nlf0, TSC_lln_cu, TSC_connectionless_sapi, TSC_p0, Ui_pdu_on_co))		( 2)
3		?TIMEOUT T_wait			
4		+LTS_test_iut_reception			( 3)
		LTS_test_iut_reception			
5		(TCV_received := TSO_iut_ui_received())			
6	TB01	[TCV_received]		(FAIL)	( 4)
7		+PO_mac_disconnect			****
8	TB02	[NOT TCV_received]		(PASS)	( 5)
9		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition: Establishment of a MAC connection. ( 2) Tester sends an UI frame with improper SAPI on the open MAC connection. ( 3) Tester checks for IUT reception. ( 4) Error: The IUT accepted the UI frame sent. ( 5) Expected Behaviour: The IUT discarded the UI frame sent. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_CA\_000  
**Group** : C\_Plane/ClassA/CA/  
**Purpose** : Initial condition: The IUT has sent the link establishment request and is now in establishment pending state.  
 Verify that the IUT re-transmits the same link establishment I-Frame request N250 times if, at each request, the timer <DL-07> expires and the expected RR response frame with the NLF bit set to '1' is not received and enters established state, if in the last re-transmission it receives the expected RR with the NLF bit set to '1'.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.1 Establishment of Class A operation  
 Only for IUT that is able to send the establishment request of the data link.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_establishment_pending			( 1 )
2		(TR := (VR + 1) MOD 2, RC := 0)			
3		REPEAT LTS_send UNTIL [RC=TSPX_n250]			
4		LTS_send			
5		START TDL_07_max			
5		LMAC ? MAC_DATA_IND	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu(TSC_nlf1, VS,TR))		( 2 )
6		(RC:=RC+1)			
7		[RC=TSPX_n250]			( 3 )
8	TB01	LMAC ! MAC_DATA_REQ	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,VR))	(PASS)	( 4 )
9		+STP_ca_check_info_transfer			( 5 )
10		+PO_mac_disconnect			****
11		[RC<TSPX_n250]			( 6 )
12	TB02	?TIMEOUT TDL_07_max		(FAIL)	( 7 )
13		+PO_mac_disconnect			****

**Detailed Comments** : ( 1 ) Initial condition.  
 ( 2 ) The IUT transmits the link establishment request.  
 ( 3 ) Expected behaviour: Re-transmission attempts are in the greather value.  
 ( 4 ) Tester acknowledges link establishment request by sending RR response frame with NLF = 1.  
 ( 5 ) Tester checks if the IUT is now in information transfer phase.  
 ( 6 ) Re-transmission attempts are not in the greather value.  
 ( 7 ) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_CA_001					
<b>Group</b> : C_Plane/ClassA/CA/					
<b>Purpose</b> : Initial condition: The IUT has sent the link establishment request and is now in establishment pending state. Verify that the IUT, on receipt of a valid RR frame response to the link establishment request it has sent, enters established state.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175–4: § 9.2.3.1 Establishment of Class A operation Only for IUT that is able to send the establishment request of the data link.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_establishment_pending	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,VR))	(PASS)	( 1)
2		LMAC ! MAC_DATA_REQ			( 2)
3		+STP_ca_check_info_transfer			( 3)
4		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester acknowledges link establishment request by sending RR response frame with NLF = 1. ( 3) Expected behaviour: Tester checks if the IUT is now in information transfer phase. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_CA\_002  
**Group** : C\_Plane/ClassA/CA/  
**Purpose** : Initial condition: The IUT has sent the link establishment request to re-establish the link and is now in re-establishment pending state.  
 Verify that the IUT re-transmits the same link establishment I-Frame request N250 times if, at each request, the timer <DL-07> expires and the expected RR response frame with the NLF bit set to '1' is not received and enters established state, if in the last re-transmission it receives the expected RR with the NLF bit set to '1'.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.8 Re-establishment of Class A operation  
 Only for IUT that is able to send the establishment request of the data link.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_re_establishment_pending			( 1 )
2		(TR := (VR + 1) MOD 2, RC := 0)			
3		REPEAT LTS_send UNTIL [RC=TSPX_n250]			
4		LTS_send			
5		START TDL_07_max			
6		LMAC ? MAC_DATA_IND	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_no_pdu(TSC_nlf1, VS,TR))		( 2 )
7		(RC:=RC+1)			
8	TB01	[RC=TSPX_n250] LMAC ! MAC_DATA_REQ	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,VR))	(PASS)	( 3 ) ( 4 )
9		+STP_ca_check_info_transfer			( 5 )
10		+PO_mac_disconnect			****
11		[RC<TSPX_n250]			( 6 )
12	TB02	?TIMEOUT TDL_07_max		(FAIL)	( 7 )
13		+PO_mac_disconnect			****

**Detailed Comments** : ( 1 ) Initial condition.  
 ( 2 ) The IUT transmits the link establishment request.  
 ( 3 ) Expected behaviour: Re-transmission attempts are in the greather value.  
 ( 4 ) Tester acknowledges link establishment request by sending RR response frame with NLF = 1.  
 ( 5 ) Tester checks if the IUT is now in information transfer phase.  
 ( 6 ) Re-transmission attempts are not in the greather value.  
 ( 7 ) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_CA_003					
<b>Group</b> : C_Plane/ClassA/CA/					
<b>Purpose</b> : Initial condition: The IUT has sent the link establishment request to re-establish the link and is now in re-establishment pending state. Verify that the IUT, on receipt of a valid RR frame response to the link re-establishment request it has sent, enters established state.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 9.2.3.8 Re-establishment of Class A operation Only for IUT that is able to send the establishment request of the data link.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_re_establishment_pending	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,VR))	(PASS)	( 1)
2		LMAC ! MAC_DATA_REQ			( 2)
3		+STP_ca_check_info_transfer			( 3)
4		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester acknowledges link establishment request by sending RR response frame with NLF = 1. ( 3) Expected behaviour: Tester checks if the IUT is now in information transfer phase. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_CA\_005  
**Group** : C\_Plane/ClassA/CA/  
**Purpose** : Initial condition: The IUT is in Class A established state.  
 Verify that the IUT acknowledges rightly a valid received I-Frame within timer <DL-04>.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.4 Reception of Class A I-Frame

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_information_transfer	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca(TSC_nlf0,VR,VS, L3_unknow))		( 1)
2		LMAC ! MAC_DATA_REQ START TDL_04_max			( 2)
3		(VS := (VS +1) MOD 2)			
4	TB01	LMAC ?MAC_DATA_IND CANCEL TDL_04_max	Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca(TSC_nlf0,VS))	(PASS)	( 3)
5		(VA := VS)			
6		+STP_ca_check_info_transfer			( 5)
7		+PO_mac_disconnect			****
8	TB02	LMAC ?MAC_DATA_IND CANCEL TDL_04_max	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu(TSC_nlf0, VS,VR))	(PASS)	( 4)
9		(VR := (VR + 1) MOD 2, VA := VS)			
10		+STP_ca_check_info_transfer			( 5)
11		+PO_mac_disconnect			****
12	TB03	?TIMEOUT TDL_04_max		(FAIL)	( 6)
13		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Initial condition.  
 ( 2) Tester transmits an I-Frame with NLF = 0.  
 ( 3) Expected behaviour: The IUT acknowledges the I-Frame by sending RR frame with NLF = 0.  
 ( 4) Expected behaviour: The IUT acknowledges the I-Frame by sending I-Frame with NLF = 0.  
 ( 5) Tester checks if the IUT is in information transfer phase.  
 ( 6) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_CA_006 <b>Group</b> : C_Plane/ClassA/CA/ <b>Purpose</b> : Initial condition: The IUT is in Class A established state. Verify that the IUT re-transmits N250 times the same I-Frame if, at each transmission, the timer <DL-04> expires and the expected acknowledgement is not received and remains in established state, if in the last re-transmission it receives the expected acknowledgement. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.2.3.6 Waiting for acknowledgement					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_unacknowledged_i_frame	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu(TSC_nlf0, VS,TR))	(PASS)	( 1)
2		(TR := (VR + 1) MOD 2, RC := 0)			( 2)
3		REPEAT LTS_send UNTIL [RC=TSPX_n250]			
4		LTS_send			( 3)
5		START TDL_04_max			
6		LMAC ? MAC_DATA_IND			( 4)
7		(RC:=RC+1)			
8		[RC=TSPX_n250]			( 5)
9		LMAC ! MAC_DATA_REQ			
10		+STP_ca_check_info_transfer			( 6)
11		+PO_mac_disconnect			
12		[RC<TSPX_n250]			( 7)
13		?TIMEOUT TDL_04_max			
		+PO_mac_disconnect		(FAIL)	****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) The IUT transmits an I-Frame with NLF = 0. ( 3) Expected behaviour: Re-transmission attempts are in the greather value. ( 4) Tester acknowledges the I-Frame by sending RR response frame with NLF = 0. ( 5) Tester checks if the IUT is in information transfer phase. ( 6) Re-transmission attempts are not in the greather value. ( 7) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_CA\_007  
**Group** : C\_Plane/ClassA/CA/  
**Purpose** : Initial condition: The IUT is in ULI state.  
 Verify that the IUT, on receipt of the Class B link establishment I-Frame request, refuses this request by sending RR response frame with the reserved LLN value "Class A operation" and NLF bit set to "1", and enters into the Class A established state.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.2.1 Class A operation – 9.2.2.2 Class B operation  
 For IUT that implement only Class A operation (no Class B).

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments	
1	TB01	+PR_basic_mac_connect	Mac_data_req( TSV_mcei1, TSV_chn, ls_cb(TSC_nlf1,VR,VS, TSC_lln_unassigned))		( 1)	
2		(VR := 0, VS := 0, VA := 0, RC := 0)				
3		[TSPX_pt]				
4		LMAC ! MAC_DATA_REQ START TDL_07_max			( 2)	
5		+LTS_rr_receive				
6		[NOT TSPX_pt]				
7		LMAC ! MAC_DATA_REQ START TDL_07_max			( 2)	
8		+LTS_rr_receive				
9		LTS_rr_receive				
10		(VS := (VS +1) MOD 2) LMAC ?MAC_DATA_IND CANCEL TDL_07_max			(PASS)	( 3)
11		(VA := VS)				
12		+STP_ca_check_info_transfer				( 4)
13		+PO_mac_disconnect				****
14		?TIMEOUT TDL_07_max			(FAIL)	( 5)
15		+PO_mac_disconnect				****

**Detailed Comments** : ( 1) Tester establishes a basic MAC connection with the IUT.  
 ( 2) Tester transmits an I-Frame class B with NLF = 1.  
 ( 3) Expected behaviour: The IUT acknowledges the I-Frame received as a class A link establishment request.  
 ( 4) Tester checks if the IUT is in information transfer phase.  
 ( 5) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_CA_008					
<b>Group</b> : C_Plane/ClassA/CA/					
<b>Purpose</b> : Initial condition: The IUT is in ULI state. Verify that the IUT, on receipt of a valid link establishment I-Frame request, responds with a RR response frame with the NLF bit set to "1" and enters into the Class A established state.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 9.2.3.1 Establishment of Class A operation					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_basic_mac_connect	Mac_data_req( TSV_mcei1, TSV_chn, Is_ca_no_pdu(TSC_nlf1, VR,VS))	(PASS)	( 1)
2		(VR := 0, VS := 0, VA := 0, RC := 0)			( 2)
3		LMAC ! MAC_DATA_REQ START TDL_07_max			
4		(VS := (VS +1) MOD 2)			
5		LMAC ?MAC_DATA_IND CANCEL TDL_07_max			( 3)
6	TB02	(VA := VS)		(FAIL)	( 4) ****
7		+STP_ca_check_info_transfer			
8		+PO_mac_disconnect			
9		?TIMEOUT TDL_07_max			
10		+PO_mac_disconnect			
<b>Detailed Comments</b> : ( 1) Tester brings the IUT in Class A information transfer phase. ( 2) Tester transmits the link establishment request. ( 3) Expected behaviour: The IUT acknowledges the link establishment request. ( 4) Tester checks if the IUT is in information transfer phase. ( 5) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_BV\_000  
**Group** : C\_Plane/ClassA/BV/  
**Purpose** : Initial condition: The IUT has sent the link establishment request and is now in establishment pending state (timer <DL-07> is active).  
 Verify that the IUT accepts an I-Frame indicating Class A link establishment, responds with a RR response frame with the NLF bit set and establishes class A operation. (Collision of establishment requests)  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.1 Establishment of Class A operation  
 Only for IUT that is able to send and to receive the establishment request of the data link.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_establishment_pending	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca_no_pdu(TSC_nlf1, VR,VS))	(PASS)	( 1)
2		(VR := 0, VS := 0, VA := 0, RC := 0)			( 2)
3		LMAC ! MAC_DATA_REQ START TDL_07_max			
4		(VS := (VS + 1) MOD 2)			( 3)
5		LMAC ? MAC_DATA_IND CANCEL TDL_07_max			
6	TB02	(VA := VS)	Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca(TSC_nlf1,VS))	(FAIL)	( 4)
7		+STP_ca_check_info_transfer			****
8		+PO_mac_disconnect			( 5)
9		?TIMEOUT TDL_07_max			
10		+PO_mac_disconnect			

**Detailed Comments** : ( 1) Initial condition.  
 ( 2) Tester transmits the link establishment request.  
 ( 3) Expected behaviour: The IUT acknowledges the link establishment request.  
 ( 4) Tester checks if the IUT is in information transfer phase.  
 ( 5) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BV_002					
<b>Group</b> : C_Plane/ClassA/BV/					
<b>Purpose</b> : Initial condition: The IUT is in Class A established state and has sent an I-Frame. Verify that the IUT accepts as an acknowledgement for a previously transmitted I-Frame, a RR response frame with correct N(R) value.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 9.2.3.5 Receiving acknowledgements					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_unacknowledged_i_frame	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))	(PASS)	( 1)
2		LMAC ! MAC_DATA_REQ			( 2)
3		+STP_ca_check_info_transfer			( 3)
4		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester acknowledges with RR frame NLF = 0 the last I-Frame received. ( 3) Expected behaviour: Tester checks if the IUT is in information transfer phase. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_BV\_003  
**Group** : C\_Plane/ClassA/BV/  
**Purpose** : Initial condition: The IUT is in Class A established state and has sent an I-Frame.  
 Verify that the IUT accepts as an acknowledgement for a previously transmitted I-Frame, an I-Frame command with correct N(S) and N(R) values.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.5 Receiving acknowledgements

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_unacknowledged_i_frame	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca(TSC_nlf0,VR,VS, L3_unknown))	(PASS)	( 1)
2		LMAC !MAC_DATA_REQ START TDL_04_max			( 2)
3		(VS := (VS + 1) MOD 2)			
4		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			( 3)
5	TB02	(VA := VS)	Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca(TSC_nlf0,VS))	(PASS)	
6		+STP_ca_check_info_transfer			( 6)
7		+PO_mac_disconnect			****
8		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			( 4)
9	TB03	(VR := (VR + 1) MOD 2, VA := VS)	Mac_data_req( TSV_mcei1, TSV_chn, lrr_ca(TSC_nlf0,VR))	(FAIL)	
10		LMAC !MAC_DATA_REQ			( 5)
11		+STP_ca_check_info_transfer			( 6)
12		+PO_mac_disconnect			****
13		?TIMEOUT TDL_04_max			( 7)
14		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Initial condition.  
 ( 2) Tester sends the an I-Frame with L3\_unknown network message.  
 ( 3) Expected behaviour: The IUT acknowledges with RR frame NLF = 0.  
 ( 4) Expected behaviour: The IUT acknowledges with an I-Frame NLF = 0.  
 ( 5) Tester acknowledges with RR frame NLF = 0 the last I-Frame received.  
 ( 6) Tester checks if the IUT is in information transfer phase.  
 ( 7) No RR or I-Frame acknowledgement.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BV_005					
<b>Group</b> : C_Plane/ClassA/BV/					
<b>Purpose</b> : Initial condition: The IUT is in timer recovery phase. Verify that the IUT accepts as an acknowledgement for a previously transmitted I–Frame, a RR response frame with correct N(R) value and leaves the timer recovery phase.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175–4: § 9.2.3.6 Waiting for acknowledgement					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_timer_recovery	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))	(PASS)	( 1)
2		LMAC ! MAC_DATA_REQ			( 2)
3		+STP_ca_check_info_transfer			( 3)
4		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester acknowledges with RR frame NLF = 0 the last I–Frame received. ( 3) Expected behaviour: Tester checks if the IUT is now in information transfer phase. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_BV\_006  
**Group** : C\_Plane/ClassA/BV/  
**Purpose** : Initial condition: The IUT is in timer recovery phase.  
 Verify that the IUT accepts as an acknowledgement for a previously transmitted I-Frame, an I-Frame with correct N(S) and N(R) values and leaves the timer recovery phase.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.6 Waiting for acknowledgement

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_timer_recovery	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca(TSC_nlf0,VR,VS, L3_unknown))	(PASS)	( 1)
2		LMAC !MAC_DATA_REQ START TDL_04_max			( 2)
3		(VS := (VS + 1) MOD 2)			
4		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			( 3)
5	TB02	(VA := VS)	Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca(TSC_nlf0,VS))	(PASS)	
6		+STP_ca_check_info_transfer			( 6)
7		+PO_mac_disconnect			****
8		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			( 4)
9	TB03	(VR := (VR + 1) MOD 2, VA := VS)	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))	(FAIL)	
10		LMAC !MAC_DATA_REQ			( 5)
11		+STP_ca_check_info_transfer			( 6)
12		+PO_mac_disconnect			****
13		?TIMEOUT TDL_04_max			( 7)
14		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Initial condition.  
 ( 2) Tester sends the an I-Frame with L3\_unknown network message.  
 ( 3) Expected behaviour: The IUT acknowledges with RR frame NLF = 0.  
 ( 4) Expected behaviour: The IUT acknowledges with an I-Frame NLF = 0.  
 ( 5) Tester acknowledges with RR frame NLF = 0 the last I-Frame received.  
 ( 6) Tester checks if the IUT is in information transfer phase.  
 ( 7) No RR or I-Frame acknowledgement.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BV_007 <b>Group</b> : C_Plane/ClassA/BV/ <b>Purpose</b> : Initial condition: The IUT is in established state. Verify that the IUT manages rightly the PT intracell procedure for connection handover. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.2.7.3. Test applies for voluntary parallel connection handover on connection in clear mode (no encryption active).					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSPX_pt]			
2		[TSO_ignore_bearer_handover( TSV_rpn)]			
3		START T_640_ms			
4		?TIMEOUT T_640_ms			
5		+PR_ca_information_transfer			( 1)
6		+STP_invoke_pt_connection_handover			( 2)
7		LMAC ? MAC_DIS_IND	Mac_dis_ind( TSV_mcei1)		( 3)
8		(TSV_mcei1 := TSV_mcei2)			
9		+STP_ca_check_info_transfer			( 4)
10		+PO_mac_disconnect			****
11		[NOT TSPX_pt]			
12		+PR_ca_information_transfer			( 1)
13		(TSV_mcei2 := 2)			
14		+STP_ft_connection_handover			( 5)
15		LMAC ! MAC_DIS_REQ	Mac_dis_req( TSV_mcei1)		( 6)
16		(TSV_mcei1 := TSV_mcei2)			
17		+STP_ca_check_info_transfer			( 7)
18		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) The IUT creates a new connection for connection handover. ( 3) The IUT disconnects the old connection. ( 4) The IUT checks if the new connection is in Class A information transfer state. ( 5) Tester creates a new connection for connection handover. ( 6) Tester disconnects the old connection. ( 7) Tester checks if the new connection is in Class A information transfer state. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_BV\_008  
**Group** : C\_Plane/ClassA/BV/  
**Purpose** : Initial condition: The IUT is in established state.  
 Verify that the IUT manages rightly the PT intercell procedure for connection handover.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.7.3.  
 Test applies for voluntary parallel connection handover on connection in clear mode (no encryption active).

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSPX_pt]			
2		+LTS_est_snd_dummy_bearer			
3		+PR_ca_information_transfer			( 1)
4		+STP_invoke_pt_intercell_connection_hdr			( 2)
5		LMAC ? MAC_DIS_IND	Mac_dis_ind( TSV_mcei1)		( 3)
6		(TSV_mcei1 := TSV_mcei2)			
7		+STP_ca_check_info_transfer			( 4)
8		+PO_mac_disconnect			****
9		[NOT TSPX_pt]			
10		+PR_ca_information_transfer			( 1)
11		(TSV_mcei2 := 2)			
12		+STP_ft_intercell_connection_handover			( 5)
13		LMAC ! MAC_DIS_REQ	Mac_dis_req( TSV_mcei1)		( 6)
14		(TSV_mcei1 := TSV_mcei2)			
15		+STP_ca_check_info_transfer			( 7)
16		+PO_mac_disconnect			****
17		LTS_est_snd_dummy_bearer			
18		[TSO_establish_new_dummy( TSPX_rpn1)]			( 8)
19		[TSO_ignore_bearer_handover( TSPX_rpn) AND TSO_ignore_bearer_handover( TSPX_rpn1)]			( 9)
20		+LTS_intracell_handover			
21		[TSO_cho_blind_slot_info()]			
22		START T_dummy_wait			
23		?TIMEOUT T_dummy_wait			
24		[TRUE]		I	
25		[TRUE]		I	
26		[TRUE]		I	
27		LTS_intracell_handover			
28		[TSPX_intracell_behaviour = 0]			
29		[TSPX_intracell_behaviour = 1]			
30		[TSO_inhibit_intracell_handover()]			
31		[TRUE]		I	

**Detailed Comments** : ( 1) Initial condition.  
 ( 2) The IUT creates a new connection for connection handover.  
 ( 3) The IUT disconnects the old connection.  
 ( 4) The IUT checks if the new connection is in Class A information transfer state.  
 ( 5) Tester creates a new connection for connection handover.  
 ( 6) Tester disconnects the old connection.  
 ( 7) Tester checks if the new connection is in Class A information transfer state.

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Test Case Dynamic Behaviour					
<b>Detailed Comments :</b> ... ( 8) Establish a new dummy bearer on the cell specified. It assumed that the cell corresponding to TSPX_rpn is active with also a dummy bearer (initial condition of tester). **** Tester disconnects the MAC connection to terminate in stable state.					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BI_000					
<b>Group</b> : C_Plane/ClassA/BI/					
<b>Purpose</b> : Initial condition: The IUT has sent the link establishment request and is now in establishment pending state (timer <DL-07> is active). Verify that the IUT, on receipt of a RR Class B response frame with NLF bit set to '1', discards the received frame and, on expiration of the timer <DL-07>, re-transmits the establishment request.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 9.2.3.1 Establishment of Class A operation Only for IUT that is able to send the establishment request of the data link.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_establishment_pending			( 1)
2		START TDL_07_min, START TDL_07_max			( 2)
3		(TR := (VR + 1) MOD 2)			
4		LMAC ! MAC_DATA_REQ			
5	TB01	?TIMEOUT TDL_07_min		(PASS)	( 3)
6		LMAC ?MAC_DATA_IND CANCEL TDL_07_max			( 4)
7		LMAC ! MAC_DATA_REQ			( 5)
8	TB02	+STP_ca_check_info_transfer		(FAIL)	( 6)
9		+PO_mac_disconnect			****
10		?TIMEOUT TDL_07_max			( 7)
11		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester send a RR Class B frame with NLF bit set to 1. ( 3) To ensure no frame transmission before TDL_07 time (RR Class B discarded). ( 4) Expected behaviour: The IUT re-transmits the link establishment request. ( 5) Tester acknowledges the last re-transmission of the establishment request. ( 6) Tester checks if the IUT is in information transfer phase. ( 7) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_BI\_001  
**Group** : C\_Plane/ClassA/BI/  
**Purpose** : Initial condition: The IUT has sent the link establishment request and is now in establishment pending state (timer <DL-07> is active).  
Verify that the IUT, on receipt of a RR response frame with NLF bit set to '1' and invalid N(R), discards the received RR response frame and, on expiration of the timer <DL-07>, re-transmits the establishment request.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.1 Establishment of Class A operation  
Only for IUT that is able to send the establishment request of the data link.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_establishment_pending	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,TR))	(PASS)	( 1)
2		START TDL_07_min, START TDL_07_max			( 2)
3		(TR := (VR + 1) MOD 2)			
4		LMAC ! MAC_DATA_REQ			( 3)
5		?TIMEOUT TDL_07_min			
6	TB02	LMAC ?MAC_DATA_IND	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_anyornone_pdu (TSC_nlf1,VS,TR))	(FAIL)	( 4)
		CANCEL TDL_07_max			( 5)
7		LMAC ! MAC_DATA_REQ			
8		+STP_ca_check_info_transfer			( 6)
9		+PO_mac_disconnect			****
10	TB02	?TIMEOUT TDL_07_max	Rrs_ca(TSC_nlf1,VR))	(FAIL)	( 7)
11		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Initial condition.  
( 2) Tester send a RR frame with NLF bit set to 1 and invalid N(R).  
( 3) To ensure no frame transmission before TDL\_07 time (RR discarded).  
( 4) Expected behaviour: The IUT re-transmits the link establishment request.  
( 5) Tester acknowledges the last re-transmission of the establishment request.  
( 6) Tester checks if the IUT is in information transfer phase.  
( 7) No response received from the IUT.  
\*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BI_002					
<b>Group</b> : C_Plane/ClassA/BI/					
<b>Purpose</b> : Initial condition: The IUT has sent the establishment request to re-establish the link and is waiting for the acknowledgement of the request. Verify that the IUT, on receipt of a RR Class B response frame with NLF bit set to '1', discards the received frame and, on expiration of the timer <DL-07>, re-transmits the re-establishment request.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 9.2.3.8 Re-establishment of Class A operation Only for IUT that is able to send the establishment request of the data link.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_re_establishment_pending	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_cb(TSC_nlf1,VR))	(PASS)	( 1)
2		START TDL_07_min, START TDL_07_max			( 2)
3		(TR := (VR + 1) MOD 2)			
4		LMAC ! MAC_DATA_REQ			( 3)
5		?TIMEOUT TDL_07_min			( 4)
6		LMAC ?MAC_DATA_IND CANCEL TDL_07_max			( 5)
7		LMAC ! MAC_DATA_REQ			( 6)
8	TB02	+STP_ca_check_info_transfer	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,VR))	(FAIL)	( 7)
9		+PO_mac_disconnect			****
10		?TIMEOUT TDL_07_max			( 7)
11		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester send a RR Class B frame with NLF bit set to 1. ( 3) To ensure no frame transmission before TDL_07 time (RR Class B discarded). ( 4) Expected behaviour: The IUT re-transmits the link establishment request. ( 5) Tester acknowledges the last re-transmission of the establishment request. ( 6) Tester checks if the IUT is in information transfer phase. ( 7) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_BI\_003  
**Group** : C\_Plane/ClassA/BI/  
**Purpose** : Initial condition: The IUT has sent the establishment request to re-establish the link and is waiting for the acknowledgement of the request.  
 Verify that the IUT, on receipt of a RR response frame with NLF bit set to '1' and invalid N(R), discards the received RR response frame and, on expiration of the timer <DL-07>, re-transmits the re-establishment request.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.8 Re-establishment of Class A operation  
 Only for IUT that is able to send the establishment request of the data link.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_re_establishment_pending	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,TR))	(PASS)	( 1)
2		START TDL_07_min, START TDL_07_max			
3		(TR := (VR + 1) MOD 2)			
4		LMAC ! MAC_DATA_REQ			( 2)
5		?TIMEOUT TDL_07_min			( 3)
6	TB02	LMAC ?MAC_DATA_IND	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_anyornone_pdu (TSC_nlf1,VS,TR))	(FAIL)	( 4)
		CANCEL TDL_07_max			
7		LMAC ! MAC_DATA_REQ			( 5)
8		+STP_ca_check_info_transfer			( 6)
9		+PO_mac_disconnect			****
10	TB02	?TIMEOUT TDL_07_max		(FAIL)	( 7)
11		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Initial condition.  
 ( 2) Tester send a RR frame with NLF bit set to 1 and invalid N(R).  
 ( 3) To ensure no frame transmission before TDL\_07 time (RR discarded).  
 ( 4) Expected behaviour: The IUT re-transmits the link establishment request.  
 ( 5) Tester acknowledges the last re-transmission of the establishment request.  
 ( 6) Tester checks if the IUT is in information transfer phase.  
 ( 7) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BI_004 <b>Group</b> : C_Plane/ClassA/BI/ <b>Purpose</b> : Initial condition: The IUT, in Class A established state, has sent an I-Frame and is waiting for the adequate acknowledgement. Verify that the IUT, on receipt of a RR Class B response frame with NLF bit set to '0', discards the received frame and, on expiration of the timer <DL-04>, re-transmits the unacknowledged I-Frame. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.2.3.6 Waiting for acknowledgement					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_unacknowledged_i_frame	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_cb(TSC_nlf0,VR))	(PASS)	( 1)
2		(TR := (VR + 1) MOD 2)			( 2)
3		LMAC ! MAC_DATA_REQ START TDL_04_max			
4		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			( 3)
5		LMAC ! MAC_DATA_REQ			( 4)
6	TB02	+STP_ca_check_info_transfer	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))	(FAIL)	( 5)
7		+PO_mac_disconnect			****
8		?TIMEOUT TDL_04_max			( 6)
9		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester send a RR Class B frame with NLF bit set to 0. ( 3) Expected behaviour: The IUT re-transmits the unacknowledged I-Frame. ( 4) Tester acknowledges the last re-transmission of the I-Frame. ( 5) Tester checks if the IUT is in information transfer phase. ( 6) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_BI\_005  
**Group** : C\_Plane/ClassA/BI/  
**Purpose** : Initial condition: The IUT, in Class A established state, has sent an I-Frame and is waiting for the adequate acknowledgement.  
 Verify that the IUT, on receipt of a RR response frame with NLF bit set to '0' and invalid N(R), discards the received RR response frame and, on expiration of the timer <DL-04>, re-transmits the unacknowledged I-Frame.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.5 Receiving acknowledgements

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_unacknowledged_i_frame	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,TR))	(PASS)	( 1)
2		(TR := (VR + 1) MOD 2)			( 2)
3		LMAC ! MAC_DATA_REQ START TDL_04_max			
4		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			( 3)
5		LMAC ! MAC_DATA_REQ			( 4)
6	TB02	+STP_ca_check_info_transfer	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))	(FAIL)	( 5)
7		+PO_mac_disconnect			****
8		?TIMEOUT TDL_04_max			( 6)
9		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Initial condition.  
 ( 2) Tester send a RR response frame with NLF bit set to 0 and invalid N(R).  
 ( 3) Expected behaviour: The IUT re-transmits the unacknowledged I-Frame.  
 ( 4) Tester acknowledges the last re-transmission of the I-Frame.  
 ( 5) Tester checks if the IUT is in information transfer phase.  
 ( 6) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour							
<b>Test Case Name</b> : TC_A_BI_006							
<b>Group</b> : C_Plane/ClassA/BI/							
<b>Purpose</b> : Initial condition: The IUT, in Class A established state, has sent an I-Frame and is waiting for the adequate acknowledgement. Verify that the IUT, on receipt of an I-Frame with invalid N(R), accepts the received frame and, on expiration of the timer <DL-04>, re-transmits the unacknowledged I-Frame with N(R) set to correctly acknowledge the received I-Frame.							
<b>Configuration</b> :							
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events							
<b>Comments</b> : ETS 300 175-4: § 9.2.3.5 Receiving acknowledgements							
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments		
1	TB01	+PR_ca_unacknowledged_i_frame	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca_no_pdu(TSC_nlf0, TR,VS))	(PASS)	( 1)		
2		(TR := (VR + 1) MOD 2)			( 2)		
3		LMAC ! MAC_DATA_REQ START TDL_04_max					
4		(VS := (VS +1) MOD 2)					
5		LMAC ?MAC_DATA_IND				Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca(TSC_nlf0,VS))	
6		LMAC ?MAC_DATA_IND CANCEL TDL_04_max				Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu (TSC_nlf0,VS,TR))	( 3)
7		LMAC ! MAC_DATA_REQ				Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))	( 4)
8		+STP_ca_check_info_transfer				( 5)	
9		+PO_mac_disconnect					****
10		?TIMEOUT TDL_04_max					(FAIL)
11	TB03	+PO_mac_disconnect	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu (TSC_nlf0,VS,TR))	(PASS)	****		
12		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			( 3)		
13		LMAC ! MAC_DATA_REQ			Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))	( 4)	
14		+STP_ca_check_info_transfer			( 5)		
15		+PO_mac_disconnect				****	
16		?TIMEOUT TDL_04_max				(FAIL)	( 6)
17		+PO_mac_disconnect				****	
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester send an I-Frame with NLF bit set to 0 and invalid N(R). ( 3) Expected behaviour: The IUT re-transmits the unacknowledged I-Frame with N(R) updated. ( 4) Tester acknowledges the last re-transmission of the I-Frame. ( 5) Tester checks if the IUT is in information transfer phase.							

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Test Case Dynamic Behaviour					
<b>Detailed Comments</b> : ... ( 6) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BI_007 <b>Group</b> : C_Plane/ClassA/BI/ <b>Purpose</b> : Initial condition: The IUT, in Class A established state, has sent an I-Frame and is waiting for the adequate acknowledgement. Verify that the IUT, on receipt of an I-Frame with invalid N(S), responds with a RR response frame or an I-Frame indicating in the N(R) field the expected N(S) of the received I-Frame and accepts the N(R) of the I-Frame as an acknowledgement for the previously transmitted frame. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.2.3.4 Reception of Class A I-Frames					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_unacknowledged_i_frame	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca_no_pdu( TSC_nlf0, VR, TS))	(PASS)	( 1)
2		(TS := (VS + 1) MOD 2)			
3		LMAC ! MAC_DATA_REQ START TDL_04_max			( 2)
4		LMAC ? MAC_DATA_IND CANCEL TDL_04_max			( 3)
5	TB02	(VA := VS)	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu( TSC_nlf0, VS, VR))	(PASS)	
6		+STP_ca_check_info_transfer			( 4)
7		+PO_mac_disconnect			****
8		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			( 5)
9	TB03	(VA := VS)		(FAIL)	
10		+STP_ca_check_info_transfer			( 4)
11		+PO_mac_disconnect			****
12		?TIMEOUT TDL_04_max			( 6)
13		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester send an I-Frame with NLF bit set to 0 and invalid N(S). ( 3) Expected behaviour: The IUT indicates the expected N(S) by sending RR response frame and stops DL_04 according to the received N(R). ( 4) Tester checks if the IUT is in information transfer phase. ( 5) Expected behaviour: The IUT transmits a new I-frame indicating the expected N(S). ( 6) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BI_008 <b>Group</b> : C_Plane/ClassA/BI/ <b>Purpose</b> : Initial condition: The IUT, in Class A established state, has sent an I-Frame and is waiting for the adequate acknowledgement. Verify that the IUT, on receipt of an I-Frame with invalid N(S) and invalid N(R), responds with a RR response frame indicating in the N(R) field the expected N(S) of the received I-Frame, and, on expiration of the timer <DL-04>, re-transmits the unacknowledged I-Frame. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.2.3.6 Waiting for acknowledgement					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_unacknowledged_i_frame			( 1 )
2		(TS := (VS + 1) MOD 2 , TR := (VR + 1) MOD 2)			
3		LMAC ! MAC_DATA_REQ START TDL_04_max	Mac_data_req( TSV_mcei1, TSV_chn, Is_ca_no_pdu(TSC_nlf0, TR,TS))		( 2 )
4	TB01	LMAC ? MAC_DATA_IND	Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca(TSC_nlf0,VS))	(PASS)	( 3 )
5	TB02	LMAC ?MAC_DATA_IND CANCEL TDL_04_max	Mac_data_ind( TSV_mcei1, TSV_chn, Ir_ca_any_pdu (TSC_nlf0,VS,TR))	(PASS)	( 4 )
6		LMAC ! MAC_DATA_REQ	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))		( 5 )
7		+STP_ca_check_info_transfer			( 6 )
8		+PO_mac_disconnect			****
9	TB03	?TIMEOUT TDL_04_max		(FAIL)	( 7 )
10		+PO_mac_disconnect			****
11	TB04	?TIMEOUT TDL_04_max		(FAIL)	( 7 )
12		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1 ) Initial condition. ( 2 ) Tester send an I-Frame with NLF bit set to 0, invalid N(R) and invalid N(S). ( 3 ) Expected event: The IUT indicates the expected N(S) by sending RR response frame. ( 4 ) Expected behaviour: The IUT re-transmits the unacknowledged I-Frame. ( 5 ) Tester acknowledges the last re-transmission of the I-Frame. ( 6 ) Tester checks if the IUT is in information transfer phase. ( 7 ) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_BI\_009  
**Group** : C\_Plane/ClassA/BI/  
**Purpose** : Initial condition: The IUT is in timer recovery phase.  
 Verify that the IUT, on receipt of a RR Class B response frame with NLF bit set to '0', discards the received frame, it remains in timer recovery phase, and, on expiration of the timer <DL-04>, re-transmits the unacknowledged I-Frame.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.6 Waiting for acknowledgement

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_timer_recovery	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_cb( TSC_nlf0, VR))	(PASS)	( 1)
2		START TDL_04_min,			( 2)
3		START TDL_04_max			
4		LMAC ! MAC_DATA_REQ			( 3)
5		?TIMEOUT TDL_04_min			( 4)
6		LMAC ?MAC_DATA_IND			Mac_data_ind( TSV_mcei1, TSV_chn, Ir_ca_anyornone_pdu( TSC_nlf0, VS, TR))
7	CANCEL TDL_04_max				
8	TB02	LMAC ! MAC_DATA_REQ	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca( TSC_nlf0, VR))	(FAIL)	( 6)
9		+STP_ca_check_info_transfer			****
10		+PO_mac_disconnect			( 7)
		?TIMEOUT TDL_04_max			****

**Detailed Comments** : ( 1) Initial condition.  
 ( 2) Tester send a RR Class B frame with NLF bit set to 0.  
 ( 3) To ensure no frame transmission before TDL\_04 time (RR Class B discarded).  
 ( 4) Expected behaviour: The IUT re-transmits the unacknowledged I-Frame.  
 ( 5) Tester acknowledges the last re-transmission of the I-Frame.  
 ( 6) Tester checks if the IUT is in information transfer phase.  
 ( 7) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BI_011					
<b>Group</b> : C_Plane/ClassA/BI/					
<b>Purpose</b> : Initial condition: The IUT is in timer recovery phase. Verify that the IUT, on receipt of an I-Frame with invalid N(R), accepts the received I-Frame and responds with an appropriate RR frame and, on expiration of the timer <DL-04>, re-transmits the unacknowledged I-Frame with N(R) set according to the last accepted I-Frame.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 9.2.3.6 Waiting for acknowledgement					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_timer_recovery	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca_no_pdu(TSC_nlf0, TR,VS))	(PASS)	( 1)
2		(TR := (VR + 1) MOD 2)			( 2)
3		LMAC ! MAC_DATA_REQ START TDL_04_max			
4		(VS := (VS +1) MOD 2)			( 3)
5		LMAC ? MAC_DATA_IND			
6		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			
7	TB02	LMAC ! MAC_DATA_REQ	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))	(FAIL)	( 4)
8		+STP_ca_check_info_transfer			( 5)
9	+PO_mac_disconnect	****			
10	?TIMEOUT TDL_04_max	( 6)			
11	+PO_mac_disconnect	****			
12	TB03	?TIMEOUT TDL_04_max			( 6)
13		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester send an I-Frame with NLF bit set to 0 and invalid N(R). ( 3) Expected behaviour: The IUT re-transmits the unacknowledged I-Frame with N(R) updated. ( 4) Tester acknowledges the last re-transmission of the I-Frame. ( 5) Tester checks if the IUT is in information transfer phase. ( 6) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_BI\_012  
**Group** : C\_Plane/ClassA/BI/  
**Purpose** : Initial condition: The IUT is in timer recovery phase.  
 Verify that the IUT, on receipt of an I-Frame with invalid N(S), responds with a RR response frame, indicating in the N(R) field the expected N(S) of the received I-Frame, and leaves timer recovery phase because the N(R) of the received I-Frame is a valid acknowledgement for the previously I-Frame it has transmitted.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.6 Waiting for acknowledgement

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_timer_recovery	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca_no_pdu( TSC_nlf0, VR,TS))	(PASS)	( 1)
2		(TS := (VS + 1) MOD 2)			( 2)
3		LMAC ! MAC_DATA_REQ START TDL_04_max			
4		LMAC ? MAC_DATA_IND CANCEL TDL_04_max			( 3)
5	TB02	(VA := VS)	Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca( TSC_nlf0, VS))	(PASS)	( 4)
6		+STP_ca_check_info_transfer			****
7		+PO_mac_disconnect			( 5)
8		LMAC ? MAC_DATA_IND CANCEL TDL_04_max			( 4)
9	TB03	(VA := VS)	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_anyornone_pdu( TSC_nlf0, VS, VR))	(FAIL)	****
10		+STP_ca_check_info_transfer			( 6)
11		+PO_mac_disconnect			****
12		?TIMEOUT TDL_04_max			( 6)
13		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Initial condition.  
 ( 2) Tester send an I-Frame with NLF bit set to 0 and invalid N(S).  
 ( 3) The IUT indicates the expected N(S) by sending RR response frame and leaves timer recovery phase according to the received N(R).  
 ( 4) Tester checks if the IUT is in information transfer phase.  
 ( 5) The IUT may also respond with an I-Frame.  
 ( 6) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BI_013					
<b>Group</b> : C_Plane/ClassA/BI/					
<b>Purpose</b> : Initial condition: The IUT is in timer recovery phase. Verify that the IUT, on receipt of an I-Frame with invalid N(S) and invalid N(R), responds with a RR response frame indicating in the N(R) field the N(S) of the expected I-Frame and, re-transmits the last unacknowledged I-Frame.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 9.2.3.6 Waiting for acknowledgement					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_timer_recovery	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca_no_pdu(TSC_nlf0, TR,TS))	(PASS)	( 1)
2		(TS := (VS + 1) MOD 2 , TR := (VR + 1) MOD 2)			
3		LMAC ! MAC_DATA_REQ START TDL_04_max			( 2)
4		LMAC ? MAC_DATA_IND			( 3)
5	TB02	LMAC ?MAC_DATA_IND CANCEL TDL_04_max	Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca(TSC_nlf0,VS))  Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu (TSC_nlf0,VS,TR))	(PASS)	( 4)
6	TB03	LMAC ! MAC_DATA_REQ	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))	(FAIL)	( 5)
7		+STP_ca_check_info_transfer			( 6)
8		+PO_mac_disconnect			****
9		?TIMEOUT TDL_04_max			( 7)
10	TB04	+PO_mac_disconnect		(FAIL)	****
11		?TIMEOUT TDL_04_max			( 7)
12		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester send an I-Frame with NLF bit set to 0, invalid N(R) and invalid N(S). ( 3) Expected event: The IUT indicates the expected N(S) by sending RR response frame. ( 4) Expected behaviour: The IUT re-transmits the unacknowledged I-Frame. ( 5) Tester acknowledges the last re-transmission of the I-Frame. ( 6) Tester checks if the IUT is in information transfer phase. ( 7) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_BO\_000  
**Group** : C\_Plane/ClassA/BO/  
**Purpose** : Initial condition: The IUT has sent the link establishment request and is now in establishment pending state.  
 Verify that the IUT, on receipt of an I-Frame with NLF bit set to '0', discards the received frame and, on expiration of the timer <DL-07>, re-transmits the establishment request.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.1 Establishment of Class A operation  
 Only for IUT that is able to send the establishment request of the data link.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_establishment_pending	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca_no_pdu(TSC_nlf0, VR,VS))	(PASS)	( 1)
2		START TDL_07_min, START TDL_07_max			
3		(TR := (VR + 1) MOD 2)			
4		LMAC ! MAC_DATA_REQ			( 2)
5	TB02	?TIMEOUT TDL_07_min	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_anyomnone_pdu (TSC_nlf1,VS,TR))	(FAIL)	( 3)
6		LMAC ?MAC_DATA_IND			( 4)
		CANCEL TDL_07_max			
7		LMAC ! MAC_DATA_REQ			( 5)
8	TB02	+STP_ca_check_info_transfer	Rrs_ca(TSC_nlf1,VR))	(FAIL)	( 6)
9		+PO_mac_disconnect			****
10		?TIMEOUT TDL_07_max			( 7)
11		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Initial condition.  
 ( 2) Tester send a I-Frame with NLF bit set to 0.  
 ( 3) To ensure no frame transmission before TDL\_07 time (I-Frame NLF 0 discarded).  
 ( 4) Expected behaviour: The IUT re-transmits the link establishment request.  
 ( 5) Tester acknowledges the last re-transmission of the establishment request.  
 ( 6) Tester checks if the IUT is in information transfer phase.  
 ( 7) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BO_001 <b>Group</b> : C_Plane/ClassA/BO/ <b>Purpose</b> : Initial condition: The IUT has sent the link establishment request and is now in establishment pending state. Verify that the IUT, on receipt of a RR response frame with NLF bit set to '0', discards the received RR response frame and, on expiration of the timer <DL-07>, re-transmits the establishment request. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.2.3.1 Establishment of Class A operation Only for IUT that is able to send the establishment request of the data link.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_establishment_pending	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))	(PASS)	( 1)
2		START TDL_07_min, START TDL_07_max			( 2)
3		(TR := (VR + 1) MOD 2)			
4		LMAC ! MAC_DATA_REQ			( 3)
5		?TIMEOUT TDL_07_min			
6		LMAC ?MAC_DATA_IND CANCEL TDL_07_max			( 4)
7		LMAC ! MAC_DATA_REQ			( 5)
8	TB02	+STP_ca_check_info_transfer	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,VR))	(FAIL)	( 6)
9		+PO_mac_disconnect			****
10		?TIMEOUT TDL_07_max			( 7)
11		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester send a RR response frame with NLF bit set to 0. ( 3) To ensure no frame transmission before TDL_07 time (RR response frame NLF 0 discarded). ( 4) Expected behaviour: The IUT re-transmits the link establishment request. ( 5) Tester acknowledges the last re-transmission of the establishment request. ( 6) Tester checks if the IUT is in information transfer phase. ( 7) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_A\_BO\_002  
**Group** : C\_Plane/ClassA/BO/  
**Purpose** : Initial condition: The IUT has sent the establishment request to re-establish the link and is waiting for the acknowledgement of the request.  
 Verify that the IUT, on receipt of an I-Frame with NLF bit set to '0', discards the received frame and, on expiration of the timer <DL-07>, re-transmits the re-establishment request.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 9.2.3.8 Re-establishment of Class A operation  
 Only for IUT that is able to send the establishment request of the data link.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_re_establishment_pending			( 1 )
2		START TDL_07_min, START TDL_07_max			
3		(TR := (VR + 1) MOD 2)			
4		LMAC ! MAC_DATA_REQ	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca_no_pdu(TSC_nlf0, VR,VS))		( 2 )
5	TB01	?TIMEOUT TDL_07_min			( 3 )
6		LMAC ?MAC_DATA_IND CANCEL TDL_07_max	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_anyornone_pdu (TSC_nlf1,VS,TR))	(PASS)	( 4 )
7		LMAC ! MAC_DATA_REQ	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,VR))		( 5 )
8		+STP_ca_check_info_transfer			( 6 )
9	TB02	+PO_mac_disconnect			****
10		?TIMEOUT TDL_07_max		(FAIL)	( 7 )
11		+PO_mac_disconnect			****

**Detailed Comments** : ( 1 ) Initial condition.  
 ( 2 ) Tester send a I-Frame with NLF bit set to 0.  
 ( 3 ) To ensure no frame transmission before TDL\_07 time (I-Frame NLF 0 discarded).  
 ( 4 ) Expected behaviour: The IUT re-transmits the link establishment request.  
 ( 5 ) Tester acknowledges the last re-transmission of the establishment request.  
 ( 6 ) Tester checks if the IUT is in information transfer phase.  
 ( 7 ) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_A_BO_003					
<b>Group</b> : C_Plane/ClassA/BO/					
<b>Purpose</b> : Initial condition: The IUT has sent the establishment request to re-establish the link and is waiting for the acknowledgement of the request. Verify that the IUT, on receipt of a RR response frame with NLF bit set to '0', discards the received RR response frame and, on expiration of the timer <DL-07>, re-transmits the re-establishment request.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 9.2.3.8 Re-establishment of Class A operation Only for IUT that is able to send the establishment request of the data link.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ca_re_establishment_pending	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf0,VR))	(PASS)	( 1)
2		START TDL_07_min, START TDL_07_max			( 2)
3		(TR := (VR + 1) MOD 2)			
4		LMAC ! MAC_DATA_REQ			( 3)
5		?TIMEOUT TDL_07_min			
6		LMAC ?MAC_DATA_IND CANCEL TDL_07_max			Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_anyornone_pdu (TSC_nlf1,VS,TR))
7	TB02	LMAC ! MAC_DATA_REQ	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,VR))	(FAIL)	( 5)
8		+STP_ca_check_info_transfer			( 6)
9		+PO_mac_disconnect			****
10		?TIMEOUT TDL_07_max			( 7)
11		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Initial condition. ( 2) Tester send a RR response frame with NLF bit set to 0. ( 3) To ensure no frame transmission before TDL_07 time (RR response frame NLF 0 discarded). ( 4) Expected behaviour: The IUT re-transmits the link establishment request. ( 5) Tester acknowledges the last re-transmission of the establishment request. ( 6) Tester checks if the IUT is in information transfer phase. ( 7) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_L\_CA\_000  
**Group** : C\_Plane/Lb/CA/  
**Purpose** : For Fixed radio termination:  
 Verify that the IUT is able to generate a broadcast frame of the short frame format (3 octets).  
 For Portable radio termination:  
 Verify that the IUT is able to receive a broadcast frame of the short frame format (3 octets).  
**Configuration** :  
**Default** : DF\_handle\_nwk\_msg ,  
 DF\_handle\_accepted\_mac\_events ,  
 DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 5.2 Broadcast service (Lb) – § 6.2 Broadcast frame structure

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STP_set_tsv_chn			
2		[TSPX_pt]			
3		+STP_set_bit_a38_to_0			
4		LMAC ! MAC_PAGE_REQ	Mac_page_req( TSC_normal_paging, Lces_short_request_page)		( 1)
5		START T_wait			
6		LMAC ? MAC_CON_IND ( TSV_mcei1 := MAC_CON_IND.mcei) START T_wait	Mac_con_ind		( 2)
7		(VR := 0, VS := 0, VA := 0, RC := 0)			
8	TB01	LMAC ?MAC_DATA_IND CANCEL T_wait	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca(TSC_nlf1,VS,VR, Lce_page_response))	(PASS)	( 3)
9		+PO_mac_disconnect			****
10	TB02	?TIMEOUT T_wait		(FAIL)	( 5)
11		+PO_mac_disconnect			****
12	TB03	?TIMEOUT T_wait		(FAIL)	( 5)
13		+PO_mac_disconnect			****
14		[NOT TSPX_pt]			
15		+STP_invoke_short_page			( 4)
16		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) IUT is a PT, Tester sends a LCE\_request in short length format.  
 ( 2) Tester receives an indication of a new MAC connection.  
 ( 3) IUT is a PT, The IUT establishes the link by sending an I-Frame with NLF = 1 and containing the L3 message LCE-PAGE-RESPONSE.  
 ( 4) IUT is a FT, The IUT as sent a correct LCE-REQUEST-PAGE in short length format.  
 ( 5) No response received from the IUT.  
 \*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_L_CA_001 <b>Group</b> : C_Plane/Lb/CA/ <b>Purpose</b> : For Fixed radio termination: Verify that the IUT is able to generate a broadcast frame of the long frame format (5 octets). For Portable radio termination: Verify that the IUT is able to receive a broadcast frame of the long frame format (5 octets). <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 5.2 Broadcast service (Lb) – § 6.2 Broadcast frame structure					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+STP_set_tsv_chn	Mac_page_req( TSC_normal_paging, Lces_long_request_page)		( 1)
2		[TSPX_pt]			
3		+STP_set_bit_a38_to_0			
4		LMAC ! MAC_PAGE_REQ			
5		START T_wait	Mac_con_ind		( 2)
6		LMAC ? MAC_CON_IND ( TSV_mcei1 := MAC_CON_IND.mcei) START T_wait			
7		(VR := 0, VS := 0, VA := 0, RC := 0)	Mac_data_ind( TSV_mcei1, TSV_chn, Ir_ca(TSC_nlf1,VS,VR, Lce_page_response))	(PASS)	( 3)
8		LMAC ?MAC_DATA_IND CANCEL T_wait			
9	TB02	+PO_mac_disconnect			****
10		?TIMEOUT T_wait		(FAIL)	( 5)
11	TB03	+PO_mac_disconnect		(FAIL)	****
12		?TIMEOUT T_wait			( 5)
13		+PO_mac_disconnect			****
14		[NOT TSPX_pt]			
15		+STP_invoke_long_page			( 4)
16		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) IUT is a PT, Tester sends a LCE_request in long length format. ( 2) Tester receives an indication of a new MAC connection. ( 3) IUT is a PT, The IUT establishes the link by sending an I-Frame with NLF = 1 and containing the L3 message LCE-PAGE-RESPONSE. ( 4) IUT is a FT, The IUT as sent a correct LCE-REQUEST-PAGE in long length format. ( 5) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_0_CA_000 <b>Group</b> : U_Plane/Class0/CA/ <b>Purpose</b> : Verify that the IUT is able to transmit a correct U-plane Class 0 frame. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_u_plane_services , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 14.3.2.1 Sending side procedure					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_inmin_mac_connect			( 1)
2		+STP_invoke_fu1_frame			( 2)
3		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Establishment of a basic MAC connection for IN minimum delay services. ( 2) Implicit request for FU1 frame. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_0_CA_001 <b>Group</b> : U_Plane/Class0/CA/ <b>Purpose</b> : Verify that the IUT is able to receive a correct U-plane Class 0 frame. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_u_plane_services , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 14.3.2.2 Receiving side procedure					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_inmin_mac_connect			( 1)
2		LMAC ! MAC_DATA_REQ START T_wait	Mac_data_req( TSV_mcei1, TSC_in, Fu1s(TSPX_in_pdu))		( 2)
3		?TIMEOUT T_wait			
4		+LTS_test_iut_reception			( 3)
5		LTS_test_iut_reception (TCV_received := TSO_iut_in_received())			
6	TB01	[TCV_received]		(PASS)	( 4)
7		+PO_empty			
8	TB02	[NOT TCV_received]		(FAIL)	( 5)
9		+PO_empty			
<b>Detailed Comments</b> : ( 1) Establishment of a basic MAC connection for IN minimum delay services. ( 2) Tester sends FU1 frame to the IUT. ( 3) Tester checks for IUT reception. ( 4) Expected Behaviour: The IUT received the FU1 frame sent. ( 5) The IUT did not receive the FU1 frame sent.					



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_1_CA_000 <b>Group</b> : U_Plane/Class1/CA/ <b>Purpose</b> : Verify that the IUT is able to transmit a correct U-plane Class 1 frame. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_u_plane_services , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 14.3.3.1 Sending side procedure					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ip_mac_connect			(1)
2		(TR := 0, RN := 0, TS := 0, SN := 0, AN := 0)			( 2)
3		+STP_invoke_fu5_frame			
4		(UTMP := BIT_TO_INT (TCV_fu5.e_r), RN := (RN + 1) MOD 128)			
5		(TCV_bool := TSO_between(UTMP,AN,SN,128))			( 3)
6		[TCV_bool]		(PASS)	
7		(AN := UTMP)			****
8		+PO_mac_disconnect			
9	TB02	[NOT TCV_bool]		(FAIL)	( 4)
10		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Establishment of a basic MAC connection for IP error correct services. ( 2) Implicit request. the IUT shall transmit a FU5 frame. ( 3) Expected Behaviour: The new acknowledgement is within the interval of the last acknowledgment and the last send. ( 4) Error: The new acknowledgement is without the interval of the last acknowledgment and the last send. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_1\_CA\_001  
**Group** : U\_Plane/Class1/CA/  
**Purpose** : Verify that the IUT treats a received frame including an RN with the A/N bit set to '1', as an acknowledgement for all frames up to and including frame number RN.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_u\_plane\_services ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 14.3.3.1 Sending side procedure

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ip_mac_connect	Mac_data_req( TSV_mcei1, TSC_ip, Fu5s(SN,TR))	(PASS)	( 1)
2		(TR := 0, RN := 0, TS := 0, SN := 0, AN := 0)			
3		+STP_c1_iut_transmit_fu5(2)			
4		[TCV_bool]			( 2)
5		LMAC ! MAC_DATA_REQ START T_wait			( 3)
6	TB02	LMAC ? MAC_DATA_IND CANCEL T_wait	Mac_data_ind( TSV_mcei1, TSC_ip, Fu5r(RN,SN))	(FAIL)	( 4)
7		+PO_mac_disconnect			****
8		?TIMEOUT T_wait			( 5)
9		+PO_mac_disconnect			****
10		[NOT TCV_bool]			( 6)
11		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Establishment of a basic MAC connection for IP error correct services.  
( 2) Exit of the test step statement without error.  
( 3) Tester sends a FU5 frame with A/N bit = 1 and RN = last frame number received.  
( 4) The IUT acknowledges the last FU5 frame sent by the Tester.  
( 5) No FU5 frame sent by the IUT.  
( 6) Exit of the test step statement with error.  
\*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_1_CA_002					
<b>Group</b> : U_Plane/Class1/CA/					
<b>Purpose</b> : Verify that the IUT correctly acknowledges received frame(s) with appropriate send sequence number(s). (In-sequence frames)					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_u_plane_services , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 14.3.3.2 Receiving side procedure					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ip_mac_connect	Mac_data_req( TSV_mcei1, TSC_ip, Fu5s(SN,TR))	(PASS)	( 1)
2		(TR := 0, RN := 0, TS := 0, SN := 0, AN := 0)			
3		LMAC ! MAC_DATA_REQ START T_wait			( 2)
4		(TS := SN, SN := (SN + 1) MOD 128)			
5		LMAC ? MAC_DATA_IND CANCEL T_wait			( 3)
6	TB02	(TR := RN, RN := (RN + 1) MOD 128, AN := TS)	Mac_data_ind( TSV_mcei1, TSC_ip, Fu5r(RN,TS))	(FAIL)	
7		+PO_mac_disconnect			****
8		?TIMEOUT T_wait			( 4)
9		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Establishment of a basic MAC connection for IP error correct services. ( 2) Tester sends FU5 frame to the IUT ( 3) Expected Event: IUT acknowledges the received frame by sending FU5 frame with E/R properly set. ( 4) No FU5 frame sent by the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_1\_BV\_000  
**Group** : U\_Plane/Class1/BV/  
**Purpose** : Verify that the IUT disconnects the U-plane link, at the event of expiration of timer <DLU-01> without receiving the requested acknowledgement.  
**Configuration** :  
**Default** : DF\_handle\_nwk\_u\_plane\_services ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 14.3.3.1 Sending side procedure

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ip_mac_connect	Mac_dis_ind(TSV_mcei1)	(PASS)	( 1)
2		(TR := 0, RN := 0, TS := 0, SN := 0, AN := 0)			
3		+STP_c1_iut_transmit_fu5(TSPX_k1)			( 2)
4		[TCV_bool]			( 3)
5		START TDLU_01_max			
6	TB02	LMAC ? MAC_DIS_IND		(FAIL)	( 4)
7		+PO_empty			
8		?TIMEOUT TDLU_01_max			( 5)
9		+PO_mac_disconnect			****
10		[NOT TCV_bool]			( 6)
11		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Establishment of a basic MAC connection for IP error correct services.  
( 2) Tester forces the IUT to reach its sending window.  
( 3) Exit of the test step statement without error.  
( 4) Expected Event: The IUT releases the MAC connection due to the expiration of its timer DLU-01.  
( 5) No MAC connection release sent by the IUT.  
( 6) Exit of the test step statement with error.  
\*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_1_BV_001 <b>Group</b> : U_Plane/Class1/BV/ <b>Purpose</b> : Verify that the IUT resets timer <DLU-01> on receipt of a frame that includes a valid acknowledgement. <b>Configuration</b> : <b>Default</b> : DF_handle_nwk_u_plane_services , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 14.3.3.1 Sending side procedure					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ip_mac_connect	Mac_data_req( TSV_mcei1, TSC_ip, Fu5s(SN,TR))	(PASS)	( 1)
2		(TR := 0, RN := 0, TS := 0, SN := 0, AN := 0)			
3		+STP_c1_iut_transmit_fu5(TSPX_k1)			( 2)
4		[TCV_bool]			( 3)
5		LMAC ! MAC_DATA_REQ START T_wait			( 4)
6	TB02	(TS := SN, SN := (SN + 1) MOD 128)	Mac_data_ind( TSV_mcei1, TSC_ip, Fu5r(RN,TS))	(FAIL)	
7		LMAC ? MAC_DATA_IND CANCEL T_wait			( 5)
8		(TR := RN, RN := (RN + 1) MOD 128, AN := TS)			
9	TB03	+PO_mac_disconnect		(FAIL)	****
10		?TIMEOUT T_wait			( 6)
11	TB03	+PO_mac_disconnect		(FAIL)	****
12		[NOT TCV_bool]			( 7)
13		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Establishment of a basic MAC connection for IP error correct services. ( 2) Tester forces the IUT to reach its sending window. ( 3) Exit of the test step statement without error. ( 4) Tester sends FU5 frame to the IUT with E/R set to acknowledge all received frame. ( 5) Expected Event: IUT acknowledges the received frame by sending FU5 frame with E/R properly set and canceled its timer DLU-01. ( 6) No FU5 frame sent by the IUT. ( 7) Exit of the test step statement with error. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_1\_BV\_002  
**Group** : U\_Plane/Class1/BV/  
**Purpose** : Verify that the IUT maintains the <DLU-01> timer whenever the window size is reached (thereby halting further transmissions).  
**Configuration** :  
**Default** : DF\_handle\_nwk\_u\_plane\_services ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 14.3.3.1 Sending side procedure

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ip_mac_connect			( 1 )
2		(TR := 0, RN := 0, TS := 0, SN := 0, AN := 0)			
3		+STP_c1_iut_transmit_fu5(TSPX_k1)			( 2 )
4		[TCV_bool]			( 3 )
5		(UTMP := (RN + 2) MOD 128)			
6		LMAC ! MAC_DATA_REQ START T_wait	Mac_data_req( TSV_mcei1, TSC_ip, Fu5s(SN,UTMP))		( 4 )
7		(TS := SN, SN := (SN + 1) MOD 128)			
8	TB01	LMAC ? MAC_DIS_IND	Mac_dis_ind(TSV_mcei1)	(PASS)	( 5 )
9		+PO_empty			
10	TB02	?TIMEOUT T_wait		(FAIL)	( 6 )
11		+PO_mac_disconnect			****
12	TB03	[NOT TCV_bool]		(FAIL)	( 7 )
13		+PO_mac_disconnect			****

**Detailed Comments** : ( 1 ) Establishment of a basic MAC connection for IP error correct services.  
( 2 ) Tester forces the IUT to reach its sending window.  
( 3 ) Exit of the test step statement without error.  
( 4 ) Tester sends FU5 frame to the IUT with erroneous E/R.  
( 5 ) Expected Event: The IUT releases the MAC connection due to the expiration of its timer DLU-01 and sent nothing.  
( 6 ) No MAC connection release sent by the IUT.  
( 7 ) Exit of the test step statement with error.  
\*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_1_BI_000					
<b>Group</b> : U_Plane/Class1/BI/					
<b>Purpose</b> : Verify that the IUT discards a received frame with an I/R bit set to '0'.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_u_plane_services , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 14.3.3.1 Sending side procedure					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ip_mac_connect	Mac_data_req( TSV_mcei1, TSC_ip, Fu5s_retransmit(SN,TR))	(PASS)	( 1)
2		(TR := 0, RN := 0, TS := 0, SN := 0, AN := 0)			( 2)
3		LMAC ! MAC_DATA_REQ START T_wait			
4		?TIMEOUT T_wait			
5		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Establishment of a basic MAC connection for IP error correct services. ( 2) Tester sends FU5 frame to the IUT with I/R bit set to 0. ( 3) Expected Event: No FU5 frame sent by the IUT (Received frame discarded). **** Tester disconnects the MAC connection to terminate in stable state.					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC_1_BI_001					
<b>Group</b> : U_Plane/Class1/BI/					
<b>Purpose</b> : Verify that the IUT discards a received frame with an A/N bit set to '0'.					
<b>Configuration</b> :					
<b>Default</b> : DF_handle_nwk_u_plane_services , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175–4: § 14.3.3.1 Sending side procedure					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ip_mac_connect	Mac_data_req( TSV_mcei1, TSC_ip, Fu5s_nack(SN,TR))	(PASS)	( 1)
2		(TR := 0, RN := 0, TS := 0, SN := 0, AN := 0)			( 2)
3		LMAC ! MAC_DATA_REQ START T_wait			
4		?TIMEOUT T_wait			( 3)
5		+PO_mac_disconnect			
<b>Detailed Comments</b> : ( 1) Establishment of a basic MAC connection for IP error correct services. ( 2) Tester sends FU5 frame to the IUT with A/N bit set to 0. ( 3) Expected Event: No FU5 frame sent by the IUT (Received frame discarded). **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC\_1\_BI\_002  
**Group** : U\_Plane/Class1/BI/  
**Purpose** : Verify that the IUT correctly acknowledges received frame(s) with erroneous send sequence number(s) after waiting for L(R) TDMA frames. (Out-of-sequence frames)  
**Configuration** :  
**Default** : DF\_handle\_nwk\_u\_plane\_services ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events  
**Comments** : ETS 300 175-4: § 14.3.3.2 Receiving side procedure

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	TB01	+PR_ip_mac_connect	Mac_data_req( TSV_mcei1, TSC_ip, Fu5s(UTMP,TR))	(PASS)	( 1)
2		(TR := 0, RN := 0, TS := 0, SN := 0, AN := 0)			
3		(UTMP := (SN + 7) MOD 128)			
4		LMAC ! MAC_DATA_REQ START T_LR_c1			( 2)
5		(TS := UTMP, SN := (UTMP + 1) MOD 128)			
6		?TIMEOUT T_LR_c1 START T_wait			
7		LMAC ? MAC_DATA_IND CANCEL T_wait			( 3)
8	TB02	(TR := RN, RN := (RN + 1) MOD 128, AN := TS)	Mac_data_ind( TSV_mcei1, TSC_ip, Fu5r(RN,TS))	(FAIL)	
9		+PO_mac_disconnect			****
10		?TIMEOUT T_wait			( 4)
11		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Establishment of a basic MAC connection for IP error correct services.  
( 2) Tester sends FU5 frame to the IUT with out of sequence E/S number.  
( 3) Expected Event: IUT acknowledges the received frame by sending FU5 frame with E/R properly set after L(R) TDMA.  
( 4) No FU5 frame sent by the IUT.  
\*\*\*\* Tester disconnects the MAC connection to terminate in stable state.



Test Step Dynamic Behaviour					
<b>Test Step Name</b> : PR_ca_establishment_pending <b>Group</b> : Preamble/C_plane/ <b>Objective</b> : The IUT sends the link establishment request and is in establishment pending state. <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.2.3.1 Establishment of Class A operation Only for IUT that is able to send the establishment request of the data link.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_basic_mac_connect			( 1)
2		(VR := 0, VS := 0, VA := 0, RC := 0)			
3		[TSPX_pt]			
4		START TDL_07_max			
5		LMAC ?MAC_DATA_IND CANCEL TDL_07_max	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca(TSC_nlf1,VS,VR, Lce_page_response))		( 2)
6	PR01	(VR := (VR + 1) MOD 2, VA := VS)		(PASS)	
7	PR02	?TIMEOUT TDL_07_max		(I)	( 3)
8		+PO_mac_disconnect			****
9		[NOT TSPX_pt]			
10		+STP_invoke_ca_establishment			( 4)
<b>Detailed Comments</b> : ( 1) Establishment of a basic MAC connection. ( 2) IUT is a PT part. Tester receives the Class A establishment request containing LCE_PAGE_RESPONSE Network Layer message. ( 3) No establishment request received from the IUT. Preamble is inconclusive. ( 4) IUT is a FT part. Implicit send. The IUT shall send the Class A establishment request. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : PR_ca_information_transfer					
<b>Group</b> : Preamble/C_plane/					
<b>Objective</b> : Tester brings the IUT into Class A information transfer phase.					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 9.2.3.1 Establishment of Class A operation					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	PR01	+PR_basic_mac_connect	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca(TSC_nlf1,VS,VR, Lce_page_response))	(PASS)	( 1)
2		(VR := 0, VS := 0, VA := 0, RC := 0)			
3		START TDL_07_max			
4		[TSPX_pt]			
5		LMAC ?MAC_DATA_IND CANCEL TDL_07_max			( 2)
6		(VR := (VR + 1) MOD 2, VA := VS)			
7		LMAC ! MAC_DATA_REQ			Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,VR))
8	PR02	?TIMEOUT TDL_07_max	Rrs_ca(TSC_nlf1,VR))	(I)	( 4)
9		+PO_mac_disconnect			****
10		[NOT TSPX_pt]			
11		LMAC ! MAC_DATA_REQ	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca_no_pdu(TSC_nlf1, VR,VS))	(PASS)	( 5)
12		(VS := (VS +1) MOD 2)			
13		LMAC ?MAC_DATA_IND CANCEL TDL_07_max			Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca(TSC_nlf1,VS))
14	PR03	(VA := VS)	Rrr_ca(TSC_nlf1,VS))	(I)	
15	PR04	?TIMEOUT TDL_07_max			( 7)
16		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Establishment of a basic MAC connection. ( 2) IUT is a PT part. Tester receives the Class A establishment request containing LCE_PAGE_RESPONSE Network Layer message. ( 3) Tester sends the Class A establishment acknowledgement. ( 4) No establishment request received from the IUT. Preamble is inconclusive. ( 5) IUT is a FT part. Tester sends the Class A establishment request. ( 6) Tester receives the Class A establishment acknowledgement sent by the IUT. ( 7) No RR response frame received from the IUT. Preamble is inconclusive. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : PR_ca_re_establishment_pending					
<b>Group</b> : Preamble/C_plane/					
<b>Objective</b> : Tester forces the IUT to re-establish the link during Class A information transfer phase					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : ETS 300 175-4: § 9.2.3.1 Establishment of Class A operation – § 9.2.5.2 Receiving I frames					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	PR01	+PR_ca_information_transfer	Mac_data_req( TSV_mcei1, TSV_chn, Is_ca(TSC_nlf0,VR,VS, L3_unknow))	(I)	( 1)
2		LMAC ! MAC_DATA_REQ START TDL_04_max			( 2)
3		(VS := (VS +1) MOD 2)			( 3)
4		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			
5		+LTS_re_establish			( 4)
6		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			
7		+LTS_re_establish			( 5)
8		?TIMEOUT TDL_04_max			
9		+PO_mac_disconnect			****
10		LTS_re_establish (VR := 0, VS := 0, VA := 0, RC := 0)			( 6)
11		+STP_invoke_ca_re_establishment			
<b>Detailed Comments</b> : ( 1) Tester brings the IUT in Class A information transfer phase. ( 2) Tester sends a class A I-Frame with NLF = 0 an correct NR and NS. ( 3) The IUT responds with a Class A RR response frame including correct NR. ( 4) The IUT responds with a Class A I-Frame including correct NR and NS. ( 5) No response received from the IUT. Preamble is inconclusive. ( 6) Implicit send. The IUT shall send the Class A re-establishment request. **** Tester disconnects the MAC connection to terminate in stable state.					

### Test Step Dynamic Behaviour

**Test Step Name** : PR\_ca\_timer\_recovery

**Group** : Preamble/C\_plane/

**Objective** : Tester brings the IUT into Class A timer recovery phase.

**Default** : DF\_handle\_nwk\_msg ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events

**Comments** : ETS 300 175-4: § 9.2.3 Link establishment and information transfer in Class A operation

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	PR01	+PR_ca_unacknowledged_i_frame_tdl04	Mac_data_ind( TSV_mcei1, TSV_chn, Ir_ca_any_pdu(TSC_nlf0, VS,TR))	(PASS)	( 1)
2		?TIMEOUT TDL_04_min			( 2)
3		LMAC ?MAC_DATA_IND CANCEL TDL_04_max			( 3), ( 4)
4	PR02	?TIMEOUT TDL_04_max		(I)	( 5)
5		+PO_mac_disconnect			****

**Detailed Comments** : ( 1) Tester brings the IUT in Class A information transfer phase with its  $V(S) = V(A) + 1$ .  
( 2) To ensure no frame transmission before TDL\_04 time.  
( 3) The network layer of the IUT re-transmits CC-RELEASE-COMPLETE message.  
( 4) The IUT is now into timer recovery phase.  
( 5) No response received from the IUT, inconclusive verdict  
\*\*\*\* Tester disconnects the MAC connection to terminate in stable state.

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : PR_ca_unacknowledged_i_frame <b>Group</b> : Preamble/C_plane/ <b>Objective</b> : Tester brings the IUT into Class A information transfer phase with its $V(S) = V(A) + 1$ . <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.2.3 Link establishment and information transfer in Class A operation					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_information_transfer			( 1)
2		LMAC ! MAC_DATA_REQ START T_net	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca( TSC_nlf0, VR, VS, Cc_setup_valid))		( 2)
3		(VS := (VS +1) MOD 2)			
4		LMAC ?MAC_DATA_IND	Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca( TSC_nlf0, VS))		( 3)
5		(VA := VS)			
6		LMAC ?MAC_DATA_IND CANCEL T_net	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu( TSC_nlf0, VS, VR))		( 4)
7	PR01	(TR := VR, VR := (VR + 1) MOD 2)		(PASS)	
8	PR02	?TIMEOUT T_net		(I)	( 5)
9		+PO_mac_disconnect			****
10		LMAC ?MAC_DATA_IND CANCEL T_net	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu( TSC_nlf0, VS, VR))		( 4)
11	PR03	(VA := VS, TR := VR, VR := (VR + 1) MOD 2)		(PASS)	
12	PR04	?TIMEOUT T_net		(I)	( 5)
13		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Tester brings the IUT in Class A information transfer phase. ( 2) Tester sends an valid CC-SETUP network message. ( 3) The IUT acknowledges the last received I-Frame by sending RR. ( 4) The network layer of the IUT reacts to the valid CC-SETUP by sending the relevant response, depending on if IUT is PT or FT, and on if call is accepted or not ( 5) No response received from the IUT, inconclusive verdict **** Tester disconnects the MAC connection to terminate in stable state.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : PR_ca_unacknowledged_i_frame_tdl04 <b>Group</b> : Preamble/C_plane/ <b>Objective</b> : Tester brings the IUT into Class A information transfer phase with its $V(S) = V(A) + 1$ , and starts timers TDL_04_min and TDL_04_max <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.2.3 Link establishment and information transfer in Class A operation					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+PR_ca_information_transfer			( 1)
2		LMAC ! MAC_DATA_REQ START T_net	Mac_data_req( TSV_mcei1, TSV_chn, ls_ca(TSC_nlf0,VR,VS, Cc_setup_valid))		( 2)
3		(VS := (VS +1) MOD 2)			
4		LMAC ?MAC_DATA_IND	Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca(TSC_nlf0,VS))		( 3)
5		(VA := VS)			
6		LMAC ?MAC_DATA_IND CANCEL T_net, START TDL_04_min, START TDL_04_max	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu(TSC_nlf0, VS,VR))		( 4)
7	PR01	(TR := VR, VR := (VR + 1) MOD 2)		(PASS)	
8	PR02	?TIMEOUT T_net		(I)	( 5)
9		+PO_mac_disconnect			****
10		LMAC ?MAC_DATA_IND CANCEL T_net, START TDL_04_min, START TDL_04_max	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu(TSC_nlf0, VS,VR))		( 4)
11	PR03	(VA := VS , VR := (VR + 1) MOD 2)		(PASS)	
12	PR04	?TIMEOUT T_net		(I)	( 5)
13		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Tester brings the IUT in Class A information transfer phase. ( 2) Tester sends an valid CC-SETUP network message. ( 3) The IUT acknowledges the last received I-Frame by sending RR. ( 4) The network layer of the IUT reacts to the valid CC-SETUP by sending the relevant response, depending on if IUT is PT or FT, and on if call is accepted or not ( 5) No response received from the IUT, inconclusive verdict **** Tester disconnects the MAC connection to terminate in stable state.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : PR_inmin_mac_connect <b>Group</b> : Preamble/U_plane/ <b>Objective</b> : Tester establishes, with the IUT, a basic MAC connection for IN minimum delay services. <b>Default</b> : DF_handle_nwk_u_plane_services , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSPX_pt]			
2		+STP_set_bit_a38_to_0			
3		LMAC ! MAC_PAGE_REQ START T_wait	Mac_page_req( TSC_normal_paging, Lce_short_request_page_in)		( 1 )
4		LMAC ? MAC_CON_IND (TCV_mcei := MAC_CON_IND.mcei, TCV_service_type := MAC_CON_IND.service_type) CANCEL T_wait	Mac_con_ind		( 2 )
5		[TCV_service_type = TSC_in]			
6	PR01	(TSV_mcei1 := TCV_mcei)		(PASS)	( 3 )
7		[TCV_service_type <> TSC_in]			
8	PR02	CANCEL		I	( 4 )
9	PR03	?TIMEOUT T_wait		I	( 5 )
10		[NOT TSPX_pt]			
11		(TSV_mcei1 := 1)			
12		LMAC ! MAC_CON_REQ START T_wait	Mac_con_req( TSV_mcei1, TSC_pmid_arbitrary, FALSE, 0, FALSE, TSPX_slot, TSC_in, 0, TSC_sbcon, TSPX_rpn)		( 6 )
13		LMAC ? MAC_CON_CFM CANCEL T_wait	Mac_con_cfm(TSV_mcei1)	(PASS)	( 7 )
14	PR04	?TIMEOUT T_wait		I	( 5 )
<b>Detailed Comments</b> : ( 1 ) IUT is a PT part .Tester sends LCE_REQUEST_PAGE paging message to invoke PT initiated setup. ( 2 ) Tester receives MAC_CON_IND ASP. The basic MAC IN minimum delay connection is established ( 3 ) The established MAC connection corresponds to the selected service type. Preamble pass. ( 4 ) The established MAC connection does not correspond to the selected service type. Preamble is inconclusive. ( 5 ) No response to the connection request of the Tester. Preamble is inconclusive. ( 6 ) IUT is a FT part. Tester sends MAC_CON_REQ ASP to simulate PT initiated setup. ( 7 ) Tester receives MAC_CON_CFM ASP. The basic MAC IN minimum delay connection is established.					

### Test Step Dynamic Behaviour

**Test Step Name** : PR\_ip\_mac\_connect  
**Group** : Preamble/U\_plane/  
**Objective** : Tester establishes, with the IUT, a basic MAC connection for IP error correct services.  
**Default** : DF\_handle\_nwk\_u\_plane\_services ,  
DF\_handle\_accepted\_mac\_events ,  
DF\_handle\_rejected\_mac\_events  
**Comments** :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSPX_pt]			
2		+STP_set_bit_a38_to_0			
3		LMAC ! MAC_PAGE_REQ START T_wait	Mac_page_req( TSC_normal_paging, Lce_short_request_page_ip)		( 1 )
4		LMAC ? MAC_CON_IND (TCV_mcei := MAC_CON_IND.mcei, TCV_service_type := MAC_CON_IND.service_type) CANCEL T_wait	Mac_con_ind		( 2 )
5		[TCV_service_type = TSC_ip]			
6	PR01	(TSV_mcei1 := TCV_mcei)		(PASS)	( 3 )
7		[TCV_service_type <> TSC_ip]			
8	PR02	CANCEL		I	( 4 )
9	PR03	?TIMEOUT T_wait		I	( 5 )
10		[NOT TSPX_pt]			
11		(TSV_mcei1 := 1)			
12		LMAC ! MAC_CON_REQ START T_wait	Mac_con_req( TSV_mcei1, TSC_pmid_arbitrary, FALSE, 0, FALSE, TSPX_slot, TSC_ip, 0, TSC_sbcon, TSPX_rpn)		( 6 )
13		LMAC ? MAC_CON_CFM CANCEL T_wait	Mac_con_cfm( TSV_mcei1)	(PASS)	( 7 )
14	PR04	?TIMEOUT T_wait		I	( 5 )

**Detailed Comments** : ( 1 ) IUT is a PT part .Tester sends LCE\_REQUEST\_PAGE paging message to invoke PT initiated setup.  
( 2 ) Tester receives MAC\_CON\_IND ASP. The basic MAC IP error correction connection is established  
( 3 ) The established MAC connection corresponds to the selected service type. Preamble pass.  
( 4 ) The established MAC connection does not correspond to the selected service type. Preamble is inconclusive.  
( 5 ) No response to the connection request of the Tester. Preamble is inconclusive.  
( 6 ) IUT is a FT part. Tester sends MAC\_CON\_REQ ASP to simulate PT initiated setup.  
( 7 ) Tester receives MAC\_CON\_CFM ASP. The basic MAC IP error correction connection is established.



Test Step Dynamic Behaviour					
<b>Test Step Name</b> : PR_basic_mac_connect <b>Group</b> : Preamble/General/ <b>Objective</b> : Tester establishes a basic MAC connection, for C-plane services only, with the IUT <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[NOT TSPX_chn]			
2		(TSV_chn := TSC_cs)			( 1)
3		[TSPX_pt]			
4		+STP_set_bit_a38_to_0			
5		+LTS_pt_connect (FALSE)			( 2)
6		[NOT TSPX_pt]			
7		(TSV_mcei1 := 1, TSV_rpn := TSPX_rpn)			
8		+LTS_ft_connect (FALSE)			( 3)
9		[TSPX_chn]			
10		(TSV_chn := TSC_cf)			( 4)
11		[TSPX_pt]			
12		+STP_set_bit_a38_to_0			
13		+LTS_pt_connect (TRUE)			( 2)
14		[NOT TSPX_pt]			
15		(TSV_mcei1 := 1, TSV_rpn := TSPX_rpn)			
16		+LTS_ft_connect (TRUE)			( 3)
17		LTS_ft_connect (cf_:CF_REQUIRED) LMAC ! MAC_CON_REQ START T_wait	Mac_con_req( TSV_mcei1, TSC_pmid_arbitrary, FALSE, 0, cf_, TSPX_slot, TSC_c_only ,0, TSC_sbcon, TSPX_rpn)		( 5)
18	PR01	LMAC ? MAC_CON_CFM CANCEL T_wait	Mac_con_cfm( TSV_mcei1)	(PASS)	( 6)
19	PR02	?TIMEOUT T_wait		(I)	( 7)
20		+PO_empty			
21		LTS_pt_connect(cf_:CF_REQUIRED) LMAC ! MAC_PAGE_REQ START T_wait	Mac_page_req( TSC_normal_paging, Lces_short_request_page)		( 8)
22		LMAC ? MAC_CON_IND ( TCV_cf_required := MAC_CON_IND.cf_required, TSV_mcei1 := MAC_CON_IND.mcei, TSV_rpn := MAC_CON_IND.rpn) CANCEL T_wait	Mac_con_ind		( 9)
23	PR03	[TCV_cf_required = cf_]		(PASS)	(10)
24	PR04	[TCV_cf_required = NOT cf_]		(I)	(11)
25		+PO_mac_disconnect			
26	PR05	?TIMEOUT T_wait		(I)	( 7)
27		+PO_empty			
<b>Detailed Comments</b> : ( 1) Slow signalling selected. ( 2) IUT is a PT part. Invoke PT initiated setup by sending paging message. ( 3) IUT is a FT part. Simulate PT initiated setup by using MAC_con_req MAC ASP. ( 4) Fast signalling selected. ( 5) Tester sends MAC_CON_REQ ASP to simulate PT initiated setup.					

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Test Step Dynamic Behaviour					
<b>Detailed Comments</b> : ... ( 6) Tester receives MAC_CON_CFM ASP. The basic MAC connection is established. ( 7) No response to the connection request of the Tester. Preamble is inconclusive. ( 8) Tester sends LCE_REQUEST_PAGE paging message to invoke PT initiated setup. ( 9) Tester receives MAC_CON_IND ASP. The basic MAC connection is established (10) The established MAC connection corresponds to the selected type of signalling. Preamble pass. (11) The established MAC connection does not correspond to the selected type of signalling. Preamble is inconclusive.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_ca_check_info_transfer <b>Group</b> : Teststeps/C_plane/ <b>Objective</b> : Tester checks if the IUT is in Class A information transfer phase <b>Default</b> : DF_handle_nwk_msg, DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 9.2.3.4 Reception of Class A I-Frame					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	CS01	LMAC ! MAC_DATA_REQ START TDL_04_max	Mac_data_req( TSV_mcei1, TSV_chn, Is_ca(TSC_nlf0,VR,VS, L3_unknow))	(PASS)	( 1)
2		(VS := (VS + 1) MOD 2)			
3		LMAC ?MAC_DATA_IND CANCEL TDL_04_max	Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca(TSC_nlf0,VS))		( 2)
4		(VA := VS)			
5		LMAC ?MAC_DATA_IND CANCEL TDL_04_max	Mac_data_ind( TSV_mcei1, TSV_chn, Ir_ca_any_pdu(TSC_nlf0, VS,VR))		( 3)
6	CS02	(VR := (VR + 1) MOD 2, VA := VS)		(PASS)	
7	CS03	?TIMEOUT TDL_04_max		(I)	( 4)
<b>Detailed Comments</b> : ( 1) Tester sends a class A I-Frame with NLF = 0 an correct NR and NS. ( 2) Expected event: The IUT responds with a Class A RR response frame including correct NR. ( 3) Expected event: The IUT responds with a Class A I-Frame including correct NR and NS. ( 4) No response received. Inconclusive verdict.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_ft_connection_handover <b>Group</b> : Teststeps/C_plane/ <b>Objective</b> : The Tester (as PT part) creates a new connection for intracell connection handover. <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : PIXIT Table B.??					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		LMAC ! MAC_CON_REQ START T_wait	Mac_con_req( TSV_mcei2, TSC_pmid_arbitrary, TRUE, TSV_mcei1, FALSE, TSPX_slot, TSC_in, 0, TSC_sbcon, TSPX_rpn)		( 1)
2	ST01	LMAC ? MAC_CON_CFM CANCEL T_wait	Mac_con_cfm( TSV_mcei2)	(PASS)	( 2)
3	ST02	?TIMEOUT T_wait		(I)	( 3)
4		LMAC ! MAC_DIS_REQ	Mac_dis_req ( TSV_mcei1)	R	
<b>Detailed Comments</b> : ( 1) The Tester (as PT part) creates a new connection for connection handover. ( 2) Tester receives a confirmation of the new connection created. ( 3) No confirmation for new connection received. Step is inconclusive. Request disconnect.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_ft_intercell_connection_handover <b>Group</b> : Teststeps/C_plane/ <b>Objective</b> : The Tester (as PT part) creates a new connection for intercell connection handover. <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : PIXIT Table B.??					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		LMAC ! MAC_CON_REQ START T_wait	Mac_con_req( TSV_mcei2, TSC_pmid_arbitrary, TRUE, TSV_mcei1, FALSE, TSPX_slot, TSC_c_only, 0, TSC_sbcon, TSPX_rpn1)		( 1)
2	ST01	LMAC ? MAC_CON_CFM CANCEL T_wait	Mac_con_cfm( TSV_mcei2)	(PASS)	( 2)
3	ST02	?TIMEOUT T_wait		I	( 3)
<b>Detailed Comments</b> : ( 1) The Tester (as PT part) creates a new connection for connection handover. ( 2) Tester receives a confirmation of the new connection created. ( 3) No confirmation for new connection received. Step is inconclusive.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_invoke_downlink_data					
<b>Group</b> : Teststeps/C_plane/					
<b>Objective</b> : Implicit Send: The IUT as FT part transmits connectionless data on downlink service.					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : PIXIT Table B.12					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	ST01	<IUT ! MAC_DOWN_DATA_IND>	Mac_down_data_ind( Uir_cu_any_pdu( TSC_connectionless_sapi))	(PASS)	( 1)
2		START T_wait	Mac_down_data_ind( Uir_cu_any_pdu( TSC_connectionless_sapi))		( 2)
3		LMAC ? MAC_DOWN_DATA_IND CANCEL T_wait			
4	ST02	+PO_empty		(FAIL)	( 3)
5		?TIMEOUT T_wait			
6		+PO_empty			
<b>Detailed Comments</b> : ( 1) IUT is a FT. Implicit request for UI frame over MAC connectionless service (Downlink). ( 2) Expected Event: The IUT sends an unacknowledged information frame. ( 3) No UI frame received from the IUT.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_invoke_uplink_data					
<b>Group</b> : Teststeps/C_plane/					
<b>Objective</b> : Implicit Send: The IUT as PT part transmits connectionless data on uplink service.					
<b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events					
<b>Comments</b> : PIXIT Table B.12					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	ST01	<IUT ! MAC_UP_DATA_IND>	Mac_up_data_ind( Uir_cu_any_pdu( TSC_connectionless_sapi))	(PASS)	( 1)
2		START T_wait	Mac_up_data_ind( Uir_cu_any_pdu( TSC_connectionless_sapi))		( 2)
3		LMAC ? MAC_UP_DATA_IND CANCEL T_wait			
4	ST02	+PO_empty		(FAIL)	( 3)
5		?TIMEOUT T_wait			
6		+PO_empty			
<b>Detailed Comments</b> : ( 1) IUT is a PT. Implicit request for UI frame over MAC connectionless service (Uplink). ( 2) Expected Event: The IUT sends an unacknowledged information frame. ( 3) No UI received from the IUT.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_invoke_ca_establishment <b>Group</b> : Teststeps/C_plane/ <b>Objective</b> : Implicit Send: The IUT transmits the Class A establishment request. <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : PIXIT Table B.13					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		<IUT ! MAC_DATA_IND>	Mac_data_ind( TSV_mcei1, TSV_chn, Ir_ca_any_pdu(TSC_nlf1, VS,VR))		( 1)
2		START T_wait			
3		LMAC ?MAC_DATA_IND CANCEL T_wait	Mac_data_ind( TSV_mcei1, TSV_chn, Ir_ca_any_pdu(TSC_nlf1, VS,VR))		( 2)
4	ST01	(VR := (VR + 1) MOD 2, VA := VS)		(PASS)	
5	ST02	?TIMEOUT T_wait		(I)	( 3)
6		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Implicit send. The IUT shall send the Class A establishment request. ( 2) Tester receives the Class A establishment request sent by the IUT. ( 3) No establishment request received from the IUT. Preamble is inconclusive. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_invoke_ca_re_establishment <b>Group</b> : Teststeps/C_plane/ <b>Objective</b> : Implicit Send: The IUT transmits the Class A re-establishment request. <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : PIXIT Table B.13					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		<IUT ! MAC_DATA_IND>	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu(TSC_nlf1, VS,VR))		( 1)
2		START T_wait			
3		LMAC ?MAC_DATA_IND CANCEL T_wait	Mac_data_ind( TSV_mcei1, TSV_chn, lr_ca_any_pdu(TSC_nlf1, VS,VR))		( 2)
4	ST01	(VR := (VR + 1) MOD 2, VA := VS)		(PASS)	
5	ST02	?TIMEOUT T_wait		(I)	( 3)
6		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Implicit send. The IUT shall send the Class A re-establishment request. ( 2) Tester receives the Class A re-establishment request sent by the IUT. ( 3) No re-establishment request received from the IUT. Preamble is inconclusive. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_invoke_pt_connection_handover <b>Group</b> : Teststeps/C_plane/ <b>Objective</b> : The IUT (as PT part) is forced to create a new connection for intracell connection handover. <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : PIXIT Table B.??					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSO_jam_traffic_bearer()]			( 1)
2		START T_wait			
3	ST01	LMAC ?MAC_CON_IND (TSV_mcei2 := MAC_CON_IND.mcei) CANCEL T_wait	Mac_con_ind_mcei_ch( TSV_mcei1)	(PASS)	( 2)
4	ST02	?TIMEOUT T_wait		(I)	( 3)
5		+PO_mac_disconnect			****
6		[TRUE]		(I)	
7		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Invoke intracell connection handover at the IUT. ( 2) Tester receives an indication of the new connection created by the IUT. ( 3) No indication for new connection received from the IUT. Step is inconclusive. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_invoke_pt_intercell_connection_hdr <b>Group</b> : Teststeps/C_plane/ <b>Objective</b> : The IUT (as PT part) is forced to create a new connection for intercell connection handover. <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : PIXIT Table B.??					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSO_power_down_rfp( TSV_rpn, TSPX_decay_rate)]			( 1)
2		START T_wait			
3		[TSV_rpn = TSPX_rpn]			
4		(TSV_rpn1 := TSPX_rpn1)			
5		+LTS_confirm_con_ind			
6		[TSV_rpn = TSPX_rpn1]			
7		(TSV_rpn1 := TSPX_rpn)			
8		+LTS_confirm_con_ind			
9		[TRUE]		(I)	
10		+PO_mac_disconnect			****
11		[TRUE]		(I)	
12		+PO_mac_disconnect			****
		LTS_confirm_con_ind			
13	ST01	LMAC ?MAC_CON_IND (TSV_mcei2 := MAC_CON_IND.mcei) CANCEL T_wait	Mac_con_ind_mcei_intercell _ch( TSV_mcei1, TSV_rpn1)	(PASS)	( 2)
14	ST02	?TIMEOUT T_wait		(I)	( 3)
15		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Invoke intercell connection handover at the IUT. ( 2) Tester receives an indication of the new connection created by the IUT. ( 3) No indication for new connection received from the IUT. Step is inconclusive. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_invoke_long_page <b>Group</b> : Teststeps/C_plane/ <b>Objective</b> : Implicit Send: The IUT as FT part transmits a correct LCE-REQUEST-PAGE in long length format. <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : PIXIT Table B.12					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		<IUT ! MAC_PAGE_IND>	Mac_page_ind( Lcer_long_request_page)		
2		START T_wait			
3	ST01	LMAC ?MAC_PAGE_IND CANCEL T_wait	Mac_page_ind( Lcer_long_request_page)	(PASS)	( 1)
4	ST02	?TIMEOUT T_wait		(FAIL)	( 2)
<b>Detailed Comments</b> : ( 1) IUT is a FT, The IUT as sent a correct LCE-REQUEST-PAGE in long length format. ( 2) No response received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_invoke_short_page <b>Group</b> : Teststeps/C_plane/ <b>Objective</b> : Implicit Send: The IUT as FT part transmits a correct LCE-REQUEST-PAGE in short length format. <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : PIXIT Table B.12					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		<IUT ! MAC_PAGE_IND>	Mac_page_ind( Lcer_short_request_page)		
2		START T_wait			
3	ST01	LMAC ?MAC_PAGE_IND CANCEL T_wait	Mac_page_ind( Lcer_short_request_page)	(PASS)	( 1)
4	ST02	?TIMEOUT T_wait		FAIL	( 2)
<b>Detailed Comments</b> : ( 1) IUT is a FT, The IUT as sent a correct LCE-REQUEST-PAGE in short length format. ( 2) No response received from the IUT. Testcase terminates.					



Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_set_tsv_chn <b>Group</b> : Teststeps/C_plane/ <b>Objective</b> : Initialise the variable TSV_chn to select slow or fast signalling channel <b>Default</b> : <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[NOT TSPX_chn]			
2		(TSV_chn := TSC_cs)			(1)
3		[TSPX_chn]			
4		(TSV_chn := TSC_cf)			(2)
<b>Detailed Comments</b> : (1) Slow signalling selected (2) Fast signalling selected					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_set_bit_a38_to_0 <b>Group</b> : Teststeps/C_plane/ <b>Objective</b> : This Test Step sets the value of the broadcasted "higher layer capabilities" bit a38 to the value '0', in order to prevent PT's from starting location registration <b>Default</b> : DF_handle_nwk_msg, DF_handle_accepted_mac_events, DF_handle_rejected_mac_events <b>Comments</b> : The test suite operation TSO_set_bit_a38_to_0 will do the job					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		( TCV_result := TSO_set_bit_a38_to_0() )			
<b>Detailed Comments</b> :					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_c1_iut_transmit_fu5(nb:INTEGER) <b>Group</b> : Teststeps/U_plane/ <b>Objective</b> : In Class 1 operation, forces the IUT to send a parametrised number of FU5 frame. <b>Default</b> : DF_handle_nwk_u_plane_services , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : ETS 300 175-4: § 14.3.3.1 Sending side procedure					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		(TCV_bool := TRUE, TCV_bool1 := FALSE, TCV_count := 0)			
2		REPEAT LTS_iut_transmission(nb) UNTIL [TCV_bool1]			
3		LTS_iut_transmission(nb:INTEGER) +STP_invoke_fu5_frame			( 1)
4		(UTMP := BIT_TO_INT(TCV_fu5.e_r), TR := RN, RN := (RN + 1) MOD 128)			
5		(TCV_bool := TSO_between (UTMP,AN,SN,128))			
6		[TCV_bool]			( 2)
7		(AN := UTMP)			
8		(TCV_count := TCV_count + 1)			
9		[TCV_count = nb]			
10		(TCV_bool1 := TRUE)			
11		[TCV_count <> nb]			
12		[NOT TCV_bool]			( 3)
13		(TCV_bool1 := TRUE, TCV_bool := FALSE)			
<b>Detailed Comments</b> : ( 1) Implicit request. the IUT shall transmit a FU5 frame. ( 2) The new acknowledgement is within the interval of the last acknowledgment and the last send. ( 3) The new acknowledgement is without the interval of the last acknowledgment and the last send.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_invoke_fu1_frame <b>Group</b> : Teststeps/U_plane/ <b>Objective</b> : Implicit Send: the IUT shall transmit a FU1 frame. <b>Default</b> : DF_handle_nwk_u_plane_services , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : PIXIT table B.14					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	ST01	<IUT ! MAC_DATA_IND>	Mac_data_ind( TSV_mcei1, TSC_in, Fu1r)		( 1)
2		START T_wait			
3		LMAC ? MAC_DATA_IND CANCEL T_wait	Mac_data_ind( TSV_mcei1, TSC_in, Fu1r)	(PASS)	( 2)
4	ST02	?TIMEOUT T_wait		(FAIL)	( 3)
5		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Implicit request for FU1 frame. ( 2) Expected Event: The IUT sends an FU1 frame. ( 3) No FU1 frame received from the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STP_invoke_fu5_frame <b>Group</b> : Teststeps/U_plane/ <b>Objective</b> : Implicit Send: the IUT shall transmit a FU5 frame. <b>Default</b> : DF_handle_nwk_u_plane_services , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> : PIXIT table B.15					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	ST01	<IUT ! MAC_DATA_IND>	Mac_data_ind( TSV_mcei1, TSC_ip, Fu5r_any_ack(RN))		( 1)
2		START T_wait			
3		LMAC ? MAC_DATA_IND (TCV_fu5 := MAC_DATA_IND.sdu) CANCEL T_wait	Mac_data_ind( TSV_mcei1, TSC_ip, Fu5r_any_ack(RN))	(PASS)	( 2)
4	ST02	?TIMEOUT T_wait		(FAIL)	( 3)
5		+PO_mac_disconnect			****
<b>Detailed Comments</b> : ( 1) Implicit request. the IUT shall transmit a FU5 frame. ( 2) The IUT transmitted the expected FU5 frame. ( 3) No FU5 frame sent by the IUT. **** Tester disconnects the MAC connection to terminate in stable state.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : PO_empty <b>Group</b> : Postamble/ <b>Objective</b> : When IUT is in stable MAC disconnection state before postamble <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	PO01	CANCEL		R	( 1 )
<b>Detailed Comments</b> : ( 1 ) All running Timeout (if any) are stopped here.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : PO_mac_disconnect <b>Group</b> : Postamble/ <b>Objective</b> : Return to stable state between two test cases. No MAC connection active. <b>Default</b> : DF_handle_nwk_msg , DF_handle_accepted_mac_events , DF_handle_rejected_mac_events <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		LMAC ! MAC_DIS_REQ	Mac_dis_req( TSV_mcei1)		( 1 )
2	PO01	CANCEL		R	( 2 )
<b>Detailed Comments</b> : ( 1 ) Tester disconnects the current connection. ( 2 ) All running Timeout (if any) are stopped here.					

Default Dynamic Behaviour					
<b>Default Name</b> : DF_handle_accepted_mac_events <b>Group</b> : <b>Objective</b> : Handling of unexpected accepted MAC ASPs events. <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		LMAC ? MAC_DATA_IND	Mac_data_ind_other_mcei(TSV_mcei1)		( 1)
2		RETURN			
3		LMAC ? MAC_CON_IND (TSV_mcei3 := MAC_CON_IND.mcei)	Mac_con_ind_other_mcei(TSV_mcei1)		( 2)
4		LMAC ! MAC_DIS_REQ	Mac_dis_req(TSV_mcei3)		( 3)
5		RETURN			
6		LMAC ? MAC_DIS_IND	Mac_dis_ind_other_mcei(TSV_mcei1)		( 4)
7		RETURN			
8		LMAC ? MAC_DOWN_DATA_IND	Mac_down_data_ind_any		( 5)
9		RETURN			
10		LMAC ? MAC_UP_DATA_IND	Mac_up_data_ind_any		( 6)
11		RETURN			
12		LMAC ? MAC_PAGE_IND	Mac_page_ind_any_data		( 7)
13		RETURN			
<b>Detailed Comments</b> : ( 1) Data received on a MCEI not used for the tests. Accepted event. ( 2) Connection indication received on a MCEI not used for the tests. ( 3) Tester disconnects the non expected connection. ( 4) Disconnection indication received on a MCEI not used for the tests. Accepted event. ( 5) Downlink connectionless data received. Accepted event. ( 6) Uplink connectionless data received. Accepted event. ( 7) Paging data received. Accepted event.					

Default Dynamic Behaviour					
<b>Default Name</b> : DF_handle_rejected_mac_events <b>Group</b> : <b>Objective</b> : Handling of unexpected rejected MAC ASPs events. <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DF01	LMAC ? MAC_DATA_IND	Mac_data_ind_mcei(TSV_mcei1)	(FAIL)	( 1)
2		+LTS_mac_disconnect			
3	DF02	LMAC ? MAC_CON_IND	Mac_con_ind_mcei(TSV_mcei1)	(I)	( 2)
4		+LTS_mac_disconnect			
5	DF03	LMAC ? MAC_CON_CFM	Mac_con_cfm_receive_any	(I)	( 3)
6		+LTS_mac_disconnect			
7		LMAC ? MAC_DIS_IND	Mac_dis_ind_mcei(TSV_mcei1)		( 4)
8	DF04	CANCEL		I	
9		LMAC ? MAC_UP_DATA_CFM	Mac_up_data_cfm		( 5)
10	DF05	CANCEL		I	
11		LMAC?OTHERWISE			( 6)
12	DF06	CANCEL		I	
		LTS_mac_disconnect			
13		LMAC ! MAC_DIS_REQ	Mac_dis_req(TSV_mcei1)		
14	DF07	CANCEL		R	
<b>Detailed Comments</b> : ( 1) Unexpected data received on the MCEI used for a test. Inconclusive verdict. ( 2) Connection indication received on the MCEI used for a test. Inconclusive verdict. ( 3) Connection confirmation received and no request pending. Inconclusive verdict. ( 4) Unexpected disconnection indication received on the MCEI used for a test. Inconclusive verdict. ( 5) Uplink connectionless data confirmation received and no request pending. Inconclusive verdict ( 6) Other unexpected events. Inconclusive verdict.					

Default Dynamic Behaviour					
<b>Default Name</b> : DF_handle_nwk_msg <b>Group</b> : <b>Objective</b> : <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DF01	LMAC ?MAC_DATA_IND	Mac_data_ind( TSV_mcei1, TSV_chn, Ir_ca( TSC_nlf1, 0, 0, Lce_page_response))		( 1)
2		RETURN			
3	DF02	LMAC ?MAC_DATA_IND	Mac_data_ind_any_pdu( TSV_mcei1, TSV_chn)		( 2)
4		RETURN			
5	DF03	LMAC ?MAC_DATA_IND	Mac_data_ind( TSV_mcei1, TSV_chn, Rrr_ca_any)		( 3)
6		RETURN			
<b>Detailed Comments</b> : ( 1) LCE_PAGE_RESPONSE received. ( 2) Accept any I-Frame from the IUT not trapped in the test case or test step tree. ( 3) Accept correct RR Frame from the IUT not trapped in the test case or test step tree.					

Default Dynamic Behaviour					
<b>Default Name</b> : DF_handle_nwk_u_plane_services <b>Group</b> : <b>Objective</b> : <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DF01	LMAC ?MAC_DATA_IND	Mac_data_ind( TSV_mcei1, TSV_chn, Ir_ca(TSC_nlf1,0,0, Lce_page_response))		( 1)
2		(VR := 1, VS := 0, VA := 0, RC := 0)			
3		LMAC ! MAC_DATA_REQ	Mac_data_req( TSV_mcei1, TSV_chn, Rrs_ca(TSC_nlf1,VR))		
4		RETURN			
5	DF02	LMAC ?MAC_DATA_IND	Mac_data_ind_any_pdu( TSV_mcei1, TSV_chn)		( 2)
6		RETURN			
<b>Detailed Comments</b> : ( 1) LCE_PAGE_RESPONSE received. Tester acknowledges it. ( 2) Accept any message from the IUT not trapped in the test case or test step tree.					