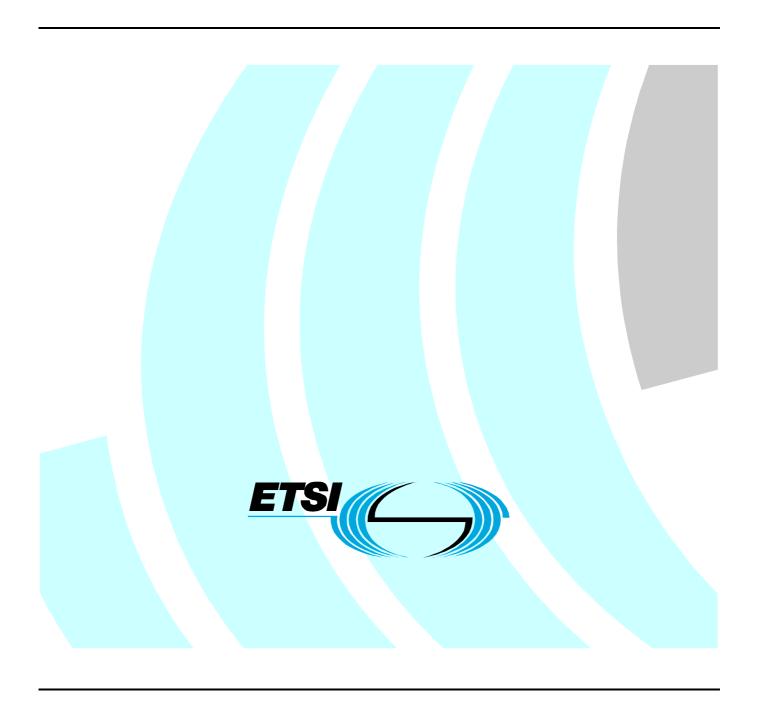# ETSI TS 102 149-2 V1.1.1 (2002-11)

Technical Specification

**Broadband Radio Access Networks (BRAN);
HIPERACCESS;
Conformance Testing for the Data Link Control (DLC) Layer;
Part 2: Test Suite Structure and
Test Purposes (TSS&TP) specification**

ETSI

Reference

DTS/BRAN-003T002-2

Keywords

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Foreword

This Technical Specification (TS) has been produced by ETSI Project Broadband Radio Access Networks (BRAN).

The present document is part 2 of a multi-part deliverable. Full details of the entire series can be found in part 1, sub-part 1 [7].

1   Scope

The present document contains the Test Suite Structure (TSS) and Test Purposes (TP) to test the BRAN HIPERACCESS; Data Link Control (DLC) layer.

The objective of this test specification is to provide a basis for conformance tests for HIPERACCESS equipment giving a high probability of air interface inter-operability between different manufacturer's HIPERACCESS equipment.

The ISO standard for the methodology of conformance testing (ISO/IEC 9646-1 [3] and ISO/IEC 9646-2 [4]) as well as the ETSI rules for conformance testing (ETS 300 406 [2]) are used as a basis for the test methodology.

2   References

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

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies.

[1]   ETSI TS 102 000 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERACCESS; Data Link Control (DLC) protocol specification".

[2]   ETSI ETS 300 406: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

[3]   ISO/IEC 9646-1 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts". (See also ITU-T Recommendation X.290 (1991).)

[4]   ISO/IEC 9646-2 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification". (See also ITU-T Recommendation X.291 (1991).)

[5]   ISO/IEC 9646-6 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".

[6]   ISO/IEC 9646-7 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statement".

[7]   ETSI TS 102 149-1(V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERACCESS; Conformance Testing for the Data Link Control (DLC) Layer; Part 1: Protocol Implementation Conformance Statement (PICS) proforma".

3   Definitions and abbreviations

3.1   Definitions

For the purposes of the present document, the terms and definitions given in ISO/IEC 9646-7 [6] and TS 102 000 [1] apply.

3.2   Abbreviations

For the purposes of the present document, the abbreviations defined in ISO/IEC 9646-1 [3], ISO/IEC 9646-6 [5], ISO/IEC 9646-7 [6], TS 102 000 [1] and the following apply:

AP	Access Point (= base station)
APC	AP Controller
APT	AP Transceiver
ARQ	Automatic Repeat Request
AT	Access Termination (= terminal = subscriber station)
ATPC	Automatic Transmit Power Control
ATTC	Automatic Transmit Time Control
BO	Inopportune Behaviour
BV	Valid Behaviour
C/I	carrier-to-interference power ratio
CE	Connection Establishment
CID	Connection ID
CM	Connection Modification
COC	COnnection Control
CT	Connection Termination
DES	Data Encryption Standard
DL	DownLink
DLC	Data Link Control (layer)
FDD	Frequency Division Duplex
FS	Frequency Scanning
IA	Initial Authorization
ID	IDentity
INC	INitialization Control
IP	Internet Protocol
IUT	Implementation Under Test
KR	Key Requests
KU	Keys Usage
LL	Leased Line
LS	Link Supervision
MAC	Medium Access Control
MC	Multicast
OC	Other Capabilities negotiation
PA	Parameters Acquisition
PDU	Protocol Data Unit
PHY	PHYsical (layer)
PICS	Protocol Implementation Conformance Statement
PN	Physical capabilities Negotiation
RA	RAnging
RE	REauthorization
RF	Radio Frequency
RLC	Radio Link Control
RRC	Radio Resource Control
SA	Security Association
SAID	SA ID
SEC	SEcurity Control
SI	Slip Indicator
TD	Transmission Delay
TDD	Time Division Duplex
TDM	Time Division Multiplex
TEK	Traffic Encryption Key
TI	Timer
TID	Terminal ID
TP	Test Purposes
TP	Time for Processing
TS	Technical Specification
TSS	Test Suite Structure

UGS   Unsolicited Grant Service
UL   UpLink

4   Test Suite Structure (TSS)

4.1   Structure

Figure 1 shows the RLC Test Suite Structure (TSS) including its subgroups defined for the conformance testing.

Test Suite	Protocol group	Protocol subgroup	Test group		
			BV	TI	BO
DLC-AP/ DLC-AT	Initialization Control	Frequency scanning			
		Synchronization Acquisition			
		APC Identification			
		UL and DL Parameters Acquisition			
		Ranging			
		Physical Capabilities Negotiation			
		Other Capabilities Negotiation			
	Radio Resource Control	Link Supervision			
		Change of PHY Mode, ATPC and ATTC			
		Load Levelling			
	Security Control	Initial Authorization			
		Reauthorization			
		Key Requests			
		Traffic Encryption Keys Usage			
	Connection Control	Connection Establishment			
		Connection Modification			
		Connection Termination			
		Multicast Connections			

Figure 1: TSS for HIPERACCESS RLC

The test suite is structured as a tree with a first level defined as DLC-AP or DLC-AT representing the protocol groups 'DLC for AP' and 'DLC for AT'.

4.2   Test groups

The test groups are organized in three levels. The first level creates three protocol groups representing the protocol services. The second level separates the protocol services in functional modules. The last level in each branch contains one or more of the standard ISO subgroups BV, TI, BO.

4.2.1   Protocol groups

The protocol groups identify the DLC services: Initialization control function, Radio resource control function, Security control and Connection control function, as defined in TS 102 000 [1].

4.2.1.1   Initialization control function

The initialization control function group is divided in seven functional modules. The first functional module identifies the Frequency scanning procedures. The second functional module identifies the Synchronization Acquisition procedures. The third functional module distinguishes the APC Identification procedures. The fourth functional module distinguishes the UL and DL Parameters Acquisition procedures. The fifth functional module identifies the Ranging procedures. The sixth functional module distinguishes the Physical Capabilities Negotiation procedures. The last functional module distinguishes the Other Capabilities Negotiation procedures.

4.2.1.2 Radio resource control function

The Radio resource control protocol group is divided in three functional modules. The first functional module distinguishes the Link Supervision procedures. The second functional module distinguishes the Change of PHY Mode, ATPC and ATTC procedures. The last functional module identifies the Load Levelling procedures.

4.2.1.3 Security control function

The Security control protocol group is divided in four functional modules. The first functional module distinguishes the Initial Authorization procedures. The second functional module distinguishes the Reauthorization procedures. The third functional module distinguishes the Key Requests procedures. The last functional module identifies the Traffic Encryption Keys Usage procedures.

4.2.1.4 Connection control function

The Connection control protocol group is divided in four functional modules. The first functional module identifies the Connection Establishment procedures. The second functional module identifies the Connection Modification procedures. The third functional module distinguishes the Connection Termination procedures. The last functional module distinguishes the Multicast Connections procedures.

4.2.2 Main test groups

The main test groups are the valid behaviour group, the invalid behaviour group and the inopportune behaviour group.

4.2.2.1 Valid Behaviour (BV) tests

This test sub group shall verify that the IUT reacts in conformity with the TS, after receipt or exchange of valid Protocol Data Units (PDUs). Valid PDUs means that the exchange of messages and the content of the exchanged messages are considered as valid.

4.2.2.2 Timer (TI) tests

This test sub group shall verify that the IUT reacts in conformity with the TS, after expiry of a defined timer.

4.2.2.3 Inopportune Behaviour (BO) tests

This test sub group shall verify that the IUT reacts in conformity with the TS, after receipt of a syntactically correct PDU not expected in the actual message exchange.

5   Test Purposes (TP)

5.1   Introduction

5.1.1   TP definition conventions

The TPs are defined following particular rules as shown in table 1.

Table 1: TP definition rules

TP Id according to the TP naming conventions	Reference. Initial condition. Stimulus. Expected behaviour.
TP Id	The TP Id is a unique identifier it shall be specified according to the TP naming conventions defined in the clause below.
Reference	The reference should contain the references of the subject to be validated by the actual TP (specification reference, clause, and paragraph).
Condition	The condition defines in which initial state the IUT has to be to apply the actual TP.
Stimulus	The stimulus defines the test event to which the TP is related.
Expected behaviour	Definition of the events that are expected from the IUT to conform to the base specification.

5.1.2   TP naming conventions

The identifier of the TP is built according to table 2.

Table 2: TP naming convention

Identifier:	TP/<st>/<pg>/<fm>/<x>-<nnn>		
	<st> = side type	AP	Access Point
		AT	Access Termination
	<pg> = protocol group	INC	INitialization Control function
		RRC	Radio Resource Control function
		SEC	SEcurity Control function
		COC	COnnection Control function
	<fm> = functional module	FS	Frequency Scanning
		SA	Synchronization Acquisition
		SI	APC Identification
		PA	UL and DL Parameters Acquisition
		RA	RAnging
		PN	Physical capabilities Negotiation
		OC	Other Capabilities negotiation
		LS	Link Supervision
		PT	Change of PHY Mode, ATPC and ATTC
		LL	Load Levelling
		IA	Initial Authorization
		RE	REauthorization
		KR	Key Requests
		KU	traffic encryption Keys Usage
		CE	Connection Establishment
		CM	Connection Modification
		CT	Connection Termination
		MC	Multicast Connections
	x = Type of testing	BV	Valid Behaviour Tests
		TI	Timer Tests
		BO	Inopportune Behaviour Tests
	<nnn> = sequential number	(000-999)	Test Purpose Number

EXAMPLE: TP/AT/SEC/KU/BV-010 is the tenth purpose for the valid behaviour testing of the Key Usage procedures of the Security control function implemented at AT side.

5.1.3   Sources of TP definitions

All TPs are specified according to TS 102 000 [1].

5.2   Test purposes for AP

5.2.1   Initialization Control

5.2.1.1   Frequency scanning

TP/AP/INC/FS/BV-000	Reference: TS 102 000 [1], clause 8.6 and its subclauses, clause 3.1 (Preambles). Initial condition: IUT is the AP. Tester is the AT. The IUT has powered up and is operating. Check that: the IUT transmits, on the correct frequencies, windows with 1 ms fixed duration each containing a valid preamble of 32 symbols and a valid control zone. Final pseudo state: The IUT continues operating.

5.2.1.2   UL and DL Parameters Acquisition

TP/AP/INC/PA/BV-000	Reference: TS 102 000 [1], clauses 8.8 and 3.1 (GBI). Initial condition: IUT is the AP. Tester is the AT. The IUT has powered up and is operating. Check that: the IUT periodically transmits a GBI message. Final pseudo state: The IUT continues operating.

5.2.1.3   Ranging

5.2.1.3.1   Ranging for First Initialization

TP/AP/INC/RA/BV-000	Reference: TS 102 000 [1], clause 10.4.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has completed initialization up to UL and DL parameters acquisition. The IUT has yet to start ranging with its peer. IUT has its peer's MAC address in its database. Check that: To start ranging, the IUT transmits a valid Ranging Invitation message using the TDM region with the most robust PHY mode preceded by zero or more Ranging Grants in the preceding frames Final pseudo state: The IUT has started ranging.

TP/AP/INC/RA/BV-001	Reference: TS 102 000 [1], clause E.3.1 and clause 10.4.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting a Ranging Invitation message. Check that: The IUT transmits
	  1) Either a Ranging Grant in the same or following frame of the Ranging Invitation message.
	  2) Or another Ranging Invitation message in a frame following the first Ranging Invitation message.

TP/AP/INC/RA/BV-002	Reference: TS 102 000 [1], clause E.3.1 and clause 10.4.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting one or more Ranging Invitation messages and then a Ranging Grant in the same frame or a frame following the last Ranging Invitation message. Check that: After not receiving a Ranging Request response to the Ranging Grant, the IUT transmits a Ranging Grant randomly mixed with zero or more Ranging Invitation messages. Final pseudo state: The IUT is waiting peer's Ranging Request Message.

TP/AP/INC/RA/BV-003	Reference: TS 102 000 [1], clause E.3.1 and clause 10.4.1 Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting a Ranging Invitation message and a then Ranging Grant in the same frame or a frame following the last Ranging Invitation message. Check that: After not receiving a Ranging Request response to the Ranging Grant, the IUT transmits a number of valid Ranging Invitation messages randomly mixed with zero or more Ranging Grants. Final pseudo state: The IUT is waiting peer's Ranging Request Message.

TP/AP/INC/RA/BV-004	Reference: TS 102 000 [1], clause E.3.1.
	Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting a Ranging Invitation message and a Ranging Grant.
	Check that: After receiving a Ranging Request response, the IUTstops sending Ranging invitation message and transmits:
	  1) Either, a valid Ranging Continue message.
	  2) Or, a valid Ranging Success message.
	Final pseudo state: The IUT continues ranging.

TP/AP/INC/RA/BV-005	Reference: TS 102 000 [1], clause E.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting a Ranging Invitation message and a Ranging Grant. The IUT has then received a Ranging Request response and responded with a Ranging Continue message and a Ranging Grant. Check that: After not receiving a Ranging Request message in response to the last Ranging Grant, the IUT transmits another Ranging Grant. Final pseudo state: The IUT continues ranging.
TP/AP/INC/RA/BV-006	Reference: TS 102 000 [1], clause E.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting Ranging Invitation messages and a Ranging Grants. The IUT has then received a Ranging Request response and responded with a Ranging Continue message and a Ranging Grant. After not receiving a Ranging Request message in response to the last Ranging Grant, the IUT transmits another Ranging Grant Check that: After not receiving any response to each successive Ranging Grant, the IUT transmits another Ranging Grant. Final pseudo state: The IUT continues ranging.
TP/AP/INC/RA/BV-007	Reference: TS 102 000 [1], clause 8.7.4 and clause E.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting Ranging Invitation messages and a Ranging Grants. The IUT has then received a Ranging Request response and responded with a Ranging Continue message. Check that: The IUT transmits a Ranging Grant in the tenth or following frame after the frame with the Ranging Continue message. Final pseudo state: The IUT continues ranging.
TP/AP/INC/RA/BV-008	Reference: TS 102 000 [1], clause E.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting a Ranging Invitation message and a Ranging Grant. The IUT has then received a Ranging Request response and responded with a Ranging Success message and a Ranging Grant 10 or more frames later. Check that: After not receiving a Ranging Ack message in response to the last Ranging Grant, the IUT gives another Ranging Grant. Final pseudo state: The IUT continues ranging.
TP/AP/INC/RA/BV-009	Reference: TS 102 000 [1], clause 8.7.4. Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting a Ranging Invitation message and a Ranging Grant. The IUT has then received a Ranging Request response and responded with a Ranging Success message. Check that: The IUT transmits a Ranging Grant in the tenth or following frame after the frame with the Ranging Success message. Final pseudo state: The IUT continues ranging.
TP/AP/INC/RA/BV-010	Reference: TS 102 000 [1], clause E.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting a Ranging Invitation message and a Ranging Grant. The IUT has then received a Ranging Request response and responded with a Ranging Success message and a Ranging Grant. After not receiving a Ranging Ack message in response to the last Ranging Grant, the IUT transmits another Ranging Grant Check that: After not receiving any response to each successive Ranging Grant, the IUT transmits another Ranging Grant. Final pseudo state: The IUT remains in initialization.

TP/AP/INC/RA/BV-011	Reference: TS 102 000 [1], clause E.3.1.
	Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting a Ranging Invitation message and a Ranging Grant. The IUT has then received a Ranging Request response and responded with a Ranging Continue message and a Ranging Grant 10 or more frames later.
	Check that: After receiving another Ranging Request response, the IUT transmits:
	  1) Either, a valid Ranging Continue message and a valid Ranging Grant in the tenth or following frame after the Ranging Continue message.
	  2) Or, a valid Ranging Success message and a valid Ranging Grant in the tenth or following frame after the Ranging Success message.
	Final pseudo state: The IUT continues ranging.

TP/AP/INC/RA/BV-012	Reference: TS 102 000 [1], clause E.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer by transmitting a Ranging Invitation message and a Ranging Grant. The IUT has then received a Ranging Request response. Check that: To continue initialization, the IUT transmits a valid Ranging Success message and a valid Ranging Grant in the tenth or following frame after the Ranging Success message. Final pseudo state: The IUT waits a Ranging Ack to conclude ranging.

TP/AP/INC/RA/BV-013	Reference: TS 102 000 [1], clause E.3.1.
	Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer and has ultimately transmitted a Ranging Success message and a Ranging Grant.
	Check that: Upon receiving a Ranging Request message, the IUT transmits:
	  1) Either, a valid Ranging Continue message and a Ranging Grant in the tenth or following frame after the Ranging Continue message.
	  2) Or, a valid Ranging Success message and a Ranging Grant in the tenth frame or following frame the Ranging Success message.
	Final pseudo state: The IUT continues ranging.

TP/AP/INC/RA/BV-014	Reference: TS 102 000 [1], clause E.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer and has ultimately transmitted a Ranging Success message and a Ranging Grant. Check that: After not receiving a Ranging Ack or a Ranging Request message in response to the last Ranging Grant, the IUT transmits a Ranging Grant. Final pseudo state: The IUT continues ranging.

TP/AP/INC/RA/BV-015	Reference: TS 102 000 [1], clause E.3.1.
	Initial condition: IUT is the AP. Tester is the AT. The IUT has started ranging with its peer and has ultimately transmitted a Ranging Success message and a Ranging Grant.
	Check that: Upon receiving a valid Ranging Ack message;
	  1) Either the IUT starts T_RangingAck and does not transmit any messages or any type of grants during this timer's duration.
	  2) Or a valid Ranging Success message and a Ranging Grant in the tenth frame or following frame the Ranging Success message.
	  3) Or a valid Ranging Continue message and a Ranging Grant in the tenth or following frame after the Ranging Continue message.
	Final pseudo state: Upon expiration of T_RangingAck, the IUT has completed initialization but is not yet operational. Upon sending either a Ranging Continue or Ranging Success message, the IUT continues ranging.

5.2.1.4   Capabilities Negotiation

5.2.1.4.1   Physical Capabilities Negotiation

TP/AP/INC/PN/BV-000	Reference: TS 102 000 [1], clause 10.5.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has completed initialization. Check that: After expiration of T_RangingAck, the IUT transmits a valid Physical Capabilities Request message. Final pseudo state: The IUT has begun physical capabilities negotiation.
TP/AP/INC/PN/BV-001	Reference: TS 102 000 [1], clause 10.5.1 and clause E.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has completed initialization and has transmitted a Physical Capabilities Request message. Check that: Upon receiving a valid Physical Capabilities Information message within the duration of timer T_PhyCapabilitiesReq, the IUT transmits a valid Physical Capabilities Confirmation message. Final pseudo state: The IUT waits to complete physical capabilities negotiation.

TP/AP/INC/PN/BV-002	Reference: TS 102 000 [1], clause 10.5.1 and clause E.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has completed initialization, transmitted a valid Physical Capabilities Request message, and started the timer T-PhyCapabilitiesReq. Check that: Upon expiration of T_PhyCapabilitiesReq without receiving a Physical Capabilities Information message, the IUT retransmits a valid Physical Capabilities Request message and restarts T_PhyCapabilitiesReq. Final pseudo state: The IUT continues physical capabilities negotiation.
TP/AP/INC/PN/BV-003	Reference: TS 102 000 [1], clause 10.5.1 and clause E.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has completed initialization, transmitted a valid Physical Capabilities Request message, and started the timer T-PhyCapabilitiesReq. Check that: Upon successive transmissions of a valid Physical Capabilities Request message and expirations of T_PhyCapabilitiesReq without receiving a Physical Capabilities Information message in response, the IUT continues to retransmit a valid Physical Capabilities Request message and to restart T_PhyCapabilitiesReq until a Physical Capabilities Information message is ultimately received. Final pseudo state: The IUT continues physical capabilities negotiation.
TP/AP/INC/PN/BV-004	Reference: TS 102 000 [1], clause 10.5.1 and clause E.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has completed initialization, transmitted a valid Physical Capabilities Request message, received a valid Physical Capabilities Information message, and transmitted a valid Physical Capabilities Confirmation message. Check that: The IUT starts the timer T_PhyCapabilitiesCnf and transmits no message during this timer's duration. Final pseudo state: The IUT continues physical capabilities negotiation. NOTE: Physical capabilities negotiation is complete if and only if the IUT does not receive a Physical Capabilities Information message during this timer's duration.
TP/AP/INC/PN/BV-005	Reference: TS 102 000 [1], clause 10.5.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has completed initialization, transmitted a valid Physical Capabilities Request message, received a valid Physical Capabilities Information message, transmitted a valid Physical Capabilities Confirmation message, and started the timer T_PhyCapabilitiesCnf. Check that: Upon reception of a Physical Capabilities Information message during the duration of T_PhyCapabilitiesCnf, the IUT retransmits a valid Physical Capabilities Confirmation message and restarts T_ PhyCapabilitiesCnf. Final pseudo state: The IUT continues physical capabilities negotiation.
TP/AP/INC/PN/BV-006	Reference: TS 102 000 [1], clause 10.5.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has completed initialization, transmitted a valid Physical Capabilities Request message, received a valid Physical Capabilities Information message, transmitted a valid Physical Capabilities Confirmation message, and started the timer T_PhyCapabilitiesCnf. Check that: After the timer expires and the IUT has not received any Physical Capabilities Information message, the IUT considers physical capabilities negotiation completed. Final pseudo state: The IUT has completed physical capabilities negotiation but is not yet operational.

5.2.1.4.2   Other Capabilities Negotiation

TP/AP/INC/OC/BV-000	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AP. Tester is the AT. Authentication is required. The IUT has completed authentication. During authentication, at least one SAID required a TEK allocation. Check that: After expiration of the timer T_TekAllocation, the IUT transmits a valid Other Capabilities Request message. Final pseudo state: The IUT has begun other capabilities negotiation.
TP/AP/INC/OC/BV-001	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AP. Tester is the AT. Authentication is required. The IUT has completed authentication. During authentication, no TEK allocation occurred. Check that: After expiration of the timer T_AuthReply, the IUT transmits a valid Other Capabilities Request message. Final pseudo state: The IUT has begun other capabilities negotiation.
TP/AP/INC/OC/BV-002	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AP. Tester is the AT. Authentication is required. The IUT has completed Authentication and has transmitted a valid Other Capabilities Request message. Check that: Upon receiving a valid Other Capabilities Information message within the duration of timer T_OtherCapabilitiesReq, the IUT transmits a valid Other Capabilities Confirmation message. Final pseudo state: The IUT waits to complete other capabilities negotiation.
TP/AP/INC/OC/BV-003	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AP. Tester is the AT. Authentication is required. The IUT has completed authentication, transmitted a valid Other Capabilities Request message, and started the timer T_OtherCapabilitiesReq. Check that: Upon expiration of T_OtherCapabilitiesReq without receiving an Other Capabilities Information message, the IUT retransmits a valid Other Capabilities Request message and restarts T_OtherCapabilitiesReq. Final pseudo state: The IUT continues other capabilities negotiation.
TP/AP/INC/OC/BV-004	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AP. Tester is the AT. Authentication is required. The IUT has completed authentication, transmitted a valid Other Capabilities Request message, and started the timer T-OtherCapabilitiesReq. Check that: Upon successive transmissions of a valid Other Capabilities Request message and expirations of T_OtherCapabilitiesReq without receiving an Other Capabilities Information message in response, the IUT continues to retransmit a valid Other Capabilities Request message and to restart T_OtherCapabilitiesReq until an Other Capabilities Information message is ultimately received. Final pseudo state: The IUT continues other capabilities negotiation.
TP/AP/INC/OC/BV-005	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AP. Tester is the AT. Authentication is required. The IUT has completed authentication, transmitted a valid Other Capabilities Request message, received a valid Other Capabilities Information message, and transmitted a valid Other Capabilities Confirmation message. Check that: The IUT starts the timer T_OtherCapabilitiesCnf and transmits no message during this timer's duration. Final pseudo state: The IUT continues other capabilities negotiation. NOTE: Other capabilities negotiation is complete if and only if the IUT does not receive an Other Capabilities Information message during this timer's duration.
TP/AP/INC/OC/BV-006	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AP. Tester is the AT. Authentication is required. The IUT has completed authentication, transmitted a valid Other Capabilities Request message, received a valid Other Capabilities Information message, transmitted a valid Other Capabilities Confirmation message, and started the timer T_OtherCapabilitiesCnf. Check that: Upon reception of an Other Capabilities Information message during the duration of T_OtherCapabilitiesCnf, the IUT retransmits a valid Other Capabilities Confirmation message and restarts T_ OtherCapabilitiesCnf. Final pseudo state: The IUT continues other capabilities negotiation.
TP/AP/INC/OC/BV-007	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AP. Tester is the AT. Authentication is required. The IUT has completed authentication, transmitted a valid Other Capabilities Request message, received a valid Other Capabilities Information message, transmitted a valid Other Capabilities Confirmation message, and started the timer T_ OtherCapabilitiesCnf. Check that: Each time the IUT receives an Other Capabilities Information message in the duration of T_ OtherCapabilitiesCnf, the IUT transmits a valid Other Capabilities Confirmation message and restarts T_ OtherCapabilitiesCnf. Final pseudo state: The IUT continues other capabilities negotiation.

| TP/AP/INC/OC/BV-008 | Reference: TS 102 000 [1], clause 10.5.3.
Initial condition: IUT is the AP. Tester is the AT. Authentication is required. The IUT has completed authentication, transmitted a valid Other Capabilities Request message, received a valid Other Capabilities Information message, transmitted a valid Other Capabilities Confirmation message, and started the timer T_ OtherCapabilitiesCnf.
Check that: After the timer expires and the IUT has not received any Other Capabilities Information message, the IUT considers other capabilities negotiation completed.
Final pseudo state: The IUT has completed other capabilities negotiation and is now operational with regards to this AT. |

5.2.2   Radio Resource Control

5.3.2.1   Link Supervision

TP/AP/RRC/LS/BV-000	Reference: TS 102 000 [1], clause 11.2.2 and clause 10.4.1. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. Check that: The IUT detects a link interruption; it irregularly transmits both RlcRangingInvitation messages and ranging grants to the Tester.
TP/AP/RRC/LS/BV-001	Reference: TS 102 000 [1], clause 11.2.2. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. The Tester does not reply to the grants sent by the IUT. Check that: The IUT irregularly transmits both RlcRangingInvitation messages and ranging grants the Tester.
TP/AP/RRC/LS/BV-002	Reference: TS 102 000 [1], clause 11.2.3. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. The IUT has sent an RlcInitializationCmd message with InitialisationCmd equal to rejectedFromNetwork. Check that: The IUT gives no grants to the Tester after this command.
TP/AP/RRC/LS/BV-003	Reference: TS 102 000 [1], clause 11.2.3. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. The IUT has sent an RlcInitializationCmd message with InitialisationCmd equal to rejectedFromChannel. Check that: The IUT gives no grants to the Tester after this command.
TP/AP/RRC/LS/BV-004	Reference: TS 102 000 [1], clause 11.2.3. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. The IUT has sent an RlcInitializationCmd message with InitialisationCmd equal to firstInitialization. Check that: The IUT gives no grants to the Tester after this command except for ranging grants.
TP/AP/RRC/LS/BV-005	Reference: TS 102 000 [1], clause 11.2.3. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. The IUT has sent an RlcInitializationCmd message with InitialisationCmd equal to transmissionStop. Check that: The IUT gives no grants to the Tester after this command except for ranging grants.
TP/AP/RRC/LS/BV-006	Reference: TS 102 000 [1], clause 11.2.3. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. The IUT has sent an RlcInitializationCmd message. Timer T_InitializationCmd has started. Check that: After the timer expires and the IUT has not received any message, the IUT re-transmits an RlcInitializationCmd message.

5.2.2.2 Change of PHY Mode, ATPC and ATTC

TP/AP/RRC/PT/BV-000	Reference: TS 102 000 [1], clause 11.3.2. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. Check that: The IUT transmits at least every 50 to 200 milliseconds an uplink grant.
TP/AP/RRC/PT/BV-001	Reference: TS 102 000 [1], clause 11.3.3. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. Check that: The IUT transmits an RlcMeasurementReportCriterium message to change the periodReportGeneral acquired in the GBI message or to stop the reporting.
TP/AP/RRC/PT/BV-002	Reference: TS 102 000 [1], clause 11.3.4. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. The tester has transmitted an RlcMeasurementReportData message with valid new DownlinkPhyMode wanted. Check that: The IUT transmits an RlcDownlinkPhyModeChange message with the DownlinkPhyModeGranted parameter.
TP/AP/RRC/PT/BV-003	Reference: TS 102 000 [1], clause 11.3.4. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. Conditions exist that cause AP to allocate another PHY mode region to AT. Check that: The IUT transmits an RlcDownlinkPhyModeChange message with the new DownlinkPhyMode.
TP/AP/RRC/PT/BV-004	Reference: TS 102 000 [1], clause 11.3.4. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. Conditions exist that cause AP to allocate another PHY mode region to AT. The IUT has transmited an RlcDownlinkPhyModeChange message with the new DownlinkPhyMode. Check that: The IUT retransmits the RlcDownlinkPhyModeChange message if the timer T_DownlinkPhyModeChange expires.
TP/AP/RRC/PT/BV-005	Reference: TS 102 000 [1], clause 11.3.5. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. Conditions exist that cause AP to adjust the uplink transmission power control. Check that: The IUT transmits an RlcUplinkCorrection message.
TP/AP/RRC/PT/BV-006	Reference: TS 102 000 [1], clause 11.3.5. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. Conditions exist that cause AP to adjust the uplink transmission power control. The IUT has transmited an RlcUplinkCorrection message. Check that: The IUT retransmits an RlcUplinkCorrection message if the timer T_UplinkCorrection expires.
TP/AP/RRC/PT/BV-007	Reference: TS 102 000 [1], clause 11.3.6. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. The tester has not reacted to the IUT, which is transmitting in a mode other than the most robust PHY mode. Check that: The IUT implements the adaptive PHY mode procedure. Final pseudo state: The IUT has changed to a more viable PHY mode and continues transmitting at the same downlink power level.
TP/AP/RRC/PT/BV-008	Reference: TS 102 000 [1], clause 11.3.6. Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. The tester has not reacted to the IUT, which is transmitting in a mode other than the most robust PHY mode. The IUT has implemented the adaptive PHY mode procedure. The tester has continued not reacting to the IUT. Check that: The IUT increases its downlink transmit power. The power correction is applied immediately before the next downlink frame preamble. The power correction does not exceed 1 dB per 50 ms and 1 db per step. Final pseudo state: The IUT continues operating and transmits at the new power level.

5.2.2.3 Load Levelling (Inter-Carrier Handover)

| TP/AP/RRC/LL/BV-000 | Reference: TS 102 000 [1], clause 11.6.
Initial condition: AP is the IUT. The tester is the AT. The IUT has initialized and connected its peer. The IUT has sent an RlcHandoverCmd message and has received an RlcHandoverCmdAck message.
Check that: The IUT transmits an RlcRangingInvitation message with the new APT. |

5.2.3   Security Control

5.2.3.1   Initial Authorization

TP/AP/SEC/IA/BV-000	Reference: TS 102 000 [1], clause 12.2.1.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has completed physical capabilities negotiation. Check that: the IUT begins the Privacy initialization by sending an RlcAuthCmd message to the Tester.
TP/AP/SEC/IA/BV-001	Reference: TS 102 000 [1], clause 12.2.1.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has sent an RlcAuthCmd message. Check that: when the timer T_AuthCmd expires without receiving an RlcAuthManufacturerInfo message from the Tester, the IUT resends the RlcAuthCmd message to the Tester.
TP/AP/SEC/IA/BV-002	Reference: TS 102 000 [1], clause 12.2.1.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has sent an RlcAuthCmd message and has received a valid RlcAuthManufacturerInfo message from the Tester. Check that: when the timer T_AuthCmd expires without receiving an RlcAuthReq message from the Tester, the IUT resends the RlcAuthCmd message to the Tester.
TP/AP/SEC/IA/BV-003	Reference: TS 102 000 [1], clause 12.2.1.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has sent an RlcAuthCmd message and has received in succession valid RlcAuthManufacturerInfo and RlcAuthReq messages from the Tester. Check that: the IUT sends a valid RlcAuthReply message to the Tester if the requesting AT is authorized.
TP/AP/SEC/IA/BV-004	Reference: TS 102 000 [1], clause 12.2.1.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has sent an RlcAuthCmd message and has received in succession valid RlcAuthManufacturerInfo and RlcAuthReq messages from the Tester. Check that: the IUT sends a valid RlcAuthReject message to the Tester if the requesting AT is not authorized.

5.2.3.2   Reauthorization

TP/AP/SEC/RE/BV-000	Reference: TS 102 000 [1], clause 12.2.1.2. Initial condition: IUT is the AP. Tester is the AT. The IUT has initialized and connected its peer and has received a valid RlcAuthReq message from the Tester. Check that: the IUT sends a valid RlcAuthReply message containing a new AK.

5.2.3.3   Key Requests

TP/AP/SEC/KR/BV-000	Reference: TS 102 000 [1], clause 12.2.1.3. Initial condition: IUT is the AP. Tester is the AT. The IUT has initialized and connected its peer and has received a valid RlcTek2Req message from the Tester. Check that: the IUT sends two valid RlcTekAllocation messages containing each one keying material for the SAID. NOTE: TEKs and HMAC-Digests are correctly encrypted and calculated with the active AT's AK.

5.2.3.4   Traffic Encryption Keys Usage

TP/AP/SEC/KU/BV-000	Reference: TS 102 000 [1], clause 12.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has initialized and connected its peer. The IUT is holding two active AKs for the Tester. The IUT has received a valid RlcAuthReq message from the Tester in the midst of the AK transition period. Check that: the IUT sends a valid RlcAuthReply message containing the newer AK of the two active keys. EXAMPLE: Transition period between AK0 and AK1, The IUT reply with AK1.
TP/AP/SEC/KU/BV-001	Reference: TS 102 000 [1], clause 12.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has initialized and connected its peer. The IUT is holding two active AKs for the Tester. The IUT has received a valid RlcAuthReq message from the Tester after the AK transition period (expiry of the older AK key). Check that: the IUT sends a valid RlcAuthReply message containing a new AK for maintaining two active AKs. EXAMPLE: AK0 has expired. The IUT reply with AK2 and activate AK1. A new transition period between AK1 and AK2 can appears.
TP/AP/SEC/KU/BV-002	Reference: TS 102 000 [1], clause 12.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has initialized and connected its peer. The IUT is holding two active AKs for the Tester. The IUT has not received a valid RlcAuthReq message from the Tester after the AK transition period (expiry of the older AK key). Check that: the IUT considers the Tester as unauthorized. EXAMPLE: RlcTekReject in reply to RlcTekReq for the SAID.
TP/AP/SEC/KU/BV-003	Reference: TS 102 000 [1], clause 12.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has initialized and connected its peer. The IUT is holding two active AKs for the Tester. The IUT has received a valid RlcTekReq message from the Tester using the older AK Sequence Number of the two active AKs. Check that: the IUT sends the valid RlcTekAllocation messages using the newer AK for encrypting the TEK and calculating the HMAC digest.
TP/AP/SEC/KU/BV-004	Reference: TS 102 000 [1], clause 12.3.1. Initial condition: IUT is the AP. Tester is the AT. The IUT has initialized and connected its peer. The IUT is holding two active AKs for the Tester. The IUT has received a valid RlcTekReq message from the Tester using the newer AK Sequence Number of the two active AKs. Check that: the IUT sends the valid RlcTekAllocation messages using the newer AK for encrypting the TEK and calculating the HMAC digest.
TP/AP/SEC/KU/BV-005	Reference: TS 102 000 [1], clause 12.3.3. Initial condition: IUT is the AP. Tester is the AT. The IUT has initialized and connected its peer. A U-plane is established between the IUT and the Tester. Single-DES is active. Check that: The IUT sends correctly encrypted unicast MAC data PDUs.
TP/AP/SEC/KU/BV-006	Reference: TS 102 000 [1], clause 12.3.3. Initial condition: IUT is the AP. Tester is the AT. The IUT has initialized and connected its peer. A U-plane is established between the IUT and the Tester. Optional Triple-DES is active. Check that: The IUT sends correctly encrypted unicast MAC data PDUs.

5.2.4 Connection Management

5.2.4.1 Connection Establishment

5.2.4.1.1 AP Initiated Connection Establishment

TP/AP/COC/CE/BV-000	Reference: TS 102 000 [1], clause 13.4.2.2. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized and operational. Check that: To establish a connection, the IUT sends a valid Connection Addition Setup message. Final pseudo state: The IUT is establishing a connection.

TP/AP/COC/CE/BV-001	Reference: TS 102 000 [1], clause 13.4.2.1.
	Initial condition: IUT is the AP. Tester is the AT. IUT is initialized and has transmitted a valid Connection Addition Setup message.
	Check that: Upon receiving a valid Connection Addition Ack message, the IUT:
	  1) Starts T_RlcConnectionAdditionAck.
	  2) Considers the connection established after T_RlcConnectionAdditionAck expires.
	Final pseudo state: The IUT is operational and the connection is established.

TP/AP/COC/CE/BV-002	Reference: TS 102 000 [1], clause 13.4.2.1. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized, has sent a Connection Addition Setup message, and started T_RlcConnectionAdditionSetup. Check that: After T_RlcConnectionSetup expires without receiving a Connection Addition Ack message; the IUT retransmits another valid Connection Addition Setup message. Final pseudo state: The IUT is establishing a connection.

TP/AP/COC/CE/BV-003	Reference: TS 102 000 [1], clause 13.4.2.3.
	Initial condition: IUT is the AP. Tester is the AT.
	IUT is initialized, has sent a Connection Addition Setup message, and started T_RlcConnectionAdditionSetup.
	Check that: Each time T_RlcConnectionAdditionSetup expires without the IUT having received a Connection Addition Ack message, the IUT:
	  1) Transmits another valid Connection Addition Setup message.
	  2) And restarts T_RlcConnectionAdditionSetup upon sending this message.
	Final pseudo state: The IUT is establishing a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur.

5.2.4.1.2 AT Initiated Connection Establishment

TP/AP/COC/CE/BV-004	Reference: TS 102 000 [1], clause 13.4.2.1. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized and operational. Check that: Upon receiving a valid Connection Addition Init message, the IUT replies to the LT with a Connection Addition Setup message. Final pseudo state: The IUT is establishing a connection.

TP/AP/COC/CE/BV-005	Reference: TS 102 000 [1], clause 13.4.2.1.
	Initial condition: IUT is the AP. Tester is the AT.
	The IUT is initialized, has received a Connection Addition Init message, and then responded with a Connection Addition Setup message.
	Check that: Upon receiving a valid Connection Addition Ack message, the IUT:
	  1) Starts T_RlcConnectionAdditionAck.
	  2) Considers the connection established after T_RlcConnectionAdditionAck expires.
	Final pseudo state: The IUT is operational and the connection is established.

TP/AP/COC/CE/BV-006	Reference: TS 102 000 [1], clause 13.4.2.1. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized, has received a Connection Addition Init message, and then sent a Connection Addition Setup message and started T_RlcConnectionAdditionSetup. Check that: Upon receiving a Connection Addition Init message during this timer's duration, the IUT retransmits another valid Connection Addition Setup message. Final pseudo state: The IUT is establishing a connection.

TP/AP/COC/CE/BV-007	Reference: TS 102 000 [1], clause 13.4.2.1.
	Initial condition: IUT is the AP. Tester is the AT.
	IUT is initialized, has received a Connection Addition Init message, then sent a Connection Addition Setup message and started T_RlcConnectionAdditionSetup.
	Check that: Each time the IUT receives a Connection Addition Init message during this timer's duration:
	  1) The IUT retransmits another valid Connection Addition Setup message.
	  2) And restarts T_ RlcConnectionAdditionSetup upon sending this Setup message.
	Final pseudo state: The IUT is establishing a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur

TP/AP/COC/CE/BV-008	Reference: TS 102 000 [1], clause 13.4.2.1. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized, has received a Connection Addition Init message, then sent a Connection Addition Setup message, and started T_RlcConnectionAdditionSetup. Check that: After T_RlcConnectionAdditionSetup expires without receiving any message; the IUT retransmits another valid Connection Addition Setup message. Final pseudo state: The IUT is establishing a connection.

TP/AP/COC/CE/BV-009	Reference: TS 102 000 [1], clause 13.4.2.1.
	Initial condition: IUT is the AP. Tester is the AT.
	IUT is initialized, has sent a Connection Addition Setup message, and started T_RlcConnectionAdditionSetup.
	Check that: Each time T_RlcConnectionAdditionSetup expires without the IUT having received any message, the IUT:
	  1) Retransmits another valid Connection Addition Setup message.
	  2) And restarts T_RlcConnectionAdditionSetup upon sending this message.
	Final pseudo state: The IUT is establishing a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur.

5.2.4.2 Change of Established Connection

5.2.4.2.1 AP Initiated Connection Change

TP/AP/COC/CM/BV-000	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized and a connection is established with the Tester. Check that: To modify a connection, the IUT sends a valid Connection Change Setup message. Final pseudo state: The IUT is modifying a connection.

TP/AP/COC/CM/BV-001	Reference: TS 102 000 [1], clause 13.4.3.
	Initial condition: IUT is the AP. Tester is the AT.
	IUT is initialized, has a valid connection with the Tester, and has transmitted a valid Connection Change Setup message.
	Check that: Upon receiving a valid Connection Change Ack message, the IUT:
	  1) Starts T_RlcConnectionChangeAck.
	  2) Considers the connection modified after T_RlcConnectionChangeAck expires.
	Final pseudo state: The IUT is operational and the connection continues as modified.

TP/AP/COC/CM/BV-002	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized, has a valid connection with the Tester, has transmitted a Connection Change Setup message, and started T_RlcConnectionChangeSetup. Check that: After T_RlcConnectionChangeSetup expires without receiving a Connection Change Ack message; the IUT retransmits another valid Connection Change Setup message. Final pseudo state: The IUT is modifying a connection.

TP/AP/COC/CM/BV-003	Reference: TS 102 000 [1], clause 13.4.3.
	Initial condition: IUT is the AP. Tester is the AT.
	IUT is initialized, has a valid connection with the Tester, has transmitted a Connection Change Setup message, and started T_RlcConnectionChangeSetup.
	Check that: Each time T_RlcConnectionChangeSetup expires without the IUT having received a Connection Change Ack message, the IUT:
	  1) Restarts T_RlcConnectionChangeSetup.
	  2) And retransmits another valid Connection Change Setup message.
	Final pseudo state: The IUT is modifying a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur.

5.2.4.2.2   AT Initiated Connection Change

TP/AP/COC/CM/BV-004	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized and a connection is established with the Tester. Check that: Upon receiving a valid Connection Change Init message, the IUT replies to the LT with a Connection Change Setup message. Final pseudo state: The IUT is modifying a connection.

TP/AP/COC/CM/BV-005	Reference: TS 102 000 [1], clause 13.4.3.
	Initial condition: IUT is the AP. Tester is the AT.
	IUT has received a valid Connection Change Init message and replied to the LT with a valid Connection Change Setup message.
	Check that: Upon receiving a valid Connection Change Ack message, the IUT:
	  1) Starts T_RlcConnectionChangeAck.
	  2) Considers the connection as modified after T_RlcConnectionChangeAck expires.
	Final pseudo state: The IUT is operational and the connection continues as modified.

TP/AP/COC/CM/BV-006	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized, has a valid connection with the Tester, has received a Connection Change Init message, and then sent a Connection Change Setup message and started T_RlcConnectionChangeSetup. Check that: Upon receiving a Connection Change Init message during this timer's duration, the IUT retransmits another valid Connection Change Setup message. Final pseudo state: The IUT is modifying a connection.

TP/AP/COC/CM/BV-007	Reference: TS 102 000 [1], clause 13.4.3.
	Initial condition: IUT is the AP. Tester is the AT.
	IUT is initialized, has a valid connection with the Tester, has received a Connection Change Init message, then sent a Connection Change Setup message and started T_RlcConnectionChangeSetup.
	Check that: Each time the IUT receives a Connection Change Init message during this timer's duration:
	  1) The IUT retransmits another valid Connection Change Setup message.
	  2) And restarts T_ RlcConnectionChangeSetup upon sending this Setup message.
	Final pseudo state: The IUT is modifying a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur

TP/AP/COC/CM/BV-008	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized, has a valid connection with the Tester, has received a valid Connection Change Init message, has transmitted a Connection Change Setup message, and started T_RlcConnectionChangeSetup. Check that: After T_RlcConnectionChangeSetup expires without receiving any message; the IUT retransmits another valid Connection Change Setup message. Final pseudo state: The IUT is modifying a connection.

TP/AP/COC/CM/BV-009	Reference: TS 102 000 [1], clause 13.4.3.
	Initial condition: IUT is the AP. Tester is the AT.
	IUT is initialized, has a valid connection with the Tester, has received a valid Connection Change Init message, has transmitted a Connection Change Setup message, and started T_RlcConnectionChangeSetup.
	Check that: Each time T_RlcConnectionChangeSetup expires without the IUT having received a Connection Change Ack message, the IUT:
	  1) Restarts T_RlcConnectionChangeSetup.
	  2) And retransmits another valid Connection Change Setup message.
	Final pseudo state: The IUT is modifying a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur.

5.2.4.3 Connection Release

5.2.4.3.1 AP Initiated Connection Release

TP/AP/COC/CT/BV-000	Reference: TS 102 000 [1], clause 13.4.4. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized and a connection is established with the Tester. Check that: To release a connection, the IUT sends a valid Connection Deletion Init message. Final pseudo state: The IUT is releasing a connection.

TP/AP/COC/CT/BV-001	Reference: TS 102 000 [1], clause 13.4.4.
	Initial condition: IUT is the AP. Tester is the AT.
	IUT is initialized, a connection is established with the Tester, and IUT has transmitted a valid Connection Deletion Init message.
	Check that: Upon receiving a valid Connection Deletion Ack message, the IUT:
	  1) Starts T_RlcConnectionDeletionAck.
	  2) Considers the connection released after T_RlcConnectionDeletionAck expires.
	Final pseudo state: The IUT is operational and the connection no longer exists.

TP/AP/COC/CT/BV-002	Reference: TS 102 000 [1], clause 13.4.4. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized, has a valid connection with the Tester, has transmitted a Connection Deletion Init message, and started T_RlcConnectionDeletionInit. Check that: Upon T_ RlcConnectionDeletionInit expiry without receiving a Connection Deletion Ack message, the IUT retransmits another valid Connection Deletion Init message. Final pseudo state: The IUT is releasing a connection.

TP/AP/COC/CT/BV-003	Reference: TS 102 000 [1], clause 13.4.4.
	Initial condition: IUT is the AP. Tester is the AT.
	IUT is initialized, has a valid connection with the Tester, has transmitted a Connection Deletion Init message, and started T_ RlcConnectionDeletionInit.
	Check that: Each time T_ RlcConnectionDeletionInit expires without the IUT having received a Connection Deletion Init message, the IUT:
	  1) Retransmits another valid Connection Deletion Init message.
	  2) And restarts T_ RlcConnectionDeletionInit upon sending this message.
	Final pseudo state: The IUT is releasing a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur.

5.2.4.3.2 AT Initiated Connection Release

TP/AP/COC/CT/BV-004	Reference: TS 102 000 [1], clause 13.4.4. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized and a connection is established with the Tester. Check that: Upon receiving a valid Connection Deletion Init message, the IUT replies to the LT with a Connection Deletion Ack message. Final pseudo state: The IUT is releasing a connection.
TP/AP/COC/CT/BV-005	Reference: TS 102 000 [1], clause 13.4.4. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized, a connection is established with the Tester, and the IUT has received a valid Connection Deletion Init message and then sent a valid Connection Deletion Ack message and started T_RlcConnectionDeletionAck. Check that: Upon T_RlcConnectionDeletionAck expiry and if no message has been received during this timer's duration, the IUT considers the connection released. Final pseudo state: The IUT is operational and the connection no longer exists.
TP/AP/COC/CT/BV-006	Reference: TS 102 000 [1], clause 13.4.4. Initial condition: IUT is the AP. Tester is the AT. IUT is initialized; a connection is established with the Tester; and the IUT has received a valid Connection Deletion Init message, then sent a valid Connection Deletion Ack message and started T_ RlcConnectionDeletionAck. Check that: Upon receiving a Connection Deletion Init message, the IUT transmits a valid Connection Deletion Ack message. Final pseudo state: The IUT is releasing a connection.

TP/AP/COC/CT/BV-007	Reference: TS 102 000 [1], clause 13.4.4.
	Initial condition: IUT is the AP. Tester is the AT.
	IUT is initialized; a connection is established with the Tester; and the IUT has received a valid Connection Deletion Init message, then sent a valid Connection Deletion Ack message and started T_ RlcConnectionDeletionAck.
	Check that: Each time, upon receiving a Connection Deletion Init message, the IUT:
	  1) Transmits a valid Connection Deletion Ack message.
	  2) Restarts T_RlcConnectionDeletionAck upon sending this message.
	Final pseudo state: The IUT is releasing a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur.

5.2.4.4   Multicast Connections

TP/AP/COC/MC/BV-000	Reference: TS 102 000 [1], clause 13.5. Initial condition: IUT is the AP. Tester is multiple ATs. IUT is initialized. Check that: To establish a multicast connection, the IUT establishes a Downlink unicast connection with each AT included in the multicast group assigning to each connection the same CID. Final pseudo state: The IUT is operational and a multicast group is formed.

5.3   Test purposes for AT

5.3.1   Initialization Control

5.3.1.1   Frequency scanning

5.3.1.1.1   Frequency scanning during first initialization

TP/AT/INC/FS/BV-000	Reference: TS 102 000 [1], clause 10.3.1. Initial condition: IUT is the AT. Tester is the AP. IUT is initializing for the first time. The IUT begins the downlink frequency-scanning step. Check that: after powering up or starting the IUT, the IUT scans all possible frequencies, orders them in descending signal strength order, and selects the frequency with the strongest signal power. Final pseudo state: The IUT has finished the downlink frequency-scanning step. NOTE: Test strategy could be to send at least two signals with different power, go through synchronization and APC identification, and then first send a Ranging Invitation message and a Ranging Grant on the weakest frequency. If the AT responds, the AT fails this Test Purpose. If the AT does not respond, then send a Ranging Invitation message and a Ranging on the strongest frequency. If the AT responds, the AT passes.

5.3.1.1.2 Frequency scanning during re-initialization

TP/AT/INC/FS/BV-001	Reference: TS 102 000 [1], clause 10.3.2. Initial condition: IUT is the AT. Tester is the AP. IUT has previously accomplished initialization. The IUT is required to re-initialize and must begin the downlink frequency-scanning step. Check that: after powering down and then powering up or re-starting the IUT or failure to remain in frame synchronization, the IUT selects the downlink frequency determined during the previous initialization. Final pseudo state: The IUT has finished the downlink frequency-scanning step for re-initialization.
TP/AT/INC/FS/BV-002	Reference: TS 102 000 [1], clause 10.3.2. Initial condition: IUT is the AT. Tester is the AP. IUT has previously accomplished initialization. The IUT is required to re-initialize and must begin the downlink frequency-scanning step. The frequency determined during the previous initialization is no longer available. Check that: the IUT goes to the next frequency in the ordered list determined during frequency scanning during first initialization. Final pseudo state: The IUT has finished the downlink frequency-scanning step for re-initialization.

5.3.1.2 Synchronization Acquisition

TP/AT/INC/SA/BV-000	Reference: TS 102 000 [1], clause 10.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has accomplished downlink frequency scanning. Check that: After receiving a certain number of valid downlink frames, the IUT synchronizes, in time and frequency, to the preamble of the downlink frame and successfully decodes the control zone. Final pseudo state: The IUT's PHY layer has synchronized with the received frame's preamble. NOTE: Test strategy could be to send several valid downlink frames and continue to APC identification with a valid APC-ID. If APC identification occurs, provoke a DL sync loss, which will cause the old frequency to be used and synchronization to occur again. Again send several valid downlink frames and continue to APC identification but this time with an invalid APC-ID. The bad APC-ID should cause automatic synchronization leading to a pass verdict. Else wise, a fail or inconclusive verdict.
TP/AT/INC/SA/BV-001	Reference: TS 102 000 [1], figure 42. Initial condition: IUT is the AT. Tester is the AP. The IUT has accomplished the downlink frequency scanning, started the timer T_synchronization, and received a downlink frame with a control zone, which cannot be decoded. Check that: Upon decoding failure and expiration of this timer, the IUT selects the next powerful frequency determined during the frequency scanning. Final pseudo state: The IUT re-starts the synchronization step. NOTE: Test strategy could be to send an incorrectly coded control zone in a frame of the most strongest frequency and a correctly coded frame in the next strongest frequency. Verdict would be pass if Ranging Invitations/Grants are accepted but with a delay corresponding to T_sychronization plus some delta.

5.3.1.3   APC Identification

TP/AT/INC/SI/BV-000	Reference: TS 102 000 [1], clause 10.3.3. Initial condition: IUT is the AT. Tester is the AP. The IUT has accomplished the synchronization acquisition step. Check that: after having received a frame's control zone containing an APC-ID the same as an APC-ID stored in its non-volatile memory, the IUT proceeds with initialization. Final pseudo state: The IUT has accomplished the APC identification step. NOTE: Test strategy could be first send a bad APC and see if the IUT responds to a Ranging Invitation/Grant. If so, it fails. Then turn off the IUT and then send the correct APC-ID to see if the IUT responds to a Ranging Invitation/Grant. If so, it passes. If not, it fails unless some other reason could lead to an Inconclusive verdict.
TP/AT/INC/SI/BV-001	Reference: TS 102 000 [1], clause 10.3.3. Initial condition: IUT is the AT. Tester is the AP. The IUT has accomplished the synchronization acquisition step. Check that: after having received a frame's control zone containing an APC-ID other than an APC-ID stored in its non-volatile memory, the IUT re-starts the initialization process by selecting the next frequency from the ordered list determined during frequency scanning. Final pseudo state: The IUT has re-started the downlink frequency-scanning step. NOTE: A test strategy could be to have an incorrect APC-ID in the control zone of the frame carried on the strongest frequency and the correct ID in the control zone of the frame with the next strongest frequency. If the IUT responds to a Ranging Invitation Grant, then it passes, else wise not. This may also be a test that would confirm selection of the right frequency in a frequency list.

5.3.1.4   UL and DL Parameters Acquisition

TP/AT/INC/PA/BV-000	Reference: TS 102 000 [1], clause 10.3.4. Initial condition: IUT is the AT. Tester is the AP. The IUT has accomplished the APC identification step. Check that: The IUT waits for the periodic GBI message. Final pseudo state: The IUT has completed the parameters acquisition. NOTE: A test strategy could be to check the Phy Mode used in the first Ranging Req received. Or a fail at any time if any of the parameters is not incorporated into the AT's functioning during further tests.

5.3.1.5   Ranging

5.3.1.5.1   Ranging for First Initialization

TP/AT/INC/RA/BV-000	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step. Check that: Upon receiving a Ranging Grant without a valid Ranging Invitation message in the same frame, the IUT sends no message and does not change state. Final pseudo state: The IUT continues to wait for a valid Ranging Invitation message.
TP/AT/INC/RA/BV-001	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step. Check that: Upon receiving repeated Ranging Grants without ever receiving a valid Ranging Invitation message, the IUT sends no message and does not change state. Final pseudo state: The IUT continues to wait for a valid Ranging Invitation message.
TP/AT/INC/RA/BV-002	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step. Check that: Upon receiving a Ranging Invitation message with its MAC address and the corresponding TID but with no Ranging Grant for the IUT in the same frame, the IUT sends no message and does not change state. Final pseudo state: The IUT waits for a valid Ranging Grant to arrive in a following frame.

TP/AT/INC/RA/BV-003	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step. Check that: Upon receiving a repeated Ranging Invitation messages with its MAC address and the corresponding TID but with no Ranging Grant for the IUT in any following frame, the IUT sends no message and does not change state. Final pseudo state: The IUT waits for a valid Ranging Grant to arrive in a following frame.
TP/AT/INC/RA/BV-004	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step. Check that: Upon receiving its first Ranging Invitation message with its MAC address and the corresponding TID and a Ranging Grant for the IUT which are both in the same frame, the IUT sends a valid Ranging Request message in the same frame in the position given by the grant, at the weakest power level, and according to the parameters given in the GBI message. Final pseudo state: The IUT is now using rough power levels to reach the AP.
TP/AT/INC/RA/BV-005	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step and received its first Ranging Invitation message in a previous frame, which had no Ranging Grant. Check that: Upon receiving a Ranging Grant, the IUT sends a valid Ranging Request message in the position given by the grant, at the weakest power level, and according to the parameters given in the GBI message. Final pseudo state: The IUT is now using rough power levels to reach the AP.
TP/AT/INC/RA/BV-006	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step, received its first Ranging Invitation message, and transmitted a valid Ranging Request message. Check that: Upon receiving another Ranging Invitation message which has no Ranging Grant in the same frame, the IUT does not transmit any message and does not change state. Final pseudo state: The IUT is now using rough power levels to reach the AP. The IUT is waiting for a Ranging Grant.
TP/AT/INC/RA/BV-007	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step, received its first Ranging Invitation message, and transmitted a valid Ranging Request message. Check that: Upon receiving repeated successive Ranging Invitation messages each of which has no Ranging Grant in the same frame, the IUT does not transmit any message and does not change state. Final pseudo state: The IUT is now using rough power levels to reach the AP. The IUT is waiting for a Ranging Grant.
TP/AT/INC/RA/BV-008	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step, received its first Ranging Invitation message, and transmitted a valid Ranging Request message. The IUT is now using rough power levels to reach the AP. Check that: Upon receiving only a Ranging Grant in a frame, the IUT sends a valid Ranging Request message in the position given by the grant, at the next rough power level, and according to the parameters given in the GBI message. Final pseudo state: The IUT continues using rough power levels to reach the AP.
TP/AT/INC/RA/BV-009	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step, received its first Ranging Invitation message, and transmitted a valid Ranging Request message. The IUT is now using rough power levels to reach the AP. Check that: Upon receiving repeated successive Ranging Grants without any Ranging Invitation message in any of the frames with the Ranging Grants, the IUT sends a valid Ranging Request message in the position given by each grant, changing to the next rough power level for sending each message, and according to the parameters given in the GBI message. Final pseudo state: The IUT continues using rough power levels to reach the AP.
TP/AT/INC/RA/BV-010	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step, received its first Ranging Invitation message, and transmitted a valid Ranging Request message. The IUT is now using rough power levels to reach the AP. Check that: Upon receiving only a Ranging Continue message in a frame without a Ranging Grant, the IUT transmits no message and does not change state. Final pseudo state: The IUT is now tuning and waiting a Ranging Grant to transmit a Ranging Req message.

TP/AT/INC/RA/BV-011	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step, received its first Ranging Invitation message, and transmitted a valid Ranging Request message. The IUT is now using rough power levels to reach the AP. Check that: Upon receiving a Ranging Continue message followed by a Ranging Grant in the tenth or following frame of the Ranging Continue message, the IUT transmits a Ranging Request message using the power corrections given in the Ranging Continue message in the frame location given by the Ranging Grant. Final pseudo state: The IUT is now tuning.
TP/AT/INC/RA/BV-012	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step, received its first Ranging Invitation message, and transmitted a valid Ranging Request message. The IUT is now using rough power levels to reach the AP. Check that: Upon receiving only a Ranging Success message in a frame without a Ranging Grant, the IUT transmits no message and does not change state. Final pseudo state: The IUT has completed tuning and is now waiting a Ranging Grant to transmit a Ranging Ack message.
TP/AT/INC/RA/BV-013	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step, received its first Ranging Invitation message, and transmitted a valid Ranging Request message. The IUT is now using rough power levels to reach the AP. Check that: Upon receiving a Ranging Success message followed by a Ranging Grant in the tenth or following frame of the Ranging Success message, the IUT transmits a Ranging Ack message with the corrections given in the Ranging Success message. Final pseudo state: The IUT has completed tuning and now waits initialization completion.
TP/AT/INC/RA/BV-014	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed the parameters acquisition step, received its first Ranging Invitation message, transmitted a valid Ranging Request message, and received a Ranging Continue message in a previous frame followed by a Ranging Grant in the tenth or later frame following the Ranging Continue message. Check that: Upon receiving successive Ranging Grants in following frames, the IUT transmits a Ranging Request message at the next rough power level in response to each Ranging Grant. Final pseudo state: The IUT continues tuning.
TP/AT/INC/RA/BV-015	Reference: TS 102 000 [1], clause 10.4. Initial condition: IUT is the AT. Tester is the AP. The IUT is tuning. Check that: Upon receiving only a Ranging Success message in a frame without a Ranging Grant, the IUT transmits no message and does not change state. Final pseudo state: The IUT waits a Ranging Grant to send the Ranging Ack message to complete tuning.
TP/AT/INC/RA/BV-016	Reference: TS 102 000 [1], clause 8.7.4. Initial condition: IUT is the AT. Tester is the AP. The IUT is tuning. Check that: Upon receiving a Ranging Success message followed by a Ranging Grant in the tenth or later frame after the Ranging Success's frame, the IUT transmits a Ranging Ack message with the corrections given in the Ranging Success message. Final pseudo state: The IUT has completed tuning and now waits initialization completion.
TP/AT/INC/RA/BV-017	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT is tuning and has received a Ranging Success message followed by a Ranging Grant message in the tenth or later frame after the Ranging Success's frame. The IUT then transmitted a Ranging Ack . Check that: Upon receiving only a Ranging Grant in a frame, the IUT transmits a Ranging Req message with the next gross power correction. Final pseudo state: The IUT returns to rough power level use.
TP/AT/INC/RA/BV-018	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT is tuning and has received a Ranging Success message followed by a Ranging Grant message in the tenth or later frame after the Ranging Success's frame. The IUT then transmitted a Ranging Ack . Check that: Upon receiving each successive Ranging Grant, the IUT transmits a Ranging Req message with the next gross power correction. Final pseudo state: The IUT returns to rough power level use.
TP/AT/INC/RA/BV-019	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT is tuning and has received a Ranging Success message followed by a Ranging Grant message in the tenth or later frame after the Ranging Success's frame. The IUT then transmitted a Ranging Ack . Check that: Upon receiving only a Ranging Continue message in a frame followed by a Ranging Grant in the tenth or following frame, the IUT transmits a Ranging Request message with the corrections given in the Ranging Continue message. Final pseudo state: The IUT continues tuning.

TP/AT/INC/RA/BV-020	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT is tuning and has received a Ranging Success message followed by a Ranging Grant message in the tenth or later frame after the Ranging Success's frame. The IUT then transmitted a Ranging Ack . Check that: Upon receiving only a Ranging Grant in a frame, the IUT transmits a Ranging Request message with the next gross power correction. Final pseudo state: The IUT returns to rough power level use.
TP/AT/INC/RA/BV-021	Reference: TS 102 000 [1], clause E.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed tuning. Check that: The IUT transmits no message and remains in the same state for the duration of timer T_RangingAck. Final pseudo state: The IUT has completed initialization
TP/AT/INC/RA/BV-022	Reference: TS 102 000 [1], clause 10.4. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed tuning and has started timer T_RangingAck. Check that: Upon receiving only a Ranging Grant while the timer is running, the IUT transmits a Ranging Request message at the next rough power level. Final pseudo state: The IUT has returned to using rough power levels to reach the AT.
TP/AT/INC/RA/BV-023	Reference: TS 102 000 [1], clause 10.4. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed tuning and has started timer T_RangingAck. Check that: Upon receiving a Ranging Success message without a Ranging Grant in the same frame while the timer is running, the IUT transmits no message. Final pseudo state: The IUT is waiting a Ranging Grant to send a Ranging Ack message.
TP/AT/INC/RA/BV-024	Reference: TS 102 000 [1], clause 10.4. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed tuning, started timer T_RangingAck, and received a Ranging Success message. Check that: Upon receiving only a Ranging Grant in the tenth or following frame, the IUT transmits a Ranging Ack message with the power corrections in the Ranging Success message. Final pseudo state: The IUT has completed tuning and now waits initialization completion.
TP/AT/INC/RA/BV-025	Reference: TS 102 000 [1], clause 10.4. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed tuning and has started timer T_RangingAck. Check that: Upon receiving a Ranging Continue message without a Ranging Grant in the same frame while the timer is running, the IUT transmits no message. Final pseudo state: The IUT is waiting a Ranging Grant to send a Ranging Req message.
TP/AT/INC/RA/BV-026	Reference: TS 102 000 [1], clause 10.4. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed tuning, started timer T_RangingAck, and received a Ranging Continue message. Check that: Upon receiving only a Ranging Grant in the tenth or following frame, the IUT transmits a Ranging Req message with the power corrections in the Ranging Continue message. Final pseudo state: The IUT continues tuning.

5.3.1.6   Capabilities Negotiation

5.3.1.6.1   Physical Capabilities Negotiation

TP/AT/INC/PN/BV-000	Reference: TS 102 000 [1], clause 10.5.1. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed ranging. Check that: Upon receiving a Physical Capabilities Request message, the IUT transmits a valid Physical Capabilities Information message. Final pseudo state: The IUT continues Physical Capabilities Negotiation.
TP/AT/INC/PN/BV-001	Reference: TS 102 000 [1], clause 10.5.1. Initial condition: IUT is the AT. Tester is the AP. The IUT is in Physical Capabilities Negotiation and has transmitted a valid Physical Capabilities Information message. Check that: After receiving a Physical Capabilities Confirmation message, the IUT transmits no message and remains in the same state for the duration of timer T_PhyCapabilitiesCnf. Final pseudo state: The IUT has completed Physical Capabilities Negotiation.

TP/AT/INC/PN/BV-002	Reference: TS 102 000 [1], clause 10.5.1. Initial condition: IUT is the AT. Tester is the AP. The IUT is in Physical Capabilities Negotiation and has transmitted a valid Physical Capabilities Information message. Check that: After receiving another Physical Capabilities Request message, the IUT transmits another valid Physical Capabilities Information message. Final pseudo state: The IUT continues Physical Capabilities Negotiation.
TP/AT/INC/PN/BV-003	Reference: TS 102 000 [1], clause 10.5.1. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed initialization. The IUT has received a Physical Capabilities Request message and transmitted a valid Physical Capabilities Information message. Check that: After the expiration of timer T_PhyCapabilitiesInfo, the IUT retransmits a valid Physical Capabilities Information message. Final pseudo state: The IUT continues Physical Capabilities Negotiation.
TP/AT/INC/PN/BV-004	Reference: TS 102 000 [1], clause 10.5.1. Initial condition: IUT is the AT. Tester is the AP. The IUT is in Physical Capabilities Negotiation, has transmitted a valid Physical Capabilities Information message, received a Physical Capabilities Confirmation message, and started timer T_PhyCapabilitiesCnf. Check that: After receiving another Physical Capabilities Confirmation message before the timer expires, the IUT transmits no message and remains in the same state for the duration of timer T_PhyCapabilitiesCnf. Final pseudo state: The IUT has completed Physical Capabilities Negotiation.
TP/AT/INC/PN/BV-005	Reference: TS 102 000 [1], clause 10.5.1. Initial condition: IUT is the AT. Tester is the AP. The IUT is in Physical Capabilities Negotiation, has transmitted a valid Physical Capabilities Information message, received a Physical Capabilities Confirmation message, and started timer T_PhyCapabilitiesCnf. Check that: Each time receiving another Physical Capabilities Confirmation message before the timer expires, the IUT transmits no message and restarts the timer T_PhyCapabilitiesCnf. Final pseudo state: The IUT continues Physical Capabilities Negotiation.

5.3.1.6.2   Other Capabilities Negotiation

TP/AT/INC/OC/BV-000	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed Authentication. Check that: Upon receiving an Other Capabilities Request message, the IUT transmits a valid Other Capabilities Information message. Final pseudo state: The IUT continues Other Capabilities Negotiation.
TP/AT/INC/OC/BV-001	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AT. Tester is the AP. The IUT is in Other Capabilities Negotiation and has transmitted a valid Other Capabilities Information message. Check that: After receiving an Other Capabilities Confirmation message, the IUT transmits no message and remains in the same state for the duration of timer T_OtherCapabilitiesCnf. Final pseudo state: The IUT has completed Physical Capabilities Negotiation.
TP/AT/INC/OC/BV-002	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AT. Tester is the AP. The IUT is in Other Capabilities Negotiation and has transmitted a valid Other Capabilities Information message. Check that: After receiving another Other Capabilities Request message, the IUT transmits another valid Other Capabilities Information message. Final pseudo state: The IUT continues Other Capabilities Negotiation.
TP/AT/INC/OC/BV-003	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed initialization. The IUT has received an Other Capabilities Request message and transmitted a valid Other Capabilities Information message. Check that: After the expiration of timer T_ OtherCapabilitiesInfo, the IUT retransmits a valid Other Capabilities Information message. Final pseudo state: The IUT continues Other Capabilities Negotiation.
TP/AT/INC/OC/BV-004	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AT. Tester is the AP. The IUT is in Other Capabilities Negotiation, has transmitted a valid Other Capabilities Information message, received an Other Capabilities Confirmation message, and started timer T_OtherCapabilitiesCnf. Check that: After receiving another Other Capabilities Confirmation message before the timer expires, the IUT transmits no message, restarts T_OtherCapabilitiesCnf and remains in the same state for the duration of timer T_ OtherCapabilitiesCnf. Final pseudo state: The IUT has completed Other Capabilities Negotiation.

TP/AT/INC/OC/BV-005	Reference: TS 102 000 [1], clause 10.5.3. Initial condition: IUT is the AT. Tester is the AP. The IUT is in Other Capabilities Negotiation, has transmitted a valid Other Capabilities Information message, received an Other Capabilities Confirmation message, and started timer T_OtherCapabilitiesCnf. Check that: Each time receiving another Other Capabilities Confirmation message before the timer expires, the IUT transmits no message and restarts the timer T_OtherCapabilitiesCnf and remains in the same state. Final pseudo state: The IUT continues Other Capabilities Negotiation.

5.3.2   Radio Resource Control

5.3.2.1   Link Supervision

TP/AT/RRC/LS/BV-000	Reference: TS 102 000 [1], clause 11.2.2. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an RlcRangingInvitation message and gives ranging grants to the IUT. The IUT has traffic information to transmit to the tester. Check that: The IUT deletes all connection and security settings and starts the ranging procedure.
TP/AT/RRC/LS/BV-001	Reference: TS 102 000 [1], clause 11.2.2. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester gives ranging grants to the IUT without transmitting an RlcRangingInvitation message. Check that: The IUT ignores the ranging grants.
TP/AT/RRC/LS/BV-002	Reference: TS 102 000 [1], clause 11.2.2. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an RlcRangingInvitation message and gives normal grants to the IUT. Check that: The IUT ignores the normal grants.
TP/AT/RRC/LS/BV-003	Reference: TS 102 000 [1], clause 11.2.2. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an RlcRangingInvitation message and gives ranging grants to the IUT. The IUT has started the ranging procedure. The tester transmits a second RlcRangingInvitation message. Check that: The IUT ignores the second RlcRangingInvitation message.
TP/AT/RRC/LS/BV-004	Reference: TS 102 000 [1], clause 11.2.3. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an RlcInitializationCmd message with InitialisationCmd equal to rejectedFromNetwork. Check that: The IUT stops all transmissions and receptions and tries not to synchronize to the network again.
TP/AT/RRC/LS/BV-005	Reference: TS 102 000 [1], clause 11.2.3. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an RlcInitializationCmd message with InitialisationCmd equal to rejectedFromChannel. Check that: The IUT stops all transmissions and receptions and tries not to synchronize to the same RF channel again.
TP/AT/RRC/LS/BV-006	Reference: TS 102 000 [1], clause 11.2.3. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an RlcInitializationCmd message with InitialisationCmd equal to firstInitialization. Check that: The IUT stops all transmissions and performs a first initialization procedure on the same carrier, started with RlcRangingInvitation message.
TP/AT/RRC/LS/BV-007	Reference: TS 102 000 [1], clause 11.2.3. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an RlcInitializationCmd message with InitialisationCmd equal to transmissionStop. Check that: The IUT stops all transmissions and continues to receive and waits for further commands.
TP/AT/RRC/LS/BV-008	Reference: TS 102 000 [1], clause 11.2.3. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an RlcInitializationCmd message with InitialisationCmd equal to transmissionReStart. Check that: The IUT replies to all grants.

5.3.2.2   Change of PHY Mode, ATPC and ATTC

TP/AT/RRC/PT/BV-000	Reference: TS 102 000 [1], clause 11.3.2. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an uplink grant. The IUT has no traffic or management information to transmit to the tester. Check that: The IUT transmits a MAC dummy PDU.
TP/AT/RRC/PT/BV-001	Reference: TS 102 000 [1], clause 11.3.3. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. Check that: The IUT transmits an RlcMeasurementReportData message after the expiration of the period given in PeriodReport of the DL GBI message.
TP/AT/RRC/PT/BV-002	Reference: TS 102 000 [1], clause 11.3.3. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an RlcMeasurementReportCriterium message with a valid PeriodReport parameter. The PeriodReport has expired. Check that: The IUT transmits an RlcMeasurementReportData message after the expiration of the period given in PeriodReport of the previously received RlcMeasurementReportCriterium message.
TP/AT/RRC/PT/BV-003	Reference: TS 102 000 [1], clause 11.3.3. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. Check that: The IUT transmits an RlcMeasurementReportData message when a certain C/(N+I) threshold is crossed.
TP/AT/RRC/PT/BV-004	Reference: TS 102 000 [1], clause 11.3.3. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an RlcMeasurementReportCriterium message with a valid PeriodReport parameter stopping the measurement. The Previous PeriodReport has expired. Check that: The IUT does not transmit an RlcMeasurementReportData message.
TP/AT/RRC/PT/BV-005	Reference: TS 102 000 [1], clause 11.3.3. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The tester has transmitted an RlcMeasurementReportCriterium message with a valid PeriodReport parameter restarting the measurement. The PeriodReport has expired. Check that: The IUT transmits an RlcMeasurementReportData message after the expiration of the period given in PeriodReport of the previously received RlcMeasurementReportCriterium message.
TP/AT/RRC/PT/BV-006	Reference: TS 102 000 [1], clause 11.3.4. Initial condition: AT is the IUT. The tester is the AP. The IUT has initialized and connected its peer. The tester has transmitted an RlcDownlinkPhyModeChange message. Check that: The IUT transmits an RlcDownlinkPhyModeChangeAck message.
TP/AT/RRC/PT/BV-007	Reference: TS 102 000 [1], clause 11.3.4. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. Conditions exist that cause AT to inform AP to allocate another PHY mode. Check that: The IUT transmits an RlcMeasurementReportData message with valid new DownlinkPhyMode wanted.
TP/AT/RRC/PT/BV-008	Reference: TS 102 000 [1], clause 11.3.4. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. Conditions exist that cause AT to inform AP to allocate another PHY mode. The IUT has transmited an RlcMeasurementReportData message with valid new DownlinkPhyMode wanted. Check that: The IUT retransmits an RlcMeasurementReportData message if the timer T_MeasurementReportData expires.
TP/AT/RRC/PT/BV-009	Reference: TS 102 000 [1], clause 11.3.5. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The IUT has received an RlcUplinkCorrection message with the request for a report parameter. Check that: The IUT transmits an RlcMeasurementReportData message.

5.3.2.3   Load Levelling (Inter-Carrier Handover)

TP/AT/RRC/LL/BV-000	Reference: TS 102 000 [1], clause 11.6. Initial condition: AT is the IUT. The tester is the AP. The IUT has been initialized and connected with its peer. The IUT has received an RlcHandoverCmd message. Check that: The IUT transmits an RlcHandoverAck message.

5.3.3   Security Control

5.3.3.1   Initial Authorization

TP/AT/SEC/IA/BV-000	Reference: TS 102 000 [1], clause 12.2.1.1. Initial condition: IUT is the AT. Tester is the AP. The IUT has completed physical capabilities negotiation and has received a valid RlcAuthCmd message from the Tester. Check that: the IUT sends a valid RlcAuthManufacturerInfo message to the Tester.
TP/AT/SEC/IA/BV-001	Reference: TS 102 000 [1], clause 12.2.1.1. Initial condition: IUT is the AT. Tester is the AP. The IUT has sent a valid RlcAuthManufacturerInfo message to the Tester. Check that: the IUT sends a valid RlcAuthReq message to the Tester.
TP/AT/SEC/IA/BV-002	Reference: TS 102 000 [1], clause 12.2.1.1. Initial condition: IUT is the AT. Tester is the AP. The IUT has sent a valid RlcAuthReq message to the Tester. Check that: if the timer T_AuthReq expires without receiving either a valid RlcAuthReply message or a valid RlcAuthReject message from the Tester, the IUT resends the RlcAuthManufacturerInfo and RlcAuthReq messages to the Tester.
TP/AT/SEC/IA/BV-003	Reference: TS 102 000 [1], clause 12.2.1.1. Initial condition: IUT is the AT. Tester is the AP. The IUT has sent a valid RlcAuthReq message to the Tester and has received a valid RlcAuthReject message from the Tester. Check that: if the error code in the received RlcAuthReject message does not indicate a permanent rejection, the IUT begins a new Initial Authorization.

5.3.3.2   Reauthorization

TP/AT/SEC/RE/BV-000	Reference: TS 102 000 [1], clause 12.2.1.2. Initial condition: IUT is the AT. Tester is the AP. The IUT is initialized. Check that: The IUT periodically refreshes its AK by re-issuing an RlcAuthReq message to the Tester.
TP/AT/SEC/RE/BV-001	Reference: TS 102 000 [1], clause 12.2.1.2. Initial condition: IUT is the AT. Tester is the AP. The IUT is initialized and has sent a valid RlcAuthReq message to refresh its AK. Check that: if the timer T_AuthReq expires without receiving a valid RlcAuthReply message from the Tester, the IUT resends the RlcAuthReq message.

5.3.3.3   Key Requests

TP/AT/SEC/KR/BV-000	Reference: TS 102 000 [1], clause 12.2.1.3. Initial condition: IUT is the AT. Tester is the AP. The IUT is initialized, has sent a valid RlcAuthReq message and has received a valid RlcAuthReply message identifying the SAID, and TEKs have already been established. Check that: the IUT periodically sends RlcTekReq messages to the Tester, requesting keying material for the SAID.

5.3.3.4 Traffic Encryption Keys Usage

TP/AT/SEC/KU/BV-000	Reference: TS 102 000 [1], clause 12.3.2. Initial condition: IUT is the AT. Tester is the AP. The IUT is initialized. The Tester is holding two active AKs for the IUT. Check that: The IUT sends a valid RlcAuthReq message to the Tester before the expiry of the lifetime of the current AK.
TP/AT/SEC/KU/BV-001	Reference: TS 102 000 [1], clause 12.3.3. Initial condition: IUT is the AT. Tester is the AP. The IUT is initialized. A U-plane is established between the IUT and the Tester. Single-DES is active. Check that: The IUT sends correctly encrypted unicast MAC data PDUs.
TP/AT/SEC/KU/BV-002	Reference: TS 102 000 [1], clause 12.3.3. Initial condition: IUT is the AT. Tester is the AP. The IUT is initialized. A U-plane is established between the IUT and the Tester. Optional Triple-DES is active. Check that: The IUT sends correctly encrypted unicast MAC data PDUs.

5.3.4 Connection Management

5.3.4.1 Connection Establishment

5.3.4.1.1 AP Initiated Connection Establishment

TP/AT/COC/CE/BV-000	Reference: TS 102 000 [1], clause 13.4.2.2. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized. Check that: Upon receiving the Connection Addition Setup message, the IUT replies to the LT with a Connection Addition Ack message. Final pseudo state: The IUT is establishing a connection.
TP/AT/COC/CE/BV-001	Reference: TS 102 000 [1], clause 13.4.2.2. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized and has received a Connection Addition Setup message and then sent an Connection Addition Ack message and started T_RlcConnectionAdditionAck. Check that: Upon expiry of T_RlcConnectionAdditionAck and if no message has been received during this timer's duration, the IUT considers the connection established. Final pseudo state: The IUT is operational and the connection is established.
TP/AT/COC/CE/BV-002	Reference: TS 102 000 [1], clause 13.4.2.2. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized has received a Connection Addition Setup message, and then transmitted a Connection Addition Ack message and started T_RlcConnectionAdditionAck. Check that: Upon receiving another Connection Addition Setup message within this timer's duration, the IUT transmits another valid Connection Addition Ack message. Final pseudo state: The IUT is establishing a connection.

TP/AT/COC/CE/BV-003	Reference: TS 102 000 [1], clause 13.4.2.2.
	Initial condition: IUT is the AT. Tester is the AP.
	IUT is initialized, has received a Connection Addition Setup message, then transmitted a Connection Addition Ack message and started T_RlcConnectionAdditionAck.
	Check that: Each time the IUT receives a Connection Addition Setup message during this timer's duration, the IUT:
	  1) Transmits another valid Connection Addition Ack message.
	  2) And restarts T_RlcConnectionAdditionAck upon sending this Connection Addition Ack message.
	NOTE: The number of these repetitions is unlimited in the specification.
	Final pseudo state: The IUT is establishing a connection.

5.3.4.1.2 AT Initiated Connection Establishment

TP/AT/COC/CE/BV-004	Reference: TS 102 000 [1], clause 13.4.2.1. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized. Check that: To establish a connection, the IUT sends a valid Connection Addition Init message. Final pseudo state: The IUT is establishing a connection.
TP/AT/COC/CE/BV-005	Reference: TS 102 000 [1], clause 13.4.2.1. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized and has sent a valid Connection Addition Init message. Check that: Upon receiving a valid Connection Addition Setup message, the IUT transmits to the LT a valid Connection Addition Ack message. Final pseudo state: The IUT is establishing a connection.
TP/AT/COC/CE/BV-006	Reference: TS 102 000 [1], clause 13.4.2.1. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized, has sent a valid Connection Addition Init message, then received a valid Connection Addition Setup message, and then transmitted a valid Connection Addition Ack message and started T_RlcConnectionAdditionAck. Check that: Upon this timer's expiry and the IUT having received no message during this timer's duration, the IUT considers the connection established. Final pseudo state: The IUT is operational and the connection is established.
TP/AT/COC/CE/BV-007	Reference: TS 102 000 [1], clause 13.4.2.1. Initial condition: IUT is the AT. Tester is the AP. The IUT is initialized. IUT is initialized, has sent a valid Connection Addition Init message and started T_RlcConnectionAdditionInit. Check that: Upon this timer's expiry and the IUT having received no valid Connection Addition Setup message with this timer's duration, the IUT retransmits the Connection Addition Init message. Final pseudo state: The IUT is establishing a connection.

TP/AT/COC/CE/BV-008	Reference: TS 102 000 [1], clause 13.4.2.1.
	Initial condition: IUT is the AT. Tester is the AP.
	The IUT is initialized and has sent a valid Connection Addition Init message.
	Check that: Each time T_RlcConnectionAddInit expires without the reception of a valid Connection Addition Setup message within the timer's duration, the IUT:
	  1) Retransmits the Connection Addition Init message;
	  2) And restarts T_RlcConnectionAddInit upon sending this message.
	Final pseudo state: The IUT is establishing a connection.
	NOTE: The number of these repetitions is unlimited in the specification.

TP/AT/COC/CE/BV-009	Reference: TS 102 000 [1], clause 13.4.2.1. Initial condition: IUT is the AT. Tester is the AP. The IUT is initialized, has sent a valid Connection Addition Init message and received a valid Connection Addition Setup message to which it transmits a valid Connection Addition Ack message and starts T_ RlcConnectionAdditionAck. Check that: After receiving a valid Connection Addition Setup message, the IUT transmits a valid Connection Addition Ack message. Final pseudo state: The IUT is establishing a connection.

TP/AT/COC/CE/BV-010	Reference: TS 102 000 [1], clause 13.4.2.1.
	Initial condition: IUT is the AT. Tester is the AP.
	The IUT is initialized, has sent a valid Connection Addition Init message and received a valid Connection Addition Setup message to which it transmits a valid Connection Addition Ack message and starts T_ RlcConnectionAdditionAck.
	Check that: Each time upon receiving a valid Connection Addition Setup message, the IUT:
	  1) Transmits a Connection Addition Ack message.
	  2) And restarts T_RlcConnectionAdditionAck upon sending this message.
	Final pseudo state: The IUT is establishing a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur.

5.3.4.2   Change of Established Connection

5.3.4.2.1   AP Initiated Connection Change

TP/AT/COC/CM/BV-000	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized and a connection is established with the tester. Check that: Upon receiving the Connection Change Setup message, the IUT replies to the LT with a Connection Change Ack message. Final pseudo state: The IUT is modifying a connection.
TP/AT/COC/CM/BV-001	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized and a connection is established with the tester. IUT has received a Connection Change Setup message, replied to it with a Connection Change Ack, and started T_RlcConnectionChangeAck. Check that: Upon expiry of T_RlcConnectionChangeAck and if no message has been received during this timer's duration, the IUT considers the connection modified. Final pseudo state: The IUT is operational and the connection continues as modified.
TP/AT/COC/CM/BV-002	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized and a connection is established with the tester. IUT has received a Connection Change Setup message, and then transmitted a Connection Change Ack message and started T_RlcConnectionChangeAck. Check that: Upon receiving another Connection Change Setup message within this timer's duration, the IUT transmits another valid Connection Change Ack message. Final pseudo state: The IUT is modifying a connection.

TP/AT/COC/CM/BV-003	Reference: TS 102 000 [1], clause 13.4.3.
	Initial condition: IUT is the AT. Tester is the AP.
	IUT is initialized and a connection is established with the tester.
	IUT has received a Connection Change Setup message, then transmitted a Connection Change Ack message and started T_RlcConnectionChangeAck.
	Check that: Each time the IUT receives a Connection Change Setup message during this timer's duration, the IUT:
	  1) Transmits another valid Connection Change Ack message.
	  2) Restarts T_RlcConnectionChangeAck when sending this Connection Change Ack message.
	Final pseudo state: The IUT is modifying a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur.

5.3.4.2.2   AT Initiated Connection Change

TP/AT/COC/CM/BV-004	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized and a connection is established with the tester. Check that: To modify a connection, the IUT sends a valid Connection Change Init message. Final pseudo state: The IUT is modifying a connection.
TP/AT/COC/CM/BV-005	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized, a connection is established with the tester, and the IUT has sent a valid Connection Change Init message. Check that: Upon receiving a valid Connection Change Setup message, the IUT replies to the LT with a valid Connection Change Ack message. Final pseudo state: The IUT is modifying a connection.
TP/AT/COC/CM/BV-006	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized; a connection is established with the tester; and the IUT has sent a valid Connection Change Init message and then received a valid Connection Change Setup message, and then transmitted a valid Connection Change Ack message and started T_RlcConnectionChangeAck. Check that: Upon this timer's expiry and the IUT having received no message during this timer's duration, the IUT considers the connection modified. Final pseudo state: The IUT is operational and the connection continues as modified.

TP/AT/COC/CM/BV-007	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized and a connection is established with the tester message and started T_RlcConnectionChangeInit. Check that: Upon this timer's expiry and the IUT having received no valid Connection Change Setup message with this timer's duration, the IUT retransmits the Connection Change Init message. Final pseudo state: The IUT is modifying a connection.

TP/AT/COC/CM/BV-008	Reference: TS 102 000 [1], clause 13.4.3.
	Initial condition: IUT is the AT. Tester is the AP.
	The IUT is initialized, a connection is established with the tester, and the IUT has sent a valid Connection Change Init message.
	Check that: Each time T_RlcConnectionChangeInit expires without the reception of a valid Connection Change Setup message within the timer's duration, the IUT:
	  1) Retransmits the Connection Change Init message.
	  2) And restarts T_RlcConnectionChangeInit upon sending this message.
	Final pseudo state: The IUT is modifying a connection.
	NOTE: The number of these repetitions is unlimited in the specification.

TP/AT/COC/CM/BV-009	Reference: TS 102 000 [1], clause 13.4.3. Initial condition: IUT is the AT. Tester is the AP. The IUT is initialized, a connection is established with the tester, and the IUT has sent a valid Connection Change Init message and received a valid Connection Change Setup message to which it transmits a valid Connection Change Ack message and starts T_RlcConnectionChangeAck. Check that: After receiving a valid Connection Change Setup message, the IUT transmits a valid Connection Change Ack message. Final pseudo state: The IUT is modifying a connection.

TP/AT/COC/CM/BV-010	Reference: TS 102 000 [1], clause 13.4.3.
	Initial condition: IUT is the AT. Tester is the AP.
	The IUT is initialized, a connection is established with the tester, and the IUT has sent a valid Connection Change Init message and received a valid Connection Change Setup message to which it transmitted a valid Connection Change Ack message and started T_RlcConnectionChangeAck.
	Check that: Each time upon receiving a valid Connection Change Setup message, the IUT:
	  1) Transmits a Connection Change Ack message.
	  2) And restarts T_RlcConnectionChangeAck upon sending this message.
	Final pseudo state: The IUT is modifying a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur.

5.3.4.3   Connection Release

5.3.4.3.1   AP Initiated Connection Release

TP/AT/COC/CT/BV-000	Reference: TS 102 000 [1], clause 13.4.4. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized and a connection is established with the Tester. Check that: Upon receiving a valid Connection Deletion Init message, the IUT replies to the LT with a Connection Deletion Ack message. Final pseudo state: The IUT is releasing a connection.
TP/AT/COC/CT/BV-001	Reference: TS 102 000 [1], clause 13.4.4. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized, a connection is established with the Tester, and the IUT has received a valid Connection Deletion Init message and then sent a valid Connection Deletion Ack message. Check that: Upon T_RlcConnectionDeletionAck expiry and if no message has been received during this timer's duration, the IUT considers the connection released. Final pseudo state: The IUT is operational and the connection no longer exists.
TP/AT/COC/CT/BV-002	Reference: TS 102 000 [1], clause 13.4.4. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized; a connection is established with the Tester; and the IUT has received a valid Connection Deletion Init message, then sent a valid Connection Deletion Ack message and started T_RlcConnectionDeletionAck. Check that: Upon receiving a Connection Deletion Init message, the IUT transmits a valid Connection Deletion Ack message. Final pseudo state: The IUT is releasing a connection.

TP/AT/COC/CT/BV-003	Reference: TS 102 000 [1], clause 13.4.4.
	Initial condition: IUT is the AT. Tester is the AP.
	IUT is initialized; a connection is established with the Tester; and the IUT has received a valid Connection Deletion Init message, then sent a valid Connection Deletion Ack message and started T_ RlcConnectionDeletionAck.
	Check that: Each time, upon receiving a Connection Deletion Init message, the IUT:
	   1) Transmits a valid Connection Deletion Ack message.
	   2) Restarts T_RlcConnectionDeletionAck upon sending this message.
	Final pseudo state: The IUT is releasing a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur.

5.3.4.3.2   AT Initiated Connection Release

TP/AT/COC/CT/BV-004	Reference: TS 102 000 [1], clause 13.4.4. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized and a connection is established with the Tester. Check that: To release a connection, the IUT sends a relevant Connection Deletion Init message. Final pseudo state: The IUT is releasing a connection.

TP/AT/COC/CT/BV-005	Reference: TS 102 000 [1], clause 13.4.4.
	Initial condition: IUT is the AT. Tester is the AP.
	IUT is initialized, a connection is established with the Tester, and IUT has transmitted a valid Connection Deletion Init message.
	Check that: Upon receiving a valid Connection Deletion Ack message, the IUT:
	   1) Starts T_RlcConnectionDeletionAck.
	   2) Considers the connection released after T_RlcConnectionDeletionAck expires.
	Final pseudo state: The IUT is operational and the connection no longer exists.

TP/AT/COC/CT/BV-006	Reference: TS 102 000 [1], clause 13.4.4. Initial condition: IUT is the AT. Tester is the AP. IUT is initialized, has a valid connection with the Tester, has transmitted a Connection Deletion Init message, and started T_RlcConnectionDeletionInit. Check that: After T_ RlcConnectionDeletionInit expires without receiving a Connection Deletion Ack message; the IUT retransmits another valid Connection Deletion Init message. Final pseudo state: The IUT is releasing a connection.

TP/AT/COC/CT/BV-007	Reference: TS 102 000 [1], clause 13.4.4.
	Initial condition: IUT is the AT. Tester is the AP.
	IUT is initialized, has a valid connection with the Tester, has transmitted a Connection Deletion Init message, and started T_ RlcConnectionDeletionInit.
	Check that: Each time T_ RlcConnectionDeletionInit expires without the IUT having received a Connection Deletion Init message, the IUT:
	   1) Retransmits another valid Connection Deletion Init message.
	   2) And restarts T_ RlcConnectionDeletionInit upon sending this message.
	Final pseudo state: The IUT is releasing a connection.
	NOTE: The specification does not limit the number of times that this cycling can occur.

History

Document history		
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