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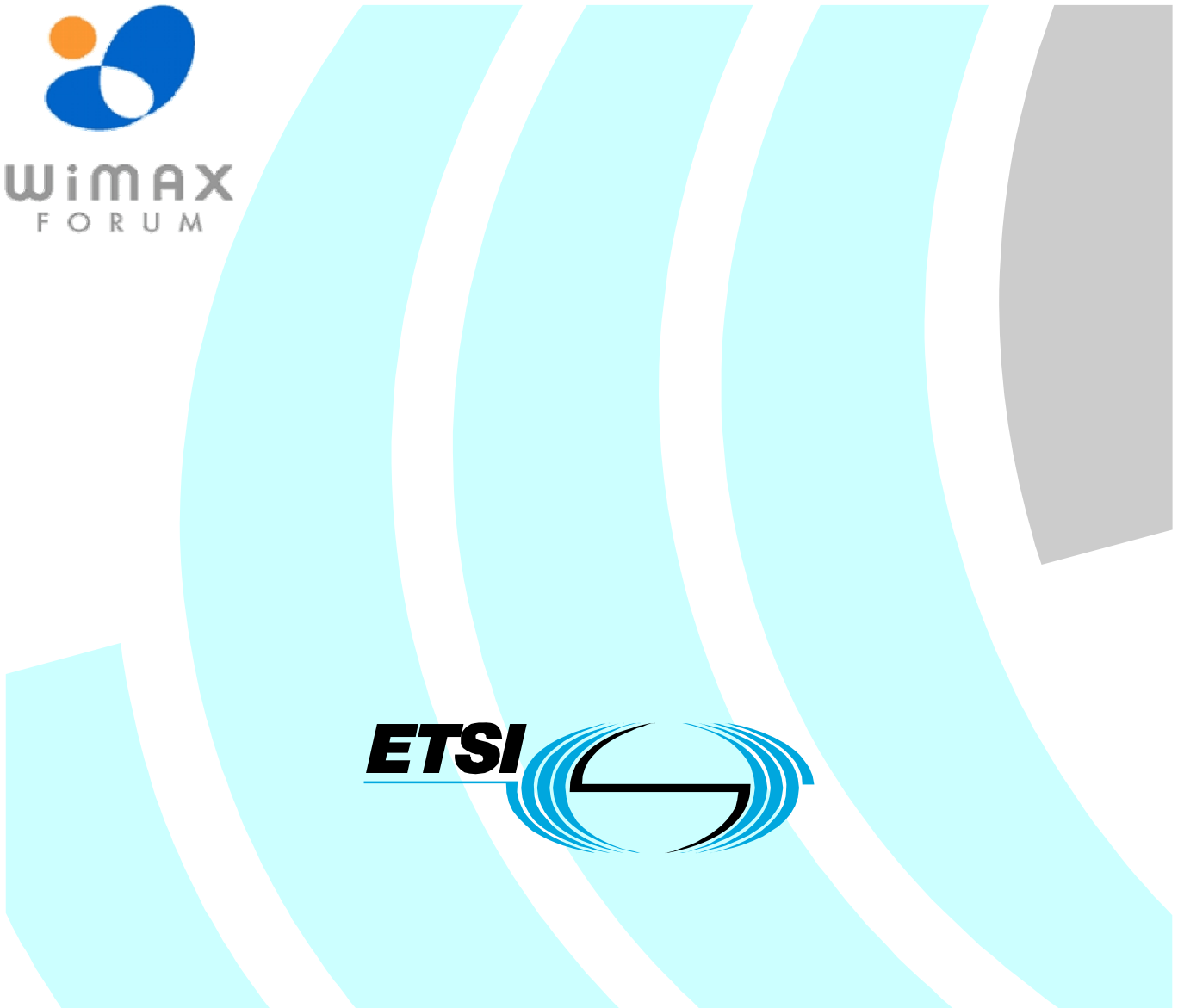
Technical Specification

Broadband Radio Access Networks (BRAN);
HiperMAN;
Conformance Testing for WiMAX/HiperMAN 1.3.1;
Part 2: Test Suite Structure and Test Purposes (TSS&TP)



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Contents

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Foreword

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

The present document is part 2 of a multi-part deliverable covering Broadband Radio Access Networks (BRAN); HiperMAN; Conformance Testing for WiMAX/HiperMAN 1.3.1, as identified below:

Part 1: "Protocol Implementation Conformance Statement (PICS) proforma";

Part 2: "Test Suite Structure and Test Purposes (TSS&TP)";

Part 3: "Abstract Test Suite (ATS)".

1 Scope

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

The objective of the present document is to provide a basis for conformance tests for HiperMAN equipment giving a high probability of air interface inter-operability between different manufacturers' HiperMAN equipment.

The ISO standard for the methodology of conformance testing (ISO/IEC 9646-1 [5] and ISO/IEC 9646-2 [6]) as well as the ETSI rules for conformance testing (ETS 300 406 [4]) are used as a basis for the test methodology.

2 References

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

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2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

[1] ETSI TS 102 178 (V1.3.1): "Broadband Radio Access Networks (BRAN); HiperMAN; Data Link Control (DLC) Layer".

[2] IEEE P802.16 (2004): "Standard for Local and Metropolitan Area Networks - Part 16: Air Interface for Fixed Broadband Wireless Access Systems".

[3] IEEE 802.16e-2005 and IEEE 802.16-2004/Cor 1-2005: "IEEE Standard for Local and Metropolitan Area Networks - Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems. Amendment for Physical and Medium Access Control Layers for Combined Fixed and Mobile Operation in Licensed Bands".

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

[5] ISO/IEC 9646-1 (1994): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts". (See also ITU-T Recommendation X.290 (1991)).

[6] ISO/IEC 9646-2 (1994): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification". (See also ITU-T Recommendation X.291 (1991)).

[7] ISO/IEC 9646-6 (1994): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".

[8] ISO/IEC 9646-7 (1995): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

[9] IEEE 802.3: "IEEE Standard for Information technology-Telecommunications and information exchange between systems-Local and metropolitan area networks-Specific requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications".

[10] ISO 3166: "Codes for the representation of names of countries and their subdivisions".

[11] ETSI TS 102 545-1: "Broadband Radio Access Networks (BRAN); HiperMAN; Conformance Testing for WiMAX/HiperMAN 1.3.1; Part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[12] IEEE 802.16-Rev2/D7 (October 2008): "Standard for Local and metropolitan area networks – Part 16: Air Interface for Broadband Wireless Access Systems".

2.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area**.** For non-specific references, the latest version of the referenced document (including any amendments) applies.

Not applicable.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ISO/IEC 9646-7 [8], TS 102 178 [1], IEEE P802.16-2004 [2] and IEEE 802.16e-2005 [3] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ISO/IEC 9646-1 [5], ISO/IEC 9646-6 [7], ISO/IEC 9646-7 [8], TS 102 178 [1], IEEE P802.16-2004 [2], IEEE 802.16e-2005 [3] and the following apply:

AAS	Adaptive Antenna System
ACK	ACKnowledgment
AES	Advanced Encryption Standard
AK	Authorization Key
ARQ	Automatic Repeat reQuest
ATM	Asynchronous Transfer Mode
AUTH	AUTHentication/AUTHorization
BE	Best Effort
BI	Invalid Behaviour
BO	inOpportune Behaviour
BPSK	Binary Phase Shift Keying
BS	Base Station
BSN	Block Sequence Number
BV	Valid Behaviour
BW	BandWidth
CBC	Cipher Block Chaining
CC	Chase Combining
CD	Channel Descriptors

CDC	Channel Descriptor Change
CDM	Channel Descriptors and Maps
CDS	Classifier DSx Signalling
CERT	Certificates
CID	Connection IDentifier
CINR	Carrier to noise and INterference Ratio
CRC	Cyclic Redundancy Check
CS	Convergence Sublayer
DBPC	Downlink Burst Profile Change Request
DCD	Downlink Channel Descriptor
DEC	Decryption
DES	Data Encryption Standard
DIUC	Downlink Interval Usage Code
DL	DownLink
DLC	Data Link Control layer
DS	Dynamic Services
DSA	Dynamic Service Addition
DSC	Dynamic Service Change
DSD	Dynamic Service Deletion
DSx	Dynamic Service addition, change or deletion
ECB	Electronic Control Block
EKS	Encryption and Key Scheduling
ENC	Encryption
ENET	Ethernet
FC	Frame Count
FDD	Frequency Division Duplexing
FPC	Fast Power Control
FRAG	Fragmentation
FSM	Finite State Machine
FWA	Fixed Wireless Access
HARQ	Hybrid Automatic Repeat Request
HMAC	Hashed Message Authentication Code
HT	Header Type
IE	Information Element
INI	Registration, IP Connectivity, and Parameter Transfer
INIT	Initialization
IP	IPv4 and IPv6
IPC	IP Connectivity
IRNG	Initial Ranging
IUT	Implementation Under Test
KEK	Key Encryption Key
KU	Key Usage
LRP	To a Less Robust Profile
MAC	Medium Access Control
MAP	Map and Frame Structure
MCP	Multicast Polling
MRP	To a More Robust Profile
NACK	Negative ACKnowledgment
OFDM	Orthogonal Frequency Division Multiplexing
OFDMA	Orthogonal Frequency Division Multiple Access
OPN	Operation
PACK	Packing
PDU	Protocol Data Unit
PHS	Payload Header Suppression
PKM	Privacy and Key Management
PMP	Point-to-MultiPoint
PRNG	Periodic Ranging
QoS	Quality of Service
QPS	QoS Parameter Sets
RE	Reset
REG	REGistration
REQ	REQuest

RER	Reset and Re-registration
RLC	Radio Link Control
RLV	Relevance
RNG	RaNGing
RSP	ReSPonse
RXD	Receive Data
SA	Security Association
SAID	Security Association IDentity
SAM	Security Association Management
SAP	Service Access Point
SBS	Serving Base Station
SBC	Negotiate Basic Capabilities
SDU	Service Data Unit
SET	Setup
SF	Service Flow
SS	Subscriber Station
TBS	Target Base Station
TDD	Time Division Duplexing
TEK	Encryption Key Transfer
TFTP	Trivial File Transfer Protocol
TI	Timer and counter
TLV	Type, Length, Value
TP	Test Purposes
TSS	Test Suite Structure
TXD	Transmit Data
UCD	Uplink Channel Descriptor
UGS	Unsolicited Grant Service
UL	Uplink
VLAN	Virtual Local Area Network

4 Test Suite Structure (TSS)

4.1 Structure

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

Group	Function	Sub-function
CS options: Encapsulation		
	Ipv4	
	Ipv6	
	Ipv4 with ROHC / ECRTP	
	Ipv6 with ROHC / ECRTP	
	Ethernet	
	Ipv4 over Ethernet	
	Ipv6 over Ethernet	
CS options: Classification		
	Classifier DSx Signalling	
	Ipv4 Classification	
		General Ipv4 classification
		Ipv4 classification with ROHC
		Ipv4 classification with ECRTP
	Ipv6 Classification	
		General Ipv6 classification
		Ipv6 classification with ROHC
		Ipv6 classification with ECRTP
	Ethernet classification	
		Pure Ethernet classification
		Ipv4 over Ethernet <Includes ROHC and ECRTP>

Group	Function	Sub-function
		Ipv6 over Ethernet <Includes ROHC and ECRTP>
Payload Header Suppression		
MAC PDU Formats		
	PDU concatenation	
	Fragmentation	
	Packing	
	CRC	
ARQ		
	Receiver operations	
	Transmitter operations	
	Reset	
Radio Link Control (Initial Network Entry and MAC Support of PHY layer)		
	Initial Ranging	
	Periodic Ranging	
	Downlink Burst Profile Management	
		To a Less Robust Profile
		To a More Robust Profile
	Negotiate Basic Capabilities	
	Feedback mechanism	
	MAC support for H-ARQ	
	Support of different MAP IEs	TBD list of functions in terms of DL-MAP IEs and UL-MAP IEs; MAP Relevance
Registration, IP connectivity and TFTP		
	Registration	
	IP Connectivity	
Dynamic Services (Service flow management)		
	Service Addition	
	Service Change	
	Service Deletion	
	QoS Parameter Sets	
Bandwidth Allocation and Polling		
	CDMA Bandwidth Request	
	Request/Grant mechanism	
	Multicast polling	
General Handover functionality		
	Network topology acquisition	
		Network Advertisement
		Scanning
		Association
	HO initiation <operations with Serving BS>	
		Initiated by MS
		Initiated by BS
	Network Re-Entry	
		Acquisition of DL and UL parameters
		HO Ranging
		Capabilities Exchange
		EAP based Authentication/ Authorization
		Registration
	HO optimization	< All options prescribed by the Mobility Profile>
Sleep mode		
	General functions	
	Power saving class type 1	
	Power saving class type 2	< Leave empty >

Group	Function	Sub-function
	Power saving class type 3	< Leave empty >
	Periodic ranging during Sleep Mode	
Idle mode		
	Transition to Idle Mode	
	Paging	
	Network Re-entry after Idle Mode	
	Expedited Network Re-entry after Idle Mode	
	Location Update	
Multicast traffic connections		
Supported cryptographic suites		
	No data encryption, no data authentication & 3-DES, 128	
	CCM-Mode 128-bit AES, CCM-Mode, AES Key Wrap with 128-bit key	
Privacy and Key Management (Security version 1, not applicable to OFDMA systems)		
	V1 Authentication/ Authorization	
		Initialization
		Operational
	V1 TEK	
		Initialization
		Operational
	V1 Security Association Management	
	Encryption and Key Scheduling	
		Key Usage
		Encryption
		Decryption
	Certificates	
Security version 2		
	PKMv2 Support	
		EAP based Authentication/Authorization
		TEK Exchange
	Security Associations Management	
		Support of Primary SA
		Support of Static SA
		Support of Dynamic SA
	CMAC	
Channel Descriptors and Maps		
	Map and frame Structure	
		Initialization
		Operational
		Relevance
	Channel Descriptors	
	Channel Descriptor Change	
		Uplink
		Downlink
Multicast and Broadcast Services		
Adaptive Antenna Support		
Reset and Re-registration		
Clock Comparison		

Figure 1: TSS for HiperMAN DLC

The test suite is structured as a tree with the root defined as DLC-BS or DLC-MS representing the protocol groups "DLC for BS" or "DLC for MS". The tree is of rank 3 with the first rank a Group, the second a Function, and the third a sub-function. The third rank is broken down into the standard ISO conformance test categories CA, BV, BI, BO and TI (discussed below).

NOTE: For compatibility with TP identifier names in earlier releases of the HiperMAN DLC Test Purposes document, the protocol group "DLC for MS" in the present document is still denoted "SS".

4.2 Test groups

Each test group has a total of three levels. The first level is the protocol services. The second level separates the protocol services into the various functional areas. The third level is the sub-functional areas. The fourth level, if required, is used to indicate the initiator (BS or MS) or the direction of communication (DL or UL). This fourth level is not shown in figure 1.

4.2.1 Protocol services

The protocol groups identify the DLC protocol services given in TS 102 178 [1], IEEE P802.16-2004 [2] and IEEE P802.16e [3].

4.2.1.1 Packet convergence sublayer Encapsulation

The service specific packet Convergence Sublayer (CS) resides on top of the MAC sublayer and supports encapsulation of higher layer protocol PDUs.

4.2.1.2 Packet convergence sublayer Classification

The service specific packet convergence sublayer (CS) resides on top of the MAC sublayer and supports encapsulation of higher layer protocol PDUs. In connection with this classification the DLC protocol service performs the following functions:

- Accepting higher-layer PDUs.
- Classifying higher-layer PDUs.
- Processing (if necessary) classified higher-layer PDUs.
- Delivering PDUs to the appropriate MAC SAP.

4.2.1.3 Payload Header Suppression

This service allows repetitive parts of the payload header information to be suppressed at the sender and to be restored at the receiver.

4.2.1.4 MAC PDU Formats

The functions included in this protocol group are PDU Packing, Fragmentation, Concatenation, and CRC Use.

4.2.1.5 ARQ

The functions included in this protocol group are ARQ Reset, ARQ Receive, and ARQ Transmit.

4.2.1.6 Radio Link Control (RLC)

This protocol group contains the test purposes for Initial Ranging/Automatic Adjustments, Negotiating Basic Capabilities, Periodic Ranging, and Downlink Profile management.

4.2.1.7 Registration, IP connectivity and TFTP

This protocol group includes the test purposes for Registration during Initialization, IP Connectivity during Initializations, Time of Day Establishment, and the Transfer of Operational Parameters.

4.2.1.8 Dynamic services

Dynamic service addition, change, and deletion for both BS-Initiated and DS-Initiated behaviour are in this protocol group.

4.2.1.9 Bandwidth allocation and polling

This protocol group includes the bandwidth request/grant functions for stand-alone, piggyback and focused contention.

4.2.1.10 General Handover functionality

This protocol group covers TPs for mobility aspects of terminals, including network scanning, association, handover operations, and network re-entry.

4.2.1.11 Sleep mode

This protocol group covers the different power saving modes.

4.2.1.12 Idle mode

This protocol group includes idle mode functions, covering transition to idle mode, paging, network re-entry after idle mode, and location update.

4.2.1.13 Multicast Traffic connections

This protocol group covers the test purposes for multicast connections where more SSs are associated to the same service via a common CID.

4.2.1.14 Supported Cryptographic Suites

This protocol group includes TPs for the supported encryption methods.

4.2.1.15 Privacy and key management

The functions included in this protocol group are version 1 of Authentication/Authorization, Certification, Reauthorization, TEK Exchange, TEK Update, TEK Scheduling, Security Association Management, Encryption, and Decryption.

4.2.1.16 Security version 2

The functions included in this protocol group are the new security functions introduced in [3] including Authentication/Authorization, Certification, Reauthorization, TEK Exchange, TEK Update, TEK Scheduling, Security Association Management, Encryption, and Decryption.

4.2.1.17 Channel descriptors and maps

This protocol group contains the test purposes for the DCD, UCD, DL-MAP, AND UL-MAP messages that provide channel parameters and burst mapping. Such functions as Scanning for the Downlink Channel and Obtaining Uplink Parameters are included.

4.2.1.18 Multicast and Broadcast Services

This protocol group contains the test purposes for the support of multicast and broadcast services.

4.2.1.19 Adaptive Antenna Support

This protocol group covers support of adaptive antenna system.

4.2.1.20 Reset and re-registration

Reset and re-registration functions are included in this protocol group.

4.2.1.21 Clock comparison

The clock comparison function in this group is used in network systems with service flows carrying information that requires the SSs to reconstruct their network clock signals; e.g. DS1 and DS3.

4.2.2 Main test types

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

4.2.2.1 Valid Behaviour (BV) tests

This test group shall verify that the IUT reacts in conformity with the base specifications 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 Invalid Behaviour (BI) tests

This test sub group shall verify that the IUT reacts in conformity with the base specifications after receipt of a syntactically invalid PDU.

4.2.2.3 Inopportune Behaviour (BO) tests

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

4.2.2.4 Timer and counter (TI) tests

This test group shall verify that the IUT reacts in conformity with the base specifications after expiry of a defined timer or counter.

5 Test Purposes (TP)

5.1 Introduction

5.1.1 TP definition conventions

The TPs are defined by the rules shown in table 1.

Table 1: TP definition rules

TP Definition Item	Item Description
TP Id	The TP Id is a unique identifier formed according to the TP naming conventions defined in clause 5.1.2.
P802.16e Reference	A pointer to the base specification requirement from which the TP is derived (specification reference, clause and paragraph).
PICS Item	The PICS item(s) associated with this TP.
Initial Condition	The IUT's state to which the TP is applied.
Expected behaviour	Definition of the events that are expected from the IUT pursuant to the base specification given a certain stimulus.
Notes	Additional optional information provided to the TP reader.

5.1.2 TP Identifier naming conventions

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

Table 2: TP naming convention

Identifier:	**TP/<st>/<pg>/<fg>/<sg>/<ini>/<x>-H<nnn>**		
	<st> = side type	BS	Base Station
		SS	Subscriber Station (Mobile Station)
	<pg> = protocol group	CSOE	CS Options: Encapsulation
		CSOC	CS Options: Classification
		PHS	Payload Header Suppression
		MAC	MAC PDU Formats
		ARQ	ARQ
		RLC	Radio Link Control
		INI	Registration, IP Connectivity, and Parameter Transfer
		DS	Dynamic Services
		BWA	Bandwidth Allocation and Polling
		GHF	General Handover Functionality
		SLM	Sleep Mode
		IDM	Idle Mode
		MTC	Multicast Traffic Connections
		SCS	Supported Cryptographic Suites
		PKM	Privacy and Key Management version 1
		SEC	Security version 2
		CDM	Channel Descriptors and Maps
		MBS	Multicast and Broadcast Services
		AAS	Adaptive Antenna Support
		RER	Reset and Re-registration
		CCC	Clock Comparison
	<fg> = function group	IP4	IP version 4
		IP6	IP version 6
		IP4R	IP version 4 with ROHC/ECRTP
		IP6R	IP version 6 with ROHC/ECRTP
		ENET	Ethernet
		IP4oE	IP version 4 over Ethernet
		IP6oE	IP version 6 over Ethernet
		CDS	Classifier DSx Signalling
		IP4C	IP version 4 Classification
		IP6C	IP version Classification
		ENTC	Ethernet Classification
		CAT	PDU Concatenation
		FRAG	Fragmentation
		PACK	Packing
		CRC	Cyclic Redundancy Check
		RxD	Receiver Operations
		TxD	Transmitter Operations
		RE	Reset
		ACQ	Acquisition of DL and UL parameters
		IRNG	Initial Ranging
		PRNG	Periodic Ranging
		DBPC	Downlink Burst Profile Management
		SBC	Negotiate Basic Capabilities
		FBK	Feedback mechanism
		HARQ	MAC support for H-ARQ
		MPIE	Support of different MAP IEs
		REG	Registration
		IPC	IP Connectivity
		DSA	Dynamic Service Addition
		DSC	Dynamic Service Change
		DSD	Dynamic Service Deletion
		QPS	QoS Parameter Sets
		CBR	CDMA Bandwidth Request
		REQ	Request/Grant

Identifier:	TP/<st>/<pg>/<fg>/<sg>/<ini>/<x>-H<nnn>		
		MCP	Multicast Polling
		NTA	Network Topology acquisition
		HOI	Handover initiation <operations with serving BS>
		NWR	Network Re-entry
		HOO	Handover Optimization
		GF	General Functions
		PW1	Power Saving class type 1
		PW2	Power Saving class type 2
		PW3	Power Saving class type 3
		PRSM	Periodic Ranging during Sleep Mode
		TIDM	Transition to Idle Mode
		PG	Paging
		NWRI	Network Re-entry after Idle Mode
		ENWR	Expedited Network Re-entry after Idle Mode
		LOC	Location update
		DES	No data encryption, no data authentication & 3-DES, 128
		AES	CCM-Mode 128-bit AES, CCM-Mode, AES Key Wrap with 128-bit key
		AUTH1	Authentication/Authorization, version 1
		TEK1	Encryption Key Transfer, version 1
		SAM1	Security Association Management, version 1
		EKS	Encryption and Key Scheduling
		CERT	Certificates
		PKM2	PKM version 2 support
		SAM	Security Associations Management
		CMAC	Cipher-based MAC
		MFS	Map and Frame Structure
		CD	Channel Descriptors
		CDC	Channel Descriptor Change
	<sg> = subfunction group	GI4C	General IP version 4 Classification
		I4CR	IP version 4 Classification with ROHC
		I4CE	IP version 4 Classification with ECRTP
		GI6C	General IP version 6 Classification
		I6CR	IP version 6 Classification with ROHC
		I6CE	IP version 6 Classification with ECRTP
		PETC	Pure Ethernet Classification
		I4oE	IP version 4 over Ethernet
		I6oE	IP version 6 over Ethernet
		LRP	To a Less Robust Profile
		MRP	To a More Robust Profile
		NWA	Network Advertisement
		SCAN	Scanning
		ASC	Association
		BsIni	Procedure is initiated by BS
		SsIni	Procedure is initiated by MS
		AUP	Acquisition of UL parameters
		ADP	Acquisition of DL parameters
		HORG	Handover Ranging
		CAPX	Capabilities Exchange
		EAPA	EAP based Authentication/Authorization
		REG	Registration
		INIT	Initialization
		OPN	Operational
		KU	Key Usage
		ENC	Encryption
		DEC	Decryption
		TEKE	TEK Exchange
		PRSA	Support of Primary SA
		STSA	Support of Static SA
		DYSA	Support of Dynamic SA
		RLV	Relevance

Identifier:	TP/<st>/<pg>/<fg>/<sg>/<ini>/<x>-H<nnn>		
		UL	Uplink
		DL	Downlink
	<x> = type of testing	BV	Valid Behaviour Tests
		BI	Invalid Syntax or Behaviour Tests
		BO	Inopportune Behaviour Tests
		TI	Timer and Counter Tests
	<nnn> = sequential number	Hnnn	(H000, H001, etc).

5.1.3 Sources of TP definitions

All TPs are specified according to IEEE P802.16-2004 [2] and supplemented by TS 102 178 [1]. In the event of conflict between these two references, the requirements of IEEE P802.16-2004 [2] were used. Unless otherwise noted, all references shown in the TPs are from IEEE P802.16-2004 [2].

The scope of the present document was refined during its development and is now fixed as the subset of IEEE P802.16-2004 [2] that specifically concerns the current WiMAX and BRAN/HiperMAN concepts. The following presents the included and excluded functions:

- Included functionality:
  - PMP-only.
  - OFDM and OFDMA PHYAdaptive antenna support (PMP-specific).
  - All privacy features.
  - ARQ.
  - CRC.
  - Fragmentation.
  - Multicast.
  - Bandwidth allocation (PMP-specific).
  - Channel description (PMP-specific).
  - Clock comparison (PMP-specific).
  - Contention resolution (PMP-specific).
  - DL burst profile management (PMP-specific).
  - Dynamic services (PMP-specific).
  - Network entry and initialization (PMP-specific).
  - Packing.
  - PHY layer support (PMP-specific).
  - Packet CS.
  - Polling (PMP-specific).
  - Reports.
  - Service Flow (PMP-specific).
  - Uplink scheduling (PMP-specific).
  - License-exempt operation.
  - PHS.

- Excluded functionality:
  - Mesh mode.
  - ATM CS.

5.1.4 TP selection criteria name convention

The mapping relationship between selection criteria of the TP and answer items of PICS is listed in table 3.

Table 3: TP Selection Criteria name convention

Identifier	Selection Criteria in TP	Answer Items in PICS	Criteria
	PIC_MOB1.	-	The TP belongs to Certification Wave 1 of features
	PIC_MOB2.	-	The TP belongs to Certification Wave 2 of features
3	PIC_VNDID	A.330/3 [11]	Vendor ID Encoding TLV
9	PIC_SS_RESTRANSMIT_MOB_SCN-REQ	To be checked	MS retransmits MOB_SCN-REQ
13	PIC_BS_RECONFIGURE_NEIGHBOR_BS_LIST	To be checked	BS reconfigures neighbour BS list in case of HO reject
14			
18	PIC_SLM_IMPLEMENTED	To be checked	Has IUT=MS implemented Sleep Mode?
22	PIC_BS_REG_RSP_ENCODINGS_IN_RNG_RSP	To be checked	Will IUT send REG-RSP encodings in RNG-RSP during network re-entry?
23	PIC_BS_OMIT_PKM_AUTH	To be checked	Will IUT instruct MS to omit PKM AUTH during network re-entry?
24	PIC_BS_OMIT_PKM_TEK	To be checked	Will IUT instruct MS to omit PKM TEK during network re-entry?
26	PIC_BS_OMIT_TOD	To be checked	Will IUT instruct MS to omit TimeOfDay during network re-entry?
27	PIC_BS_OMIT_TFTP	To be checked	Will IUT instruct MS to omit TFTP during network re-entry?
28	PIC_BS_TRF_IND_REQUIRED_FLAG	To be checked	Will IUT send MOB-SLP-RSP with TRF_IndicationFlag set to 1?
29	PIC_BS_TRF_TRIGGERED_WAKENING_FLAG	To be checked	Will IUT send MOB-SLP-RSP with TRF_triggeredWakeningFlag set to 1?
31	PIC_M_BS_MBS	B.229/1 [11]	Multi-BS-MBS service supported.

Identifier	Selection Criteria in TP	Answer Items in PICS	Criteria
32	PIC_BS_MBS_BSI	B.229/3	Multi-BS-MBS service BS initiation
33	PIC_BS_MBS_MSI	B.229/4	Multi-BS-MBS service MS initiation
34	PIC_BS_MS_RESET_BS_INI	A.186/1	MS reset initiated by BS (RES-CMD)
35	PIC_MS_RESET_BS_INI	A.77/1	MS reset initiated by BS (REC-CMD)

5.2 Test purposes for BS (BS)

5.2.1 CS Options: Encapsulation (CSOE)

5.2.1.1 IP version 4 (IP4)

TP-ID	TP/BS/CSOE/IP4/BV-H000 {1} **
P802.16 Reference	[3] Clause 5.2.6 [12] Clause 5.2.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is initialized and a connection is established with IPv4 CS without Payload Header Suppression.
Expected Behaviour	Check that: To transmit DL IPv4 packets, the IUT sends MAC PDUs containing the IPv4 packets and omits the PHSI field.
Test strategy	
Notes	

TP ID	TP/BS/CSOE/IP4/BV-H001 {1} **
P802.16 Reference	[3] Clauses 5.2, 5.2.1, 5.2.2, and 5.2.6.1 [12] Clauses 5.2, 5.2.1, 5.2.2, and 5.2.5.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is initialized and a connection is established with IPv4 CS without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving UL, the IUT passes a valid MAC SDU to the CS IPv4 SAP.
Test strategy	
Notes	

5.2.1.2 IP version 6 (IP6)

TP-ID	TP/BS/CSOE/IP6/BV-H000 {1} **W2
P802.16 Reference	[3] Clause 5.2.6 [12] Clause 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv6 CS and without Payload Header Suppression.
Expected Behaviour	Check that: To transmit DL IPv6 packets, the IUT sends MAC PDUs containing the IPv6 packets and omits the PHSI field.
Test strategy	
Notes	

TP ID	TP/BS/CSOE/IP6/BV-H001 {1} **W2
P802.16 Reference	[3] Clause 5.2, 5.2.1, 5.2.2, and 5.2.6.1 [12] Clauses 5.2, 5.2.1, 5.2.2, and 5.2.5.1.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv6 CS and without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving UL, the IUT passes a valid MAC SDU to the CS IPv6 SAP.
Test strategy	
Notes	

5.2.1.3 IP version 4 with ROHC (IP4R)

TP-ID	TP/BS/CSOE/IP4R/BV-H000 {4}
P802.16 Reference	[3] Clause 5.2.7 [12] Clause 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv4 CS and ROHC header compression and without Payload Header Suppression.
Expected Behaviour	Check that: To transmit DL IPv4 packets, the IUT sends MAC PDUs with compressed IPv4 header information.
Test strategy	
Notes	Means of associating packets with a ROHC channel are required. Means of associating a ROHC channel to a SFID are required. "ROHC Parameter Payload" defaults may need definition. Test will require a sniffer on the CS IPv4 SAP.

TP ID	TP/BS/CSOE/IP4R/BV-H001 {4}
P802.16 Reference	[3] Clause 5.2, 5.2.1, and 5.2.7 [12] Clause 5.2, 5.2.1, and 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv4 CS and ROHC header compression and without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving UL, the IUT passes a valid MAC SDU to the CS IPv4 SAP.
Test strategy	
Notes	Means of associating packets with a ROHC channel are required. Means of associating a ROHC channel to a SFID are required. "ROHC Parameter Payload" defaults may need definition.

5.2.1.4 IP version 6 with ROHC (IP6R)

TP-ID	TP/BS/CSOE/IP6R/BV-H000 {4}
P802.16 Reference	[3] Clause 5.2.7 [12] Clause 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv6 data flow with ROHC header compression and without Payload Header Suppression.
Expected Behaviour	Check that: To transmit DL IPv6 packets, the IUT sends MAC PDUs with compressed IPv6 header information.
Test strategy	
Notes	Means of associating packets with a ROHC channel are required. Means of associating a ROHC channel to a SFID are required. "ROHC Parameter Payload" defaults may need definition.

TP ID	TP/BS/CSOE/IP6R/BV-H001
P802.16 Reference	[3] Clause 5.2, 5.2.1, and 5.2.7 [12] Clause 5.2, 5.2.1, and 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv6 data flow with ROHC header compression and without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving UL, the IUT passes a valid MAC SDU to the CS IPv6 SAP.
Test strategy	
Notes	Means of associating packets with a ROHC channel are required. Means of associating a ROHC channel to a SFID are required. "ROHC Parameter Payload" defaults may need definition.

5.2.1.5 Ethernet (ENET)

TP-ID	TP/BS/CSOE/ENET/BV-H000
	Deleted.

TP-ID	TP/BS/CSOE/ENET/BV-H001
	Deleted.

TP-ID	TP/BS/CSOE/ENET/BV-H002 {2*}
P802.16 Reference	[3] and [12] Clause 5.2.4.
PICS Item	IO-ETH1.
Initial Condition	IUT is initialized and a connection is established with Ethernet CS and without PHS.
Expected Behaviour	Check that: To transmit DL Ethernet packets, the IUT sends MAC PDUs containing the Ethernet packet and omits the PHSI field. The IUT does not include the Ethernet FCS when transmitting over this CS.
Test strategy	
Notes	

TP ID	TP/BS/CSOE/ENET/BV-H003 {2*}
P802.16 Reference	[3] and [12] Clauses 5.2, 5.2.1, and 5.2.2.
PICS Item	IO-ETH1.
Initial Condition	IUT is initialized and a connection is established with Ethernet CS data flow without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving UL, the IUT passes a valid MAC SDU to the CS Ethernet SAP.
Test strategy	
Notes	

5.2.1.6 IP version 4 over Ethernet

TP-ID	TP/BS/CSOE/IP4oE/BV-H000
	Deleted.

TP-ID	TP/BS/CSOE/IP4oE/BV-H001 {2*}
P802.16 Reference	[3] and [12] Clauses 5.2.3, and 5.2.4.
PICS Item	IO-ETH2.
Initial Condition	IUT is initialized and a connection is established with IPv4 over Ethernet CS and without PHS.
Expected Behaviour	Check that: To transmit DL IPv4 over Ethernet packets, the IUT sends MAC PDUs containing the IPv4 over Ethernet packet and omits the PHSI field.
Test strategy	
Notes	

TP ID	TP/BS/CSOE/IP4oE/BV-H002
P802.16 Reference	[3] and [12] Clauses 5.2, 5.2.1, and 5.2.2.
PICS Item	IO-ETH2.
Initial Condition	IUT is initialized and a connection is established with IPv4/Ethernet CS data flow without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving UL, the IUT passes a valid MAC SDU to the CS IPv4/Ethernet SAP.
Test strategy	
Notes	Test will require a PCO on the CS IPv4/Ethernet SAP.

5.2.1.7 IP version 6 over Ethernet

TP-ID	TP/BS/CSOE/IP6oE/BV-H000
	Deleted.

TP-ID	TP/BS/CSOE/IP6oE/BV-H001
P802.16 Reference	[3] and [12] Clauses 5.2.3 and 5.2.4.
PICS Item	IO-ETH3.
Initial Condition	IUT is initialized and a connection is established with IPv6 over Ethernet CS and without PHS.
Expected Behaviour	Check that: To transmit DL IPv6 over Ethernet packets, the IUT sends MAC PDUs containing the IPv6 over Ethernet packet and omits the PHSI field.
Test strategy	
Notes	

TP ID	TP/BS/CSOE/IP6oE/BV-H002
P802.16 Reference	[3] and [12] Clause 5.2, 5.2.1, and 5.2.2.
PICS Item	IO-ETH3.
Initial Condition	IUT is initialized and a connection is established with IPv6/Ethernet CS data flow without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving UL, the IUT passes a valid MAC SDU to the CS IPv6/Ethernet SAP.
Test strategy	
Notes	

5.2.2 CS Options: Classification

TP ID	TP/BS/CSOC/BV-H000
	Deleted.

TP ID	TP/BS/CSOC/BV-H001
	Deleted.

TP ID	TP/BS/CSOC/BV-H002
	Deleted.

TP ID	TP/BS/CSOC/BV-H003
	Deleted.

TP ID	TP/BS/CSOC/BV-H004 {3}
P802.16 Reference	[3] Clauses 11.13.19.3.2 and 5.2.3.2 [12] Clauses 11.13.19.3.2 and 5.2.3.2.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating and a connection is established with data flow. The IUT is receiving data PDUs using PHS for a CS SAP that does not match any classifier. The IUT is discarding the data.
Expected Behaviour	Check that: After a classifier matching the data received on the connection has been added by use of a DSC transaction, the IUT transmits the data on the MAC CID corresponding to the added classifier.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/BV-H005 {3}
P802.16 Reference	[3] Clauses 11.13.19.3.2 and 11.13.19.3.4 [12] Clauses 11.13.18.3.2 and 11.13.18.3.3.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating. The IUT is transmitting data on two MAC connections. The classifiers associated with each CID are not identical and have different priorities.
Expected Behaviour	Check that: After having replaced a classifier with another similar to the other classifier but with a lower priority, the IUT now transmits the data that was on the two MAC CIDs on the MAC CID with the classifier having the highest priority.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/BV-H006 {1}**
P802.16 Reference	[3] and [12] Clause 5.2.2.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating and a connection is established with data flow.
Expected Behaviour	Check that: In case the packet does not match the classifier the IUT discards the packet.
Test strategy	
Notes	Requires an UT over the CS.

TP ID	TP/BS/CSOC/BV-H007 {3}
P802.16 Reference	[3] Clauses 11.13.19.3.2 and 5.2.2 [12] Clauses 11.13.18.3.2 and 5.2.2.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating. The IUT is transmitting data on a MAC connection corresponding to the classifier established during connection setup.
Expected Behaviour	Check that: After the classifier is deleted and when there is no longer any classifier that matches the data being transmitted, the IUT discards the data.
Test strategy	
Notes	

5.2.2.1 Classifier DSx Signalling (CDS)

TP-ID	TP/BS/CSOC/CDS/BV-H000 {3}
P802.16 Reference	[3] Clauses 11.13.19.3.2 and 5.2.3.2 [12] Clauses 11.13.18.3.2 and 5.2.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a connection is established. The data contains only SDUs which do not match existing classifiers, so that the SDUs are being discarded.
Expected Behaviour	Check that: After a classifier is added for the connection, which matches the incoming SDUs, the IUTUIT transmits MAC SDUs at the connection.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/CDS/BV-H001
	Deleted.

TP ID	TP/BS/CSOC/CDS/BV-H002 {3}
P802.16 Reference	[3] Clauses 11.13.19.3.2 and 5.2.3.2 [12] Clauses 11.13.18.3.2 and 5.2.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a connection is established. The data contains only SDUs which do not match existing classifiers, so that the SDUs are being discarded. A DSC transaction (initiated by the IUT) for the service flow to replace a classifier is successful.
Expected Behaviour	Check that: The IUT classifies packets correctly according to the existing and changed classifiers. After a classifier changed to match incoming SDUs the IUT transmits MAC SDUs at the connection.
Test strategy	
Notes	Changing classifier is a less frequent operation than e.g. adding a classifier.

TP ID	TP/BS/CSOC/CDS/BV-H005 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.4 [12] Clauses 5.2.2 and 11.13.18.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a valid DSA-REQ containing a packet classifier, the IUT sends a DSA-RSP.

TP-ID	TP/BS/CSOC/CDS/BV-H006 {1} **
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.4 [12] Clauses 5.2.2 and 11.13.18.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On setting up a new connection the IUT transmits a DSA-REQ containing a packet classifier.
Test strategy	
Notes	Requires a means to initiate a connection set up. When the CS type is IPv4/IPv6-based, the set up will require an agreed upon method for the SS to obtain an IPv4/v6 address as part of as the set up (for example DHCP).

TP-ID	TP/BS/CSOC/CDS/BV-H007 {3}
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.2 [12] Clauses 5.2.2 and 11.13.18.3.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a DL service flow is established.
Expected Behaviour	Check that: On receiving a valid DSC-REQ containing a DSC Add Classifier parameter for the service flow, the IUT sends a DSC-RSP.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/CDS/BV-H008 {3}
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.2 [12] Clauses 5.2.2 and 11.13.18.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and an UL service flow is established by the IUT.
Expected Behaviour	Check that: To add a classifier the IUT transmit a DSC-REQ containing a DSC Add Classifier parameter for the service flow.
Test strategy	
Notes	Requires a means for adding a classifier. When the CS type is IPv4/IPv6-based, the IP address allocation method (used as part of the test set up) has to be supported by both the SS and the BS. Adding a classifier by DSC is a comparatively rare operation.

5.2.2.2 IPv4 classification (IP4C)

TP ID	TP/BS/CSOC/IP4C/BV-H000 {1} **
P802.16 Reference	[3] and [12] Clause 5.2.2 paragraph 3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two DL IPv4 CS service flows are established having different CIDs. Packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv4 CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/IP4C/BV-H001 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two DL IPv4 CS service flows are established. Different IPv4 Protocol packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv4 CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	Particular classification rule is tested.

TP ID	TP/BS/CSOC/IP4C/BV-H002 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.3 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two DL IPv4 CS service flows are established. Different IP Masked Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv4 CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	Particular classification rule is tested.

TP ID	TP/BS/CSOC/IP4C/BV-H003 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.4 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two DL IPv4 CS service flows are established. Different IP Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv4 CS SDUs matching the classifier for the first connection on the first connection and if the IUT supports multiple IP addresses to a single MS, check if IUT transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	Particular classification rule is tested.

TP ID	TP/BS/CSOC/IP4C/BV-H004 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.5 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two DL IPv4 CS service flows are established. Different IP Protocol Source Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv4 CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	Particular classification rule is tested.

TP ID	TP/BS/CSOC/IP4C/BV-H005 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.6 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two DL IPv4 CS service flows are established. Different IP Protocol Destination Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv4 CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Particular classification rule is tested.

TP ID	TP/BS/CSOC/IP4C/BV-H006 {1} **
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.7.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two DL IPv4 CS service flows are established. Identical IP Protocol Destination Port packet classifiers (with different classifier rule priorities) are defined for both connections.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching both classifiers on the connection having the higher classifier priority.
Test strategy	
Notes	Priority of otherwise identical classification rule is tested. The IPv4 classification fields used could be any field as long as they are identical.

TP ID	TP/BS/CSOC/IP4C/BV-H007 {1} **
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2-7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2-7.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two DL connections are established for two IPv4 CS service flows. Each connection has a single classifier rule that includes Identical IP Protocol Source Port, identical IP Type of Service/DSCP, identical IP Protocol, identical IP Masked Source Address, identical IP Destination Address and different IP Protocol Destination Port.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching all classifier fields for the first connection on the first connection and transmits CS SDUs matching all classifier fields for the second connection on the second connection. Also check that the IUT does not transmit packets that match only some of the fields in the classifier rules of either connection.
Test strategy	
Notes	Classification rule consisting of multiple IPv4 fields is tested. The specific fields used are not important as long there is more than one.

5.2.2.3 IPv6 classification (IP6C)

TP ID	TP/BS/CSOC/IP6C/BV-H000
	Deleted.

TP ID	TP/BS/CSOC/IP6C/BV-H001 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two DL IPv6 CS service flows are established. Different IP Traffic Class/DSCP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv6 CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/IP6C/BV-H002
	Deleted.

TP ID	TP/BS/CSOC/IP6C/BV-H003 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.4 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.4.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two DL IPv6 CS service flows are established. Different IP Masked Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	A particular classification rule is tested

TP ID	TP/BS/CSOC/IP6C/BV-H004 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.5 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.5
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two DL IPv6 CS service flows are established. Different IP Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and if the IUT supports multiple IP addresses to a single MS, check if IUT transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/IP6C/BV-H005 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.6 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.6.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two DL IPv6 CS service flows are established having different CIDs. Packet classifiers are defined for both connections.
Expected Behaviour	Check that: The IUT transmits IPv6 CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/IP6C/BV-H006 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.7.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two DL IPv6 CS service flows are established. Different IP Protocol Destination Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv6 CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/IP6C/BV-H007 {1} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2-7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2-7.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two DL connections are established for two IPv6 CS service flows. Each connection has a single classifier rule that includes identical IP Protocol Source Port, IP Traffic Class/DSCP, IP Protocol, IP Masked Destination Address, IP Protocol Destination Port and different IP Source Address.
Expected Behaviour	Check that: The IUT transmits IPv6 CS SDUs matching all classifier fields for the first connection on the first connection and transmits CS SDUs matching all classifier fields for the second connection on the second connection. Also check that the IUT does not transmit packets that match only some of the fields in the classifier rules of either connection.
Test strategy	
Notes	

5.2.2.4 Ethernet classification (ENTC)

5.2.2.4.1 Pure Ethernet Classification (PETC)

TP ID	TP/BS/CSOC/ENTC/PETC/BV-H000 {1*}
P802.16 Reference	[3] and [12] Clause 5.2.2 paragraph 3.
PICS Item	IO-ETH1.
Initial Condition	IUT is operational and two DL Ethernet CS service flows are established. Packet classifiers are defined for both connections. Incoming CS SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits Ethernet CS SDUs matching the classifier for the first connection on the first connection and transmits Ethernet CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/PETC/BV-H001 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.8 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.8.
PICS Item	IO-ETH1.
Initial Condition	IUT is operational and two DL Ethernet CS service flows are established. Different Ethernet MAC Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits Ethernet CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	Particular classification rule is tested

TP ID	TP/BS/CSOC/ENTC/PETC/BV-H002 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.9 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.5.
PICS Item	IO-ETH1.
Initial Condition	IUT is operational and two DL Ethernet CS service flows are established. Different Ethernet MAC Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits Ethernet CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	Particular classification rule is tested

TP ID	TP/BS/CSOC/ENTC/PETC/BV-H003 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.10 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.10.
PICS Item	IO-ETH1.
Initial Condition	IUT is operational and two DL Ethernet CS service flows are established. Different Ethernet SAP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits Ethernet CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/PETC/BV-H004
	Deleted.

TP ID	TP/BS/CSOC/ENTC/PETC/BV-H005 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.8-11 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.8-11.
PICS Item	IO-ETH1.
Initial Condition	IUT is operational and two DL Ethernet CS service flows are established. Each connection has a single classifier rule than includes identical Ethertype SAP, Ethernet MAC Source Address and different Ethernet MAC Destination Address.
Expected Behaviour	Check that: The IUT transmits Ethernet CS SDUs matching all classifier fields for the first connection on the first connection and transmits CS SDUs matching all classifier fields for the second connection on the second connection. Also check that the IUT does not transmit packets that match only some of the fields in the classifier rules of either connection.
Test strategy	
Notes	Particular classification rule is tested.

5.2.2.4.2 IPv4 over Ethernet (IP4oE)

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H000 {1*}
P802.16 Reference	[3] and [12] Clause 5.2.2 paragraph 3.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two DL IPv4 over Ethernet CS service flows are established. Packet classifiers are defined for both connections. Incoming CS SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv4 over Ethernet SDUs matching the classifier for the first connection on the first connection and transmits IPv4 over Ethernet CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H001 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two DL IPv4 over Ethernet CS service flows are established. Different IP Type of Service/DSCP packet classifiers is defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H002 {3*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.3 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.3.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two DL IPv4 over Ethernet CS service flows are established. Different IP Protocol packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	General test case; superseded by other TPs that test particular classification rules: IP Source Address, etc.

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H003 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.4 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.4.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two DL IPv4 over Ethernet CS service flows are established. Different IP Masked Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H004 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.5 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.5.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two DL IPv4 over Ethernet CS service flows are established. Different IP Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H005 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.6 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.6.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two DL IPv4 over Ethernet CS service flows are established. Different IP Source Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H006 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.7.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two DL IPv4 over Ethernet CS service flows are established. Different IP Protocol Destination Port packet classifiers (are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H007 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.8 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.8.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two DL IPv4 over Ethernet CS service flows are established. Different Ethernet MAC Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: Incoming SDUs match classifier(s) of at most one service flow. the IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Particular classification rule is tested.

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H008 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.9 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.9.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two DL IPv4 over Ethernet CS service flows are established. Different Ethernet MAC Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H009 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.10 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.10.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two DL IPv4 over Ethernet CS service flows are established. Different Ethernet SAP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H010
	Deleted.

TP ID	TP/BS/CSOC/ENTC/IP4oE/BV-H011 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2-11 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2-11.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two DL IPv4 over Ethernet CS service flows are established. Each connection has a single classifier rule than includes Identical IP Protocol Destination Port, IP Type of Service/DSCP, IP Protocol, IP Masked Source Address, Ethertype SAP, IP Protocol Source Port, IP Protocol Destination Port, Ethernet MAC Destination Address, Ethernet MAC Source Address and different IP Destination Address.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching all classifier fields for the first connection on the first connection and transmits CS SDUs matching all classifier fields for the second connection on the second connection. Also check the IUT does not transmit packets that match only some of the fields in the classifier rules of either connection.
Test strategy	
Notes	Particular classification rule is tested.

5.2.2.4.3 IPv6 over Ethernet (IP6oE)

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H000
P802.16 Reference	[3] and [12] Clause 5.2.2 paragraph 3.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two DL IPv6 over Ethernet CS service flows are established. Packet classifiers are defined for both connections. Incoming CS SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv6 over Ethernet SDUs matching the classifier for the first connection on the first connection and transmits IPv6 over Ethernet CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H001
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two DL IPv6 over Ethernet CS service flows are established. Different IP Traffic Class/DHCP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H002
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.3 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.3.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two DL IPv6 over Ethernet CS service flows are established. Different IP Protocol packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H003
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.4 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.4.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two DL IPv6 over Ethernet CS service flows are established. Different IP Masked Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H004
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.5 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.5.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two DL IPv6 over Ethernet CS service flows are established. Different IP Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H005
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.6 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.6.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two DL IPv6 over Ethernet CS service flows are established. Different IP Source Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H006
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.7.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two DL IPv6 over Ethernet CS service flows are established. Different IP Protocol Destination Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H007
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.8 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.8.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two DL IPv6 over Ethernet CS service flows are established. Different Ethernet MAC Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv6 CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H008
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.9 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.9.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two DL IPv6 over Ethernet CS service flows are established. Different Ethernet MAC Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H009
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.10 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.10.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two DL IPv6 over Ethernet CS service flows are established. Different Ethernet SAP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H010
	Deleted.

TP ID	TP/BS/CSOC/ENTC/IP6oE/BV-H011
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2-11 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2-11.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two DL IPv6 over Ethernet CS service flows are established. Each connection has a single classifier rule than includes I, IP Traffic Class/DSCP, IP Protocol, IP Masked Source Address, Ethertype SAP, IP Protocol Source Port, IP Protocol Destination Port, Ethernet MAC Destination Address, Ethernet MAC Source Address and different IP Destination Address.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching all classifier fields for the first connection on the first connection and transmits CS SDUs matching all classifier fields for the second connection on the second connection. Also check that the IUT does not transmit packets that match only some of the fields in the classifier rules of either connection.
Test strategy	
Notes	

5.2.2.5 VLAN (VLAN)

TP ID	TP/BS/CSOC/VLAN/BV-H000
	Deleted.

TP-ID	TP/BS/CSOC/VLAN/BV-H001
	Deleted.

5.2.2.5.1 IP over VLAN (IPoV)

TP ID	TP/BS/CSOC/VLAN/IPoV/BV-H000
	Deleted.

TP ID	TP/BS/CSOC/VLAN/IPoV/BV-H001
	Deleted.

TP ID	TP/BS/CSOC/VLAN/IPoV/BV-H002
	Deleted.

TP ID	TP/BS/CSOC/VLAN/IPoV/BV-H003
	Deleted.

TP ID	TP/BS/CSOC/VLAN/IPoV/BV-H004
	Deleted.

TP ID	TP/BS/CSOC/VLAN/IPoV/BV-H005
	Deleted.

TP ID	TP/BS/CSOC/VLAN/IPoV/BV-H006
	Deleted.

TP ID	TP/BS/CSOC/VLAN/IPoV/BV-H007
	Deleted.

TP ID	TP/BS/CSOC/VLAN/IPoV/BV-H008
	Deleted.

5.2.3 Payload Header Suppression (PHS)

TP ID	TP/BS/PHS/BV-H000 {1}**
P802.16 Reference	[3] Clause 5.2.3.2 paragraph 3, 6.3.2.3.10, and 11.13.19.3.7 [12] Clause 5.2.3.2 paragraph 3, 6.3.2.3.10, and 11.13.18.3.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: To create a PHS rule the IUT must use one of the following methods: 1) To create a PHS rule in connection with adding a new service flow, the IUT uses a DSA-REQ message that the PHS rule definition includes a PHSI value. 2) To create a PHS rule to an existing service flow, the IUT uses a DSC-REQ message with PHS DSC action parameter value 0 and that the PHS rule definition includes a PHSI value.
Test strategy	
Notes	Requires means to provoke sending of the DSA-REQ message with an appropriate content from the IUT.

TP ID	TP/BS/PHS/BV-H000x
	Deleted.

TP ID	TP/BS/PHS/BV-H000y {3}
P802.16 Reference	[3] Clause 5.2.3.2 paragraph 3, 6.3.2.3.13, and 11.13.19.3.7 [12] Clause 5.2.3.2 paragraph 3, 6.3.2.3.13, and 11.13.18.3.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: When the IUT receives a valid DSA-REQ to establish a new service flow including the definition of a PHS rule, the IUT transmits a DSA-RSP including the PHSI to be used for the PHS rule.
Test strategy	
Notes	

TP-ID	TP/BS/PHS/BV-H000z {3}
P802.16 Reference	[3] Clause 5.2.3.2 paragraph 3, 6.3.2.3.13, and 11.13.19.3.7 [12] Clause 5.2.3.2 paragraph 3, 6.3.2.3.10, and 11.13.18.3.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: When the IUT receives a valid DSC-REQ including a request to add a new PHS rule to an existing service flow, the IUT transmits a DSC-RSP including the PHSI to be used for the PHS rule.
Test strategy	
Notes	

TP-ID	TP/BS/PHS/BV-H001
	Deleted.

TP-ID	TP/BS/PHS/BV-H001x
	Deleted.

TP ID	TP/BS/PHS/BV-H002
	Deleted.

TP ID	TP/BS/PHS/BV-H002x
	Deleted.

TP ID	TP/BS/PHS/BV-H003 {2*}
P802.16 Reference	[3] Clauses 5.2.3, 5.2.4.1, and 11.13.19.1 [12] Clauses 5.2.3, 5.2.4.1, and 11.13.18.1.
PICS Item	IO_ETH1.
Initial Condition	The IUT has completed setting up an Ethernet connection. A set of classifiers and corresponding payload header suppression rules has been established for this connection.
Expected Behaviour	Check that: - To transmit data that matches the classifier associated with header payload suppression rule, the IUT sends data with headers suppressed according to the rule, the PHSI <> 0. - And to transmit data that, does not match the PHS rule, the IUT sends data with original headers PHSI=0.
Test strategy	
Notes	PHSV must be set to 0(verify) to properly transmit data that does not match with original headers.

TP ID	TP/BS/PHS/BV-H003x
P802.16 Reference	[3] Clauses 5.2.3, 5.2.5.1, and 11.13.19.1 [12] Clauses 5.2.3, 5.2.4.1, and 11.13.18.1.
PICS Item	
Initial Condition	The IUT has completed setting up a VLAN connection. A set of classifiers and corresponding payload header suppression rules has been established for this connection specifying that the payload header suppression rule applies.
Expected Behaviour	Check that: - To transmit data that matches the classifier associated with header payload suppression rule, the IUT sends data with headers suppressed according to the rule, the PHSI <> 0. - And to transmit data that, does not match the PHS rule, the IUT sends data with original headers PHSI=0.
Test strategy	
Notes	

TP-ID	TP/BS/PHS/BV-H003y {1}**
P802.16 Reference	[3] Clauses 5.2.3, 5.2.6.1, and 11.13.19.1 [12] Clauses 5.2.3, 5.2.5.1, and 11.13.18.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed setting up an IPv4 connection. A set of classifiers and corresponding payload header suppression rules has been established for this connection.
Expected Behaviour	Check that: - To transmit data that matches the classifier associated with header payload suppression rule, the IUT sends data with headers suppressed according to the rule, the PHSI <> 0. - And to transmit data that, does not match the PHS rule, the IUT sends data with original headers PHSI=0.
Test strategy	
Notes	PHSV must be set to 0(verify) to compare the bytes in the packet header with the bytes in the PHSF.

TP ID	TP/BS/PHS/BV-H003z {1} **W2
P802.16 Reference	[3] Clauses 5.2.3, 5.2.6.1, and 11.13.19.1 [12] Clauses 5.2.3, 5.2.5.1, and 11.13.18.1.
PICS Item	PIC_MOB2.
Initial Condition	The IUT has completed setting up an IP 6 connection. A set of classifiers has been established for this connection specifying that the payload header suppression rule applies.
Expected Behaviour	Check that: - To transmit data that matches the classifier associated with header payload suppression rule, the IUT sends data with headers suppressed according to the rule, the PHSI <> 0. - And to transmit data that, does not match the PHS rule, the IUT sends data with original headers PHSI=0.
Test strategy	
Notes	PHSV must be set to 0(verify) to compare the bytes in the packet header with the bytes in the PHSF.

TP ID	TP/BS/PHS/BV-H003w
P802.16 Reference	[3] Clauses 5.2.3, 5.2.7.1, and 11.13.19.1 [12] Clauses 5.2.3, 5.2.5, and 11.13.18.1.
PICS Item	
Initial Condition	The IUT has completed setting up a compressed IP 4 connection. A set of classifiers has been established for this connection specifying that the payload header suppression rule applies.
Expected Behaviour	Check that: - To transmit data that matches the classifier associated with header payload suppression rule, the IUT sends data with headers suppressed according to the rule, the PHSI <> 0 - And to transmit data that, does not match the PHS rule, the IUT sends data with original headers PHSI=0.
Test strategy	
Notes	PHSV must be set to 0(verify) to properly transmit data that does not match with original headers.

TP ID	TP/BS/PHS/BV-H004
	Deleted.

TP ID	TP/BS/PHS/BV-H004x
	Deleted.

TP ID	TP/BS/PHS/BV-H004y {2} ** W2
P802.16 Reference	[3] Clauses 5.2.3.2 paragraph 3 and 11.13.19.3.5 [12] Clauses 5.2.3.2 paragraph 3 and 11.13.18.3.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: To delete a specific PHS rule and its associated set of TLVs, the IUT uses a DSC message with PHS DSC action parameter value 2 and the associated PHSI TLV to indicate the PHS rule to be deleted.
Test strategy	
Notes	Requires means to provoke sending of the DSC-REQ message with an appropriate content from the IUT.

TP ID	TP/BS/PHS/BV-H004z {2} **W2
P802.16 Reference	[3] Clauses 5.2.3.2 paragraph 3 and 11.13.19.3.5 [12] Clauses 5.2.3.2 paragraph 3 and 11.13.18.3.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: To delete all PHS rules, the IUT uses a DSC message with PHS DSC action parameter value 3.
Test strategy	
Notes	

TP ID	TP/BS/PHS/BV-H005 {4}
P802.16 Reference	[3] and [12] Clause 5.2.3, paragraph 2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. A packet CS service flow with PHS is established for a packet classification.
Expected Behaviour	Check that: When the packet classification is deleted and the PHS rule associated with the packet classification is not associated to any other packet classification, the IUT deletes the PHS rule associated with the packet classification.
Test strategy	
Notes	Requires means to provoke deletion of the packet classification. For a UL flow a DSC-REQ should be sent by the BS with Classifier DSC action parameter value 2. For a DL flow a DSC-REQ should be sent by the BS with PHS DSC action parameter value 2 and additionally a Classifier DSC action parameter value 2 if the BS had earlier informed the MS of the DL Classifier rule.

TP ID	TP/BS/PHS/BV-H006
	Deleted.

TP ID	TP/BS/PHS/BV-H007
	Deleted.

TP ID	TP/BS/PHS/BV-H008 {1*}
P802.16 Reference	[3] and [12] Clause 5.2.3.1 and 5.2.4.1.
PICS Item	IO_ETH1.
Initial Condition	The IUT has completed a DSA exchange setting up a UL Ethernet connection. A classifier and corresponding payload header suppression rule has been established for this connection.
Expected Behaviour	Check that: On receiving MAC PDUs with header payload suppression, the IUT correctly delivers data to its Upper Layer after having restored the headers.
Test strategy	
Notes	

TP ID	TP/BS/PHS/BV-H008x
P802.16 Reference	[3] Clauses 5.2.3.1 and 5.2.5.1 [12] Clauses 5.2.3.1 and 5.2.4.
PICS Item	
Initial Condition	The IUT has completed a DSA exchange setting up a UL VLAN connection. A classifier has been established for this connection specifying that the payload header suppression rule applies.
Expected Behaviour	Check that: On receiving MAC PDUs with header payload suppression, the IUT correctly delivers data to its Upper Layer after having restored the headers.
Test strategy	
Notes	

TP-ID	TP/BS/PHS/BV-H008y {1}**
P802.16 Reference	[3] Clauses 5.2.3.1 and 5.2.6.1 [12] Clauses 5.2.3.1 and 5.2.5.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed a DSA exchange setting up a UL IPv4 connection. A classifier has been established for this connection specifying that the payload header suppression rule applies.
Expected Behaviour	Check that: On receiving MAC PDUs with header payload suppression, the IUT correctly delivers data to its Upper Layer after having restored the headers.
Test strategy	
Notes	

TP-ID	TP/BS/PHS/BV-H008z {1} **W2
P802.16 Reference	[3] Clauses 5.2.3.1 and 5.2.6.1 [12] Clauses 5.2.3.1 and 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	The IUT has completed a DSA exchange setting up a UL IPv6 connection. A classifier has been established for this connection specifying that the payload header suppression rule applies.
Expected Behaviour	Check that: On receiving MAC PDUs with header payload suppression, the IUT correctly delivers data to its Upper Layer after having restored the headers.
Test strategy	
Notes	

TP-ID	TP/BS/PHS/BV-H008w
P802.16 Reference	[3] Clauses 5.2.3.1 and 5.2.7.1 [12] Clauses 5.2.3.1 and 5.2.5.
PICS Item	
Initial Condition	The IUT has completed a DSA exchange setting up a UL compressed IPv4 connection. A classifier has been established for this connection specifying that the payload header suppression rule applies.
Expected Behaviour	Check that: On receiving MAC PDUs with header payload suppression, the IUT correctly delivers data to its Upper Layer after having restored the headers.
Test strategy	
Notes	

TP-ID	TP/BS/PHS/BV-H009 {1}**
P802.16 Reference	[3] and [12] Clause 5.2.3.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed a DSA exchange setting up an UL connection with a payload header suppression rule applied.
Expected Behaviour	Check that: On receiving data with PHSI=0 the IUT delivers the MAC SDU to its Upper Layer without restoring the header.
Test strategy	
Notes	If PHSI is 0, the header is contained in the data and no suppression is used.

TP ID	TP/BS/PHS/BV-H010 {3*}
P802.16 Reference	[3] and [12] Clauses 5.2.3.1 paragraph 2 and 5.2.4.1.
PICS Item	IO_ETH1.
Initial Condition	IUT is operating. An Ethernet DL packet CS service flow with PHS is established. The PHSV was not present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: The IUT correctly suppresses the payload header according to the payload header suppression rule.
Test strategy	
Notes	The absence of the PHSV TLV defaults to PHS verification enabled.

TP ID	TP/BS/PHS/BV-H010x
	Deleted.

TP ID	TP/BS/PHS/BV-H010y {3}
P802.16 Reference	[3] Clauses 5.2.3.1 paragraph 2 and 5.2.6.1 [12] Clauses 5.2.3.1 and 5.2.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. An IPv4 DL packet CS service flow with PHS is established. The PHSV was not present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: The IUT correctly suppresses the payload header according to the payload header suppression rule.
Test strategy	1) Check that the PHSV is deselected by sending a packet known not to pass verification and confirming that it is still transmitted. 2) Send valid packets that would pass verification if applied and check that they are transmitted with correctly suppressed header information even if not verified.
Notes	The absence of the PHSV TLV defaults to PHS verification enabled.

TP ID	TP/BS/PHS/BV-H010z {3}
P802.16 Reference	[3] Clause 5.2.3.1 paragraph 2 and 5.2.6.1 [12] Clauses 5.2.3.1 and 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating. An IPv6 DL packet CS service flow with PHS is established. The PHSV was not present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: For a given upper layer protocol, the IUT correctly suppresses the payload header according to the payload header suppression rule.
Test strategy	1) Check that the PHSV is deselected by sending a packet known not to pass verification and confirming that it is still transmitted. 2) Send valid packets that would pass verification if applied and check that they are transmitted with correctly suppressed header information even if not verified.
Notes	The absence of the PHSV TLV defaults to PHS verification enabled.

TP ID	TP/BS/PHS/BV-H010w
	Deleted.

TP ID	TP/BS/PHS/BV-H011 {1*}
P802.16 Reference	[3] and [12] Clauses 5.2.3.1 paragraph 2 and 5.2.4.1.
PICS Item	IO_ETH1.
Initial Condition	IUT is operating. An Ethernet DL packet CS service flow with PHS is established. The PHSV = 0 was present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: The IUT correctly suppresses the payload header according to the payload header suppression rule for the packets matching PHSF.
Test strategy	
Notes	

TP ID	TP/BS/PHS/BV-H011x
	Deleted.

TP ID	TP/BS/PHS/BV-H011y {2} **W2
P802.16 Reference	[3] Clauses 5.2.3.1 paragraph 2 and 5.2.6.1 [12] Clauses 5.2.3.1 paragraph 2 and 5.2.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. An IPv4 DL packet CS service flow with PHS is established. The PHSV = 0 was present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: The IUT correctly suppresses the payload header according to the payload header suppression rule for the packets matching PHSF.
Test strategy	
Notes	

TP ID	TP/BS/PHS/BV-H011z {2} **W2
P802.16 Reference	[3] Clauses 5.2.3.1 paragraph 2 and 5.2.6.1 [12] Clauses 5.2.3.1 paragraph 2 and 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating. An IPv6 DL packet CS service flow with PHS is established. The PHSV = 0 was present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: The IUT correctly suppresses the payload header according to the payload header suppression rule for the packets matching PHSF.
Test strategy	
Notes	The proper function of PHSV can only determined by checking if a packet known not to pass verification in the transmitter is transmitted over the air without the header being suppressed (i.e. PHSI = 0).

TP ID	TP/BS/PHS/BV-H011w
	Deleted.

TP ID	TP/BS/PHS/BO-H000
	Deleted.

5.2.4 MAC PDU Construction (MAC)

TP-ID	TP/BS/MAC/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has established a DL transport connection (service flow) to an SS, with packing and fragmentation enabled.
Expected Behaviour	Check that: For data transport connections in the DL, the IUT correctly packs if packing occurs and the IUT correctly fragments data.
Test strategy	
Notes	

TP-ID	TP/BS/MAC/BV-H000a {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. IUT has established a primary management connection to SS with packing and fragmentation enabled.
Expected Behaviour	Check that: For the primary management connection in the DL, the IUT correctly packs if packing occurs and the IUT correctly fragments data.
Test strategy	The test case needs to address three different cases: packing only, fragmentation only, packing and fragmentation combined.
Notes	

TP-ID	TP/BS/MAC/BV-H000b
P802.16 Reference	[3] and [12] Clause 6.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. Packing is on. IUT has completed Network entry and initialization.
Expected Behaviour	Check that: For secondary connections in the DL, the IUT correctly packs and fragments data.
Test strategy	
Notes	Secondary Management connections not required for OFDMA.

TP-ID	TP/BS/MAC/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. Packing is on. IUT has established a UL Data connection (service flow) with SS.
Expected Behaviour	Check that: For data transport, connections in the UL, the IUT correctly unpacks and de-fragments data.
Test strategy	
Notes	

TP-ID	TP/BS/MAC/BV-H001a {3}
P802.16 Reference	[3] and [12] Clause 6.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. Packing is off. IUT has established a UL Data connection (service flow) with SS.
Expected Behaviour	Check that: For data transport, connections in the UL, the IUT correctly de-fragments data.
Test strategy	
Notes	

TP-ID	TP/BS/MAC/BV-H001b {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating (Packing is on) and has established a primary management connection in the UL to a SS.
Expected Behaviour	Check that: For the Primary connection in the UL, the IUT correctly unpacks and de-fragments data.
Test strategy	
Notes	

TP-ID	TP/BS/MAC/BV-H001c
P802.16 Reference	[3] and [12] Clause 6.3.3.
PICS Item	
Initial Condition	IUT is operating. Packing is on. IUT has completed Network entry and initialization.
Expected Behaviour	Check that: For secondary connections in the UL, the IUT correctly unpacks and de-fragments data.
Test strategy	
Notes	

TP ID	TP/BS/MAC/BV-H002 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: The IUT neither fragments nor packs MAC Management messages on the Basic, Broadcast, and Initial Ranging connections.
Test strategy	
Notes	

TP ID	TP/BS/MAC/BV-H003 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.7.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: When allocated space within a data burst cannot be used and its size is less than that of a MAC header, the IUT initializes the unused space to a known state by setting each unused byte to the stuff byte value.
Test strategy	
Notes	

TP ID	TP/BS/MAC/BV-H004 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.7 Table "CIDs".
PICS item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: When allocated space within a data burst cannot be used, the IUT initializes the unused space to a known state: - either by setting each unused byte to the stuff byte value 0xFF; or - formats the unused space as a MAC Padding PDU. In this case, the MAC CID field is the value of the Padding CID, the CI, EC, HT, and Type fields are set to zero, the length field is set to the number of unused bytes including the MAC header size for creating the padding MAC PDU, and the HCS is calculated in the usual way.
Test strategy	
Notes	

TP ID	TP/BS/MAC/BV-H005
	Deleted.

TP ID	TP/BS/MAC/BV-H006 {4}
P802.16 Reference	[3] and [12] Clause 6.3.2.2.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: The IUT does not construct MAC PDUs with Packing and Fragmentation sub headers in the same MAC PDU.
Test strategy	
Notes	

TP ID	TP/BS/MAC/BV-H007 {4}
P802.16 Reference	[3] and [12] Clause 6.3.2.2.
PICS item	
Initial Condition	IUT is operating.
Expected Behaviour	Check that: When per-PDU sub headers and per-SDU sub headers are in the same MAC PDU, the IUT constructs the PDU with the per-PDU sub headers always before the first per-SDU sub header.
Test strategy	
Notes	

TP ID	TP/BS/MAC/BV-H008
	Deleted.

TP ID	TP/BS/MAC/BV-H009 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.1.1 Table "Generic MAC header fields".
PICS item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: The IUT calculates the HCS value for the first five bytes of the cell header and inserts the results into the HCS field. The HCS is the remainder of the division (Modulo 2) by the generator polynomial $g(D)=D^8+D^2+D+1$ multiplied by the content of the header excluding the HCS field.
Test strategy	
Notes	

TP ID	TP/BS/MAC/BV-H010 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.1.1 Table "Generic MAC Header Fields".
PICS item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow supporting ordered PDU delivery is established with "PDU SN extended subheader for HARQ reordering" TLV value equal to 1 or 2 in the DSA-REQ/RSP messages. IUT is generating MAC PDU(s) for this service flow.
Expected Behaviour	Check that: Extended Subheader is present and appears immediately after the Generic MAC Header.
Test strategy	
Notes	

TP ID	TP/BS/MAC/BV-H011 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.2.2 Table "Generic MAC Header Fields" and 6.3.2.2.7.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow supporting ordered PDU delivery is established with "PDU SN extended subheader for HARQ reordering" TLV value equal to 1 or 2 in the DSA-REQ/RSP messages. IUT is generating MAC PDU(s) for this service flow.
Expected Behaviour	Check that: Extended Subheaders are not encrypted.
Test strategy	
Notes	

TP ID	TP/BS/MAC/BI-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: On receiving a MAC management message containing a reserved value in the MAC Management "Type" field, the IUT silently discards the message.
Test strategy	To be tested by sending an "invalid" MAC management message and observing no "reply" to this message and after some time initiate a valid action that can be successfully performed. The "invalid" MAC management message should be discarded and not cause the IUT to stop operating.
Notes	

TP ID	TP/BS/MAC/BI-H001 {4}
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: On receiving a MAC management message not containing all required parameters, the IUT silently discards the message.
Test strategy	To be tested by sending an "invalid" MAC management message and observing no "reply" to this message and after some time initiate a valid action that can be successfully performed. The "invalid" MAC management message should be discarded and not cause the IUT to stop operating. Not clear in standard which parameters that are required.
Notes	

TP ID	TP/BS/MAC/BI-H002 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: On receiving a MAC management message containing erroneously encoded parameters, the IUT silently discards the message.
Test strategy	To be tested by sending an "invalid" MAC management message and observing no "reply" to this message and after some time initiate a valid action that can be successfully performed. The "invalid" MAC management message should be discarded and not cause the IUT to stop operating.
Notes	

TP ID	TP/BS/MAC/BI-H003 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.1.1 Table "Generic MAC header fields".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. SS is registered and authenticated with data service established.
Expected Behaviour	Check that: On receiving MAC PDUs with an incorrect HCS, the IUT silently discards the burst payload starting from the erroneous PDU.
Test strategy	Send a faulty PDU and check that nothing is visible on the network side, then send a correct PDU and check that the corresponding SDU is visible on the network side.
Notes	

5.2.4.1 PDU Concatenation (CAT)

TP ID	TP/BS/MAC/CAT/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: To transmit multiple MAC PDUs addressed to the same SS that can fit into one downlink burst, the IUT concatenate the MAC PDUs into a single burst.
Test strategy	
Notes	

TP ID	TP/BS/MAC/CAT/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving multiple MAC PDUs concatenated into single burst, the IUT correctly extracts all the MAC PDUs included in the single burst.
Test strategy	
Notes	

5.2.4.2 Fragmentation (FRAG)

TP-ID	TP/BS/MAC/FRAG/BV-H000
P802.16 Reference	[3] and [12] Clauses 6.3.3.3 and 5.1.2.1.
PICS Item	
Initial Condition	IUT is operational and using the ATM CS.
Expected Behaviour	Check that: When transmitting continuous downlink ATM cell data, the IUT transmits ATM cells without fragmentation.
Test strategy	
Notes	

TP ID	TP/BS/MAC/FRAG/BV-H001
	Deleted.

TP-ID	TP/BS/MAC/FRAG/BV-H002
	Deleted.

TP-ID	TP/BS/MAC/FRAG/BV-H003
P802.16 Reference	[3] and [12] Clauses 6.3.3.3 and 6.3.2.2.1.
PICS Item	
Initial Condition	IUT is operational. An active connection has been set up with fragmentation enabled.
Expected Behaviour	Check that: When transmitting data which does not fit into one MAC PDU, the IUT transmits two or more consecutive MAC PDUs with the Fragmentation Sub Header and FC bits properly set.
Test strategy	Use Echo-Request either to the BS or to an IP device behind the BS to send the content to be returned in the fragmented form.
Notes	Data which does not fit into one MAC PDU if the size of MAC SDU is > 2 047 bytes.

TP ID	TP/BS/MAC/FRAG/BV-H004
	Deleted.

TP ID	TP/BS/MAC/FRAG/BV-H005 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.3.1.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational. Non-ARQ connection.
Expected Behaviour	Check that: The IUT transmits fragments once and in sequence.
Test strategy	
Notes	

TP ID	TP/BS/MAC/FRAG/BV-H006 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.3.4.1.2 and 6.3.2.2.3.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational. The IUT has established a non-ARQ connection (Extended Type bit in generic MAC header set to 1).
Expected Behaviour	Check that: The IUT includes fragmentation information for individual MAC PDUs or MAC SDU fragments in the Packing sub header if packing occurs.
Test strategy	
Notes	

TP ID	TP/BS/MAC/FRAG/BV-H007 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.4.1.2.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational. The IUT has established a non-ARQ connection for variable-length SDUs.
Expected Behaviour	Check that: When no Packing sub header is present, the IUT places the fragmentation information for individual MAC SDU fragments in the corresponding Fragmentation sub header.
Test strategy	
Notes	

TP ID	TP/BS/MAC/FRAG/BV-H008 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.3.3.2 and 6.3.4.2.
PICS item	PIC-MOB1.
Initial Condition	IUT is operational. The IUT has established an ARQ-enabled connection for variable length SDUs.
Expected Behaviour	Check that: The IUT forms fragments for transmission by concatenating sets of ARQ blocks with adjacent sequence numbers.
Test strategy	
Notes	

TP ID	TP/BS/MAC/FRAG/BV-H009
	Deleted.

TP ID	TP/BS/MAC/FRAG/BV-H010 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.4.2.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational. The IUT has established an ARQ connection for variable-length SDUs on the connection.
Expected Behaviour	Check that: When no Packing sub header is present, the IUT places the fragmentation information for individual MAC SDU fragments in the corresponding Fragmentation sub header.
Test strategy	
Notes	

TP-ID	TP/BS/MAC/FRAG/BV-H011 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.3.
PICS Item	PIC-MOB1.
Initial Condition	IUT is operational. An active UL connection has been set up with fragmentation enabled.
Expected Behaviour	Check that: On receiving two or more consecutive MAC PDUs with Fragmentation Sub-headers and FC, the IUT shall reassemble the Fragmented MAC PDUs, from the first MAC PDU with "10" FC bits, and consecutive MAC PDUs with "11" FC bits, until MAC PDU with "01" FC bits.
Test strategy	
Notes	

TP ID	TP/BS/MAC/FRAG/BV-H012 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.3.1.
PICS item	PIC-MOB1.
Initial Condition	IUT is operational. The IUT has established a non-ARQ UL connection and is not using HARQ. Fragments, while dropping one of the intermediate fragment (to create a missing fragment scenario) and then a "new first fragment" have been sent to the IUT.
Expected Behaviour	Check that: On receiving fragments in sequence but one fragment is missing, the IUT discards all MAC PDUs on the connection until a new first fragment is detected.
Test strategy	
Notes	

TP ID	TP/BS/MAC/FRAG/BV-H013 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.3.1.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational and has established a non-ARQ UL connection without HARQ. Fragments, while dropping one of the intermediate fragment (to create a missing fragment scenario) and then a non fragmented MSDU have been sent to the IUT.
Expected Behaviour	Check that: On receiving fragments in sequence but one fragment is missing, the IUT discards all MAC PDUs on the connection until a non-fragmented MAC PDU is detected.
Test strategy	
Notes	

5.2.4.3 Packing (PACK)

TP ID	TP/BS/MAC/PACK/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.2.3.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: When sending variable length MAC SDUs, the IUT either transmits each SDU into a PDU or packs a group of SDUs into a PDU with a Packing subheader for each PDU.
Test strategy	
Notes	

TP ID	TP/BS/MAC/PACK/BV-H001
	Deleted.

TP ID	TP/BS/MAC/PACK/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.3.4.1.1.
PICS item	
Initial Condition	IUT is operational. The IUT has established a non-ARQ connection (Extended Type bit in generic MAC header set to 0) for fixed-length SDUs.
Expected Behaviour	Check that: For packing fixed length blocks, the IUT sets the Request/Transmission policy to allow packing and prohibit fragmentation.
Test strategy	
Notes	

TP ID	TP/BS/MAC/PACK/BV-H003
P802.16 Reference	[3] and [12] Clause 6.3.3.4.1.1.
PICS item	
Initial Condition	IUT is operational. The IUT has established a non-ARQ connection (Extended Type bit in generic MAC header set to 0) for fixed-length SDUs.
Expected Behaviour	Check that: To establish a non-ARQ connection for fixed-length SDUs, the IUT includes the SDU size in the DSA-REQ message.
Test strategy	
Notes	

TP ID	TP/BS/MAC/PACK/BV-H004
	Deleted.

TP ID	TP/BS/MAC/PACK/BV-H005 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.3.4.2 and 6.3.3.4.1.2.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational. The IUT has established an ARQ connection (Extended Type bit in generic MAC header set to 1) for variable-length SDUs.
Expected Behaviour	Check that: The IUT attaches a Packing sub header to each fragment of MAC SDU in the MAC PDU if packing occurs.
Test strategy	
Notes	

TP ID	TP/BS/MAC/PACK/BV-H006 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.4.2.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational. ARQ and packing are enabled on the connection.
Expected Behaviour	Check that: On receiving a MAC SDU broken into multiple fragments that are then packed into the same MAC PDU, the IUT unpacks and de-fragments the MAC PDU to form the MAC SDU.
Test strategy	
Notes	

TP ID	TP/BS/MAC/PACK/BV-H007 {3}
P802.16 Reference	[3] and [12] Clause 6.3.3.4.2.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational. ARQ and packing are enabled on the connection.
Expected Behaviour	Check that: On receiving a MAC PDU packed with SDU fragments from different SDUs including a mix of first transmissions and retransmissions, the IUT unpacks and de-fragments the MAC PDU to form the MAC SDUs.
Test strategy	
Notes	

TP ID	TP/BS/MAC/PACK/BV-H008
	Deleted

5.2.4.4 Cyclic Redundancy Check (CRC)

TP-ID	TP/BS/MAC/CRC/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.2.3 and 6.3.3.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. An SS is registered and authenticated with the IUT. A downlink service flow is established with CRC on.
Expected Behaviour	Check that: The IUT sends data over said connection in MAC PDUs with a correctly computed CRC.
Test strategy	
Notes	

TP ID	TP/BS/MAC/CRC/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.1.1 and 6.3.3.5.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating. CRC use is on.
Expected Behaviour	Check that: The IUT includes a CRC as defined in IEEE 802.3 [9] in each generic MAC header (HT set to 0). The CRC covers the generic MAC header and MAC PDU payload. If the PDU is encrypted, the CRC covers the payload after encryption.
Test strategy	
Notes	

TP ID	TP/BS/MAC/CRC/BV-H002 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: The IUT enables CRC usage for the Initial Ranging, Broadcast, Fragmentable broadcast, Basic, and Primary Management connections.
Test strategy	
Notes	

TP ID	TP/BS/MAC/CRC/BV-H003
	Deleted

TP-ID	TP/BS/MAC/CRC/BI-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. An SS is registered and authenticated with the IUT. An uplink service flow is established with CRC on.
Expected Behaviour	Check that: On receiving data with incorrect CRC, the IUT silently discards the PDU.
Test strategy	
Notes	

5.2.5 Automatic Repeat Request (ARQ)

TP ID	TP/BS/ARQ/BV-H000 {1} **W2
P802.16 Reference	[3] Clause 11.13.18.1 [12] Clause 11.13.17.1.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the ARQ Enable TLV set to ARQ Not Requested (0) to establish a service flow, the IUT accepts the DSA transaction and does not implement ARQ for the service flow.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/BV-H001 {3}
P802.16 Reference	[3] Clause 11.13.18.1 [12] Clause 11.13.17.1.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational. The IUT transmits a DSA-REQ with the ARQ Enable TLV set to ARQ Requested (1) to establish a service flow.
Expected Behaviour	Check that: On receiving a DSA-RSP with the ARQ Enable TLV set to ARQ Not Accepted (0), the IUT accepts the DSA transaction and does not implement ARQ for the service flow.
Test strategy	
Notes	Require a means to force the IUT to transmit a DSA-REQ with the ARQ Enable TLV set to ARQ Requested (1) to establish a service flow.

TP ID	TP/BS/ARQ/BV-H002 {1}**
P802.16 Reference	[3] Clause 11.13.18.2 [12] Clause 11.13.17.2.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational. The IUT transmits a DSA-REQ with an ARQ_WINDOW_SIZE parameter.
Expected Behaviour	Check that: On receiving a DSA-RSP with an ARQ_WINDOW_SIZE parameter smaller than that in its previously sent DSA-REQ, the IUT implements the smaller value as the ARQ_WINDOW_SIZE.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/BV-H003 {4}
P802.16 Reference	[3] Clause 11.13.18.2 [12] Clause 11.13.17.2.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational. The IUT transmits a DSA-REQ with an ARQ_WINDOW_SIZE parameter.
Expected Behaviour	Check that: On receiving a DSA-RSP with an ARQ_WINDOW_SIZE parameter larger than that in its previously sent DSA-REQ, the IUT implements the smaller value as the ARQ_WINDOW_SIZE.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/BV-H004
	Deleted.

TP ID	TP/BS/ARQ/BV-H004b {4}
P802.16 Reference	[3] Clause 11.13.18.3 [12] Clause 11.13.17.3.
PICS item	PIC_MOB1.
Initial Condition	The IUT is operational and has performed a successful DSA transaction, with ARQ_RETRY_TIMEOUT parameters.
Expected Behaviour	Check that: The IUT sets the ARQ_RETRY_TIMEOUT to the sum of ARQ transmitters TRANSMITTER_DELAY and ARQ receivers RECEIVER_DELAY.
Test strategy	
Notes	TP probably not testable.

TP ID	TP/BS/ARQ/BV-H005 {2} **W2
P802.16 Reference	[3] Clause 11.13.18.4 [12] Clause 11.13.17.4.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the ARQ_BLOCK_LIFETIME parameter set to 0 and when the transaction is successful, the IUT handles ARQ_BLOCK_LIFETIME as infinite.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/BV-H006 {2} **W2
P802.16 Reference	[3] Clause 11.13.18.7 [12] Clause 11.13.17.7.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the ARQ_RX_PURGE_TIMEOUT parameter set to 0 and when the transaction is successful, the IUT handles ARQ_RX_PURGE_TIMEOUT as infinite.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/BV-H007 {2} **\W2
P802.16 Reference	[3] Clause 11.13.18.8 [12] Clause 11.13.17.8.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ message with minimum and maximum values of ARQ_BLOCK_SIZE, the IUT transmits a DSA-RSP message with a selected value of ARQ_BLOCK_SIZE within the range in the DSA-REQ message and that the IUT's ARQ_BLOCK_SIZE during service flow is the value in the DSA-RSP message.
Test strategy	
Notes	If the IUT sending a DSA-REQ(SS in this case) uses a minimum that is larger than what the receiving IUT(BS in this case) can support due to admission or other policy restrictions, then the receiving IUT will have no choice other than reject the DSA-REQ.

TP ID	TP/BS/ARQ/BV-H008 {2} **\W2
P802.16 Reference	[3] Clause 11.13.18.8 [12] Clause 11.13.17.7.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ message without an ARQ_BLOCK_SIZE parameter, the IUT transmits a DSA-RSP message with an ARQ_BLOCK_SIZE value less than or equal to the maximum ARQ_BLOCK_SIZE value and that the IUT's ARQ_BLOCK_SIZE during service flow is the value in the DSA-RSP message.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/BV-H009
	Deleted.

5.2.5.1 Receiver Operations (RXD)

TP ID	TP/BS/ARQ/RXD/BV-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4, 6.3.3.4, and 6.3.3.4.2.
PICS item	PIC_MOB2.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection.
Expected Behaviour	Check that: On receiving ARQ blocks, the IUT transmits ARQ feedback information: - either in an ARQ Feedback standalone message; or - in the first piggy-backed packed PDU sub header with the FC bits set to 00, where bit #4 in the Type encodings of the generic MAC header is set to 1.
Test strategy	
Notes	Optional method by BS, difficult to test packing.

TP ID	TP/BS/ARQ/RXD/BV-H001
	Deleted.

TP ID	TP/BS/ARQ/RXD/BV-H001b {1}**
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	The IUT is a receiver on an ARQ-enabled connection.
Expected Behaviour	Check that: When the receiving data blocks with block BSN_n missing and block BSN_{n+1} is received, the IUT sends an ACK: - either cumulative (type 1) which ACK blocks up to BSN_{n-1}; - or Cumulative with selective (type 2) which ACK blocks up to BSN_{n-1}, NACK BSN_n and selective ACKs later blocks if any; - or Cumulative with block (type 3) which ACK blocks up to BSN_{n-1}, NACK BSN_n and block ACKs later blocks if any.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RXD/BV-H002 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection.
Expected Behaviour	Check that: On receiving ARQ blocks, the IUT does not fragment ARQ feedback messages.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RXD/BV-H003 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.5.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection.
Expected Behaviour	Check that: The IUT uses CRC-32 for error detection in MAC PDUs on the connection.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RXD/BV-H004 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3 Figure "ARQ block reception".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection.
Expected Behaviour	Check that: After receiving an ARQ block that has not been acknowledged, the IUT acknowledges the ARQ block in subsequent feedback.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RXD/BV-H005 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3 Figure "ARQ block reception".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. ARQ block BSN_n has been acknowledged.
Expected Behaviour	Check that: On receiving an ARQ block BSN_n that is in the IUT's window that has already been acknowledged, the IUT again acknowledges the ARQ block, by: - either cumulative (type 1); - or Cumulative with selective (type 2); - or Cumulative with block (type 3).
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RXD/BV-H006 {4}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection.
Expected Behaviour	Check that: On receiving ARQ blocks packed in a PDU with a break in the contiguous BSN sequence numbers: …, BSN_n, BSN_{n+2}, the IUT transmits an acknowledgement: - either cumulative ACK (type 1) for BSN_n; - or type 2 cumulative BSN_n and selective BSN_{n+2}; - or type 3 cumulative BSN_n and block ack BSN_{n+2}.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RXD/BV-H007 {1}**W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. The IUT receives stream of PDUs (containing ARQ blocks to BSN_n) where one PDU (containing ARQ block BSN_{n-k}) has a CRC-32 error the TE transmits several consequent blocks without CRC error.
Expected Behaviour	Check that: The IUT transmits no ACK for BSN_{n-k}.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RXD/BV-H008 {4}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3 Figure "ARQ block reception".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection.
Expected Behaviour	Check that: On receiving an ARQ block that is not in the IUT's window, the IUT sends an ACK of the blocks that have been received within the window and discards the block outside the window.
Test strategy	
Notes	Test strategy is probably complicated.

TP ID	TP/BS/ARQ/RXD/BV-H009
	Deleted.

TP ID	TP/BS/ARQ/RXD/BV-H010 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.4.6.3 and 6.3.2.3.31.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. The IUT received ARQ blocks with some containing CRC errors. The IUT acknowledged the correct blocks and NACKed the blocks containing the CRC errors.
Expected Behaviour	Check that: On receiving an ARQ Discard message, the IUT acknowledges the unacknowledged blocks up to the BSN in the ARQ discard message.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RXD/BV-H011
	Deleted.

TP ID	TP/BS/ARQ/RXD/BV-H012 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.4.6.2 and 6.3.2.3.31.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. The IUT then received an ARQ Discard message in order to skip ARQ blocks up to the BSN value BSN_n in the message. The IUT acknowledged the skipping of all the blocks up to the BSN value.
Expected Behaviour	Check that: The IUT transmits no ACK for BSN_{n+1}.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RXD/BV-H013
	Deleted.

TP ID	TP/BS/ARQ/RXD/BV-H014
	Deleted.

TP ID	TP/BS/ARQ/RXD/BV-H015 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. ARQ_DELIVER_IN_ORDER is not enabled.
Expected Behaviour	Check that: On receiving an incomplete set for a MAC SDU and then a complete set of blocks for another MAC SDU, the IUT provides the convergence layer with the complete SDU immediately after reception of its last block.
Test strategy	
Notes	Requires an Upper Tester.

TP ID	TP/BS/ARQ/RXD/BV-H016 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. ARQ_DELIVER_IN_ORDER is enabled.
Expected Behaviour	Check that: On receiving an incomplete set for a MAC SDU and then a complete set of blocks for another MAC SDU, the IUT provides the convergence layer with the complete SDU only after the incomplete set of blocks have been purged using ARQ_RX_PURGE_TIMEOUT.
Test strategy	
Notes	Requires an Upper Tester.

TP ID	TP/BS/ARQ/RXD/TI-H000 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. The IUT received an ARQ block for BSN=n=ARQ_RX_WINDOW_START that contains a CRC error and received an ARQ block for BSN=n+1 without error. The IUT ACKed block n+1 and NACKed block n and started ARQ_RX_PURGE_TIMEOUT for block n+1. The IUT continues receiving ARQ blocks with block n always containing a CRC error (the block is always marked as not received by the IUT).
Expected Behaviour	Check that: At ARQ_RX_PURGE_TIMEOUT expiry for block n+1, the IUT ACKs block n by transmitting ARQ feedback IE.
Test strategy	
Notes	

5.2.5.2 Transmit Data (TXD)

TP ID	TP/BS/ARQ/TXD/BV-H000 {1} **\W2
P802.16 Reference	[3] and [12] Clause 6.3.4.1.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. Packing is disabled. The IUT start transmitting.
Expected Behaviour	Check that: said N (N is a number modulo ARQ_BSN_MODULUS) the BSN number of the first PDU, the BSN of the second PDU shall be equal to (N + number of ARQ blocks contained in the first PDU). In case more PDUs are transmitted without retransmission the algorithm applies to the third, fourth PDUs (contiguous modulo ARQ_BSN_MODULUS).
Test strategy	1) TE does not request retransmission. 2) Need to be provided enough data for at least two PDUs to be transmitted at IUT side. 3) The number of the ARQ blocks contained in the first PDU is equal to Ceiling (PDU Payload Size/ARQ_BLOCK_SIZE).
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H001 {1} **\W2
P802.16 Reference	[3] and [12] Clause 6.3.4.1.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection.
Expected Behaviour	Check that: When fragmentation occurs on the connection, the IUT fragments the SDU according to ARQ block boundaries.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H002 {1} **\W2
P802.16 Reference	[3] and [12] Clause 6.3.4.1.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection.
Expected Behaviour	Check that: When the PDU is packed, the IUT transmits the sequence of blocks immediately between the MAC sub headers with contiguous sequence numbers and the sequence of blocks after the last packing sub header with contiguous sequence numbers.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H003 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.4.1.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection.
Expected Behaviour	Check that: When the PDU contains packing or fragmentation sub headers, the IUT places into the sub header's BSN field the sequence number of the first ARQ block in the sequence of blocks following the sub header.
Test strategy	
Notes	

TP-ID	TP/BS/ARQ/TXD/BV-H004 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.3.4.2 and 6.3.2.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. An ARQ connection is established and the IUT is the transmitter on this connection. The ARQ Enabled service flow is in active state and packing is on.
Expected Behaviour	Check that: To transmit data whose size exceeds ARQ_BLOCK_SIZE × 2 048 (to ensure that the BSN wraps around), the IUT sends the data in different blocks each of ARQ_BLOCK_SIZE (last block can be less than ARQ_BLOCK_SIZE) and the assigned BSN in the packing sub header to the blocks wraps around after reaching value 2 048.
Test strategy	
Notes	ARQ_BLOCK_SIZE value is set during service addition.

TP-ID	TP/BS/ARQ/TXD/BV-H005 {3}
P802.16 Reference	[3] and [12] Clause 6.3.3.3, 6.3.4, and 6.3.2.2.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. An ARQ Enabled service flow is in the active state. Packing is off.
Expected Behaviour	Check that: When transmitting data whose size exceeds ARQ_BLOCK_SIZE × 2 048 (to ensure that the BSN wraps around), the IUT sends the data in different blocks each of ARQ_BLOCK_SIZE (last block can be less than ARQ_BLOCK_SIZE) and the assigned BSN in the Fragmentation sub-header to the blocks wraps around after reaching value 2 048.
Test strategy	
Notes	ARQ_BLOCK_SIZE value is set during service addition.

TP ID	TP/BS/ARQ/TXD/BV-H006 {3}
P802.16 Reference	[3] and [12] Clause 6.3.3.4.3.
PICS item	PIC_MOB2.
Initial Condition	ARQ enabled on the connection.
Expected Behaviour	Check that: On receiving a fragmented and packed PDU containing ARQ Feedback Payload, the IUT ignores the FSN/BSN and processes the ARQ Feedback Payload.
Test strategy	
Notes	

TP-ID	TP/BS/ARQ/TXD/BV-H007 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.
PICS Item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT transmits ARQ blocks.
Expected Behaviour	Check that: On receiving an ARQ feedback message, the IUT transmits the subsequent blocks.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H008
	Deleted.

TP ID	TP/BS/ARQ/TXD/BV-H009 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.4 and 6.3.2.1.1 Table "Type encodings".
PICS item	PIC_MOB2.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT transmitted ARQ blocks after which it received ARQ feedback information in an ARQ Feedback standalone message. The IUT then transmitted another set of ARQ blocks after which the ARQ feedback information is piggy-backed in a PDU by setting to 1 bit #4 in the Type encodings of the generic MAC header field and placing the ARQ Feedback Payload in the first packed sub header of the PDU.
Expected Behaviour	Check that: The IUT correctly processes the ARQ feedback information in both the ARQ Feedback standalone message and in the piggy-backed packed PDU sub header.
Test strategy	
Notes	Need means of making receiver generate feedback in both formats.

TP ID	TP/BS/ARQ/TXD/BV-H010 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has transmitted ARQ blocks all of which have been acknowledged except one.
Expected Behaviour	Check that: On receiving a NACK concerning this block using cumulative with a selective ACK map (type 2). (This block is now in the "Waiting" state), the IUT retransmits the NACK block.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H010a {1}**W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has transmitted ARQ blocks all of which have been acknowledged except one. ARQ_BLOCK_LIFETIME is greater than or equal to 2 x ARQ_RETRY_TIMEOUT.
Expected Behaviour	Check that: On receiving the cumulative ACK (type1) concerning this block the unacknowledged block is now in the "Waiting" state), the IUT retransmits the unacknowledged block.
Test strategy	
Notes	When cumulative ACK (Type 1) is used, the unacknowledged block must be the last block received by the TE to be consistent with the initial condition ("all of which have been acknowledged except one").

TP ID	TP/BS/ARQ/TXD/BV-H010b {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has transmitted ARQ blocks all of which have been acknowledged except one.
Expected Behaviour	Check that: On receiving a NACK concerning this block using cumulative ACK with block Sequence Ack (type 3). (This block is now in the "Waiting" state), the IUT retransmits the NACK block followed by other blocks not yet sent using the rules for fragmentation and packing.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H011 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has transmitted ARQ blocks.
Expected Behaviour	Check that: On receiving ACKs for some of the blocks and NACKs concerning the other blocks using a cumulative with selective ACK map (type 2). (These blocks are now in the "Waiting" state), the IUT retransmits the NACK blocks with the block having the lowest BSN being retransmitted first followed by other blocks not yet sent using the rules for fragmentation and packing.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H011a {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has transmitted ARQ blocks.
Expected Behaviour	Check that: On receiving ACKs for some of the blocks and NACKs concerning the other blocks using a cumulative ACK with block Sequence ACK (type 3). (These blocks are now in the "Waiting" state), the IUT retransmits the NACK blocks with the block having the lowest BSN being retransmitted first followed by other blocks not yet sent using the rules for fragmentation and packing.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H012
	Deleted

TP ID	TP/BS/ARQ/TXD/BV-H013 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has transmitted ARQ blocks where a cumulative ACK is possible for a set of blocks.
Expected Behaviour	Check that: On receiving a cumulative ACK for a subset of this set, the IUT does not retransmit any of the blocks in the cumulative ACK and retransmits the un-ACKed subset of the set after the ARQ_RETRY_TIMEOUT has elapsed.
Test strategy	
Notes	For a cumulative ACK, retransmission of higher BSN (not ACKed blocks) can only be sent after ARQ_RETRY_TIMEOUT elapsed.

TP ID	TP/BS/ARQ/TXD/BV-H014a {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has transmitted ARQ blocks.
Expected Behaviour	Check that: On receiving a cumulative ACK with Block Sequence ACK (type 3) with gaps (indicating NACK for some of the transmitted blocks), the IUT does not retransmit any of the blocks below or equal to the cumulative ACK Block sequence or contained in any of the Block sequence intervals and retransmits only those blocks not ACKed.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H015
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has transmitted ARQ blocks and has received a selective ACK for all blocks except BSN_i and BSN_k where i < k (i.e. where block BSN_i was transmitted before block BSN_k).The IUT then transmits more ARQ blocks including those for BSN_i and BSN_k.
Expected Behaviour	Check that: After having received a selective ACK for BSN_k, the IUT then transmits more ARQ blocks including that for BSN_i.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H016 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has transmitted ARQ blocks and has received an ACK for all blocks except BSN_i. Block BSN_k is ACKed where i < k (i.e. where block BSN_i was transmitted before block BSN_k).
Expected Behaviour	Check that: On receiving a NACK for block BSN_i, the IUT transmits more ARQ blocks including that for BSN_i.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H017 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection.
Expected Behaviour	Check that: On receiving a block ACK for an invalid BSN, the IUT ignores the block ACK.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/BV-H018
	Moved and renamed to TP/BS/ARQ/TXD/TI-H004.

TP ID	TP/BS/ARQ/TXD/TI-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT transmits ARQ blocks.
Expected Behaviour	Check that: On not receiving ACKs or NACKs for any block from BSN_n after ARQ_RETRY_TIMEOUT, the IUT retransmits block BSN_n after at least ARQ_RETRY_TIMEOUT time from the first sending of block BSN_n.
Test strategy	
Notes	A prerequisite to this test is that ARQ_BLOCK_LIFETIME is long enough to allow at least one expiry of ARQ_RETRY_TIMEOUT.

TP ID	TP/BS/ARQ/TXD/TI-H001 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.4.3.4 and 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The ARQ_BLOCK_LIFETIME>2xARQ_RETRY_TIMEOUT. The IUT transmits ARQ blocks and has not received any ACKs or NACKs for any block from BSN_n and on. The IUT then retransmitted block BSN_n after ARQ_RETRY_TIMEOUT time from the first sending of block BSN_n.
Expected Behaviour	Check that: On not receiving any ACKs or NACKs for any block from BSN_n and again on ARQ_RETRY_TIMEOUT, the IUT retransmits block BSN_n after ARQ_RETRY_TIMEOUT time from the last sending of block BSN_n.
Test strategy	
Notes	A prerequisite to this test is that ARQ_BLOCK_LIFETIME is long enough to allow more than one expiry of ARQ_RETRY_TIMEOUT.

TP ID	TP/BS/ARQ/TXD/TI-H002
	Deleted.

TP ID	TP/BS/ARQ/TXD/TI-H003 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT transmits ARQ blocks. (ARQ_BLOCK_LIFETIME begins).The IUT does not receive any ACKs or NACKs for any block from BSN_n to any of the repeated transmissions. The IUT then transmitted an ARQ DISCARD message between ARQ_BLOCK_LIFETIME expiry and ARQ_RX_PURGE_TIMEOUT + ARQ_RETRY_TIMEOUT expiry. (ARQ_RETRY_TIMEOUT begins). The IUT did not send an ACK for the discarded BSN_n.
Expected Behaviour	Check that: After ARQ_RETRY_TIMEOUT expiry without receiving an ACK for the discarded BSN_n, the IUT retransmits the ARQ DISCARD message and restarts ARQ_RETRY_TIMEOUT until receiving an ACK for the discarded BSN_n.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/TXD/TI-H004 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT transmits ARQ blocks. (ARQ_BLOCK_LIFETIME begins).
Expected Behaviour	Check that: On not receiving any ACKs or NACKs for any block from BSN_n and after no response to any of the repeated transmissions, the IUT transmits an ARQ DISCARD message between ARQ_BLOCK_LIFETIME expiry and ARQ_RX_PURGE_TIMEOUT + ARQ_RETRY_TIMEOUT expiry.
Test strategy	
Notes	

5.2.5.3 Reset (RE)

TP ID	TP/BS/ARQ/RE/BV-H000 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.4.6.2 and 6.3.2.3.32 Figure "ARQ Reset message dialog-receiver initiated".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. The IUT starts ARQ_SYNC_LOSS_TIMEOUT at block BSN_{n+1} reception and never received additional blocks. The IUT then transmitted an ARQ Reset message Type 0x0 (Request) after expiration of ARQ_SYNC_LOSS_TIMEOUT.
Expected Behaviour	Check that: On receiving an ARQ Reset message Type 0x1(Responder Ack), the IUT transmits an ARQ Reset message Type 0x2 (Confirmation).
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RE/BV-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog-transmitter initiated".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT transmits ARQ blocks and has started ARQ_SYNC_LOSS_TIMEOUT. On not receiving an ACK for block BSN_{n+1} despite its repeated retransmissions, the IUT then transmits an ARQ Reset message Type 0x0 (Request) after expiration of ARQ_SYNC_LOSS_TIMEOUT and stops transmitting on the connection.
Expected Behaviour	Check that: On receiving an ARQ Reset message Type 0x1 (Responder Ack), the IUT resumes transmitting ARQ blocks with the first BSN = 0.
Test strategy	A means of providing upper layer data to the IUTs ARQ layer after reset may be required in order for the IUT to resume transmitting ARQ blocks.
Notes	ARQ_WINDOW_START=0 implies that BSN=0.

TP ID	TP/BS/ARQ/RE/BV-H002 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog-receiver initiated".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. The IUT starts ARQ_SYNC_LOSS_TIMEOUT at block BSN_{n+1} reception and has never received additional blocks. The IUT then transmitted an ARQ Reset message Type 0x0 (Request) after expiration of ARQ_SYNC_LOSS_TIMEOUT. It then received an ARQ Reset message Type 0x1(Responder Ack). The IUT then transmitted an ARQ Reset message Type 0x2 (Confirmation).
Expected Behaviour	Check that: On receiving ARQ blocks beginning with BSN=0, the IUT acknowledges the received ARQ blocks starting with a BSN=0.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RE/BV-H003 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog-transmitter initiated".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection.
Expected Behaviour	Check that: On receiving an ARQ Reset message Type 0x0, the IUT transmits an ARQ Reset message Type 0x1 (Responder Ack).
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RE/BV-H004 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog-receiver initiated".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection.
Expected Behaviour	Check that: On receiving an ARQ Reset message Type 0x0 (Initiator), the IUT stops transmitting ARQ blocks and transmits an ARQ Reset message Type 0x1 (Responder Ack).
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RE/BV-H005 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog-transmitter initiated".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. The IUT has received an ARQ Reset message Type 0x0. The IUT then transmitted an ARQ Reset message Type 0x1 (Responder Ack).
Expected Behaviour	Check that: On receiving ARQ blocks starting with a BSN=0, the IUT acknowledges the ARQ blocks received starting with BSN=0.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RE/BV-H006 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog-receiver initiated".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT then received an ARQ Reset message Type 0x0 (Initiator). The IUT stopped transmitting ARQ blocks and then transmitted an ARQ Reset message Type 0x1 (Responder Ack).
Expected Behaviour	Check that: On receiving an ARQ Reset message Type 0x2 (Confirmation), the IUT begins transmitting ARQ blocks with the first block's BSN=0.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RE/TI-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog-transmitter initiated".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has started ARQ_SYNC_LOSS_TIMEOUT.
Expected Behaviour	Check that: On not receiving an ACK for block BSN_{n+1} despite the IUT's repeated retransmissions and after ARQ_SYNC_LOSS_TIMEOUT expiry, the IUT transmits an ARQ Reset message Type 0x0 (Request) and stops transmitting on the connection.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RE/TI-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog-transmitter initiated".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has transmitted an ARQ Reset message Type 0x0 (Request) after expiration of ARQ_SYNC_LOSS_TIMEOUT, stopped transmitting on the connection, and started T22.
Expected Behaviour	Check that: On expiry of T22 without a response to the ARQ Reset, the IUT retransmits the ARQ Reset message Type 0x0.
Test strategy	
Notes	T22_retries is a vendor specific value.

TP ID	TP/BS/ARQ/RE/TI-H002 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog-receiver initiated".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. The IUT starts ARQ_SYNC_LOSS_TIMEOUT at block BSN_{n+1} reception.
Expected Behaviour	Check that: On not receiving additional blocks, the IUT transmits an ARQ Reset message Type 0x0 (Request) after expiration of ARQ_SYNC_LOSS_TIMEOUT.
Test strategy	
Notes	

TP ID	TP/BS/ARQ/RE/TI-H003 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog-receiver initiated".
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the transmitter on this connection. The IUT has received an ARQ Reset message Type 0x0 (Initiator). The IUT stopped transmitting ARQ blocks, transmitted an ARQ Reset message Type 0x1 (Responder Ack), and started T22.
Expected Behaviour	Check that: On T22 expiry without receiving an ARQ Reset message Type 0x2 (Confirmation), the IUT retransmits the ARQ Reset message Type 0x1 (Responder Ack).
Test strategy	
Notes	T22_retries is a vendor specific value. May need means to make the IUT to transmit the first ARQ_reset message.

5.2.6 Radio Link Control (RLC)

5.2.6.1 Initial Ranging (IRNG)

TP ID	TP/BS/RLC/ACQ/BV-H000 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.4, 8.3.6.3, and 8.4.5.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: The IUT transmits UL-MAPs containing Initial Ranging UL-MAP IEs (UIUC 12) with Ranging Method TLV value 0b00 or 0b01.
Test strategy	Straightforward.
Notes	Check also for UCDs containing CDMA ranging codes.

TP ID	TP/BS/RLC/IRNG/BV-H000
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.6 and 6.3.9.5.1 Table "Ranging and Automatic Adjustments Procedure".
PICS Item	
Initial Condition	IUT is operating and transmitting UL-MAPs with Initial Ranging IEs.
Expected Behaviour	Check that: On receiving a RNG-REQ with the Initial Ranging CID in an Initial Ranging opportunity that requires timing and power adjustments, the IUT: 1) transmits a RNG-RSP on the Initial Ranging CID containing Basic CID, Primary CID, Status = Continue, Timing Adjustments, and Power Adjustments; and 2) subsequently transmits an Initial Ranging interval for the Basic CID in the RNG-RSP.
Test strategy	Straightforward. 1) IUT will send the Initial Ranging interval for the new Basic CID in a frame following the RNG-RSP.
Notes	1) Subchannelized ranging mechanism is not operating for this TP.

TP ID	TP/BS/RLC/IRNG/BV-H001
	Deleted.

TP ID	TP/BS/RLC/IRNG/BV-H002
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.6 and 6.3.9.5.1.
PICS Item	
Initial Condition	IUT is operating and transmitting UL-MAPs with Initial Ranging IEs for a given Basic CID.
Expected Behaviour	Check that: On receiving a RNG-REQ with the given Basic CID in an Initial Ranging opportunity within tolerances, the IUT transmits a RNG-RSP on the Basic CID containing Status = Success.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H003
P802.16 Reference	[3] and [12] Clause 6.3.9.6 Figure "Initial Ranging – BS response to undecodable message.
PICS Item	
Initial Condition	IUT is operating below 11 GHz and in Initial Ranging for an MS.
Expected Behaviour	Check that: On receiving an un-decodable RNG-REQ, the IUT either sends a RNG-RSP containing Ranging Status = Continue with Frame Number (and Opportunity) or discards the received message and does nothing.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H004
	Deleted.

TP ID	TP/BS/RLC/IRNG/BV-H005
P802.16 Reference	[3] and [12] Clauses 6.3.9.6 and 8.3.7.2.
PICS Item	
Initial Condition	IUT is operating and in Initial Ranging for an MS.
Expected Behaviour	Check that: On receiving a long preamble followed by two identical symbols containing a subchannelized preamble on a sub-channel, the IUT allocates a single sub channel for the MS and sends a UL-MAP with UL-MAP IE containing a Subchannelized Network Entry IE on the Initial Ranging CID.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H006
P802.16 Reference	[3] and [12] Clauses 6.3.9.6 Figure 63 and 11.6.
PICS Item	
Initial Condition	IUT is operating and has started Initial Ranging and is in polled phase.
Expected Behaviour	Check that: On receiving a RNG-REQ containing adjusted PHY parameters, the IUT sends a RNG-RSP containing a Ranging Status set to success.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H007
P802.16 Reference	[3] and [12] Clauses 6.3.9.6 and 8.3.7.2.
PICS Item	
Initial Condition	IUT is operating and in Initial Ranging for an MS.
Expected Behaviour	Check that: On receiving a subchannelized network entry signal, the IUT sends RNG-RSP containing the frame number, initial ranging opportunity number and the received ranging sub-channel number. The IUT allocates the sub channel identifying the transmit opportunity, frame number and ranging sub channel. The IUT then sends a Subchannelized Network Entry IE in UL-MAP IE.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H008
P802.16 Reference	[3] and [12] Clauses 6.3.9.6 and 8.3.7.2.
PICS Item	
Initial Condition	IUT is operating and in Initial Ranging for an MS. The IUT has received subchannelized network entry signal. The IUT has then sent a Subchannelized Network Entry IE in UL-MAP IE.
Expected Behaviour	Check that: On receiving a RNG-REQ at MS maximum power, the IUT sends a RNG-RSP containing Status = Success.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H009
P802.16 Reference	[3] and [12] Clause 6.3.7.4.3.2.
PICS Item	
Initial Condition	IUT is operating.
Expected Behaviour	Check that: After transmitting a UCD message with Ranging Request Opportunity Size: 1) the IUT provides initial ranging grants with a time between them equal to the maximum value of Initial Ranging Interval; and 2) the size of each initial ranging grant is an integer multiple of "Contention Ranging Request Opportunity Size".
Test strategy	1) Check the value of Ranging Request Opportunity Size in the UCD. 2) Check the time between initial ranging grants provided by the IUT. 3) Assign PASS if the time between initial ranging grants is lower than the maximum value of Initial Ranging Interval and the size of each initial ranging grant is an integer multiple of "Ranging Request Opportunity Size".
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H010
P802.16 Reference	[3] and [12] Clause 6.3.9.6 Figure "Initial Ranging – SS (part 2)".
PICS Item	
Initial Condition	IUT is operating, has received a valid initial RNG-REQ on CID=0, and has transmitted a RNG-RSP (continue) on CID=0.
Expected Behaviour	Check that: On receiving an identical initial RNG-REQ on CID=0, the IUT retransmits the RNG-RSP (continue) message containing transmission parameter adjustments on CID=0.
Test strategy	Straightforward.
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H011
	Deleted.

TP ID	TP/BS/RLC/IRNG/BV-H012
P802.16 Reference	[3] and [12] Clauses 6.3.9.6 and 6.3.10.1.
PICS Item	
Initial Condition	IUT is operating and has started Polled Initial Ranging.
Expected Behaviour	Check that: On receiving a RNG-REQ requesting change of DL PHY Mode to another allowed mode, the IUT sends a RNG-RSP confirming the change.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H013
P802.16 Reference	[3] and [12] Clauses 6.3.9.6 and 6.3.10.1.
PICS Item	
Initial Condition	IUT is operating and has started Polled Initial Ranging.
Expected Behaviour	Check that: On receiving a RNG-REQ requesting change of DL PHY Mode to another not allowed mode, the IUT sends a RNG-RSP message continuing the original PHY mode.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H014
P802.16 Reference	[3] and [12] Clause 6.3.9.6, Figure 62.
PICS Item	
Initial Condition	IUT is operating and in Initial Ranging for an MS.
Expected Behaviour	Check that: On receiving a RNG-REQ message for an MS that operates on a channel and the IUT does not accept the MS on this DL channel, the IUT sends a RNG-RSP message with status = abort specifying the new downlink frequency to use.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H015 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.10.3.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and in Initial Ranging for an MS.
Expected Behaviour	Check that: On successfully receiving an Initial CDMA Ranging Code for which time, power and/or frequency adjustment is needed the IUT sends a RNG-RSP message with status continue or success and containing the received CDMA Ranging Code.
Test strategy	Vendors will suggest parameters and the range of parameters for which the adjustment is needed.
Notes	The TE shall use an Initial Ranging CDMA Code over one symbol (if RNG-RSP with status=continue previously received) or two symbols (if RNG-RSP with status=continue not received).

TP ID	TP/BS/RLC/IRNG/BV-H016 {1} **
P802.16 Reference	[3] and [12] Clause 6.3.10.3.1 Table 121.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and in Initial Ranging for an MS.
Expected Behaviour	Check that: On successfully receiving an initial CDMA Initial Ranging Code for which no time, power or frequency adjustment is needed, the IUT sends a CDMA_Allocation_IE or Ranging response message with status success followed by a CDMA_Allocation-IE providing Bandwidth Allocation of required size for the MS to allow the MS to send a RNG-REQ message.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BV-H017 {1} **
P802.16 Reference	[3] and [12] 6.3.8, 6.3.9.5.1, 6.3.10 and 8.4.7.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmitting UL-MAPs with CDMA_ALLOCATION IEs.
Expected Behaviour	Check that: On receiving a valid RNG-REQ in an CDMA UL Allocation with: - Initial Ranging CID; - MS MAC Address TLV; - Mac Version TLV. The IUT responds with a RNG-RSP on the Initial Ranging CID with: - Basic CID TLV; - Primary Management CID TLV; - MS MAC Address TLV; - Ranging Status TLV.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BI-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.6 and 6.3.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and in Initial Ranging for an MS.
Expected Behaviour	Check that: When TE transmits an improperly formatted RNG-REQ message, the IUT does not send RNG-RSP.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BI-H001
P802.16 Reference	[3] and [12] Clauses 6.3.9.6 and 6.3.2.3.
PICS Item	
Initial Condition	IUT is operating and has started Polled Initial Ranging.
Expected Behaviour	Check that: On receiving an improperly formatted RNG-REQ message, the IUT does not send a RNG-RSP and continues operation.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BI-H002 {3}
P802.16 Reference	[3] and [12] Clause 6.3.9.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and in Initial Ranging for an MS.
Expected Behaviour	Check that: On receiving a RNG-REQ message without Ranging CID in the allocated slot, the IUT does not send a RNG-RSP.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BI-H003
P802.16 Reference	[3] and [12] Clause 6.3.9.6.
PICS Item	
Initial Condition	IUT is operating and in Initial Ranging for an MS. The IUT has received a subchannelized network entry signal. The IUT has then sent a Subchannelized Network Entry IE in UL-MAP IE to accomplish allocation.
Expected Behaviour	Check that: On receiving a RNG-REQ at MS minimum power, the IUT does not send RNG-RSP.
Test strategy	
Notes	

TP-ID	TP/BS/RLC/IRNG/BI-H004
P802.16 Reference	[3] and [12] Clauses 6.3.2.3 Table "MAC Management messages" and 6.3.2.3.5.
PICS Item	
Initial Condition	The IUT is ranging.
Expected Behaviour	Check that: On receiving a RNG-REQ message on a connection other than an Initial ranging or Basic CID, the IUT ignores the RNG-REQ and does not send a RNG-RSP.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BO-H000
P802.16 Reference	[3] and [12] Clause 6.3.9.6 Figure 63.
PICS Item	
Initial Condition	IUT is operating and has started Initial Ranging and is in polled phase.
Expected Behaviour	Check that: On receiving a RNG-REQ message in the Initial Maintenance slot, the IUT does not send RNG-RSP and continues operation.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/BO-H001
P802.16 Reference	[3] and [12] Clause 6.3.9.6.
PICS Item	
Initial Condition	IUT is operating and has allocated Data Grant IEs.
Expected Behaviour	Check that: On receiving a RNG-REQ message in a Data Grant interval, the IUT either ignores the message or uses the requested DL PHY Mode.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/TI-H000
P802.16 Reference	[3] and [12] Clauses 6.3.9.5.1, and 6.3.9.6 Figure "Initial Ranging, Polled Phase-BS", and 10.1 "Invited Ranging Retries".
PICS Item	
Initial Condition	IUT is operating and has started Initial Ranging and is in polled phase.
Expected Behaviour	Check that: On sending "Invited Ranging Retries" Initial Ranging intervals on the Basic CID (polled ranging) and having received no RNG-REQ to any of the polled ranging opportunities, the IUT transmits a RNG-RSP (abort).
Test strategy	1) TE sends initial RNG-REQ on CID=0 in an Initial Ranging Interval with transmission power sufficient for IUT to decode RNG-REQ but requiring a RNG-RSP(continue) from IUT, not a RNG-RSP(success). 2) IUT sends RNG-RSP(continue) with power adjustments. 3) TE remains silent and does not respond to any of the Polled Initial ranging opportunities. 4) Assign PASS verdict if IUT sends RNG-RSP(abort) after it sends "Invited Ranging Retries" Initial Ranging intervals.
Notes	

TP ID	TP/BS/RLC/IRNG/TI-H001
P802.16 Reference	[3] and [12] Clauses 6.3.9.5.1, and 6.3.9.6 Figure "Initial Ranging, Polled Phase-BS", and 10.1 "Ranging Correction Retries".
PICS Item	
Initial Condition	IUT is operating and has started Initial Ranging and is in polled phase.
Expected Behaviour	Check that: After "Ranging Correction Retries" repetitions of sending Initial Ranging intervals on the Basic CID (polled ranging) of receiving a RNG-REQ requiring power corrections for each of the polled ranging opportunities and sending a RNG-RSP(continue), the IUT transmits a RNG-RSP(abort).
Test strategy	1) TE sends initial RNG-REQ on CID=0 in an Initial Ranging Interval with transmission power sufficient for IUT to decode RNG-REQ but requiring a RNG-RSP(continue) from IUT, not a RNG-RSP(success). 2) For Ranging Correction Retries, loop through the following: - IUT transmits polled Initial Ranging interval on TE's Basic CID; - TE transmits RNG-REQ at transmission characteristics forcing IUT to transmit RNG-RSP (continue); - IUT sends RNG-RSP(continue) with power adjustments. 3) IUT sends one more polled Initial Ranging opportunity on TE's Basic CID. 4) TE transmits one more RNG-REQ at transmission characteristics forcing IUT to transmit RNG-RSP (continue). 5) Assign PASS verdict if IUT sends RNG-RSP(abort).
Notes	

TP ID	TP/BS/RLC/IRNG/TI-H002 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.7 and 6.3.10.3.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and is waiting for a SBC-REQ message.
Expected Behaviour	Check that: After expiry of timer T9, the IUT releases and ages out Basic and Primary Management CIDs.
Test strategy	
Notes	

TP ID	TP/BS/RLC/IRNG/TI-H003 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.9.5.1, 6.3.7.4.3.2, and 10.1 Table 342.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: The time between UL-MAPs transmitted by the IUT containing ranging region assignment is less than the maximum time allowed for Initial Ranging Interval.
Test strategy	
Notes	

5.2.6.2 Periodic Ranging (PRNG)

TP ID	TP/BS/RLC/PRNG/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operating and an UL service flow is established.
Expected Behaviour	Check that: On receiving UL transmissions that require timing offset adjustment, the IUT transmits an unsolicited RNG-RSP (Continue) or RNG-RSP (Success) message with timing offset adjustment parameters.
Test strategy	
Notes	Selected as WiMAX Wave 1 TP - this info to be deleted before publication.

TP ID	TP/BS/RLC/PRNG/BV-H001
	Deleted.

TP ID	TP/BS/RLC/PRNG/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operating and an UL service flow is established.
Expected Behaviour	Check that: On receiving UL transmissions that require a power adjustment, the IUT performs one of the actions below: - either transmit RNG-RSP (Continue) message with power adjustment parameters; or - transmit RNG-RSP (Success) message with power adjustment parameters; or - transmit FPC message with power adjustment parameters; or - transmit Power Control IE with power adjustment parameters; or - change to a more robust PHY Mode.
Test strategy	
Notes	

TP ID	TP/BS/RLC/PRNG/BV-H003
	Deleted.

TP ID	TP/BS/RLC/PRNG/BV-H004
	Deleted.

TP ID	TP/BS/RLC/PRNG/BV-H005
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operating. An UL service flow is established. The IUT is adjusting power during periodic ranging by iterating RNG-RSP (Continue) messages.
Expected Behaviour	Check that: On receiving UL transmissions that no longer require a RNG-RSP (Continue) message to adjust power, the IUT transmits: - either a RNG-RSP (Success) message with or without adjustments; or - a Power Control IE; or - an FPC.
Test strategy	
Notes	

TP ID	TP/BS/RLC/PRNG/BV-H006
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.6 and 6.3.10.3.2.
PICS Item	
Initial Condition	IUT is operating, an UL service flow is established with data flow. A timing adjustment for the UL is required.
Expected Behaviour	Check that: The IUT terminates the timing adjustment by transmitting a RNG-RSP(Success) with or without adjustments.
Test strategy	
Notes	

TP ID	TP/BS/RLC/PRNG/BV-H007
P802.16 Reference	[3] and [12] Clause 6.3.10.1.
PICS Item	
Initial Condition	IUT is operating and a DL service flow is established.
Expected Behaviour	Check that: On receiving a DBPC-REQ message on the Basic CID to change the DL transmission to a less robust burst profile, the IUT transmits a DBPC-RSP.
Test strategy	
Notes	

TP ID	TP/BS/RLC/PRNG/BV-H008
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operating and a UL service flow is established.
Expected Behaviour	Check that: On detecting a threshold crossing for UL PHY Mode, the IUT transmits a RNG-RSP message to change the UL PHY mode.
Test strategy	
Notes	Threshold may be CINR.

TP ID	TP/BS/RLC/PRNG/BV-H009
	Deleted.

TP ID	TP/BS/RLC/PRNG/BV-H010
P802.16 Reference	[3] and [12] Clause 6.3.10.2. Figure: Periodic Ranging receiver processing – BS Table: Parameters and constants; "Ranging Correction Retries"
PICS Item	
Initial Condition	IUT is operating and a service flow is established. It has started ranging corrections.
Expected Behaviour	Check that: After transmitting RNG-RSP(continue) for more than Ranging Correction Retries, the IUT removes the MS from management and sends a RNG-RSP with Ranging Status set to Abort.
Test strategy	
Notes	IUT can correct ranging using any combination in any number of the following: - PHY Mode change; - RNG-RSP(success); - RNG-RSP(continue); - FPC; - Power Control IE. This TP only requires the counting number of times RNG-RSP(continue) is sent. The other methods for ranging correction are not counted when received. To be defined in the PIXIT how to set the BS to send/show RSP is complete.

TP ID	TP/BS/RLC/PRNG/BV-H011
P802.16 Reference	[3] and [12] Clauses 6.3.10.2 and 6.3.2.3.34.
PICS Item	
Initial Condition	IUT is operating and a service flow is established. The IUT is correcting ranging that is the IUT has sent a RNG-RSP with Status continue.
Expected Behaviour	Check that: On receipt of a signal with satisfactory power, the IUT sends: - either a RNG-RSP with the Ranging Status set to success; or - an FPC; or - a Power Control IE.
Test strategy	
Notes	The satisfactory power parameters are included in PIXIT parameters. The equipment manufacturer provides these parameters for its device. These parameters can vary for individual devices.

TP ID	TP/BS/RLC/PRNG/BV-H012
P802.16 Reference	[3] and [12] Clauses 6.3.10.2, 6.3.2.3.34, and 8.2.1.3.2.
PICS Item	
Initial Condition	IUT is operating and a service flow is established. The IUT is correcting ranging.
Expected Behaviour	Check that: On receipt of a signal that is unsatisfactory, the IUT performs one of the actions below: - either transmit RNG-RSP (Continue) message with power adjustment parameters; or - transmit RNG-RSP (Success) message with power adjustment parameters; or - transmit FPC message with power adjustment parameters; or - transmit Power Control IE with power adjustment parameters; or - change to a more robust PHY Mode.
Test strategy	
Notes	

TP ID	TP/BS/RLC/PRNG/BV-H013 {1} **
P802.16 Reference	[3] and [12] Clause 6.3.10.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: On receiving a CDMA code from the Periodic Ranging domain that requires timing offset adjustment, the IUT transmits a RNG-RSP using the ranging CID. The RNG-RSP contains required adjustments as well as a status notification.
Test strategy	Vendors provide timing offset for IUT to adjust the timing.
Notes	RNG-RSP message contains the Ranging Code Attributes TLV.

TP ID	TP/BS/RLC/PRNG/BV-H014 {1} **
P802.16 Reference	[3] and [12] Clause 6.3.10.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: On receiving a CDMA code from the Periodic Ranging domain within the tolerable limits of the IUT, the IUT transmits a RNG-RSP with a status notification value success using the Ranging CID.
Test strategy	Vendors provide the range of tolerable limits.
Notes	RNG-RSP message contains the Ranging Code Attributes TLV.

TP ID	TP/BS/RLC/PRNG/BI-H000
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS Item	
Initial Condition	IUT is operating and a service flow is established.
Expected Behaviour	Check that: On receipt of an invalid RNG-REQ, the IUT ignores the message.
Test strategy	
Notes	

TP ID	TP/BS/RLC/PRNG/TI-H000
P802.16 Reference	[3] and [12] Clauses 6.3.10.2 Figure 83 and 10.1 Table 342.
PICS Item	
Initial Condition	IUT is operating and an uplink service flow is established and no data traffic is transmitted.
Expected Behaviour	Check that: The IUT transmits periodic ranging opportunity when timer T27 expires.
Test strategy	
Notes	

5.2.6.3 Downlink Burst Profile Management (DBPC)

TP ID	TP/BS/RLC/DBPC/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.2.3.21.
PICS item	
Initial Condition	IUT has terminated Network entry procedures and has transmitted a Basic CID allocation grant.
Expected Behaviour	Check that: On receiving a DBPC-REQ on the Basic CID, to refuse this request the IUT transmits a DPBC-RSP with the DIUC parameter unchanged from that before the received DPBC-REQ and continues transmitting at the same DIUC profile.
Test strategy	
Notes	Requires a means to provoke the IUT to refuse the DBPC-REQ.

TP-ID	TP/BS/RLC/DBPC/BI-H000
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.21 and 6.3.10.1.
PICS Item	
Initial Condition	The IUT using DIUC n is operating with an MS.
Expected Behaviour	Check that: On receiving a DPBC-REQ for a DIUC that is not indicated in the DCD message, the IUT sends a DBPC-RSP indicating the DIUC in use.
Test strategy	
Notes	

TP-ID	TP/BS/RLC/DBPC/BI-H001
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.20 and 6.3.2.3.
PICS Item	
Initial Condition	The IUT using DIUC n is operating with an MS.
Expected Behaviour	Check that: On receiving A DPBC-REQ in an invalid format, the IUT ignores the message.
Test strategy	
Notes	

5.2.6.3.1 Change to a Less Robust Profile (LRP)

TP ID	TP/BS/RLC/DBPC/LRP/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "Transition to a less robust burst profile".
PICS item	
Initial Condition	IUT has terminated Network entry procedures and has received a DPBC-REQ on the Basic CID for a less robust burst profile.
Expected Behaviour	Check that: On receiving the DPBC-REQ and to accept the request, the IUT immediately stops transmitting DL data, transmits the DPBC-RSP accepting the request, and then begins transmitting DL data on the weaker DIUC.
Test strategy	
Notes	

TP-ID	TP/BS/RLC/DBPC/LRP/BV-H001
P802.16 Reference	[3] and [12] Clauses 6.3.10.1 and 6.3.2.3.21, Figure "Transition to a less robust burst profile".
PICS Item	
Initial Condition	The IUT using DIUC n is operating with an MS.
Expected Behaviour	Check that: On receiving a DPBC-REQ indicating a less robust profile and when the MS is no longer authorized for this profile, the IUT sends a DBPC-RSP indicating the profile currently in use.
Test strategy	
Notes	

5.2.6.3.2 Change to a More Robust Profile (MRP)

TP ID	TP/BS/RLC/DBPC/MRP/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "Transition to a more robust burst profile".
PICS item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: On receiving a DPBC-REQ on the Basic CID for a more robust burst profile, to accept the request the IUT immediately begins transmitting DL data using the new burst profile and transmits a valid DPBC-RSP.
Test strategy	
Notes	

TP ID	TP/BS/RLC/DBPC/MRP/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "Transition to a more robust burst profile".
PICS item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: On receiving a RNG-REQ that requests use of a more robust downlink burst profile in an Initial Ranging Interval, to accept the request the IUT immediately begins transmitting DL data using the new burst profile and transmits a valid RNG-RSP.
Test strategy	
Notes	

5.2.6.4 Negotiate Basic Capabilities (SBC)

TP ID	TP/BS/RLC/SBC/BV-H000 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.9.7 and 6.3.2.3.24.
PICS Item	PIC_MOB1.
Initial Condition	IUT is initializing and has just completed Initial Ranging.
Expected Behaviour	Check that: On receiving a valid SBC-REQ message on the Basic CID, the IUT transmits an SBC-RSP with the intersection of the IUT's and MS's capabilities set to "on".
Test strategy	Straightforward.
Notes	

TP ID	TP/BS/RLC/SBC/BV-H001 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.9.7.
PICS Item	PIC_MOB1.
Initial Condition	IUT is initializing has received an SBC-REQ message and has sent the SBC-RSP message.
Expected Behaviour	Check that: On receiving an identical SBC-REQ message on the Basic CID, the IUT transmits another SBC-RSP.
Test strategy	
Notes	

TP ID	TP/BS/RLC/SBC/BV-H002 {2} **W2
P802.16 Reference	[3] Clauses 6.3.2.3.23 and 6.3.2.3.24, [12] Clauses 6.3.2.3.23 and 6.3.2.3.24, 11.8.11, and 11.8.13.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has not completed initial network entry with the TE. IUT is configured with NSP ID List and Visited NSP Realm and has just sent RNG-RSP with status "success".
Expected Behaviour	Check that: On receiving a valid SBC-REQ message with Visited NSP ID TLV on the Basic CID, the IUT transmits an SBC-RSP with the Visited NSP Realm TLV containing the realm that was configured to the IUT for that NSP ID.
Test strategy	
Notes	

TP ID	TP/BS/RLC/SBC/BV-H003 {2} **W2
P802.16 Reference	[3] Clauses 6.3.2.3.23, 6.3.2.3.24, and 6.3.2.3.59, [12] Clauses 6.3.2.3.23, 6.3.2.3.24, 6.3.2.3.59, 11.8.9, 11.1.11.1, 11.1.11.2, and 11.8.14.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has not completed initial network entry with the TE. IUT has just sent RNG-RSP with status "success". IUT is configured with NSP ID list and verbose NSP names.
Expected Behaviour	Check that: On receiving a valid SBC-REQ message with SIQ TLV having bit#0 and bit#1 set to 1 on the Basic CID, the IUT transmits an SBC-RSP with the NSP List TLV and Verbose NSP Name List TLV containing the NSP IDs and Verbose NSP Names that were configured to the IUT, or the IUT transmits an SBC-RSP with the SII-ADV Message Pointer TLV and SII-ADV message is transmitted by IUT on a frame specified in SII-ADV Message Pointer TLV of SBC-RSP and that SII-ADV message contains NSP List TLV and Verbose NSP Name List TLV containing the NSP IDs and Verbose NSP Names that were configured to the IUT.
Test strategy	
Notes	

TP ID	TP/BS/RLC/SBC/BI-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.7 and 6.3.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is initializing and has just completed Initial Ranging.
Expected Behaviour	Check that: On receiving an invalid SBC-REQ message (see clause 6.3.2.3) on the Basic CID, the IUT silently discards the received message and continues operation.
Test strategy	
Notes	

TP-ID	TP/BS/RLC/SBC/BI-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.3 Table "MAC Management messages".
PICS Item	PIC_MOB1.
Initial Condition	Initial Ranging has been completed.
Expected Behaviour	Check that: On receiving an SBC-REQ message on a connection other than Basic CID, the IUT ignores the SBC-REQ message and does not send an SBC-RSP.
Test strategy	
Notes	

5.2.6.5 Feedback Mechanism (FBK)

5.2.6.5.1 Feedback Polling

TP-ID	TP/BS/RLC/FBK/BV-H000 {3}
P802.16 Reference	[3] and [12] Clauses 8.4.5.4.28 and 6.3.2.1.2.2.1.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: When the IUT sends a UL-MAP containing a Feedback polling IE with Dedicated UL Allocation Included bit set to 1, a dedicated UL allocation is included in this UL-MAP IE. When the Dedicated UL Allocation Included bit is set to 0, no dedicated UL allocation shall be included in this UL-MAP IE.
Test strategy	
Notes	

TP ID	TP/BS/RLC/FBK/BV-H001
	Deleted.

TP ID	TP/BS/RLC/FBK/BV-H002
P802.16 Reference	[3] and [12] Clauses 6.3.2.2.7.3 and 6.3.2.1.2.2.1.
PICS Item	
Initial Condition	IUT is operating and an UL service flow is established.
Expected Behaviour	Check that: When the IUT sends a Feedback request extended subheader in a Generic MAC header, the extended subheader shall indicate the applied frame for the UL allocation.
Test strategy	
Notes	

5.2.6.5.2 Fast-Feedback

TP ID	TP/BS/RLC/FBK/BV-H003 {1} **
P802.16 Reference	[3] Clauses 6.3.18, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9 [12] Clauses 6.3.17, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9.
PICS Item	PIC_MOB1.
Initial Condition	MS is operating with at least one DL connection.
Expected Behaviour	Check that: When the IUT sends a CQICH allocation IE with: - feedback type=0b00 (physical); - report type=0b0 (preamble) or 0b1 (zone); - CINR preamble report type=0b0 or 0b1 when report_type=0; - CINR zone measurement type=0b0 (pilots) when report_type=1. The IUT reserves a Fast-feedback channel for the MS in the designated frames by using the fast-feedback channel IE (UIUC=0) in the UL-MAP of the prior frame or by using the Fast-Feedback Region TLV in the UCD.
Test strategy	
Notes	

TP ID	TP/BS/RLC/FBK/BV-H004 {3}
P802.16 Reference	[3] Clauses 6.3.18, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9 [12] Clauses 6.3.17, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9.
PICS Item	PIC_MOB2.
Initial Condition	MS is operating with at least one DL connection.
Expected Behaviour	Check that: When the IUT sends a CQICH allocation IE with: - feedback type=0b01 (effective); - report type= 0b1 (zone); - CINR zone measurement type=0b0 (pilots). The IUT reserves a Fast-feedback channel for the MS in the designated frames by using the fast-feedback channel IE (UIUC=0) in the UL-MAP of the prior frame or by using the FastFeedback Region TLV in the UCD.
Test strategy	
Notes	

5.2.6.6 MAC-support for HARQ (HARQ)

5.2.6.6.1 DL HARQ Operation

TP ID	TP/BS/RLC/HARQ/BV-H000
	Deleted.

TP ID	TP/BS/RLC/HARQ/BV-H000B {1} **
P802.16 Reference	[3] and [12] Clause 8.4.5.3.21.
PICS Item	PIC_MOB1.
Initial Condition	MS is operating; has completed Network entry procedures and has a DL connection with HARQ support enabled.
Expected Behaviour	Check that: When the IUT makes a DL allocation, it uses the HARQ DL MAP IE with mode = 0 and DL HARQ Chase Sub-burst IE.
Test strategy	
Notes	

TP ID	TP/BS/RLC/HARQ/BV-H000C {1} **
P802.16 Reference	[3] and [12] Clause 8.4.5.3.21.
PICS Item	PIC_MOB1.
Initial Condition	MS is operating; has completed Network entry procedures and has a DL connection with HARQ support enabled. IUT makes a DL allocation using the HARQ DL MAP IE in frame N.
Expected Behaviour	Check that: In the UL-MAP of frame N, the IUT includes a HARQ ACKCH Region allocation IE and reserves space in the ACK region for the MS to send a HARQ ACK or NACK in frame N+HARQ ACK delay for DL burst.
Test strategy	
Notes	The space reserved for the MS in the ACK channel is relative to the position of the DL allocation in the HARQ DL MAP. HARQ ACK delay for DL burst 1 is mandatory.

TP ID	TP/BS/RLC/HARQ/BV-H000D {2} **W2
P802.16 Reference	[3] and [12] Clause 8.4.5.4.25.
PICS Item	PIC_MOB1.
Initial Condition	MS is operating; has completed Network entry procedures and has a DL connection with HARQ support enabled. IUT makes a DL allocation using the HARQ DL MAP IE in frame N.
Expected Behaviour	Check that: After successfully receiving an ACK in frame N + HARQ ACK delay for DL burst, the IUT does not retransmit the previous encoded packet at the same ACID with the same AI_SN value.
Test strategy	
Notes	

TP ID	TP/BS/RLC/HARQ/BV-H001
P802.16 Reference	[3] Clause 6.3.17.1 [12] Clause 6.3.16.1.
PICS Item	
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Incremental Redundancy (IR) variant of HARQ.
Expected Behaviour	Check that: When the IUT sends a first subpacket it shall be label with 0b00 as the SPID.
Test strategy	
Notes	

TP ID	TP/BS/RLC/HARQ/BV-H002
P802.16 Reference	[3] Clauses 6.3.17.1 and 11.4.1 Table 358 [12] Clauses 6.3.16.1 and 11.4.1 Table 358.
PICS Item	
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Incremental Redundancy (IR) variant of HARQ for a DL HARQ connection.
Expected Behaviour	Check that: When receiving no acknowledgements on transmission of a subpacket, the IUT retransmits one of the 4 sub-packets no more than "maximum retransmission" times as defined in the DCD message.
Test strategy	
Notes	

TP ID	TP/BS/RLC/HARQ/BV-H003 {2} **W2
P802.16 Reference	[3] Clauses 6.3.17.1 and 8.4.5.3.21 [12] Clauses 6.3.16.1 and 8.4.5.3.21.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Chase Combining (CC) variant of HARQ for a DL HARQ connection.
Expected Behaviour	Check that: When receiving no acknowledgements on transmission of a subburst, the IUT retransmits the same subburst. The ACID and AI_SN bit must match the values used in the prior transmission of the subburst.
Test strategy	
Notes	

TP ID	TP/BS/RLC/HARQ/BV-H004
P802.16 Reference	[3] Clause 6.3.17.1 [12] Clause 6.3.16.1.
PICS Item	
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Incremental Redundancy (IR) variant of HARQ for a DL HARQ connection.
Expected Behaviour	Check that: When IUT receives a positive acknowledgement to a sent subpacket and the IUT has more data to transmit on this connection the IUT toggles the HARQ identifier sequence number (AI_SN) to indicate that this subpacket is a new subpacket.
Test strategy	
Notes	

TP ID	TP/BS/RLC/HARQ/BV-H005 {3}
P802.16 Reference	[3] and [12] Clauses 8.4.5.3.21 and 8.4.5.3.21 Table 286m.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Chase combining variant of HARQ for a DL HARQ connection and DL HARQ Chase sub-burst IE has set ACK disable ('1').
Expected Behaviour	Check that: When the IUT does not expect an acknowledgement for a HARQ downlink transmission, the IUT does not perform retransmission.
Test strategy	
Notes	The IUT does not reserve a space in the HARQ ACK Region for the MS to send an ACK if ACK_disable bit is 1.

TP ID	TP/BS/RLC/HARQ/BV-H006
P802.16 Reference	[3] and [12] Clauses 8.4.5.3.21 and 8.4.5.3.21 Table 286o.
PICS Item	
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Incremental redundancy variant of HARQ for a DL HARQ connection and DL HARQ IR CTC sub-burst IE has set ACK disable ('1').
Expected Behaviour	Check that: When the IUT does not receive an acknowledgement for a HARQ downlink transmission the IUT does not perform retransmission.
Test strategy	
Notes	

TP ID	TP/BS/RLC/HARQ/BV-H007
P802.16 Reference	[3] and [12] Clauses 8.4.5.3.21 and 8.4.5.3.21 Table 286o.
PICS Item	
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Incremental redundancy HARQ for Convolutional Code (IR-CC) for a DL HARQ connection and DL HARQ IR CC sub-burst IE has set ACK disable ('1').
Expected Behaviour	Check that: When the IUT does not receive an acknowledgement for a HARQ downlink transmission the IUT does not perform retransmission.
Test strategy	
Notes	

TP ID	TP/BS/RLC/HARQ/TI-H000
P802.16 Reference	[3] Clauses 6.3.17.1 and 11.4.1 Table 358 [12] Clauses 6.3.16.1 and 11.4.1 Table 358.
PICS Item	
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Incremental Redundancy (IR) variant of HARQ for a DL HARQ connection.
Expected Behaviour	Check that: When IUT transmits a subpacket it shall not retransmit a sub-packet until at least the time "HARQ ACK delay for DL burst" has passed without a positive acknowledgement has been received.
Test strategy	
Notes	

5.2.6.6.2 UL HARQ Operation

TP-ID	TP/BS/RLC/HARQ/BV-H008 {1} **
P802.16 Reference	[3] and [12] Clause 8.4.5.4.24.
PICS Item	PIC_MOB1.
Initial Condition	MS is operating; has completed Network entry procedures and has an UL connection with HARQ support enabled.
Expected Behaviour	Check that: When the IUT makes an UL allocation, it uses the HARQ UL MAP IE with mode = 0 and UL HARQ Chase Sub-burst IE.
Test strategy	
Notes	BS may also make allocations to connection with HARQ disabled by setting the ACK-Disable bit to 1.

TP-ID	TP/BS/RLC/HARQ/BV-H009 {2} **W2
P802.16 Reference	[3] and [12] Clause 8.4.5.4.25.
PICS Item	PIC_MOB1.
Initial Condition	MS is operating; has completed Network entry procedures and has an UL connection with HARQ support enabled. IUT makes an UL allocation using the HARQ UL MAP IE.
Expected Behaviour	Check that: After successfully receiving the UL data, the IUT indicates that the new allocation is not for retransmission.
Test strategy	
Notes	This TP assumes that the IUT has additional BW to allocate to the MS. The usage of same ACID after receiving successfully is not required.

TP-ID	TP/BS/RLC/HARQ/BV-H010
	Deleted.

5.2.7 Registration, IP Connectivity and Parameter Transfer (INI)

5.2.7.1 Registration (REG)

TP ID	TP/BS/INI/REG/BV-H000
P802.16 Reference	[3] and [12] Clauses 6.3.9.9 and 11.8.4.3.
PICS Item	
Initial Condition	IUT is operating and is waiting for a REG-REQ message.
Expected Behaviour	Check that: On receiving a REG-REQ, the IUT verifies the HMAC digest and generates a Secondary Management CID, determines which capabilities are enabled based on implemented options and policy, and sends a REG-RSP, the Primary CID, the Secondary Management CID, the HMAC tuple (if required by the MAC Message Authentication mode), and the Response set to OK.
Test strategy	
Notes	

TP ID	TP/BS/INI/REG/BV-H001
	Deleted.

TP ID	TP/BS/INI/REG/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.9.9
PICS Item	
Initial Condition	IUT is operating and is waiting for a REG-REQ message.
Expected Behaviour	Check that: On receiving a REG-REQ from a managed SS containing the IP Version, the IUT sends a REG-RSP containing the IP Version to be used on the Secondary Management Connection.
Test strategy	
Notes	

TP ID	TP/BS/INI/REG/BV-H003 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.9.9 and 6.3.2.3.8.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and is waiting for a REG-REQ message.
Expected Behaviour	Check that: On receiving a REG-REQ containing the SS Capabilities, the IUT sends a REG-RSP containing the SS Capabilities in order to indicate which are supported and to be used.
Test strategy	
Notes	

TP ID	TP/BS/INI/REG/BV-H004 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.9, 6.3.2.3.8, and 11.7.8.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and is waiting for a REG-REQ message.
Expected Behaviour	Check that: On receiving a REG-REQ containing the SS Capabilities with unrecognizable/unsupported capabilities, the IUT sends a REG-RSP containing the unsupported SS Capabilities set to off or a response without the unrecognized/unsupported SS capabilities.
Test strategy	
Notes	

TP ID	TP/BS/INI/REG/BI-H000 {1} **
P802.16 Reference	[3] and [12] Clause 6.3.9.9.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and is waiting for a REG-REQ message.
Expected Behaviour	Check that: On receiving a REG-REQ containing an invalid CMAC, the IUT sends a REG-RSP containing the Response set to "Message authentication failure".
Test strategy	
Notes	

TP ID	TP/BS/INI/REG/BI-H000a
P802.16 Reference	[3] and [12] Clause 6.3.9.9.
PICS Item	
Initial Condition	IUT is operating and is waiting for a REG-REQ message.
Expected Behaviour	Check that: On receiving a REG-REQ containing an invalid HMAC, the IUT sends a REG-RSP containing the Response set to "Message authentication failure".
Test strategy	
Notes	

TP ID	TP/BS/INI/REG/BI-H001 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.9 and 6.3.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and is waiting for a REG-REQ message.
Expected Behaviour	Check that: On receiving an invalid but correctly authenticated REG-REQ, the IUT silently discards the received message and continues operation.
Test strategy	
Notes	1) "invalid" message should be clarified as those having Type Value (reserved) or invalid IE encoding.

TP ID	TP/BS/INI/REG/BO-H000
P802.16 Reference	[3] and [12] Clauses 6.3.9.9 and 6.3.9.12.
PICS Item	
Initial Condition	IUT is operating and has sent a TFTP-RSP message.
Expected Behaviour	Check that: On receiving a REG-REQ, the IUT silently discards the received message and continues operation.
Test strategy	
Notes	

TP ID	TP/BS/INI/REG/BO-H001 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.9 and 7.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and is in Authentication and Authorization phase.
Expected Behaviour	Check that: On receiving a REG-REQ, the IUT silently discards the received message and continues operation.
Test strategy	
Notes	

TP ID	TP/BS/INI/REG/TI-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.9.9.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and is waiting for a REG-REQ message.
Expected Behaviour	Check that: After expiry of timer T17, the IUT releases and ages out Basic and Primary Management CIDs.
Test strategy	
Notes	Defer the TP until clarification in the standard. The standard does not define what exactly is "age out".

5.2.7.2 IP Connectivity (IPC)

TP ID	TP/BS/INI/IPC/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.9.10.
PICS Item	
Initial Condition	IUT has authorized and registered a managed SS.
Expected Behaviour	Check that: On receiving a DHCP-DISCOVER on the Secondary Management Connection, the IUT correctly implements DHCP server functionality.
Test strategy	
Notes	

TP ID	TP/BS/INI/IPC/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.9.11.
PICS Item	
Initial Condition	IUT has authorized and registered a managed SS. The SS has obtained its IP address.
Expected Behaviour	Check that: On receiving a Time Of Day request on the Secondary Management Connection, the IUT correctly implements the Time Protocol server functionality.
Test strategy	
Notes	

TP ID	TP/BS/INI/IPC/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.9.12.
PICS Item	
Initial Condition	IUT has authorized and a managed SS. The SS has obtained its IP address and the time of the day.
Expected Behaviour	Check that: On initiation of a TFTP for the download of the SS configuration file on the Secondary Management Connection, the IUT correctly implements TFTP server functionality.
Test strategy	
Notes	

TP ID	TP/BS/INI/IPC/BV-H003
P802.16 Reference	[3] and [12] Clause 6.3.9.12.
PICS Item	
Initial Condition	IUT has authorized and registered a managed SS. The TFTP transaction has started.
Expected Behaviour	Check that: On receiving a TFTP-CPLT message, the IUT sends a TFTP-RSP with the associated Primary CID.
Test strategy	
Notes	

TP ID	TP/BS/INI/IPC/BI-H000
P802.16 Reference	[3] and [12] Clauses 6.3.9.12 and 6.3.2.3.
PICS Item	
Initial Condition	IUT has authorized and registered a managed SS. The TFTP transaction has started.
Expected Behaviour	Check that: On receiving an invalid TFTP-CPLT message, the IUT silently discards the received message.
Test strategy	
Notes	

TP ID	TP/BS/INI/IPC/BO-H000
P802.16 Reference	[3] and [12] Clauses 6.3.9.12 and 6.3.2.3.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures and in normal operation.
Expected Behaviour	Check that: On receiving a TFTP-CPLT message, the IUT silently discards the received message.
Test strategy	
Notes	

TP ID	TP/BS/INI/IPC/BO-H001
P802.16 Reference	[3] and [12] Clauses 6.3.9.12 and 6.3.2.3.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures and in normal operation.
Expected Behaviour	Check that: On receiving a TFTP-CPLT message from a non existing SS, the IUT silently discards the received message.
Test strategy	
Notes	

TP ID	TP/BS/INI/IPC/TI-H000
P802.16 Reference	[3] and [12] Clause 6.3.9.12.
PICS Item	
Initial Condition	IUT has authorized, registered, and started T13 for a managed SS.
Expected Behaviour	Check that: On timer T13 expiry, the IUT de-assigns the management SS CIDs.
Test strategy	
Notes	

TP ID	TP/BS/INI/IPC/TI-H001
P802.16 Reference	[3] and [12] Clause 6.3.9.12.
PICS Item	
Initial Condition	IUT has authorized, registered, and started T13 for a managed SS.
Expected Behaviour	Check that: After the expiry of timer T13, on receiving a TFTP-CPLT the IUT does not send a TFTP-RSP.
Test strategy	
Notes	

5.2.8 Dynamic Services (DS)

5.2.8.1 Dynamic Services Addition (DSA)

TP ID	TP/BS/DS/DSA/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: To initiate a DL service flow, the IUT sends a valid DSA-REQ with valid DL parameters.
Test strategy	Straightforward.
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: To initiate an UL service flow, the IUT sends a valid DSA-REQ with valid UL parameters.
Test strategy	Straightforward.
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/BV-H002 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3 and 6.3.14.9.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: To create an uplink and a downlink Service flow, the IUT sends two DSA-REQ, one to create and activate the UL portion and one to create and activate the DL portion.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction for an uplink and a downlink service flow with DSA-REQs.

TP ID	TP/BS/DS/DSA/BV-H003 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a DL service flow by sending a DSA-REQ with DL parameters.
Expected Behaviour	Check that: On receiving a DSA-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSA-ACK containing the Confirmation Code set to OK/success.
Test strategy	Straightforward.
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/BV-H004 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a UL service flow by sending a DSA-REQ with UL parameters.
Expected Behaviour	Check that: On receiving a DSA-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSA-ACK containing the Confirmation Code set to OK/success.
Test strategy	Straightforward.
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/BV-H005 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3 and 6.3.14.9.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing both an uplink and a downlink service flow by sending a separate DSA-REQ for the UL and another DSA-REQ for the DL service flow with parameters.
Expected Behaviour	Check that: On receiving a DSA-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSA-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction for an uplink and a downlink service flow with DSA-REQs.

TP ID	TP/BS/DS/DSA/BV-H006 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.9.13, and 6.3.14.7.1.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: To create a provisioned state Service flow, the IUT sends a DSA-REQ message to create the service flow in the provisioned state.
Test strategy	Straightforward.
Notes	Requires a means to provoke the IUT to start the provisioned state DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/BV-H007 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.9.13 and 6.3.14.7.1.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a provisioned state service flow by sending a DSA-REQ message.
Expected Behaviour	Check that: On receiving a DSA-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSA-ACK containing the Confirmation Code set to OK/success.
Test strategy	Straightforward.
Notes	Requires a means to provoke the IUT to start the provisioned state DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/BV-H008 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3 and 6.3.14.6.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: To create an admitted state Service flow, the IUT sends a DSA-REQ message to create a service flow in the admitted state.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/BV-H009 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3 and 6.3.14.6.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing an admitted state service flow by sending a DSA-REQ message.
Expected Behaviour	Check that: On receiving a DSA-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSA-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the admitted state DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/BV-H010 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a DL service flow by sending a DSA-REQ with DL parameters.
Expected Behaviour	Check that: On receiving a DSA-RSP containing the Confirmation Code set to reject-other, the IUT sends a DSA-ACK containing a Confirmation Code > 0 (i.e. Reject-…).
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/BV-H011 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.7.1.2 and 11.13.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a DL service flow by sending a DSA-REQ with DL parameters. The IUT has received a DSA-RSP message and has sent a DSA-ACK message.
Expected Behaviour	Check that: On receiving a DSA-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSA-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/BV-H013
	Deleted.

TP ID	TP/BS/DS/DSA/BV-H014 {2} **W2
	Deleted

TP ID	TP/BS/DS/DSA/BV-H015 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. The IUT has received a DSA-REQ message, has sent a DSx-RVD message and then a DSA-RSP message.
Expected Behaviour	Check that: On receiving a DSA-ACK containing the Confirmation Code set to OK/success, the IUT accepts this message.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BV-H016 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. The IUT has received a DSA-REQ message, has sent a DSx-RVD message and then a DSA-RSP message.
Expected Behaviour	Check that: On receiving a DSA-ACK containing the Confirmation Code set to reject-other, the IUT accepts this message.
Test strategy	
Notes	The service flow is not created, as the Confirmation Code in the DSA-ACK contains a reject code.

TP ID	TP/BS/DS/DSA/BV-H017 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3 and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. The IUT has received a DSA-REQ message, has sent a DSx-RVD message and then a DSA-RSP message. The IUT has finally received a DSA-ACK message. The IUT has started timer T10 and timer T10 has not expired.
Expected Behaviour	Check that: On receiving a DSA-ACK containing the Confirmation Code set to OK/success, the IUT takes no action.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BV-H018 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3 and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. The IUT has received a DSA-REQ message, has sent a DSx-RVD message and then a DSA-RSP message. The IUT has finally received a DSA-ACK message. The IUT has started timer T10 and timer T10 has not expired.
Expected Behaviour	Check that: On receiving a DSA-ACK containing the Confirmation Code set to reject-other, the IUT takes no action.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BV-H019 {1} **W2
P802.16 Reference	[3] Clauses 6.3.14.9.3 and 11.13.18 [12] Clauses 6.3.14.9.3 and 11.13.17.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: On receiving a DSA-REQ containing ARQ TLVs, the IUT sends a DSX-RVD followed by a DSA-RSP containing the same ARQ TLVs with same or changed values or omitting ARQ TLVs which use proposed values in DSA-REQ.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BV-H020 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.14.9.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow is established.
Expected Behaviour	Check that: The IUT exchanges correctly data on the active Service Flow.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BV-H021
P802.16 Reference	[3] and [12] Clauses 6.3.9.12, 6.3.9.13, 6.3.2.3.10 and 6.3.2.3.11.
PICS Item	
Initial Condition	IUT is registered. The IUT has started the TFTP transaction. There are preprovisioned DS service flows to establish.
Expected Behaviour	Check that: On receiving a valid TFTP-CPLT, the IUT transmits a TFTP-RSP, followed by the BS-initiated DSA-REQ.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BI-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3 and 6.3.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a DL service flow by sending a DSA-REQ with DL parameters.
Expected Behaviour	Check that: On receiving an erroneous DSA-RSP, e.g. missing a required parameter, the IUT re-sends a DSA-REQ message, if the number of retries is less than "DSx Request Retries".
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/BI-H001 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3 and 7.3.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: On receiving a DSA-REQ message with an unused SAID, the IUT sends a DSA-RSP message to refuse the service flow associated with the unused SAID.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BI-H002 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.14.7.1.1 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started.
Expected Behaviour	Check that: On receiving a DSA-REQ containing the Service Flow Parameters set to an unsupported value, the IUT sends a DSX-RVD and a DSA-RSP containing the Confirmation Code set to any reject reason.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BO-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: On receiving a DSA-RSP message for a non-existing service flow, the IUT sends a DSA-ACK containing the Confirmation Code set to any reject reason.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BO-H001 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3 and 6.3.14.9.3.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. The IUT does not support the SS initiated dynamic service addition.
Expected Behaviour	Check that: On receiving a DSA-REQ, the IUT sends a DSA-RSP to indicate that the service is not allowed.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BO-H002
	Deleted.

TP ID	TP/BS/DS/DSA/BO-H003 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.1 and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for a service flow and has sent a valid DSA-RSP accepting the DSA-REQ. Then the IUT has received a valid DSA-ACK.
Expected Behaviour	Check that: On receiving a new DSA-REQ message, the IUT sends a DSA-RSP.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BO-H004 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction DSA-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT waits the DSA-ACK.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSA/BO-H005 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction DSA-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the DSA-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF Delete-Local command, the IUT sends no message and goes to the Deleting Service Flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/BS/DS/DSA/BO-H006 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.2 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction DSA-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the DSA-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF DSA-ACK Lost command and retries are available, the IUT retransmits the DSA-RSP and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSA-ACK Lost.

TP ID	TP/BS/DS/DSA/BO-H007 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.2 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction DSA-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the DSA-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF DSA-ACK Lost command and retries are exhausted, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSA-ACK Lost.

TP ID	TP/BS/DS/DSA/BO-H008 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Changed command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Changed.

TP ID	TP/BS/DS/DSA/BO-H009 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Deleted command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/BS/DS/DSA/BO-H010 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PICS_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSA/BO-H011 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Delete-Local command, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/BS/DS/DSA/BO-H012 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Change-Remote command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Remote.

TP ID	TP/BS/DS/DSA/BO-H013 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Deleting Service state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the SF Deleted command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/BS/DS/DSA/BO-H014 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Deleting Service state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSA/BO-H015 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Deleting Service state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSA-REQ, the IUT sends no message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BO-H016 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Deleting Service state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSA-ACK, the IUT sends no message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BO-H017 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction DSA-RSP Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the DSA-RSP pending state.
Expected Behaviour	Check that: On receiving a SF Delete-Remote command for the pending DSA transaction, the IUT stops the Local DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSA/BO-H018 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction DSA-RSP Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the DSA-RSP pending state.
Expected Behaviour	Check that: On receiving a SF Abort Add command for the pending DSA transaction, the IUT stops T7, starts T10, and goes to DSA Local Holding Down state.
Test strategy	
Notes	Requires a means of provoking the SF Abort Add command.

TP ID	TP/BS/DS/DSA/BO-H019 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Holding state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving a SF Delete-Local command for the pending DSA transaction, the IUT sends no message and goes to the Deleting Service Flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/BS/DS/DSA/BO-H020 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Holding state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving a SF Changed command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Changed.

TP ID	TP/BS/DS/DSA/BO-H021 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Holding state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving a SF Change-Remote command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Remote.

TP ID	TP/BS/DS/DSA/BO-H022 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Holding state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving a SF Delete-Remote command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSA/BO-H023 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving a SF Delete-Remote command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSA/BO-H024 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving a SF Abort Add command for the pending DSA transaction, the IUT sends no message and goes to the Holding Down state.
Test strategy	
Notes	Requires a means of provoking the SF Abort Add.

TP ID	TP/BS/DS/DSA/BO-H025 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSA-RSP for the pending DSA transaction, the IUT ignore DSA-RSP and remains in the same state.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/BO-H026 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a SF Deleted command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/BS/DS/DSA/BO-H027 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving an SF Delete-Remote command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSA/TI-H000 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.2, and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a DL service flow by sending a DSA-REQ.
Expected Behaviour	Check that: For an IUT initiated DSA procedure when each time timer T7 expires and no reply is received, the IUT re-sends a DSA-REQ for DSx Request Retries times.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/TI-H001 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.2, and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a DL service flow by sending a DSA-REQ.
Expected Behaviour	Check that: For an IUT initiated DSA procedure after DSx Request Retries times repetition of DSA-REQ sending and when timer T7 expires and no reply is received, the IUT does not re-send the DSA-REQ message.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/TI-H002 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.2, and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a DL service flow by sending a DSA-REQ. The IUT is in the DSA-RSP Pending state.
Expected Behaviour	Check that: Before expiry of timer T10 and on receiving repeated DSA-RSP messages containing the Confirmation Code set to OK/success, the IUT sends a DSA-ACK containing the Confirmation Code set to OK/success for each received DSA-RSP.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/TI-H003 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.2, and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a DL service flow by sending a DSA-REQ. The IUT has received a DSA-RSP message and has sent a DSA-ACK message.
Expected Behaviour	Check that: Within maximum value of timer T10 and on receiving a redundant copy of the DSA-RSP, the IUT re-sends the DSA-ACK message.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/TI-H004 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.2, and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a DL service flow by sending a DSA-REQ.
Expected Behaviour	Check that: For an IUT initiated DSA procedure after DSx Request Retries times repetition of DSA-REQ sending and before timer T10 expires and on receiving a DSA-RSP containing the Confirmation Code set to reject-other, the IUT sends a DSA-ACK containing a Confirmation Code > 0 (Reject-.).
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/TI-H005 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.2, and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated establishing a DL service flow by sending a DSA-REQ.
Expected Behaviour	Check that: For an IUT initiated DSA procedure after DSx Request Retries times repetition of DSA-REQ sending and before timer T10 expires and on receiving a DSA-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSA-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSA transaction with a DSA-REQ.

TP ID	TP/BS/DS/DSA/TI-H006 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.1, and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: On receiving a DSA-REQ less than DSx Response Retries times each time before the expiry of timer T8, the IUT sends a DSA-RSP message for each received DSA-REQ message.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/TI-H007 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.1 and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. The IUT has received a DSA-REQ and has re-sent a DSA-RSP message "DSx Response Retries" times due to expiration of T8,
Expected Behaviour	Check that: On receiving a DSA-REQ, the IUT does not process the DSA request further.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/TI-H008 {2} **\W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.1 and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. The IUT has received a DSA-REQ message, sent a DSX-RVD followed by a valid DSA-RSP, and started T8.
Expected Behaviour	Check that: On expiry of timer T8 without receiving a DSA-ACK, the IUT sends for DSx Response Retries times the DSA-RSP message each time restarting T8.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/TI-H009 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.1, 6.3.14.9.3, 6.3.14.9.3.1 and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for a service flow and sent a valid DSX-RVD and DSA-RSP accepting the DSA-REQ.
Expected Behaviour	Check that: On expiry of timer T8 when the number of retries is exhausted and on no DSA-ACK message received, the IUT does not re-send the DSX-RVD and DSA-RSP messages and stops the procedure. The associated service flow is not created.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/TI-H010 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Holding state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT waits T10 expiration.
Expected Behaviour	Check that: When T10 expires, the IUT ends the DSA transaction.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/TI-H011 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On T10 expiry without receiving any messages, the IUT ends the DSA transaction.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/TI-H012 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On T10 expiry without receiving any messages, the IUT ends the DSA transaction.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/TI-H013 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.1 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction DSA-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT waits for the DSA-ACK.
Expected Behaviour	Check that: On T8 expiry and Retries Exhausted, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/TI-H014 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.1 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT has started timer T10.
Expected Behaviour	Check that: On T10 expiry without receiving any messages, the IUT ends the DSA transaction.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSA/TI-H015 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.3, 6.3.14.9.3.1 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Deleting Service state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On T10 expiry, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	

5.2.8.2 Dynamic Services Change (DSC)

TP ID	TP/BS/DS/DSC/BV-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. An uplink and a downlink service flow are established.
Expected Behaviour	Check that: To change the established uplink and downlink Service flow, the IUT sends two DSC-REQ, one to modify the UL portion and one to modify the DL portion.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction for change to an uplink and a downlink service flow with a DSC-REQ.

TP ID	TP/BS/DS/DSC/BV-H001 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated changing an uplink and downlink service flow by sending a DSC-REQ for the UL service flow and a DSC-REQ for a DL service flow.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSC-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/DSC/BV-H002 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 and 6.3.14.9.4.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A DL service flow is established.
Expected Behaviour	Check that: To change an established DL Service flow, the IUT sends a DSC-REQ to change the DL parameters of the service flow.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction for a service flow with a DSC-REQ. Use case 1: The state of the connection is changed from Provisioned State to Active State. Use case 2: The QoS parameter is changed on active connection.

TP ID	TP/BS/DS/DSC/BV-H003 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated changing a DL service flow by sending a DSC-REQ with DL parameters.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSC-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ. Use case1: The state of the connection is changed from Provisioned State to Active State. Use case 2: The QoS parameter is changed on active connection.

TP ID	TP/BS/DS/DSC/BV-H004 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 and 6.3.14.9.4.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A UL service flow is established.
Expected Behaviour	Check that: To change an established UL Service flow, the IUT sends a DSC-REQ to change the UL parameters of the service flow.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction for a service flow with a DSC-REQ.

TP ID	TP/BS/DS/DSC/BV-H005 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated changing a UL service flow by sending a DSC-REQ with UL parameters.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSC-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/DSC/BV-H006 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated changing a service flow by sending a DSC-REQ. The IUT has received the DSC-RSP message and has sent the DSC-ACK message.
Expected Behaviour	Check that: On receiving a redundant copy of the DSC-RSP message within a time no longer than the maximum value of timer T10, the IUT re-sends the DSC-ACK message.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/DSC/BV-H007 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated changing a UL service flow by sending a DSC-REQ with UL parameters.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to reject-other, the IUT sends a DSC-ACK containing the Confirmation Code set to reject-other.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/DSC/BV-H008 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.1 and 6.3.14.9.4.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A service flow is established.
Expected Behaviour	Check that: On receiving a DSC-REQ, the IUT sends a DSX-RVD containing the Confirmation Code set to OK/success and then sends a DSC-RSP containing the Confirmation Code set to OK/success.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BV-H009 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.1 and 6.3.14.9.4.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A service flow is established.
Expected Behaviour	Check that: On receiving a DSC-REQ containing the Service Flow Parameters set to an unsupported value, the IUT sends a DSX-RVD containing the Confirmation Code set to any reject reason and then sends a DSC-RSP containing the Confirmation Code set to any reject reason.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BV-H010
	Deleted.

TP ID	TP/BS/DS/DSC/BV-H011 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A service flow is established. The IUT has received a DSC-REQ message and has sent a DSX-RVD message followed by a DSC-RSP message. The IUT is now in DSC-Remote DSC-ACK pending state.
Expected Behaviour	Check that: On receiving a DSC-ACK containing the Confirmation Code set to reject-other, the IUT accepts this message.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BV-H012 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.1 and 6.3.14.9.4.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A service flow is established. The IUT has received a DSC-REQ message and has sent a DSX-RVD message followed by a DSC-RSP message. Then the IUT has received a DSC-ACK message and started timer T10.
Expected Behaviour	Check that: On receiving a DSC-ACK containing the Confirmation Code set to OK/success, the IUT takes no action.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BV-H013 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.1 and 6.3.14.9.4.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A service flow is established. The IUT has received a DSC-REQ message and has sent a DSX-RVD message followed by a DSC-RSP message. Then the IUT has received a DSC-ACK message and started timer T10.
Expected Behaviour	Check that: On receiving a DSC-ACK containing the Confirmation Code set to reject-other, the IUT takes no action.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BV-H014 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.1 and 6.3.14.9.4.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A UGS service flow is established. The IUT has received a DSC-REQ message for obtaining the Maximum Sustained Traffic Rate and has sent a DSC-RSP message.
Expected Behaviour	Check that: On receiving a DSC-ACK, the IUT changes the bandwidth to the new allocated Maximum Sustained Traffic Rate if there is available bandwidth.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BV-H015 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 paragraph 9, 6.3.14.9.4.2 and 6.3.2.3.13.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization, is operating, and a DS flow is established. The IUT has sent a DSC-REQ message.
Expected Behaviour	Check that: On receiving a DSC-REQ, the IUT aborts the SS initiated DSC transaction and allow the IUT initiated transaction to complete.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow with a DSC-REQ.

TP ID	TP/BS/DS/DSC/BV-H016 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving a DSC-RSP accepting the change, the IUT transmits a DSC-ACK, incorporates the changes, and starts T10.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BV-H017 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving a DSC-RSP refusing the change, the IUT transmits a DSC-ACK and starts T10.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BV-H018 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS Initiated DSC transaction has started. The IUT waits for the DSC-ACK.
Expected Behaviour	Check that: On receiving a DSC-REQ and retries are available, the IUT retransmits the DSC-RSP.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BV-H019 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT waits for the DSC-ACK.
Expected Behaviour	Check that: On receiving a DSC-REQ and retries are exhausted, the IUT sends no message.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BI-H000
	Deleted.

TP ID	TP/BS/DS/DSC/BI-H001 {2} **\W2
P802.16 Reference	[3] Clauses 6.3.14.9.4 and 11.13 Table 383 [12] Clauses 6.3.14.9.4 and 11.13 Table 601.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A DL service flow is established.
Expected Behaviour	Check that: To change an established DL Service flow, the IUT sends a DSC-REQ that does not include following TLV encoding: Service Flow Error, Errored Parameter, Error Code, Error Message, Request/Transmission Policy, Fixed vs. Variable Length SDU Indicator, SDU Size, Convergence Sub layer Specification, Target SAID, FSN Size, MBS zone identifier assignment, HARQ Channel mapping, PDU SN extended subheader for HARQ reordering, and MBS contents IDs.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction for a service flow with a DSC-REQ.

TP ID	TP/BS/DS/DSC/BI-H002
	Deleted.

TP ID	TP/BS/DS/DSC/BI-H003 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1, 6.3.14.9.4.3, 6.3.2.3.13 and 6.3.2.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is registered and a DS flow is established. The IUT has received DSC-REQ to which it has sent a DSX-RVD and DSC-RSP.
Expected Behaviour	Check that: On receiving an erroneous DSC-ACK, the IUT terminates the DSC transaction without sending any response.
Test strategy	Check that: The DS flow characteristics are the same after as before this DSC transaction was performed.
Notes	The DSA-ACK is erroneous so that the PDU is not processed by the DSC transaction process, but discarded. This causes the DSC transaction to fail and the requested DSC not to be implemented.

TP ID	TP/BS/DS/DSC/BO-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow is established.
Expected Behaviour	Check that: On receiving a DSC-RSP for a non existing service flow, the IUT sends DSC-ACK containing Confirmation Code > 0.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BO-H001 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated changing a service flow by sending a DSC-REQ. The IUT has received the DSC-RSP message, has sent the DSC-ACK message, and has started T10.
Expected Behaviour	Check that: On receiving a DSC-RSP for the existing service flow after the expiry of T10, the IUT ignores the received message.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/DSC/BO-H002
	Deleted.

TP ID	TP/BS/DS/DSC/BO-H003 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated changing a service flow by sending a DSC-REQ.
Expected Behaviour	Check that: On receiving a DSC-REQ, the IUT ignores the received DSC-REQ, and on receiving a DSC-RSP containing the Confirmation Code set to OK/success, sends a DSC-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/DSC/BO-H004 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.2.3.15.
PICS Item	PIC_MOB1.
Initial Condition	IUT is registered and a DS flow is established.
Expected Behaviour	Check that: On receiving a DSC-ACK for a non existing service flow, the IUT ignores the message.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BO-H005 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT waits for the DSC-RSP.
Expected Behaviour	Check that: On receiving the command SF DSC-REQ Lost and retries are available, the IUT resends the DSC-REQ and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSC-REQ Lost.

TP ID	TP/BS/DS/DSC/BO-H006 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the DSC-RSP Pending state.
Expected Behaviour	Check that: On receiving the command SF DSC-REQ Lost and retries are exhausted, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSC-REQ Lost.

TP ID	TP/BS/DS/DSC/BO-H007 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the DSC-RSP Pending state.
Expected Behaviour	Check that: On receiving the command SF Delete-Remote, the IUT ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSC/BO-H008 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the DSC-RSP Pending state.
Expected Behaviour	Check that: On receiving the command SF Delete-Local, the IUT stops T7, starts T10, and goes to the Deleting Service flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/BS/DS/DSC/BO-H009 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the command SF Changed, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Changed.

TP ID	TP/BS/DS/DSC/BO-H010 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the command SF Change-Remote, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Remote.

TP ID	TP/BS/DS/DSC/BO-H011 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the command SF Delete-Remote, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSC/BO-H012 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the command SF Delete-Local, the IUT sends no message and goes to the Deleting Service Flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/BS/DS/DSC/BO-H013 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving the command SF Delete-Remote, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSC/BO-H014 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving the command SF Delete-Local, the IUT sends no message and goes to the Deleting Service Flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/BS/DS/DSC/BO-H015 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the command SF Deleted, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/BS/DS/DSC/BO-H016 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the command SF Delete-Remote, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSC/BO-H017 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSC-RSP, the IUT sends no message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BO-H018 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1, 6.3.14.9.1 and 6.3.2.3.15.
PICS Item	PIC_MOB2.
Initial Condition	IUT is registered and a DS flow is established. The IUT has received a DSC-REQ, has then sent a DSC-RSP and has then received a DSA-ACK.
Expected Behaviour	Check that: On receiving a redundant copy of the previously received DSC-REQ, the IUT ignores the message.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BO-H019 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1, 6.3.14.9.4.3 and 6.3.2.3.15.
PICS Item	PIC_MOB2.
Initial Condition	IUT is registered and a DS flow is established. The IUT has received a DSC-REQ, has then sent a DSC-RSP and has then received a DSA-ACK.
Expected Behaviour	Check that: On receiving a redundant copy of the previously received DSC-ACK, the IUT ignores the message.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BO-H020 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the DSC-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF DSC-ACK Lost command and retries are available, the IUT retransmits the DSC-RSP and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSC-ACK Lost.

TP ID	TP/BS/DS/DSC/BO-H021 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the DSC-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF DSC-ACK Lost command and retries are exhausted, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSC-ACK Lost.

TP ID	TP/BS/DS/DSC/BO-H022 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the DSC-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSC/BO-H023 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the DSC-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF Change-Local command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Local.

TP ID	TP/BS/DS/DSC/BO-H024 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the DSC-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF Delete-Local command, the IUT sends no message, stops T8, starts T10, and goes to the Deleting Service Flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/BS/DS/DSC/BO-H025 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Changed command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Changed.

TP ID	TP/BS/DS/DSC/BO-H026 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Deleted command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/BS/DS/DSC/BO-H027 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSC/BO-H028 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Change-Local command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Local.

TP ID	TP/BS/DS/DSC/BO-H029 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Delete-Local command, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/BS/DS/DSC/BO-H030 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Change-Remote command, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF Change-Remote.

TP ID	TP/BS/DS/DSC/BO-H031 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the SF Deleted command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/BS/DS/DSC/BO-H032 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSC/BO-H033 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the SF Change-Local command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Local.

TP ID	TP/BS/DS/DSC/BO-H034 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSC-REQ, the IUT sends no message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/BO-H035 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSC-ACK, the IUT sends no message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/TI-H000 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated changing a service flow by sending a DSC-REQ.
Expected Behaviour	Check that: For an IUT initiated DSC procedure, when each time timer T7 expires with no DSC-RSP reply received, the IUT re-sends the DSC-REQ for DSx Request Retries times.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/DSC/TI-H001 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated changing a service flow by sending a DSC-REQ.
Expected Behaviour	Check that: For an IUT initiated DSC procedure after DSx Request Retries times repetition of DSC-REQ sending and when timer T7 expires without any reply is received, the IUT does not re-send the DSC-REQ message and stops the initiated procedure.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/DSC/TI-H002 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated changing a service flow by sending a DSC-REQ. The IUT has received the DSC-RSP message and has sent the DSC-ACK message.
Expected Behaviour	Check that: Before expiry of timer T10 and on receiving a DSC-RSP containing the Confirmation Code set to OK/success, the IUT re-sends the DSC-ACK message for each received DSC-RSP.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/DSC/TI-H003 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and has initiated changing a service flow by sending a DSC-REQ. The IUT has received the DSC_RSP message and has sent the DSC-ACK message.
Expected Behaviour	Check that: After expiry of timer T10 and then receipt of a DSC-RSP, the IUT ignores the received message.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/DSC/TI-H004 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A service flow is established. The IUT has received a DSC-REQ message and has sent a DSX-RVD message followed by a DSC-RSP message. The IUT waits for the DSC-ACK.
Expected Behaviour	Check that: On receiving more DSC-REQ messages before the expiry of timer T8, the IUT re-sends the DSC-RSP for each received DSC-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/DSC/TI-H005 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A service flow is established. The IUT has received a DSC-REQ message and has sent a DSX-RVD message followed by a DSC-RSP message. The IUT waits for the DSC-ACK and .has re-sent the DSC-RSP message "DSx Response Retries" times due to expiration of T8.
Expected Behaviour	Check that: On receiving a DSC-REQ, the IUT takes no action.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/TI-H006 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A service flow is established. The IUT has received a DSC-REQ message and has sent a DSX-RVD message followed by a DSC-RSP message. The IUT waits for the DSC-ACK.
Expected Behaviour	Check that: On expiry of timer T8 and on nothing received for the concerned service flow, the IUT re-sends for DSx Response Retries times the DSC-RSP message.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/TI-H007 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14, 6.3.14.9.4.2 and 6.3.14.9.4.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization, is operating, and a DS flow is established. The IUT has received a DSC-REQ and then has sent a DSX-RVD and DSC-RSP.
Expected Behaviour	Check that: On T8 expiry without receiving a DSC-ACK for more than DSx Response Retries times, the IUT stops the DSC transaction.
Test strategy	
Notes	After the DSC transaction has been stopped the IUT continues to use the DS flow with the existing parameters.

TP ID	TP/BS/DS/DSC/TI-H008 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT has started timer T10.
Expected Behaviour	Check that: On T10 expiry, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/TI-H009 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On T10 expiry, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/TI-H010 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On T10 expiry, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSC/TI-H011 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2 and 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On T10 expiry, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	

5.2.8.3 Dynamic Services Deletion (DSD)

TP ID	TP/BS/DS/DSD/BV-H000 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A DL service flow is established.
Expected Behaviour	Check that: To delete an established DL Service flow, the IUT sends a DSD-REQ.
Test strategy	Straightforward
Notes	Requires a means to provoke the IUT to delete the service flow with a DSD-REQ.

TP ID	TP/BS/DS/DSD/BV-H001 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A UL service flow is established.
Expected Behaviour	Check that: To delete an established UL Service flow, the IUT sends a DSD-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to delete the service flow with a DSD-REQ.

TP ID	TP/BS/DS/DSD/BV-H002 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. An uplink and a downlink service flow are established.
Expected Behaviour	Check that: To change established uplink and downlink Service flows, the IUT sends a separate DSD-REQ to delete the UL portion and another DSD-REQ to delete the DL portion.
Test strategy	
Notes	Requires a means to provoke the IUT to delete the service flow with a DSD-REQ.

TP ID	TP/BS/DS/DSD/BV-H003 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5 and 6.3.14.9.5.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. An UL service flow is established. The IUT has sent a DSD-REQ to delete the service flow.
Expected Behaviour	Check that: On receiving a DSD-RSP containing the Confirmation Code set to OK/success, the IUT accepts it.
Test strategy	
Notes	Requires a means to provoke the IUT to delete the service flow with a DSD-REQ.

TP ID	TP/BS/DS/DSD/BV-H004 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5 and 6.3.14.9.5.1.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. An UL service flow is established. The connection is not in Provisioned State.
Expected Behaviour	Check that: On receiving a DSD-REQ, the IUT sends a DSD-RSP containing the Confirmation Code set to OK/success.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSD/BV-H005
	Deleted.

TP ID	TP/BS/DS/DSD/BI-H000
	Deleted.

TP ID	TP/BS/DS/DSD/BI-H001
	Deleted.

TP ID	TP/BS/DS/DSD/BI-H002
	Deleted.

TP ID	TP/BS/DS/DSD/BO-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5 and 6.3.14.9.5.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. An UL service flow is established. The IUT has sent a DSD-REQ to delete the service flow.
Expected Behaviour	Check that: On receiving a DSD-RSP for a non existing service, the IUT ignores the received DSD-RSP message.
Test strategy	
Notes	Requires a means to provoke the IUT to delete the service flow with a DSD-REQ.

TP ID	TP/BS/DS/DSD/BO-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. An UL service flow is established. The IUT has deleted the service flow.
Expected Behaviour	Check that: On receiving a DSD-RSP message for a recently deleted service, the IUT ignores the received DSD-RSP message.
Test strategy	
Notes	Requires a means to provoke the IUT to delete the service flow with a DSD-REQ.

TP ID	TP/BS/DS/DSD/BO-H002 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. An UL service flow is established.
Expected Behaviour	Check that: On receiving a DSD-RSP for the existing UL service, the IUT ignores the received DSD-RSP message.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSD/BO-H003
	Deleted.

TP ID	TP/BS/DS/DSD/BO-H004 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5.1 and 6.3.2.3.16.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and a DS flow is established.
Expected Behaviour	Check that: On receiving a DSD-REQ for a non existing service flow, the IUT ignores the message.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSD/BO-H005 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 Figure "DSD – Locally Initiated Transaction state transition diagram" and 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction DSD-RSP Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSD transaction has started. The IUT waits for the DSD-RSP.
Expected Behaviour	Check that: On receiving an SF DSD-REQ Lost Command and retries are available, the IUT retransmits the DSD-REQ message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSD-REQ Lost Command.

TP ID	TP/BS/DS/DSD/BO-H006 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 Figure "DSD – Locally Initiated Transaction state transition diagram" and 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction DSD-RSP Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSD transaction has started. The IUT is in the DSD-RSP Pending state.
Expected Behaviour	Check that: On receiving an SF DSD-REQ Lost Command and retries are exhausted, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSD-REQ Lost Command.

TP ID	TP/BS/DS/DSD/BO-H007 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 Figure "DSD – Locally Initiated Transaction state transition diagram" and 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction DSD-RSP Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSD transaction has started. The IUT is in the DSD-RSP Pending state.
Expected Behaviour	Check that: On receiving an SF Delete-Remote Command, the IUT sends no message, stops T7, starts T10, and goes to the Holding Down state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/BS/DS/DSD/BO-H008 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 Figure "DSD – Locally Initiated Transaction state transition diagram" and 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSD transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving an SF Deleted command, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/BS/DS/DSD/BO-H009 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 Figure "DSD – Remotely Initiated Transaction state transition diagram" and 6.3.14.9.5.3 Figure "DSD – Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSD transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving an SF Deleted command, the IUT sends no message and ends the DSD transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/BS/DS/DSD/TI-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5, 6.3.14.9.5.2, and 6.3.14.9.5.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. An UL service flow is established. The IUT has sent a DSD-REQ to delete the service flow.
Expected Behaviour	Check that: For an IUT initiated DSD procedure when each time timer T7 expires and no reply is received, the IUT re-sends the DSD-REQ message for DSx Request Retries times and then stops the initiated procedure.
Test strategy	
Notes	Requires a means to provoke the IUT to delete the service flow with a DSD-REQ.

TP ID	TP/BS/DS/DSD/TI-H001 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5, 6.3.14.9.5.2, and 6.3.14.9.5.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. An UL service flow is established. The IUT has sent a DSD-REQ to delete the service flow.
Expected Behaviour	Check that: For an IUT initiated DSD procedure, after DSx Request Retries times repetition of DSD-REQ sending and when timer T7 expires and no reply is received, the IUT does not re-send the DSD-REQ message and stops the initiated procedure.
Test strategy	
Notes	Requires a means to provoke the IUT to delete the service flow with a DSD-REQ.

TP ID	TP/BS/DS/DSD/TI-H002 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5 and 6.3.2.3.10.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. An UL service flow is established. The IUT has just deleted the existing service flow.
Expected Behaviour	Check that: Before the expiration of T10 and when it needs to establish a new service flow, the IUT sends a DSA-REQ message but does not reuse the CID of the recently deleted connection.
Test strategy	
Notes	Requires a means to provoke the IUT to establish a service flow with a DSA-REQ.

TP ID	TP/BS/DS/DSD/TI-H003 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 Figure "DSD – Locally Initiated Transaction state transition diagram" and 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSD transaction has started. The IUT waits for the DSD-RSP.
Expected Behaviour	Check that: On expiry of T10, the IUT sends no message and ends the DSD transaction.
Test strategy	
Notes	

TP ID	TP/BS/DS/DSD/TI-H004 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 Figure "DSD – Remotely Initiated Transaction state transition diagram" and 6.3.14.9.5.3 Figure "DSD – Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSD transaction has started. The IUT sends DSD-RSP and starts timer T10.
Expected Behaviour	Check that: On expiry of T10, the IUT sends no message and ends the DSD transaction.
Test strategy	
Notes	

5.2.8.4 QoS Parameter Sets (QPS)

TP ID	TP/BS/DS/QPS/BV-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the provisioned state is established.
Expected Behaviour	Check that: To initiate a change to the admitted state, the IUT sends a DSC-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction for a service flow with a DSC-REQ.

TP ID	TP/BS/DS/QPS/BV-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the provisioned state is established. The IUT has sent a DSC-REQ message to change the service flow to the admitted state.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to OK/success, sends a DSC-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/QPS/BV-H002 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the provisioned state is established.
Expected Behaviour	Check that: To initiate a change to the active state, the IUT sends a DSC-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction for a service flow with a DSC-REQ.

TP ID	TP/BS/DS/QPS/BV-H003 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the provisioned state is established. The IUT has sent a DSC-REQ message to change the service flow to the active state.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSC-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/QPS/BV-H004 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the active state is established.
Expected Behaviour	Check that: To change the service flow to the provisioned state, the IUT sends a DSC-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction for a service flow with a DSC-REQ.

TP ID	TP/BS/DS/QPS/BV-H005 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 and 6.3.14.6.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A service flow in the active state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ containing the Service Flow Parameters with the Service Flow Identifier and a null ActiveQoSParamSet, the IUT deactivates the referenced Service Flow.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H006 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 and 6.3.14.6.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A service flow in the active state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ containing the Service Flow Parameters with the Service Flow Identifier and only an AdmittedQoSParamSet, the IUT deactivates the referenced Service Flow.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H007 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 and 6.3.14.6.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. A service flow in the active state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ containing the Service Flow Parameters with the Service Flow Identifier, a null AdmittedQoSParamSet and null ActiveQoSParamSet, the IUT deactivates the referenced Service Flow.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H008 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 and 6.3.14.9.4.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the active state is established. The IUT has sent a DSC-REQ message to change the service flow to the provisioned state.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSC-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/QPS/BV-H009 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 and 6.3.14.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the active state is established.
Expected Behaviour	Check that: To change the service flow to the admitted state, the IUT sends a DSC-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction for a service flow with a DSC-REQ.

TP ID	TP/BS/DS/QPS/BV-H010 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 and 6.3.14.9.4.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the active state is established. The IUT has sent a DSC-REQ message to change the service flow to the admitted state.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSC-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction with a DSC-REQ.

TP ID	TP/BS/DS/QPS/BV-H011 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.6, and 6.3.14.6.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the admitted state is established.
Expected Behaviour	Check that: To change the service flow to the active state, the IUT sends a DSC-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to start the DSC transaction for a service flow with a DSC-REQ.

TP ID	TP/BS/DS/QPS/BV-H012 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.6, and 6.3.14.6.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the admitted state is established. The IUT has sent a DSC-REQ message to change the service flow to the active state.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSC-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to change the state to active.

TP ID	TP/BS/DS/QPS/BV-H013 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.6.1, and 6.3.14.6.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the admitted state is established.
Expected Behaviour	Check that: To change the service flow to the provisioned state, the IUT sends a DSC-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow to provisioned state.

TP ID	TP/BS/DS/QPS/BV-H014 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 6.3.14.6, and 6.3.14.6.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A service flow in the admitted state is established. The IUT has sent a DSC-REQ message to change the service flow to the provisioned state.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSC-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow to provisioned state.

TP ID	TP/BS/DS/QPS/BV-H015 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.4.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSC-REQ with supplemental or overriding service parameters, the IUT includes these supplemental and overriding service parameters in the DSC-RSP.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H016 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.4.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational. An uplink service flow is active.
Expected Behaviour	Check that: On receiving a DSC-REQ with supplemental and overriding service parameters, the IUT includes the supplemental and overriding service parameters in the DSC-RSP.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H017 {3}
P802.16 Reference	[3] and [12] Clause 11.13.4.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational. An uplink service flow is active.
Expected Behaviour	Check that: On receiving a DSC-REQ message with multiple updates to a single QoS Parameter Set, the IUT transmits a DSC-RSP message with CC 2 (reject-unrecognized-configuration-setting).
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H018 {2} **W2
P802.16 Reference	[3] Clause 11.13.11 [12] Clause 11.13.10.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ message to establish an uplink service flow with the Data Delivery Service and Uplink grant scheduling type parameter omitted in the message, the IUT provides the Best Effort (BE) uplink scheduling service.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H019
P802.16 Reference	[3] Clause 11.13.11 [12] Clause 11.13.10.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ message to establish an uplink service flow with the Uplink grant scheduling type parameter set to Undefined, the IUT provides the uplink scheduling service defined in the Vendor-specific QoS parameters.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H020 {1} **W2
P802.16 Reference	[3] Clause 11.13.11 [12] Clause 11.13.10.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ message to establish an uplink service flow with the Service Flow Scheduling Type parameter set to BE (2), the IUT provides the Best Effort (BE) uplink scheduling service.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H021 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.5.2.4.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating. A service flow is established with BE scheduling in use for this connection.
Expected Behaviour	Check that: The IUT sets the Request/Transmission Policy to use contention requests on the connection.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H022 {1} **W2
P802.16 Reference	[3] Clause 11.13.11 [12] Clause 11.13.10.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ message to establish an uplink service flow with the Service Flow Scheduling Type parameter set to nrtPS (3), the IUT provides the nrtPS uplink scheduling service.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H023 {1} **W2
P802.16 Reference	[3] Clause 11.13.11 [12] Clause 11.13.10.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ message to establish an uplink service flow with the Service Flow Scheduling Type parameter set to rtPS (4), the IUT provides the rtPS uplink scheduling service.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H024 {1} **W2
P802.16 Reference	[3] Clause 11.13.11 [12] Clause 11.13.10.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ message to establish an uplink service flow with the Service Flow Scheduling Type parameter set to UGS (6), the IUT provides the UGS uplink scheduling service.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H025 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.5.2.1.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating. A service flow is established with UGS scheduling in use for this connection.
Expected Behaviour	Check that: The IUT provides uplink allocations for the SS at periodic intervals based upon the Minimum Reserved Traffic Rate of the service whose size is sufficient or larger to hold the fixed length data (with associated generic MAC header and Grant management sub header).
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H026 {2} **W2
P802.16 Reference	[3] Clauses 6.3.5.2.1 and 11.13.12 [12] Clauses 6.3.5.2.1 and 11.13.11.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating. A service flow is established with UGS scheduling in use for this connection.
Expected Behaviour	Check that: The IUT sets the Request/Transmission policy to prohibit the use of contention request opportunities on this connection.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H027
P802.16 Reference	[3] and [12] Clause 6.3.14.4.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational. One uplink service flow and one downlink service flow are active for a given Service Class Name.
Expected Behaviour	Check that: On a change in the definition of the Service Class Name with new QoS parameters, the IUT maintains the existing uplink and downlink service flow QoS.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H028
P802.16 Reference	[3] and [12] Clause 6.3.14.4.
PICS item	
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ message using the Service Class Name for the Admitted QoS Parameter Set, the IUT transmits a DSA-RSP with the expanded set of service flow TLV coding.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H029
P802.16 Reference	[3] and [12] Clause 6.3.14.4.
PICS item	
Initial Condition	IUT is operational. An uplink service flow is active.
Expected Behaviour	Check that: On receiving a DSC-REQ message using the Service Class Name for the Admitted QoS Parameter Set, the IUT transmits a DSC-RSP with the expanded set of service flow TLV coding.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H030
P802.16 Reference	[3] and [12] Clauses 11.13.3 and 6.3.14.4.
PICS item	
Initial Condition	IUT is operational. An uplink service flow is active.
Expected Behaviour	Check that: On receiving a DSC-REQ message specifying some QoS parameters and a Service Class Name that changes all the current parameters, the IUT provides the service specified by the new QoS parameters. For the remaining unspecified parameters, the Service Class Name values are used.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H031 {3}
P802.16 Reference	[3] and [12] Clause 11.13.4.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: The IUT handles a single update to each of the Active and Admitted QoS parameter sets in a DSA transaction.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H032 {1} **W2
P802.16 Reference	[3] Clause 11.13.11 [12] Clause 11.13.10.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ message to establish an uplink service flow with the Service Flow Scheduling Type parameter set to Extended rtPS (5), the IUT provides the extended rtPS uplink scheduling service.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H033 {3}
P802.16 Reference	[3] and [12] Clause 11.13.4.
PICS item	PIC_MOB1.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: The IUT handles a single update to each of the Active and Admitted QoS parameter sets in a DSC transaction.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H034 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.6.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a service flow is Admitted.
Expected Behaviour	Check that: On receiving a DSA-REQ for an additional service flow that exceeds the provisioned QoS, the IUT transmits a DSA-RSP accepting the additional service flow and reserves resources for the service flow already admitted.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H035 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.6.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ for the active service flow with an AdmittedQoSParameterSet that is a subset of the current AdmittedQoSParameterSet and the ActiveQoSParameterSet remains a subset of the new AdmittedQoSParameterSet, the IUT transmits a DSC-RSP accepting the new AdmittedQoSParameterSet.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H036 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.6.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ for the active service flow with an AdmittedQoSParameterSet that is a subset of the current AdmittedQoSParameterSet and the ActiveQoSParameterSet no longer remains a subset of the new AdmittedQoSParameterSet, the IUT transmits a DSC-RSP rejecting the new AdmittedQoSParameterSet.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H037 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.8.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ message for the service flow containing only an AdmittedQoSParameter set and no Active QoS parameter set, and the DSC transaction completes successfully, then the IUT deactivates the service flow.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H038 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.8 and 6.3.14.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a service flow is Active. The IUT received a DSC-REQ for the service flow with neither an ActiveQoSParameter set nor an AdmittedQosParameter set. This DSC transaction was successful causing the service flow to be de-admitted.
Expected Behaviour	Check that: On receiving a DSC-REQ containing only an ActiveQoSParameter set the check involving the Admitted and Active QoS parameter check fails causing the service flow to remain in de-admitted state.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H039 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.8.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ containing both an ActiveQoSParameter set and an AdmittedQoSParameter set and on successful completion of the DSC transaction, the IUT implements the QoS contained in the new Admitted and Active QoS Parameter sets. (The ActiveQoSParameter set is a subset of the AdmittedQoSParameter set).
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H040 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.8 and 6.3.14.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ containing both an ActiveQoSParameter set and an AdmittedQoSParameter set but the Active set is not a subset of the Admitted set, the IUT transmits a DSC-RSP refusing the change and continues using the original QoS.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H041 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ with a null ActiveQoSParameter set, the IUT transmits a DSC-RSP accepting the transaction and after successful transaction completion the IUT deactivates the service flow.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H042 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.2 and 11.13.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT has just initialized and is now provisioning a service flow.
Expected Behaviour	Check that: The IUT has service flow parameters containing a ProvisionedQoSParameter set.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H043 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.2, 11.13.4, and 6.3.9.13.
PICS Item	PIC_MOB1.
Initial Condition	IUT has just initialized. A service flow is provisioned.
Expected Behaviour	Check that: The IUT has service flow parameters containing a ProvisionedQoSParameter set.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H044 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.8.
PICS item	PIC_MOB2.
Initial Condition	IUT is operational. A downlink service flow is active. The IUT has received a DSC-REQ message with neither an Active QoS parameters set nor an Admitted QoS parameters set. The DSC transaction was successful and the downlink service was deactivated.
Expected Behaviour	Check that: On receiving a DSC-REQ message with only an Active QoS Parameters Set and when the DSC transaction is successfully completed, the IUT does not reactivate the downlink service flow.
Test strategy	

TP ID	TP/BS/DS/QPS/BV-H045
P802.16 Reference	[3] and [12] Clause 11.13.5.
PICS Item	
Initial Condition	IUT is operating with two service flows.
Expected Behaviour	Check that: Given that two service flows are identical in all QoS parameters besides priority, the IUT gives the higher priority service flow lower delay and higher buffering preference.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H046
	Deleted.

TP ID	TP/BS/DS/QPS/BV-H047
	Deleted.

TP ID	TP/BS/DS/QPS/BV-H048
	Deleted.

TP ID	TP/BS/DS/QPS/BV-H049
	Deleted.

TP ID	TP/BS/DS/QPS/BV-H050
P802.16 Reference	[3] Clauses 11.13.10 and 11.1.6 [12] Clause 11.13.9 and 11.1.6.
PICS Item	
Initial Condition	The IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ containing Vendor-specific QoS Parameters that does not include the Vendor ID as its first element, the IUT discards the Vendor-specific QoS Parameters, processes the remainder of the DSC-REQ, and transmits a valid DSC-RSP.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H051
P802.16 Reference	[3] Clause 11.13.12 [12] Clause 11.13.11.
PICS Item	
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the Request/Transmission Policy Bit #0 set to zero followed by a successful DSA transaction, the IUT does not provide broadcast bandwidth request opportunities for the service flow.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H052
P802.16 Reference	[3] Clause 11.13.12 [12] Clause 11.13.11.
PICS Item	
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the Request/Transmission Policy Bit #1 set to zero followed by a successful DSA transaction, the IUT does not provide multicast bandwidth request opportunities for the service flow.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H053 {3}
P802.16 Reference	[3] Clause 11.13.12 [12] Clause 11.13.11.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the Request/Transmission Policy Bit #3 set to prohibit data fragmentation followed by a successful DSA transaction, the IUT does not fragment data for the service flow.
Test strategy	
Notes	This test case needs some special test interface and test mode.

TP ID	TP/BS/DS/QPS/BV-H054 {3}
P802.16 Reference	[3] Clause 11.13.12 [12] Clause 11.13.11.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the Request/Transmission Policy Bit #4 set to prohibit payload header suppression followed by a successful DSA transaction, the IUT does not suppress headers for the service flow.
Test strategy	
Notes	

TP ID	TP/BS/DS/QPS/BV-H055 {4}
P802.16 Reference	[3] Clause 11.13.12 [12] Clause 11.13.11.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is operational.

Expected Behaviour	Check that: On receiving a DSA-REQ with the Request/transmission Policy Bit #5 set to prohibit packing multiple SDUs (or fragments) into single MAC PDUs followed by a successful DSA transaction, the IUT does not pack multiple SDUs (or fragments) into single MAC PDUs for the service flow.
Test strategy	
Notes	This test case needs some special test interface and test mode.

TP ID	TP/BS/DS/QPS/BV-H056
P802.16 Reference	[3] Clause 11.13.14 [12] Clause 11.13.13.
PICS Item	
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with a Maximum Latency parameter that does not exceed the Minimum Downlink Reserved Rate followed by a successful DSA transaction, the IUT satisfies Maximum Latency requirement for the service flow.
Test strategy	
Notes	

5.2.9 Bandwidth Allocation and Polling (BWA)

TP ID	TP/BS/BWA/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.7.1.
PICS item	
Initial Condition	IUT is operating.
Expected Behaviour	Check that: For half-duplex SSs, the IUT does not allocate uplink bandwidth for the downlink within the propagation delay, SSTTG, and SSRTG parts of the frame.
Test strategy	
Notes	

TP ID	TP/BS/BWA/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.8.1.
PICS item	
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: The IUT transmits the size of individual transmission opportunities for each type of contention IE in each UCD message and allocates bandwidth for contention IEs in integer multiples of this size.
Test strategy	
Notes	

TP ID	TP/BS/BWA/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.7.4.3.1.
PICS item	
Initial Condition	The IUT is operating.
Expected Behaviour	Check that: When using multicast or broadcast, the IUT transmits the bandwidth opportunity granting an integer multiple of the "Bandwidth request opportunity size" in the UCD.
Test strategy	
Notes	

TP ID	TP/BS/BWA/BV-H003
P802.16 Reference	[3] and [12] Clauses 6.3.6.3, 6.3.7.4, 6.3.9.4 and 8.3.
PICS item	
Initial Condition	IUT has registered an SS.
Expected Behaviour	Check that: The IUT sends in every frame a UL-MAP containing the Basic CID and the Request IE.
Test strategy	
Notes	

TP ID	TP/BS/BWA/BV-H004
P802.16 Reference	[3] and [12] Clauses 6.3.6.3, 6.3.7.4, 6.3.9.4 and 8.3.
PICS item	
Initial Condition	IUT has registered an SS.
Expected Behaviour	Check that: The IUT sends in every frame a UL-MAP containing the Basic CID and the Data Grant Burst Type IE.
Test strategy	
Notes	

TP ID	TP/BS/BWA/BV-H005
P802.16 Reference	[3] and [12] Clauses 6.3.6.3, 6.3.7.4, 6.3.9.4 and 8.3.
PICS item	
Initial Condition	IUT has registered an SS.
Expected Behaviour	Check that: The IUT sends in every frame a UL-MAP containing the Multicast CID and the Request IE.
Test strategy	
Notes	

TP ID	TP/BS/BWA/BV-H006
P802.16 Reference	[3] and [12] Clauses 6.3.6.3, 6.3.7.4, 6.3.9.4 and 8.3.
PICS item	
Initial Condition	IUT has registered an SS.
Expected Behaviour	Check that: The IUT sends in every frame a UL-MAP containing the Broadcast CID and the Request IE.
Test strategy	
Notes	

TP ID	TP/BS/BWA/BV-H007
	Deleted.

TP ID	TP/BS/BWA/BV-H008
P802.16 Reference	[3] and [12] Clause 6.3.6.3.2.
PICS item	
Initial Condition	The IUT is operational with multiple subscriber stations.
Expected Behaviour	Check that: When there is insufficient bandwidth to unicast poll an inactive SS on its Basic CID, the IUT polls the inactive SS using a multicast or broadcast bandwidth allocation on a corresponding CID.
Test strategy	
Notes	

TP ID	TP/BS/BWA/BV-H009
	Deleted.

TP ID	TP/BS/BWA/BV-H010 {2}**W2
P802.16 Reference	[3] and [12] Clauses 6.3.6.3.1 and 6.3.6.3.3.
PICS item	PIC_MOB1.
Initial Condition	The IUT is operational and the IUT is receiving on a UGS connection. The MS has one more non-UGS connection.
Expected Behaviour	Check that: On receiving a Grant Management subheader with the PM bit set to one, the IUT unicast polls the SS by allocating an UL resource sufficient for transmitting of BW request header.
Test strategy	
Notes	

TP ID	TP/BS/BWA/BV-H011
P802.16 Reference	[3] and [12] Clause 6.3.6.3.3.
PICS item	
Initial Condition	The IUT is operational with multiple subscriber stations one of which uses the UGS scheduling service.
Expected Behaviour	Check that: When the UGS scheduling service consumes bandwidth to the point that the QoS requirements of other SSs cannot be met, the IUT polls the UGS connection SS on its Basic CID using a Data Grant IE.
Test strategy	
Notes	

5.2.9.1 CDMA Bandwidth Request (CBR)

TP ID	TP/BS/BWA/CBR/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.6.5.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: The when the IUT receives a CDMA Code from the code subset allocated to Bandwidth requests, the IUT provides an uplink allocation using a CDMA_Allocation_IE.
Test strategy	
Notes	

5.2.9.2 Request/Grant (REQ)

TP ID	TP/BS/BWA/REQ/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2 and 6.3.6.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and an UL connection with Best Effort (BE) scheduling is established.
Expected Behaviour	Check that: On receiving an aggregate Bandwidth Request Header including the aggregate Bandwidth Request as a response to the CDMA Allocation IE, the IUT transmits one or more uplink bandwidth grants satisfying the request, fully or partially.
Test strategy	Straightforward.
Notes	

TP ID	TP/BS/BWA/REQ/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2 and 6.3.6.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and an UL service flow with Best Effort (BE) scheduling is established.
Expected Behaviour	Check that: On receiving an incremental Bandwidth Request Header including the incremental Bandwidth Request as a response to the CDMA Allocation IE, the IUT transmits one or more uplink bandwidth grants satisfying the request, fully or partially.
Test strategy	Straightforward.
Notes	Incremental Bandwidth Request may use either Bandwidth Request Header or BW Request and Tx Power Report Header.

TP ID	TP/BS/BWA/REQ/BV-H002
P802.16 Reference	[3] and [12] Clauses 8.3.7.3.1 and 8.3.6.3.1.
PICS Item	
Initial Condition	IUT is operating. Focused Contention is not supported.
Expected Behaviour	Check that: On allocating a transmission opportunity to request bandwidth, the IUT transmits a Request Region Full IE (a UL-MAP IE with UIUC=2) in the UL-MAP.
Test strategy	Straightforward.
Notes	Requires a means to provoke the IUT to allocate a bandwidth request opportunity.

TP ID	TP/BS/BWA/REQ/BV-H003
P802.16 Reference	[3] and [12] Clause 8.3.7.3.1.
PICS Item	
Initial Condition	IUT is operating. Focused Contention is not supported. IUT has transmitted a Request Region Full IE in the UL-MAP.
Expected Behaviour	Check that: On receiving a Bandwidth Request Header in the region indicated by the Request Region Full IE, the IUT transmits one or more uplink grants for the requested bandwidth satisfying the request.
Test strategy	Straightforward.
Notes	

TP ID	TP/BS/BWA/REQ/BV-H004b
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.2.1.2, 6.3.6.1 and 8.3.6.3.1.
PICS Item	
Initial Condition	IUT is operating and an UL service is established.
Expected Behaviour	Check that: On receiving a Bandwidth Request Header in an uplink grant allocation for UIUC=5 to 12, the IUT transmits one or more uplink grants for the requested bandwidth satisfying the request.
Test strategy	Straightforward.
Notes	

TP ID	TP/BS/BWA/REQ/BV-H005 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.3.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and an UL service is established.
Expected Behaviour	Check that: To allocate a bandwidth grant, the IUT uses the SS's Basic CID.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H006 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. An UL service with UGS scheduling is established and is in active state.
Expected Behaviour	Check that: The IUT grants sufficient amount of capacity within sufficient time to meet the connection's latency requirement.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H007 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating. A UL service with rtPS scheduling is established and is in active state.
Expected Behaviour	Check that: The IUT issues polls within sufficient time to meet the connection's latency requirement.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H008
P802.16 Reference	[3] and [12] Clause 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.3.
PICS Item	
Initial Condition	IUT is operating. An UL service with nrtPS scheduling is established and is in active state.
Expected Behaviour	Check that: The IUT issues polls within time limit.
Test strategy	
Notes	Time limit should be defined to test.

TP ID	TP/BS/BWA/REQ/BV-H009 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and an UL connection with Best Effort (BE) scheduling is established.
Expected Behaviour	Check that: On receiving a piggyback request for more BW, the IUT transmits one or more uplink bandwidth grants satisfying the request, fully or partially.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H010 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and an UL connection with nrtPS scheduling is established.
Expected Behaviour	Check that: On receiving an aggregate Bandwidth Request Header, the IUT transmits one or more uplink bandwidth grants satisfying the request, fully or partially.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H011 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and an UL connection with nrtPS scheduling is established.
Expected Behaviour	Check that: On receiving an incremental Bandwidth Request, the IUT transmits one or more uplink bandwidth grants satisfying the request, fully or partially.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H012 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and an UL connection with rtPS scheduling is established.
Expected Behaviour	Check that: On receiving a piggyback request for more BW, the IUT transmits one or more uplink bandwidth grants satisfying the request, fully or partially within sufficient time to meet the connection's latency requirement.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H013 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and an UL connection with rtPS scheduling is established.
Expected Behaviour	Check that: On receiving an aggregate Bandwidth Request Header, the IUT transmits one or more uplink bandwidth grants satisfying the request, fully or partially, within sufficient time to meet the connection's latency requirement.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H014 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and an UL connection with rtPS scheduling is established.
Expected Behaviour	Check that: On receiving an incremental Bandwidth Request Header of incremental type, the IUT transmits one or more uplink bandwidth grants satisfying the request, fully or partially, within sufficient time to meet the connection's latency requirement.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H015
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H016
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H017
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H018
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H019
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H020
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H021 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.1.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating. An UL service with UGS scheduling is established and is in active state. Another UL service with rtPS scheduling is established and is in active state.
Expected Behaviour	Check that: On receiving a MAC PDU on the UGS connection with the PM bit set to 1, the IUT polls within sufficient time to meet the connection's latency requirement.
Test strategy	
Notes	The IUT polling should allow the MS's uplink scheduling time.

TP ID	TP/BS/BWA/REQ/BV-H022 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.6.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating. An UL service with UGS scheduling is established and is in active state. Another UL service with nrtPS scheduling is established and is in active state.
Expected Behaviour	Check that: On receiving a MAC PDU on the UGS connection with PM bit set to 1, the IUT issues polls.
Test strategy	
Notes	The IUT polling should allow the MS's uplink scheduling time.

TP ID	TP/BS/BWA/REQ/BV-H023
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H024
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H025
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2 and 6.3.6.1.
PICS Item	
Initial Condition	IUT is operating. A connection is established and is in active state. Focused Contention is supported.
Expected Behaviour	Check that: To allocate a transmission opportunity for requesting bandwidth in REQ Region Focused, the IUT sends a UL-MAP with UIUC=3 indicating the Request Region Focused IE.
Test strategy	
Notes	Requires a means to provoke the IUT to allocate a transmission opportunity for requesting bandwidth in REQ Region Focused.

TP ID	TP/BS/BWA/REQ/BV-H026
P802.16 Reference	[3] and [12] Clause 8.3.7.3.1.
PICS Item	
Initial Condition	IUT is operating. A connection is established and is in active state. Focused Contention is supported. IUT has transmitted a Request Region Focused IE in the UL-MAP.
Expected Behaviour	Check that: On receiving a short code over a Transmission Opportunity which consists of 4 sub-carriers by two OFDM symbols in the Request Region Focused, the IUT transmits a UL-MAP IE with UIUC=4 and the Focused Contention IE.
Test strategy	
Notes	Requires a means to provoke the IUT to allocate a transmission opportunity for requesting bandwidth in REQ Region Focused.

TP ID	TP/BS/BWA/REQ/BV-H027
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.6.4.
PICS Item	
Initial Condition	IUT is operating. A connection is established and is in active state. Focused Contention is supported. The IUT has sent a Focused Contention IE.
Expected Behaviour	Check that: On receiving a Bandwidth Request Header with transmission opportunity and contention channels, the IUT transmits one or more uplink bandwidth grants satisfying the request, fully or partially.
Test strategy	
Notes	Requires a means to provoke the IUT to allocate a transmission opportunity for requesting bandwidth in REQ Region Focused.

TP ID	TP/BS/BWA/REQ/BV-H028
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 8.3.6.3.3.
PICS Item	
Initial Condition	IUT is operating. A connection is established and is in active state. Focused Contention is supported. The IUT has sent a UL-MAP IE with UIUC=13 and a Sub Channelized Network Entry IE allocating a transmission opportunity and a contention sub-channel.
Expected Behaviour	Check that: On receiving a Bandwidth Request Header in the chosen transmission opportunity and chosen contention channels, the IUT transmits one or more uplink bandwidth grants satisfying the request.
Test strategy	
Notes	Requires a means to provoke the IUT to send UL-MAP IE with UIUC=13 and Sub Channelized Network Entry IE allocating transmission opportunity and contention sub-channel.

TP ID	TP/BS/BWA/REQ/BV-H029
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1, 8.3.6.3.1, 8.3.6.3.4 and 8.3.6.3.6.
PICS Item	
Initial Condition	IUT is operating. A connection is established and is in active state. Focused Contention is supported. The IUT has sent a UL-MAP IE with UIUC=15 and an AAS IE with Extended UIUC=0x02.
Expected Behaviour	Check that: On receiving a Bandwidth Request Header in the allocated transmission opportunity, the IUT transmits one or more uplink bandwidth grants satisfying the request.
Test strategy	
Notes	Requires a means to provoke the IUT to send UL-MAP IE with UIUC=15 and AAS IE with Extended UIUC=0x02.

TP ID	TP/BS/BWA/REQ/BV-H030
P802.16 Reference	[3] and [12] Clause 6.3.6.4.
PICS item	
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a Focused Contention Transmission during a REQ Region-Focused, the IUT provides an uplink allocation to transmit a Bandwidth Request MAC PDU using the Broadcast CID with the OFDM Focused_Contention_IE specifying the Contention Channel, Contention Code, and Transmit Opportunity.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H031 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.5.2.2.
PICS item	PIC_MOB2.
Initial Condition	IUT is operating. A single uplink transport connection is established with rtPS scheduling in use for this connection.
Expected Behaviour	Check that: The IUT periodically polls the SS, by transmitting unicast request opportunities.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H031x
P802.16 Reference	[3] and [12] Clause 6.3.5.2.1.
PICS item	
Initial Condition	IUT is operating. A connection is established with UGS scheduling in use for this connection.
Expected Behaviour	Check that: The IUT periodically transmits unicast request opportunities and sets the Request/Transmission Policy to prohibit use of contention requests on the connection.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H032
P802.16 Reference	[3] and [12] Clause 6.3.5.2.3.
PICS item	
Initial Condition	IUT is operating. A connection is established with nrtPS scheduling in use for this connection.
Expected Behaviour	Check that: The IUT transmits unicast request opportunities and sets the Request/Transmission Policy to allow use of contention requests on the connection.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H032x
P802.16 Reference	[3] and [12] Clause 6.3.5.2.4.
PICS item	
Initial Condition	IUT is operating. A connection is established with BE scheduling in use for this connection.
Expected Behaviour	Check that: The IUT transmits unicast request opportunities and sets the Request/Transmission Policy to allow use of contention requests on the connection.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H032y {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.5.2.2.1.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating. A connection is established with Extended rtPS scheduling in use for this connection.
Expected Behaviour	Check that: The IUT allocates unicast request opportunities according to the performance criteria that shall meet the Minimum Reserved Traffic Rate and Maximum Latency objectives.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H033
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H034
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H035
	Deleted.

TP ID	TP/BS/BWA/REQ/BV-H035a {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.2.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. A UL service with extended rtPS scheduling is established and is in active state.
Expected Behaviour	Check that: When the IUT receives the CQICH codeword(0b111011) from the MS, the IUT shall start allocating the UL grant corresponding to the current Maximum Sustained Traffic Rate value.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H036 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.5.2.2.1.
PICS item	PIC_MOB1.
Initial Condition	IUT is operating. A connection is established with ertPS scheduling in use for this connection.
Expected Behaviour	Check that: The IUT does not change the size of the UL allocations until receiving another bandwidth change request for this connection.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H037 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.2.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and an UL connection with Extended rtPS scheduling is established.
Expected Behaviour	Check that: On receiving a valid aggregate Bandwidth Request Header, the IUT starts to transmit uplink bandwidth grants satisfying the request, fully or partially.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H038 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.2.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and an UL connection with Extended rtPS scheduling is established.
Expected Behaviour	Check that: On receiving a valid incremental Bandwidth Request Header, the IUT starts to transmit bandwidth grants satisfying the request, fully or partially.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H039 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.2.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and an UL connection with Extended rtPS scheduling is established.
Expected Behaviour	Check that: On receiving a valid piggyback request for more BW, the IUT starts to transmit uplink bandwidth grants satisfying the request, fully or partially.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H040
P802.16 Reference	[3] and [12] Clauses 6.3.2.1.2, 6.3.6.1 and 6.3.5.2.2.1.
PICS Item	
Initial Condition	IUT is operating. An UL service with Extended rtPS scheduling is established and is in active state.
Expected Behaviour	Check that: The IUT continuous grants sufficient amount of capacity at correct intervals.
Test strategy	
Notes	

TP ID	TP/BS/BWA/REQ/BV-H041
	Deleted.

5.2.9.3 Multicast Polling (MCP)

TP ID	TP/BS/BWA/MCP/BV-H000
P802.16 Reference	[3] and [12] Clauses 6.3.12 Figure "Multicast polling assignment—BS" and 11.10.
PICS item	
Initial Condition	IUT is operational.
Expected Behaviour	Check that: To add an SS to a multicast polling group, the IUT transmits a MCA-REQ message with the Assignment field set to 0x01.
Test strategy	
Notes	The type of polling for the uplink connection could be defined by PIXIT parameter.

TP ID	TP/BS/BWA/MCP/BV-H001
P802.16 Reference	[3] and [12] Clauses 6.3.12 Figure "Multicast polling assignment—BS" and 11.10.
PICS item	
Initial Condition	IUT is operational. To add an SS to a multicast polling group, the IUT has transmitted an MCA-REQ message with the Assignment field set to 0x01.
Expected Behaviour	Check that: After receiving an MCA-RSP message with a Confirmation Code set to 0x00 (successful), the IUT transmits data to the multicast peers on the multicast CID.
Test strategy	
Notes	The type of polling for the uplink connection could be defined by PIXIT parameter.

TP ID	TP/BS/BWA/MCP/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.12 Figure "Multicast polling assignment—BS".
PICS item	
Initial Condition	IUT is operational. To add an SS to a multicast polling group, the IUT has transmitted an MCA-REQ message with the Assignment field set to 0x01.
Expected Behaviour	Check that: After receiving an MCA-RSP message with a Confirmation Code set to 0x03 (unsuccessful), the IUT transmits no data to the multicast peer on the multicast CID that transmitted the MCA-RSP.
Test strategy	
Notes	

TP ID	TP/BS/BWA/MCP/BV-H003
P802.16 Reference	[3] and [12] Clauses 6.3.12 Figure "Multicast polling assignment—BS" and 11.10.
PICS item	
Initial Condition	IUT is operational. An SS has been added to a multicast polling group and is receiving on the Multicast CID.
Expected Behaviour	Check that: To direct the SS to leave the multicast group, the IUT transmits a MCA-REQ message with the assignment field set to 0x00.
Test strategy	
Notes	Requires a means to provoke the MCA-REQ.

TP ID	TP/BS/BWA/MCP/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.12 Figure "Multicast polling assignment—BS".
PICS item	
Initial Condition	IUT is operational. A multicast connection with an SS is operational. The IUT has transmitted an MCA-REQ directing the SS to leave the multicast group.
Expected Behaviour	Check that: On receiving a valid MCA-RSP from the SS to leave the multicast group, the IUT transmits no further transmission opportunities to the SS for the former Multicast CID.
Test strategy	
Notes	

TP ID	TP/BS/BWA/MCP/BV-H005
P802.16 Reference	[3] and [12] Clause 6.3.12 Figure "Multicast polling assignment—BS".
PICS Item	
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: The IUT refrains from adding SS with only UGS or rtPS polling connections to Multicast Polling groups.
Test strategy	
Notes	Refer to PIXIT for information regarding conditions under which the IUT may create Multicast Polling groups.

TP ID	TP/BS/BWA/MCP/BV-H006
P802.16 Reference	[3] and [12] Clauses 6.3.12 and 6.3.7.4.3.
PICS item	
Initial Condition	IUT has authorized and registered an SS.
Expected Behaviour	Check that: While executing Multicast polling, on receiving a Bandwidth Request Header containing the Multicast CID using the Request IE burst profile, the IUT sends a Grant Management Sub header containing the Multicast CID.
Test strategy	
Notes	

TP ID	TP/BS/BWA/MCP/BV-H007
P802.16 Reference	[3] and [12] Clauses 6.3.12 and 6.3.7.4.3.1.
PICS item	
Initial Condition	IUT has registered an SS.
Expected Behaviour	Check that: While executing Multicast polling, on receiving a Generic MAC Header containing the Multicast CID and a Grant Management Sub header (PiggyBack request) using the Request IE burst profile, the IUT sends a Grant Management Sub header containing the Multicast CID.
Test strategy	
Notes	

TP ID	TP/BS/BWA/MCP/BI-H000
P802.16 Reference	[3] and [12] Clause 6.3.12 Figure "Multicast polling assignment—BS".
PICS Item	
Initial Condition	The IUT is has sent an MCA-REQ, started T15, and is waiting for an MCA-RSP.
Expected Behaviour	Check that: On receiving an improperly formatted MCA-RSP message, the IUT silently discards the received message and, after Timer T15 expires without receiving a valid MCA-REQ, resends the MCA-REQ message.
Test strategy	
Notes	

TP ID	TP/BS/BWA/MCP/BO-H000
P802.16 Reference	[3] and [12] Clause 6.3.12 Figure "Multicast polling assignment—BS".
PICS Item	
Initial Condition	No multicast polling group transactions are outstanding.
Expected Behaviour	Check that: On receiving an unsolicited MCA-RSP message, the IUT silently discards the received message.
Test strategy	
Notes	

TP ID	TP/BS/BWA/MCP/TI-H000
P802.16 Reference	[3] and [12] Clause 6.3.12 Figure "Multicast polling assignment—BS".
PICS item	
Initial Condition	IUT is operational. To add an SS to a multicast polling group, the IUT has transmitted an MCA-REQ message with the Assignment field set to 0x01 and started T15.
Expected Behaviour	Check that: On not receiving a valid MCA-RSP and on Timer T15 expiry, the IUT resends the MCA-REQ message.
Test strategy	
Notes	

TP ID	TP/BS/BWA/MCP/TI-H001
P802.16 Reference	[3] and [12] Clause 6.3.12 Figure "Multicast polling assignment—BS".
PICS item	
Initial Condition	IUT is operational. To add an SS to a multicast polling group, the IUT has transmitted an MCA-REQ message with the Assignment field set to 0x01 and started T15.
Expected Behaviour	Check that: Each time for MCA Request retries on not receiving a valid MCA-RSP, the IUT retransmits the MCA-REQ after T15 expiry and restarts T15. After the maximum number of MCA-REQ retries is exceeded, the IUT then ceases transmitting the MCA-REQ.
Test strategy	
Notes	Need a PIXIT parameter for MCA Request retries. When attempts fail n times, Figure Multicast polling assignment-BS shows IUT going back to Wait state. Thus, the test for ceasing transmitting the MCA-REQ.

5.2.10 General Handover Functionality (GHF)

5.2.10.1 Network topology acquisition (NTA)

5.2.10.1.1 Network advertisement (NWA)

TP ID	TP/BS/GHF/NTA/NWA/BV-H000 {1}**
P802.16 Reference	[3] Clauses 6.3.22.1.1, 10.1, and 6.3.2.3.47.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: To broadcast information about network topology, the IUT sends a valid MOB_NBR-ADV with valid parameters considering fully optimized HO scenario. The sending interval must be less than maximum value.
Test strategy	
Notes	

5.2.10.1.2 Scanning (SCAN)

TP ID	TP/BS/GHF/NTA/SCAN/BV-H000 {1}**
P802.16 Reference	[3] Clause 6.3.22.1.2 [12] Clause 6.3.21.1.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: On receiving a valid MOB_SCN-REQ, the IUT sends a MOB_SCN-RSP with a scan duration parameter either at least as long as requested in the MOB_SCN-REQ message or set to zero (to deny the request).
Test strategy	
Notes	

TP ID	TP/BS/GHF/NTA/SCAN/BV-H001 {3}
P802.16 Reference	[3] Clause 6.3.22.1.2 [12] Clause 6.3.21.1.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. A scanning interval has not been assigned to the MS. IUT has not received MOB_SCN-REQ.
Expected Behaviour	Check that: To trigger MS to report scanning result, the IUT sends an unsolicited MOB_SCN-RSP with a scan duration parameter set to zero.
Test strategy	
Notes	Requires a mechanism to trigger BS to perform this operation.

TP ID	TP/BS/GHF/NTA/SCAN/BV-H002
	Deleted.

TP ID	TP/BS/GHF/NTA/SCAN/BV-H003
P802.16 Reference	[3] Clauses 6.3.22.1.2 and 6.3.2.3.49 [12] Clause 6.3.21.1.2 and 6.3.2.3.44.
PICS Item	
Initial Condition	IUT has completed initialization and is operating. The IUT has negotiated unicast ranging opportunity.
Expected Behaviour	Check that: On receiving a valid MOB_SCN-REQ, the IUT sends a MOB_SCN-RSP with a scan duration parameter either at least as long as requested in the MOB_SCN-REQ message or set to zero (to deny the request) and includes the BS information with the unicast ranging opportunity in the scanning list of the MOB_SCN-RSP.
Test strategy	
Notes	Negotiation of the unicast ranging opportunity has succeeded over the backbone. This is for Association.

5.2.10.2 HO process (HO)

5.2.10.2.1 Process at Serving BS (SVG)

5.2.10.2.1.1 Cell reselection

Void.

5.2.10.2.1.2 HO initiation

5.2.10.2.1.2.1 MS initiated HO (MS)

TP ID	TP/BS/GHF/HO/SVG/INI/MS/BV-H000 {1}**
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: On receiving a valid MOB_MSHO-REQ message, the IUT sends a MOB_BSHO-RSP message.
Test strategy	
Notes	

TP ID	TP/BS/GHF/HO/SVG/INI/MS/BV-H001 {2} **W2
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: To force MS to conduct handover, on receiving a valid MOB_MSHO-REQ message considering fully optimized HO scenario, the IUT sends a MOB_BSHO-RSP message with HO operation mode = "0b1".
Test strategy	
Notes	Needs some means to enforce the BS to decide on fully optimized HO.

TP ID	TP/BS/GHF/HO/SVG/INI/MS/BV-H002
	Deleted.

TP ID	TP/BS/GHF/HO/SVG/INI/MS/BV-H003 {1}**
P802.16 Reference	[3] Clauses 6.3.22.2.2, 6.3.22.2.5 and 6.3.2.3.54 [12] Clauses 6.3.21.2.2, 6.3.21.2.5 and 6.3.2.3.54.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: To notify MS of retention of MS connection information after reception of a MOB_HO-IND, on receiving a valid MOB_MSHO-REQ message, the IUT sends a MOB_BSHO-RSP message with Resource Retain Flag = "0b1".
Test strategy	
Notes	

5.2.10.2.1.2.2 BS initiated HO (BS)

TP ID	TP/BS/GHF/HO/SVG/INI/BS/BV-H000 {2} **W2
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: To proceed with HO notification, the IUT sends a valid MOB_BSHO-REQ message.
Test strategy	
Notes	The IUT shall include at least one recommended BS in MOB_BSHO-REQ message.

TP ID	TP/BS/GHF/HO/SVG/INI/BS/BV-H001 {2} **W2
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: To force MS to conduct handover, while proceeding with HO notification, the IUT sends a valid MOB_BSHO-REQ message with HO operation mode = "0b1".
Test strategy	
Notes	The IUT shall include at least one recommended BS in MOB_BSHO-REQ message.

TP ID	TP/BS/GHF/HO/SVG/INI/BS/BV-H002 {2} **W2
P802.16 Reference	[3] Clauses 6.3.22.2.2 and 6.3.22.2.5 [12] Clauses 6.3.21.2.2 and 6.3.21.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: To notify MS of retention of MS connection information, the IUT sends a valid MOB_BSHO-REQ message with Resource Retain Flag = "0b1".
Test strategy	
Notes	Requires a means to ensure that the IUT will request retention of the MS connection.

5.2.10.2.1.3 HO Cancellation (CCL)

TP ID	TP/BS/GHF/HO/SVG/CCL/BV-H000 {3}
P802.16 Reference	[3] Clause 6.3.22.2.3 [12] Clause 6.3.21.2.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. IUT has transmitted MOB_BSHO-REQ message.
Expected Behaviour	Check that: On receiving a valid MOB_HO-IND message with the HO_IND_type="0b01" (HO cancel) before expiration of Resource_retain_timer, the IUT resumes Normal Operation communication.
Test strategy	
Notes	BS initiated HO.

TP ID	TP/BS/GHF/HO/SVG/CCL/BV-H001 {2} **W2
P802.16 Reference	[3] Clause 6.3.22.2.3 [12] Clause 6.3.21.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has transmitted MOB_BSHO-RSP message.
Expected Behaviour	Check that: On receiving a valid MOB_HO-IND message with the HO_IND_type="0b01" (HO cancel) before expiration of Resource_retain_timer, the IUT resumes Normal Operation communication.
Test strategy	
Notes	MS initiated HO.

5.2.10.2.1.4 HO Termination (TER)

5.2.10.2.1.4.1 Valid Behaviour

TP ID	TP/BS/GHF/HO/SVG/TER/BV-H000 {4}
P802.16 Reference	[3] Clause 6.3.22.2.5 [12] Clause 6.3.21.2.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: On receiving a valid MOB_HO-IND message with the HO_IND_type="0b00" (serving BS release) and no backbone message with indication of MS network attachment at target BS, the IUT retains connections, MAC state machine and PDUs until expiration of timer Resource_retain_timer.
Test strategy	
Notes	

TP ID	TP/BS/GHF/HO/SVG/TER/BV-H001 {4}
P802.16 Reference	[3] Clauses 6.3.22.2.5 and 6.3.2.3.55 [12] Clauses 6.3.21.2.5 and 6.3.2.3.50.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: Having received a valid MOB_HO-IND message with the HO_IND_type="0b00" (serving BS release), on receipt of a backbone message with indication of MS network attachment at target BS, the IUT removes MAC context and MAC PDUs.
Test strategy	
Notes	

5.2.10.2.1.4.2 Timer

TP ID	TP/BS/GHF/HO/SVG/TER/TI-H000 {4}
P802.16 Reference	[3] Clauses 6.3.22.2.5 and 6.3.2.3.55 [12] Clauses 6.3.21.2.5 and 6.3.2.3.50.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: Having received a valid MOB_HO-IND message with the HO_IND_type="0b00" (serving BS release) and no backbone message with indication of MS network attachment at target BS, when timer Resource_retain_timer expires, the IUT remove MAC context and MAC PDUs.
Test strategy	
Notes	

TP ID	TP/BS/GHF/HO/SVG/TER/TI-H001 {4}
P802.16 Reference	[3] Clauses 6.3.22.2.5, 6.3.2.3.54 and 11.7.13.1 [12] Clauses 6.3.21.2.5, 6.3.2.3.49 and 11.7.12.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: Having sent a MOB_BSHO-RSP with Resource Retain Flag = 1 but without Resource Retain Time TLV, the IUT uses the Systems Resource Retain Time timer to retain the MS MAC context.
Test strategy	
Notes	

5.2.10.2.1.5 Drops during HO (DRO)

TP ID	TP/BS/GHF/HO/SVG/DRO/BV-H000 {4}
P802.16 Reference	[3] Clause 6.3.22.2.6. [12] Clause 6.3.21.2.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: Having detected a drop, the IUT retains connections, MAC state machine and PDUs until expiration of timer Resource_retain_timer.
Test strategy	
Notes	A BS can detect a drop when the Number of retries limit allowed on inviting Ranging Requests for the periodic ranging mechanism is exceeded.

5.2.10.2.2 Process at Target BS (TGT)

5.2.10.2.2.1 Use of Scanning and Association Result (SAR)

TP ID	TP/BS/GHF/TGT/SAR/BV-H000 {2} **W2
P802.16 Reference	[3] Clauses 6.3.22.2.4 and 8.4.5.4.21 [12] Clauses 6.3.21.2.4 and 8.4.5.4.21.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. The MS learned required ranging parameters at the target BS at the time of HO.
Expected Behaviour	Check that: Having received HO notification from the serving BS over the backbone, the IUT places a Fast_Ranging_IE() in the UL_MAP the Fast_Ranging_IE shall appear before expiration of T55.
Test strategy	
Notes	Requires a means to retrieve from the IUT the action time. IUT has received a backbone message from serving BS regarding the action time.

TP ID	TP/BS/GHF/TGT/SAR/BV-H000a
	Deleted.

5.2.10.2.2.2 Drops during HO (DRO)

TP ID	TP/BS/GHF/TGT/DRO/BV-H000
	Deleted.

5.2.10.2.2.3 Network Re-Entry (NRE)

TP ID	TP/BS/GHF/TGT/NWR/BV-H000 {1}**
P802.16 Reference	[3] Clauses 6.3.22.2.7, 6.3.2.3.5, 6.3.2.3.6 and 6.3.10.3.1 [12] Clauses 6.3.21.2.7, 6.3.2.3.5, 6.3.2.3.6 and 6.3.10.3.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: Having received a valid RNG-REQ message in the ranging CID, the IUT responds with a RNG-RSP message assigning Basic and Primary CIDs.
Test strategy	
Notes	

TP ID	TP/BS/GHF/TGT/NWR/BV-H001 {1}**
P802.16 Reference	[3] Clause 6.3.22.2.7 [12] Clause 6.3.21.2.7.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: Having received a valid RNG-REQ message in the ranging CID, to notify the MS of possible omission of re-entry process management messages, the IUT responds with a RNG-RSP with a HO Process Optimization TLV.
Test strategy	
Notes	

TP ID	TP/BS/GHF/TGT/NWR/BV-H002 {1}**
P802.16 Reference	[3] Clauses 6.3.22.2.7, 6.3.2.3.5, 6.3.2.3.6, 6.3.10.3.1, 11.1.2.2 and 11.6 [12] Clauses 6.3.21.2.7, 6.3.2.3.5, 6.3.2.3.6, 6.3.10.3.1, 11.1.2.2 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: Having received a valid RNG-REQ message with Serving BS ID and Ranging Purpose Indication with Bit#0 set to 1 and a CMAC tuple that can be successfully decrypted by the IUT, the IUT responds with a RNG-RSP with CMAC tuple.
Test strategy	
Notes	

TP ID	TP/BS/GHF/TGT/NWR/BV-H003 {3}
P802.16 Reference	[3] Clauses 6.3.22.2.7, 6.3.2.3.6 and 11.6 [12] Clauses 6.3.21.2.7, 6.3.2.3.6 and 11.6.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: During network re-entry, the IUT sends RNG-RSP including HO Process Optimization TLV Bit#0 set to 1 and Bit#8 set to 0 and not including any SBC-RSP encodings TLV and sends an unsolicited SBC-RSP message.
Test strategy	
Notes	

TP ID	TP/BS/GHF/TGT/NWR/BV-H004 {2} **W2
P802.16 Reference	[3] Clauses 6.3.22.2.7, 6.3.2.3.6 and 11.6 [12] Clauses 6.3.21.2.7, 6.3.2.3.6 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: During network re-entry, the IUT sends RNG-RSP including HO Process Optimization TLV Bit#0 set to 1 (omit SBC-REQ), Bit#8 set to 1 (omit unsolicited SBC-RSP from BS) and including SBC-RSP encodings and the IUT does not send an unsolicited SBC-RSP.
Test strategy	
Notes	Implementation of this test requires some means to enforce the IUT to do this behaviour.

TP ID	TP/BS/GHF/TGT/NWR/BV-H005 {3}
P802.16 Reference	[3] Clauses 6.3.22.2.7 and 11.6 [12] Clauses 6.3.21.2.7 and 11.6.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: During network re-entry, the IUT sends RNG-RSP including HO Process Optimization TLV Bit#7 set to 1 (omit REG-REQ) and Bit#10 set to 0 (BS shall send unsolicited REG-RSP) and not including the REG-RSP encodings TLV and then the IUT sends an unsolicited REG-RSP.
Test strategy	
Notes	Implementation of this test needs some means to enforce the corresponding BS to do this behaviour.

TP ID	TP/BS/GHF/TGT/NWR/BV-H006 {2} **W2
P802.16 Reference	[3] Clauses 6.3.22.2.7, 6.3.2.3.6 and 11.6 [12] Clauses 6.3.2.21.7, 6.3.2.3.6 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: During network re-entry, the IUT sends RNG-RSP including HO Process Optimization TLV Bit#7 set to 1 (omit REG-REQ) and Bit#10 set to 1 (BS does not send unsolicited REG-RSP) and including REG-RSP encodings and then the IUT does not send an unsolicited REG-RSP.
Test strategy	
Notes	Implementation of this test needs some means to enforce the corresponding BS to do this behaviour.

TP ID	TP/BS/GHF/TGT/NWR/BV-H007 {3}
P802.16 Reference	[3] Clauses 6.3.22.2.7, 6.3.2.3.6 and 11.6 [12] Clauses 6.3.21.2.7, 6.3.2.3.6 and 11.6.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation. During network re-entry IUT sends an unsolicited REG-RSP, however the MS sends a REG-REQ.
Expected Behaviour	Check that: Having received the 2nd REG-REQ message the IUT sends REG-RSP.
Test strategy	
Notes	

TP ID	TP/BS/GHF/TGT/NWR/BV-H007b
P802.16 Reference	[3] Clauses 6.3.22.2.7, 6.3.2.3.6 and 11.6 [12] Clauses 6.3.21.2.7, 6.3.2.3.6 and 11.6.
PICS Item	
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation. During network re-entry the IUT sends an unsolicited SBC-RSP, however the MS sends a SBC-REQ.
Expected Behaviour	Check that: Having received the 2nd SBC-REQ message the IUT sends SBC-RSP.
Test strategy	
Notes	The "handover initiation completed" in the IUT (BS) is denotes that the initial RNG-REQ/RNG-RSP messages have been exchanged, so the re-entry procedure for the MS to follow is communicated to the MS.

TP ID	TP/BS/GHF/TGT/NWR/BV-H008
	Deleted.

TP ID	TP/BS/GHF/TGT/NWR/BV-H009
	Deleted.

TP ID	TP/BS/GHF/TGT/NWR/BV-H010 {1}**
P802.16 Reference	[3] Clause 6.3.22.2.7 [12] Clause 6.3.21.2.7.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initialization and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: During network re-entry, the IUT sends RNG-RSP including HO Process Optimization TLV Bit#3, Bit #4, and Bit#5 are all set to 1.
Test strategy	
Notes	

TP ID	TP/BS/GHF/TGT/NWR/BV-H011
	Deleted.

TP ID	TP/BS/GHF/TGT/NWR/BV-H012
	Deleted.

TP ID	TP/BS/GHF/TGT/NWR/BV-H013
P802.16 Reference	[3] Clauses 6.3.22.2.7, 11.6 and 6.3.9 [12] Clauses 6.3.21.2.7, 11.6 and 6.3.9.
PICS Item	
Initial Condition	IUT has completed initialization and is operating. IUT is performing handover initiation.
Expected Behaviour	Check that: When the IUT does not support Handover Optimization it sends a RNG-RSP with HO Process Optimization TLV bit#0 = 0 (SBC communication required), bit#7 = 0 (REG communication required), bit#8 = 1 (Omit unsolicited SBC-RSP), and bit#10 = 1 (omit unsolicited REG-RSP).
Test strategy	
Notes	

5.2.11 Sleep Mode (SLM)

5.2.11.1 Power Saving Class Type 1 (PW1)

TP ID	TP/BS/SLM/PW1/BV-H000 {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.46 and 6.3.21.2 [12] Clauses 6.3.2.3.41 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has established a best effort DL connection with the MS and has completed a MOB_SLP-REQ/RSP message exchange to define a PSC for the BE connection. The MS has activated the PSC and the MS is in sleep mode. No SDUs arrive at the IUT for the BE connection. The MS is not scheduled to perform periodic ranging.
Expected Behaviour	Check that: The IUT does one of the following: - defines a PSC with TRF-IND_Required flag set to "0"; - defines a PSC with TRF-IND_Required flag set to "1"; and - sends at least one MOB_TRF-IND with negative indication on the broadcast CID or sleep mode multicast CID in each availability interval which contains at least one listening window of the Power Saving Class(es) of Type 1.
Test strategy	
Notes	

TP ID	TP/BS/SLM/PW1/BV-H000a
	Deleted.

TP ID	TP/BS/SLM/PW1/BV-H001
	Deleted.

TP ID	TP/BS/SLM/PW1/BV-H001a {4}
P802.16 Reference	[3] Clause 6.3.21.2 [12] Clause 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The MS has completed HO from BS#1 to the IUT. The MS has included Power_Saving_Class_Parameters of type 1 to define a PSC in the RNG-REQ during network re-entry with the IUT.
Expected Behaviour	Check that: The IUT includes Power_Saving_Class_Parameters of type 1 in the RNG-RSP for definition of the Power Saving Class of type 1 in response to definition request of a PSC in RNG-REQ.
Test strategy	
Notes	

TP ID	TP/BS/SLM/PW1/BV-H001b {4}
P802.16 Reference	[3] Clauses 6.3.2.3.44, 6.3.2.3.45 and 6.3.21.2 [12] Clauses 6.3.2.3.39, 6.3.2.3.40 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The MS has completed HO from BS#1 to the IUT. The MS has included Power_Saving_Class_Parameters of type 1 to define a PSC in the RNG-REQ during network re-entry with the IUT. The IUT has included Power_Saving_Class_Parameters of type 1 in the RNG-RSP in response to definition request of a PSC in RNG-REQ.
Expected Behaviour	Check that: On receipt of a MOB_SLP-REQ containing the Power_Saving_Class_ID field activating the Power Saving Class of type 1 defined in RNG-RSP, the IUT sends a MOB_SLP-RSP with Sleep_Approved field indicating approval.
Test strategy	
Notes	Requires a means to trigger IUT to activate a Power Saving Class of type 1 in RNG-RSP.

TP ID	TP/BS/SLM/PW1/BV-H001c {4}
P802.16 Reference	[3] Clause 6.3.21.2 [12] Clause 6.3.20.2.
PICS Item	PIC_MOB2.
Initial Condition	The MS has completed HO from BS#1 to the IUT. The MS has included Power_Saving_Class_Parameters of type 1 to define a PSC in the RNG-REQ during network re-entry with the IUT. The IUT has included Power_Saving_Class_Parameters of type 1 in the RNG-RSP for definition of the Power Saving Class of type 1 in response to definition request of a PSC in RNG-REQ.
Expected Behaviour	Check that: On receipt of a Bandwidth request and uplink sleep control header activating the Power_Saving_Class_ID defined in RNG-RSP, the IUT sends a DL sleep control extended subheader.
Test strategy	
Notes	Requires a means to trigger IUT to activate a Power Saving Class of type 1 in RNG-RSP. Uplink sleep control header and DL sleep control extended subheader supports are Wave 2 feature.

TP ID	TP/BS/SLM/PW1/BV-H002
	Deleted.

TP ID	TP/BS/SLM/PW1/BV-H003
	Deleted.

TP ID	TP/BS/SLM/PW1/BV-H004
	Deleted.

TP ID	TP/BS/SLM/PW1/BV-H005 {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.44, 6.3.2.3.45 and 6.3.21.2 [12] Clauses 6.3.2.3.39, 6.3.2.3.40 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry with the MS. MS sends a valid MOB_SLP-REQ message for definition of a Power Saving Class of type 1. The PSC includes only unicast connections.
Expected Behaviour	Check that: The IUT responds with a MOB_SLP-RSP with final definition of the Power Saving Class.
Test strategy	
Notes	

TP ID	TP/BS/SLM/PW1/BV-H005a {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.44, 6.3.2.3.45 and 6.3.21.2 [12] Clauses 6.3.2.3.39, 6.3.2.3.40 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry with the MS. A Power Saving Class of Type 1 has been defined. MS sends a valid MOB_SLP-REQ message for activation of the Power Saving Class of type 1. The PSC includes only unicast connections.
Expected Behaviour	Check that: The IUT responds with a MOB_SLP-RSP with Sleep_Approved bit set to 0 or 1. If the IUT approves activation request, it shall set Sleep_ Approved bit as well as Operation bit to 1.
Test strategy	
Notes	

TP ID	TP/BS/SLM/PW1/BV-H005b {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.44, 6.3.2.3.45 and 6.3.21.2 [12] Clauses 6.3.2.3.39, 6.3.2.3.40 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry with the MS. A Power Saving Class of Type 1 has been defined. MS sends a valid MOB_SLP-REQ message for deactivation of the Power Saving Class of type 1. The Power Saving Class has been activated. The PSC includes only unicast connections.
Expected Behaviour	Check that: The IUT responds with a MOB_SLP-RSP with Sleep_Approved bit set to 0 or 1. If the IUT approves deactivation request, it shall set Sleep_ Approved bit to 1 and Operation bit to 0.
Test strategy	
Notes	

TP ID	TP/BS/SLM/PW1/BV-H006
P802.16 Reference	[3] Clauses 6.3.2.3.44, 6.3.2.3.45 and 6.3.21.2 [12] Clauses 6.3.2.3.39, 6.3.2.3.40 and 6.3.20.2.
PICS Item	
Initial Condition	The IUT has completed initial network entry with the MS. The MS sends a valid MOB_SLP-REQ for a Power Saving Class of type 1 containing the Definition field set to "1 = Definition of Power Saving Class present" and the Operation field set to "0 = Deactivation of Power Saving Class".
Expected Behaviour	Check that: The IUT sends a MOB_SLP-RSP with Sleep_Approved field set to 1 indicating approval.
Test strategy	
Notes	This is to test the case of PSC definition without activation.

TP ID	TP/BS/SLM/PW1/BV-H007
P802.16 Reference	[3] Clauses 6.3.2.3.44, 6.3.2.3.45, and 6.3.21.2 [12] Clauses 6.3.2.3.39, 6.3.2.3.40, and 6.3.20.2.
PICS Item	
Initial Condition	The IUT has completed initial network entry with the MS. The MS has defined but not activated a Power Saving Class of type 1 with a MOB_SLP-REQ and IUT has replied with a MOB_SLP-RSP with Sleep_Approved field indicating approval. The MS sends a valid a MOB_SLP-REQ for a Power Saving Class of type 1 activating the Power_Saving_Class_ID defined by the previous exchange of MOB_SLP-REQ and MOB_SLP-RSP with Definition field set to "0 = Definition of Power Saving Class present" and the Operation field set to "1 = activation of Power Saving Class".
Expected Behaviour	Check that: The IUT sends a MOB_SLP-RSP with Sleep_Approved field indicating approval.
Test strategy	
Notes	

TP ID	TP/BS/SLM/PW1/BV-H008 {1} ** W2
P802.16 Reference	[3] Clauses 6.3.2.2.7.2, 6.3.2.3.44, 6.3.2.3.45, and 6.3.21.2 [12] Clauses 6.3.2.2.7.2, 6.3.2.3.39, 6.3.2.3.40, and 6.3.20.2.
PICS Item	PIC_MOB2.
Initial Condition	The IUT has completed initial network entry with the MS. The MS has defined but not activated a Power Saving Class of type 1 with a MOB_SLP-REQ and IUT has replied with a MOB_SLP-RSP with Sleep_Approved field indicating approval. The MS transmits a valid Bandwidth request and uplink sleep control header activating the Power_Saving_Class_ID defined by the previous exchange of MOB_SLP-REQ and MOB_SLP-RSP.
Expected Behaviour	Check that: The IUT sends MOB_SLP-RSP or DL sleep control extended subheader.
Test strategy	
Notes	DL sleep control extended subheader and Bandwidth request and uplink sleep control support is Wave 2 feature.

TP ID	TP/BS/SLM/PW1/BV-H009 {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.46 and 6.3.21.2 [12] Clauses 6.3.2.3.41 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has established a best effort DL and UL connections. All the MS connections are associated with a type 1 PSC, and the MS has activated the PSC for BE connections with TRF_IND-Required set to 1. The MS is in sleep mode. The IUT receives DL SDUs for BE connection defined in the PSC.
Expected Behaviour	Check that: On a connection associated with a Power Saving Class of type 1, the IUT transmits a MOB_TRF-IND with a positive traffic indication during the listening interval deactivating the PSC.
Test strategy	DL traffic can be created by simulating a 2nd MS pinging MS#1.
Notes	

TP ID	TP/BS/SLM/PW1/BV-H009a
	Deleted.

TP ID	TP/BS/SLM/PW1/BV-H009b {3}
P802.16 Reference	[3] Clauses 6.3.2.2.7.2, 6.3.2.3.46, and 6.3.21.2 [12] Clauses 6.3.2.2.7.2, 6.3.2.3.41, and 6.3.20.2.
PICS Item	PIC_MOB2.
Initial Condition	The IUT has established best effort DL and UL connections. All the MS connections are associated with a type 1 PSC which is not activated.
Expected Behaviour	Check that: In order to activate a Power Saving Class, the IUT transmits unsolicited MOB_SLP-RSP or DL sleep control extended subheader.
Test strategy	
Notes	Requires a means to trigger IUT to activate a Power Saving Class. Unsolicited activation of a PSC using MOB_SLP-RSP is Wave 2 feature.

TP ID	TP/BS/SLM/PW1/BV-H010 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.2.2.7.2, 6.3.2.3.46, and 6.3.21.2 [12] Clauses 6.3.2.2.7.2, 6.3.2.3.41, and 6.3.20.2.
PICS Item	PIC_MOB2.
Initial Condition	The IUT has established a best effort DL and UL connection. All the MS connections are associated with a type 1 PSC. Traffic_triggered_wakening_flag is set to 0 and the MS has activated the PSC for BE connection. The MS is in sleep mode. The IUT receives DL SDUs for the BE connection defined in the PSC.
Expected Behaviour	Check that: When the IUT deactivates a Power Saving Class, it transmits an unsolicited MOB_SLP-RSP or DL sleep control extended subheader.
Test strategy	
Notes	Requires a means to trigger IUT to deactivate a Power Saving Class.

TP ID	TP/BS/SLM/PW1/BV-H010a
	Deleted.

TP ID	TP/BS/SLM/PW1/BV-H011 {1}**
P802.16 Reference	[3] Clauses 6.3.2.1.2.1.1 and 6.3.21.2 [12] Clauses 6.3.2.1.2.1.1 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has established a UL connection. All the MS CIDs are associated to a type 1 PSC, and the MS has activated the PSC for the UL connection with Traffic_triggered_awakening flag set to 1. The MS is in sleep mode. The IUT receives any UL transmission.
Expected Behaviour	Check that: The IUT deactivates the PSC.
Test strategy	Proposed data traffic: MS sends an ICMP Echo Request to the IUT and the IUT sends an ICMP Echo Reply back.
Notes	

TP ID	TP/BS/SLM/PW1/BV-H011a
	Deleted.

TP ID	TP/BS/SLM/PW1/BV-H012
	Deleted.

TP ID	TP/BS/SLM/PW1/BV-H013
	Deleted.

5.2.11.2 Power Saving Class Type 2 (PW2)

Void.

5.2.11.3 Power Saving Class Type 3 (PW3)

Void.

5.2.11.4 Periodic Ranging during Sleep Mode (PRSM)

TP ID	TP/BS/SLM/PRSM/BV-H000
	Deleted.

TP ID	TP/BS/SLM/PRSM/BV-H001
P802.16 Reference	[3] Clauses 6.3.21.5 and 6.3.21.7.1 [12] Clauses 6.3.20.5 and 6.3.20.7.1.
PICS Item	
Initial Condition	The IUT has established a best effort DL connection with the MS and has completed a MOB_SLP-REQ/RSP message exchange to define a PSC 1 for the BE connection. Periodic ranging in sleep mode has been initiated the IUT has received a RNG-REQ.
Expected Behaviour	Check that: If there is any need to update the SLPID assigned to the MS, the IUT append a SLPID_Update TLV to the RNG-RSP message, where the Old_SLPID in the SLPID_Update TLV matches the current SLPID of the MS.
Test strategy	
Notes	Requires a means to ensure that IUT includes SLPID update in the RNG-RSP. It is not required to support SLPID_Update TLV included in the RNG-RSP message according to the WiMAX Forum System Profile release 1.0.

5.2.12 Idle Mode (IDM)

5.2.12.1 Transition to Idle Mode (TDIM)

5.2.12.1.1 Valid Behaviour

TP ID	TP/BS/IDM/TIDM/BV-H000 {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.26, 6.3.2.3.42, and 6.3.24.1 [12] Clauses 6.3.2.3.26, 6.3.2.3.37, and 6.3.23.1.
PICS Item	PIC_MOB1.
Initial Condition	MS has completed initial network entry with IUT. MS sends a DREG-REQ message with a De-Registration_Request_Code=0x01 and a valid CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Expected Behaviour	Check that: The IUT sends a valid DREG-CMD with Action Code=0x05 for acknowledging MS-initiated Idle mode or Action Code=0x06 for requesting re-transmission of DREG-REQ.
Test strategy	TLVs transmitted with Action Code=0x05: - Paging Information TLV; - Paging Controller ID TLV; - Idle Mode Retain Information TLV; and - a CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization". TLVs transmitted with Action Code=0x06: - REQ-duration TLV; and - a CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Notes	MS-initiated Idle mode.

TP ID	TP/BS/IDM/TIDM/BV-H001 {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.42 and 6.3.24.1 [12] Clauses 6.3.2.3.37 and 6.3.23.1.
PICS Item	PIC_MOB1.
Initial Condition	MS has completed initial network entry with IUT.
Expected Behaviour	Check that: On receipt of DREG-REQ with a De-Registration_Request_Code =0x01 and with Idle Mode Retain Information TLV, the IUT sends DREG-CMD containing Idle Mode Retain Information TLV.
Test strategy	
Notes	

TP ID	TP/BS/IDM/TIDM/BV-H002 {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.26, 6.3.2.3.42, and 6.3.24.1 [12] Clauses 6.3.2.3.26, 6.3.2.3.37, and 6.3.23.1.
PICS Item	PIC_MOB1.
Initial Condition	MS has completed initial network entry with IUT. The IUT determines that the MS should enter idle mode.
Expected Behaviour	Check that: The IUT sends a valid unsolicited DREG-CMD with an Action Code=0x05 and the following TLVs: - Paging Information TLV; - Paging Controller ID TLV; - Idle Mode Retain Information TLV; - Optional REQ-duration TLV; and - a CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Test strategy	
Notes	BS-initiated Idle Mode. Requires a means to trigger IUT to send an unsolicited DREG-CMD.

TP ID	TP/BS/IDM/TIDM/BV-H003
	Deleted.

5.2.12.1.2 Timer

TP ID	TP/BS/IDM/TIDM/TI-H000 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.2.3.26, 6.3.2.3.42, and 6.3.24.1 [12] Clauses 6.3.2.3.26, 6.3.2.3.37, and 6.3.23.1.
PICS Item	PIC_MOB1.
Initial Condition	MS has completed initial network entry with IUT. In order to command the MS to begin Idle Mode, the IUT sends a valid unsolicited DREG-CMD with an Action Code=0x05, and does not receive a DREG-REQ from the MS.
Expected Behaviour	Check that: The IUT retransmits the DREG-CMD after expiry of T46 timer.
Test strategy	
Notes	First retry of BS-initiated idle mode. Requires a means to trigger IUT to send an unsolicited DREG-CMD.

TP ID	TP/BS/IDM/TIDM/TI-H001 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.2.3.26, 6.3.2.3.42, and 6.3.24.1 [12] Clauses 6.3.2.3.26, 6.3.2.3.37, and 6.3.23.1.
PICS Item	PIC_MOB1.
Initial Condition	MS has completed initial network entry with IUT. The IUT determines that the MS should enter idle mode, completes TP/BS/IDM/TIDM/TI-H000, does not receive a DREG-REQ from the MS within T46.
Expected Behaviour	Check that: In order to command the MS to begin Idle Mode, the IUT sends another unsolicited DREG-CMD with an Action Code=0x05, and on no reply from the MS within T46 timer after sending the DREG-CMD, it retransmits the DREG-CMD until DREG-Command-Retry-Count is exhausted.
Test strategy	
Notes	Multiple retries of BS-initiated idle mode. Requires a means to trigger IUT to send an unsolicited DREG-CMD.

TP ID	TP/BS/IDM/TIDM/TI-H002 {3}
P802.16 Reference	[3] Clauses 6.3.2.3.26, 6.3.2.3.42, and 6.3.24.1 [12] Clauses 6.3.2.3.26, 6.3.2.3.37, and 6.3.23.1.
PICS Item	PIC_MOB1.
Initial Condition	MS is in Idle Mode with IUT. The MS does not perform Location Update. Idle Mode System Timer has expired.
Expected Behaviour	Check that: IUT does not retain the MS service. On receipt of a RNG-REQ with bit #1 or bit#0 of Ranging Purpose Indication TLV set to 1 and Paging Controller ID TLV, on Ranging CID, the IUT sends a RNG-RSP with ranging status abort.
Test strategy	
Notes	Requires a means to trigger IUT to send an unsolicited DREG-CMD. This error case applies to both location update and network re-entry cases.

5.2.12.2 Paging (PG)

TP ID	TP/BS/IDM/PG/BV-H000 {1}**
P802.16 Reference	[3] Clause 6.3.24.6 [12] Clause 6.3.23.6.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in idle mode with the IUT. DL Traffic arrives for the MS.
Expected Behaviour	Check that: The IUT transmits a valid MOB_PAG-ADV message on the Broadcast CID or Idle Mode Multicast CID during the BS Paging Interval, containing the Paging Group ID used by the MS, the MS MAC Address hash, and an associated action code of 0b10.
Test strategy	DL traffic can be created by simulating a 2nd MS pinging MS#1.
Notes	

TP ID	TP/BS/IDM/PG/BV-H001
	Deleted.

TP ID	TP/BS/IDM/PG/BV-H002
	Deleted.

TP ID	TP/BS/IDM/PG/BV-H003
	Deleted.

TP ID	TP/BS/IDM/PG/BV-H004
P802.16 Reference	[3] Clauses 6.3.2.3.42 and 6.3.24.6 [12] Clauses 6.3.2.3.37 and 6.3.23.6.
PICS Item	
Initial Condition	The MS has sent DREG-REQ with no MAC Hash Skip Threshold TLV. The MS is in idle mode with the IUT.
Expected Behaviour	Check that: With no data traffic to be sent to the MS while other MSs need to be paged, the IUT sends MOB_PAG-ADV omitting MAC Address hash of the MS.
Test strategy	DL traffic can be created by simulating MSs pinging.
Notes	

TP ID	TP/BS/IDM/PG/BV-H005 {2} ** W2
P802.16 Reference	[3] Clause 6.3.24.6 [12] Clause 6.3.23.6.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in idle mode with the IUT.
Expected Behaviour	Check that: With DL traffic to be sent to the MS or with necessity of MS location update, the IUT transmits a BS Broadcast Paging on the Broadcast CID or Idle Mode Multicast CID. And on no reply from the MS, the IUT retransmits the BS Broadcast Paging every paging cycle until Paging Retry Count is exhausted.
Test strategy	DL traffic can be created by simulating a 2nd MS pinging MS#1. Also, a trigger for location update is required.
Notes	

TP ID	TP/BS/IDM/PG/BV-H006 {3}
P802.16 Reference	[3] Clauses 6.3.24.5 and 8.4.5.3.25 [12] Clauses 6.3.23.5 and 8.4.5.3.25.
PICS Item	PIC_MOB2.
Initial Condition	The MS is in idle mode with the IUT.
Expected Behaviour	Check that: The IUT transmits a DL-MAP containing the Broadcast Control Pointer IE, indicating the frame number when the DCD and/or UCD messages are transmitted.
Test strategy	
Notes	Broadcast Control Pointer IE is also used for MSs in Idle Mode entering from other BSs to update DCD/UCD. The IUT vendor should provide a trigger to transmit Broadcast Control Pointer IE.

TP ID	TP/BS/IDM/PG/BV-H007
	Deleted.

5.2.12.3 Power Down Update (PWD)

TP ID	TP/BS/IDM/PWD/BV-H000 {2} ** W2
P802.16 Reference	[3] Clause 6.3.2.3.5, 6.3.2.3.6 and 6.3.24.8.1.3 [12] Clause 6.3.2.3.5, 6.3.2.3.6 and 6.3.23.8.1.3.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in Idle Mode with the IUT. The MS sends a valid RNG-REQ message with Power Down Indicator TLV, MS MAC Address TLV, Ranging Purpose Indication TLV, Paging Controller ID TLV, and a valid CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Expected Behaviour	Check that: The IUT sends a RNG-RSP with Location Update Response TLV, Ranging Status TLV, MS MAC Address TLV, and CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Test strategy	
Notes	

5.2.12.4 Network Re-Entry (NWR)

TP ID	TP/BS/IDM/NWR/BV-H000 {1}**
P802.16 Reference	[3] Clauses 6.3.22.2.7, 6.3.24.8.1.3, and 6.3.24.9 [12] Clauses 6.3.21.2.7, 6.3.23.8.1.3, and 6.3.23.9.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in Idle Mode with the IUT. During the initial ranging the MS sends a valid RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, Ranging Purpose Indication TLV with Bit#0 set to 1, and CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization". MS context is available at the IUT.
Expected Behaviour	Check that: The IUT responds with a RNG-RSP with: - HO Process Optimization TLV; - Ranging Status TLV; - MS MAC Address TLV; - Basic CID TLV; - Primary Management CID TLV; - REG-RSP Encodings with CID Update TLV and unless negotiation of authorization policy resulted in "no authorization"optional SA_TEK-Update TLV; and - CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Test strategy	
Notes	

TP ID	TP/BS/IDM/NWR/BV-H001
	Deleted.

TP ID	TP/BS/IDM/NWR/BV-H002 {3}
P802.16 Reference	[3] Clause 6.3.22.2.7 [12] Clause 6.3.21.2.7.
PICS Item	PIC_MOB2.
Initial Condition	The MS is in Idle Mode with the IUT. During the initial ranging, the MS sends a valid RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, Ranging Purpose Indication TLV with Bit#0 set to 1, and CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization". MS context is available at the IUT.
Expected Behaviour	Check that: During network re-entry, the IUT sends RNG-RSP including HO Process Optimization TLV Bit#0 set to 1 and Bit#8 set to 0 and not including any SBC-RSP encodings and sends an unsolicited SBC-RSP.
Test strategy	
Notes	It is not clear what triggers the BS to send unsolicited SBC-RSP when it is not needed in most if not all cases. The IUT should be given the option of using either BV-H002 or BV-H003 during network re-entry.

TP ID	TP/BS/IDM/NWR/BV-H003 {2} ** W2
P802.16 Reference	[3] Clause 6.3.22.2.7 [12] Clause 6.3.21.2.7.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in Idle Mode with the IUT. During the initial ranging, the MS sends a valid RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, Ranging Purpose Indication TLV with Bit#0 set to 1, and CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization". MS context is available at the IUT.
Expected Behaviour	Check that: During network re-entry, the IUT sends RNG-RSP including HO Process Optimization TLV Bit#0 set to 1 and Bit#8 set to 1 and SBC-RSP encodings and does not send an unsolicited SBC-RSP.
Test strategy	
Notes	

TP ID	TP/BS/IDM/NWR/BV-H004 {3}
P802.16 Reference	[3] Clause 6.3.22.2.7 [12] Clause 6.3.21.2.7.
PICS Item	PIC_MOB2.
Initial Condition	The MS is in Idle Mode with the IUT. During the initial ranging, the MS sends a valid RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, Ranging Purpose Indication TLV with Bit#0 set to 1, and CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization". MS context is available at the IUT.
Expected Behaviour	Check that: During network re-entry, the IUT sends RNG-RSP including HO Process Optimization TLV Bit#7 set to 1 and Bit#10 set to 0 and not including any REG-RSP encodings and sends an unsolicited REG-RSP.
Test strategy	
Notes	It is not clear what triggers the BS to send unsolicited REG-RSP when it is not needed in most if not all cases. The IUT should be given the option of using network re-entry with or without unsolicited REG-RSP.

TP ID	TP/BS/IDM/NWR/BV-H005 {2} ** W2
P802.16 Reference	[3] Clause 6.3.22.2.7 [12] Clause 6.3.21.2.7.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in Idle Mode with the IUT. During the initial ranging, the MS sends a valid RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, Ranging Purpose Indication TLV with Bit#0 set to 1, and CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization". MS context is available at the IUT.
Expected Behaviour	Check that: During network re-entry, the IUT sends RNG-RSP including HO Process Optimization TLV Bit#7 set to 1 and Bit#10 set to 1 and including REG-RSP encodings and does not send an unsolicited REG-RSP.
Test strategy	
Notes	

TP ID	TP/BS/IDM/NWR/BV-H006
	Deleted.

TP ID	TP/BS/IDM/NWR/BV-H007
	Deleted.

TP ID	TP/BS/IDM/NWR/BV-H008
	Deleted.

TP ID	TP/BS/IDM/NWR/BV-H009 {2} ** W2
P802.16 Reference	[3] Clause 6.3.22.2.7 [12] Clause 6.3.21.2.7.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in Idle Mode with the IUT. During the initial ranging, the MS sends a valid RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, Ranging Purpose Indication TLV with Bit#0 set to 1, and CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization". MS context is available at the IUT.
Expected Behaviour	Check that: During network re-entry, the IUT sends RNG-RSP including HO Process Optimization TLV Bit#3, BIT#4 and BIT#5 set to 1.
Test strategy	
Notes	

TP ID	TP/BS/IDM/NWR/BV-H010
	Deleted.

TP ID	TP/BS/IDM/NWR/BV-H011
	Deleted.

TP ID	TP/BS/IDM/NWR/BV-H012
	Deleted.

TP ID	TP/BS/IDM/NWR/BV-H013 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.24.9 and 11.6 [12] Clauses 6.3.23.9 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in Idle Mode with the IUT. During the initial ranging, the MS sends a valid RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, Ranging Purpose Indication TLV with Bit#0 set to 1, and CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization". MS context is unavailable at the IUT.
Expected Behaviour	Check that: During network re-entry, when the IUT has received a RNG-REQ without a inclusion of a valid CMAC tuple, the IUT sends a RNG-RSP with a HO Process Optimization TLV that allows no re-entry management messages to be omitted. That is all bits of HO Process Optimization TLV shall be set to 0 except for Bit#3, BIT#4 and BIT#5, Bit#8, and Bit#10 are set to 1.
Test strategy	
Notes	BS does not send unsolicited SBC-RSP or REG-RSP in this case. IUT may also send a RNG-RSP with status = abort to force the MS to perform full network entry.

5.2.12.5 Location update (LOC)

TP ID	TP/BS/IDM/LOC/BV-H000 {1}**
P802.16 Reference	[3] Clauses 6.3.24.8.2.1 and 11.6 [12] Clauses 6.3.23.8.2.1 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in Idle Mode with the IUT.
Expected Behaviour	Check that: When the IUT receives a RNG-REQ including Ranging Purpose Indication TLV with Bit #1 set to 1, Location Update Request MS MAC Address TLV, Paging Controller ID TLV, and a valid CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization", the IUT sends a RNG-RSP with a Ranging Status TLV, and successful Location Update Response=0x00, Success of Location Update, and CMAC unless negotiation of authorization policy resulted in "no authorization". If Paging Information or Paging Controller has changed, the IUT shall include Paging Information TLV and Paging Controller ID TLV, respectively.
Test strategy	
Notes	Requires a means to trigger for the IUT to transmit Location Update Response=0x00, Success of Location Update.

TP ID	TP/BS/IDM/LOC/BV-H001 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.24.8.2.1 and 11.6 [12] Clauses 6.3.23.8.2.1 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in Idle Mode with the IUT.
Expected Behaviour	Check that: When the IUT receives a RNG-REQ including Ranging Purpose Indication TLV with Bit #1 set to 1 for Location Update Request, Paging Controller ID TLV, and an invalid CMAC Tuple TLV, the IUT sends a RNG-RSP with a Location Update Response=0x01, Failure of Location Update.
Test strategy	
Notes	

TP ID	TP/BS/IDM/LOC/BV-H002 {3}
P802.16 Reference	[3] Clauses 6.3.24.8.2.1 and 6.3.24.8.2.2 [12] Clauses 6.3.23.8.2.1 and 6.3.23.8.2.2.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in Idle Mode performing Secure Location Update. The IUT evaluates the CMAC Tuple as invalid and cannot supply a corresponding authenticating CMAC Tuple.
Expected Behaviour	Check that: The IUT includes Location Update Response TLV in RNG-RSP with a value of 0x01=Failure of Location Update to instruct the MS to continue network re-entry from Idle Mode.
Test strategy	
Notes	Unsecure Location Update process.

5.2.13 Multicast Traffic Connections (MTC)

Void.

5.2.14 Supported Cryptographic Suites (SCS)

5.2.14.1 No data encryption, No data authentication and No key encryption

TP ID	TP/BS/SCS/DES/BV-H000
P802.16 Reference	[3] and [12] Clause 7.5.1.2 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has transmitted an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x00 for no data encryption, value 0x00 for no data authentication, and no key encryption.
Expected Behaviour	Check that: For the given SA, the IUT sends DL MAC DATA PDU payloads without encryption.
Test strategy	
Notes	

TP ID	TP/BS/SCS/DES/BV-H001
P802.16 Reference	[3] and [12] Clause 7.5.1.2 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has transmitted an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x00 for no data encryption, value 0x00 for no data authentication, and no key encryption.
Expected Behaviour	Check that: For the given SA, the IUT receives UL MAC DATA PDU payloads which are not encrypted.
Test strategy	
Notes	

5.2.14.2 CCM-mode 128-bit AES, CCM-Mode and AES Key Wrap with 128-bit key (AES)

TP ID	TP/BS/SCS/AES/BV-H000
P802.16 Reference	[3] and [12] Clause 7.5.1.2 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has transmitted an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x02 for CCM-Mode, AES for a given SA and using TEK encryption algorithm AES Key Wrap with 128-bit key.
Expected Behaviour	Check that: For the given SA, the IUT uses the CCM mode of the AES algorithm to encrypt the DL MAC DATA PDU payloads.
Test strategy	
Notes	

TP ID	TP/BS/SCS/AES/BV-H001
P802.16 Reference	[3] and [12] Clause 7.5.1.2.1 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has transmitted an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x02 for CCM-Mode, AES for a given SA and using TEK encryption algorithm AES Key Wrap with 128-bit key.
Expected Behaviour	Check that: For the given SA, the IUT sends the encrypted MAC DATA PDU payload pre-pended with a 4 byte packet number that is not encrypted.
Test strategy	
Notes	

TP ID	TP/BS/SCS/AES/BV-H002
P802.16 Reference	[3] and [12] Clause 7.5.1.2.1 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has transmitted an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x02 for CCM-Mode, AES for a given SA and using TEK encryption algorithm AES Key Wrap with 128-bit key.
Expected Behaviour	Check that: For the given SA, when a new TEK is installed the IUT sends the next encrypted MAC DATA PDU payload with packet number 1.
Test strategy	
Notes	

TP ID	TP/BS/SCS/AES/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.5.1.2.4 and 7.5.1.2.1.
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has transmitted an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x02 for CCM-Mode, AES for a given SA and using TEK encryption algorithm AES Key Wrap with 128-bit key.
Expected Behaviour	Check that: For the given SA, when IUT receives UL MAC DATA PDU packets which fail to be decrypted the IUT shall discard these packets.
Test strategy	
Notes	

TP ID	TP/BS/SCS/AES/BV-H004
P802.16 Reference	[3] and [12] Clauses 7.5.1.2.4 and 7.5.1.2.1.
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has transmitted an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x02 for CCM-Mode, AES for a given SA and using TEK encryption algorithm AES Key Wrap with 128-bit key.
Expected Behaviour	Check that: For the given SA, when IUT receives a UL MAC DATA PDU packet with a packet number equal or less than the recorded maximum for the SA then the packet shall be discarded.
Test strategy	
Notes	

5.2.15 Privacy and Key Management (PKM)

5.2.15.1 PKM Version 1 Authentication/Authorization (AUTH1)

5.2.15.1.1 Initialization (INIT)

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H000
P802.16 Reference	Clauses 7.2.1 and 7.2.4.1.
PICS Item	
Initial Condition	IUT is initializing an SS. Basic Capabilities Negotiation is completed. Static SAs are provisioned. The IUT receives a valid Auth Info message and then a valid Auth Request message.
Expected Behaviour	Check that: The IUT transmits a valid Auth Reply message with a SA whose SAID is identical to the Basic CID in the Auth Request message, a SA for each provisioned static SA and the encrypted AK.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H001
P802.16 Reference	[3] and [12] Clauses 7.2.1 and 7.2.4.1.
PICS Item	
Initial Condition	IUT is initializing an SS. Basic Capabilities Negotiation is completed. No Static SAs are provisioned. The IUT receives a valid Auth Info message and then a valid Auth Request message.
Expected Behaviour	Check that: The IUT transmits a valid Auth Reply message with a SA whose SAID is identical to the Basic CID in the Auth Request message and the encrypted AK.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.2.1 and 7.2.1.3.1.
PICS Item	
Initial Condition	Negotiating Basic Capabilities is complete. IUT is provisioned to authorize basic unicast services.
Expected Behaviour	Check that: The IUT determines if the requesting SS is authorized for basic unicast services and initialize the SA descriptor list of the Auth Reply message accordingly, i.e. that the basic CID is the first entry.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.2.1.5 and 6.3.2.3.9.4.
PICS Item	
Initial Condition	Negotiating Basic Capabilities is completed. The IUT has received an Auth Request with a list of cryptographic suites, all of which the IUT does not support.
Expected Behaviour	Check that: The IUT transmits an Auth Reject.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H004
P802.16 Reference	[3] and [12] Clauses 7.1.3 and 7.2.1.3.1.
PICS Item	
Initial Condition	Negotiating Basic Capabilities is complete. The IUT receives a request use to a Security Association for which it is not authorized.
Expected Behaviour	Check that: The IUT provides only authorized Security Associations.
Test strategy	
Notes	

TP ID	TP/BS/ PKM/AUTH/INIT/BV-H005
	Deleted.

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H005
P802.16 Reference	[3] and [12] Clauses 7.2.1 and 7.2.1.6.2.
PICS Item	
Initial Condition	The IUT has terminated Network entry procedures. SS authorization is revoked
Expected Behaviour	Check that: The IUT transmits an Auth Invalid.
Test strategy	
Notes	Requires a means to revoke SS authorization.

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H006
P802.16 Reference	[3] and [12] Clauses 7.2.1, 7.2.4.1, and 7.5.5.
PICS Item	
Initial Condition	The IUT has terminated Network entry procedures. The IUT receives an Auth Request containing SS's user certificate.
Expected Behaviour	Check that: The IUT transmits an Auth Reply containing 1 024 bit RSA public-key encrypted AKs using SS's public key.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H007
P802.16 Reference	[3] and [12] Clause 7.4.1.2.
PICS Item	
Initial Condition	The IUT has terminated Network entry procedures. The IUT receives an Auth Request when a single AK is active.
Expected Behaviour	Check that: The IUT transmits an Auth Reply with a second active AK that has a key sequence number one greater (modulo 16) than the existing AK's and that the active lifetime of this second AK is the remaining lifetime of the first AK plus the AK-Lifetime parameter and with a SA whose SAID is identical to the Basic CID in the Auth Request message.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H008
P802.16 Reference	[3] and [12] Clauses 7.4.1.3, 7.5.4.3, and 11.1.2.1.
PICS Item	
Initial Condition	The IUT has terminated Network entry procedures. One AK is active for the IUT.
Expected Behaviour	Check that: For receiving the following messages: DSx-REQ, DSx-RSP, DSx-ACK, REG-REQ, TFTP-CPLT, MOB_SLP-REQ, MOB_SLP-RSP, MOB_SCN-REQ, MOB_SCN-RSP, MOB_BSHO-REQ, MOB_MSHO-REQ, MOB_BSHO-RSP,MOB HO-IND, DREG-REQ, the IUT uses the active AK associated with the AK Sequence number given in the received tuple to calculate the HMAC-Digest and to authenticate the messages.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H009
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: On receiving a PKM-REQ MAC message with an invalid PKM packet type code, the IUT does nothing and remains in the same state.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H010
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: On receiving PKM-REQ message, the IUT transmits a PKM-RSP message with the Identifier field equal to the Identifier of the PKM-REQ message.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H011
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: On transmitting a TEK Invalid message that is not a response to a PKM-REQ message, the IUT sets the Identifier field to 0.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H012
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: When generating an unsolicited Auth Invalid message, the IUT sets the PKM Identifier field to 0.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H013
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: Given that different ordering of PKM-REQ message attributes and that the HMAC-Digest attribute, if any, is correctly placed, the IUT correctly processes the PKM-REQ.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H014
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9 and 11.9.
PICS Item	
Initial Condition	IUT has negotiated basic capabilities and SS authorization and key exchange has started.
Expected Behaviour	Check that: On receiving a PKM_REQ message with unknown attributes, the IUT ignores the unknown attributes and recognizes the valid attributes.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BV-H015
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9.
PICS Item	
Initial Condition	IUT has negotiated basic capabilities and SS authorization and key exchange has started.
Expected Behaviour	Check that: On receiving a PKM_REQ message with missing required attributes, the IUT silently discards the request and does not transmit a message and stays in the same state.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BI-H000
P802.16 Reference	[3] and [12] Clauses 7.2.1 Figure "Authorization state machine flow diagram" Table "Authorization FSM state transition matrix" and 11.9.10.
PICS Item	
Initial Condition	IUT has negotiated basic capabilities. The IUT receives a valid Auth Info message.
Expected Behaviour	Check that: On receiving an Auth Request containing incorrect ASN.1 DER encoding, the IUT transmits an Auth Reject message with the error code set to Permanent Authorization Failure.
Test strategy	
Notes	BS may transmit No Information in error-code.

TP ID	TP/BS/PKM/AUTH1/INIT/BI-H001
P802.16 Reference	[3] and [12] Clauses 7.2.1 Figure "Authorization state machine flow diagram" Table "Authorization FSM state transition matrix" and 11.9.10.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. The IUT receives a valid Auth Info message.
Expected Behaviour	Check that: On receiving an Auth Request containing an SS certificate with an invalid signature, the IUT transmits an Auth Reject message with the error code set to Permanent Authorization Failure.
Test strategy	
Notes	BS may transmit No Information in error-code. Cover with a configuration parameter.

TP ID	TP/BS/PKM/AUTH1/INIT/BI-H002
P802.16 Reference	[3] and [12] Clauses 7.2.1 Figure "Authorization state machine flow diagram" Table "Authorization FSM state transition matrix" and 11.9.10.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. The IUT receives a valid Auth Info message.
Expected Behaviour	Check that: On receiving an Auth Request containing incompatible Security Capabilities, the IUT transmits an Auth Reject message with the error code set to Permanent Authorization Failure.
Test strategy	
Notes	BS may transmit No Information in error-code. Cover with a configuration parameter.

TP ID	TP/BS/PKM/AUTH1/INIT/BI-H003
P802.16 Reference	[3] and [12] Clauses 7.2.1 Figure "Authorization state machine flow diagram" Table "Authorization FSM state transition matrix" and 11.9.10.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. The IUT receives a valid Auth Info message.
Expected Behaviour	Check that: On receiving an Auth Request containing an SS certificate on the "hot" list, the IUT transmits an Auth Reject message with the error code set to Permanent Authorization Failure.
Test strategy	
Notes	BS may transmit No Information in error-code. Cover with a configuration parameter.

TP ID	TP/BS/PKM/AUTH1/INIT/BI-H004
P802.16 Reference	[3] and [12] Clauses 7.2.1 Figure "Authorization state machine flow diagram" Table "Authorization FSM state transition matrix" and 11.9.10.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. The IUT receives a valid Auth Info message.
Expected Behaviour	Check that: On receiving an Auth Request containing an SS certificate from an unknown manufacturer, the IUT transmits an Auth Reject message with the error code set to Permanent Authorization Failure.
Test strategy	
Notes	BS may transmit No Information in error-code. Cover with a configuration parameter.

TP ID	TP/BS/PKM/AUTH1/INIT/BI-H005
P802.16 Reference	[3] and [12] Clauses 7.2.1 Figure "Authorization state machine flow diagram" Table "Authorization FSM state transition matrix" and 11.9.10.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. The IUT receives a valid Auth Info message.
Expected Behaviour	Check that: On receiving an Auth Request containing an SS certificate inconsistencies between the certificate data and in accompanying PKM attributes data, the IUT transmits an Auth Reject message with the error code set to Permanent Authorization Failure.
Test strategy	
Notes	BS may transmit No Information in error-code. Cover with a configuration parameter.

TP ID	TP/BS/PKM/AUTH1/INIT/BI-H006
P802.16 Reference	[3] and [12] Clauses 7.2.1 Figure "Authorization state machine flow diagram" Table "Authorization FSM state transition matrix" and 11.9.10.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: On receiving an Auth Info message and then an Auth Request message for an SS not authorized for basic unicast service. The IUT transmits an Auth Reject message with the error code set either to No Information or Unauthorized SS.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BI-H007
P802.16 Reference	[3] and [12] Clauses 7.2.1 Figure "Authorization state machine flow diagram" Table "Authorization FSM state transition matrix" and 11.9.10.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. The IUT has received an Auth Info message.
Expected Behaviour	Check that: On receiving an Auth Request containing an SAID that is different from that previously sent on the Basic CID, the IUT transmits an Auth Reject message with the error code set either to No Information or Unauthorized SAID.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/INIT/BI-H008
P802.16 Reference	[3] and [12] Clauses 7.2.1 Figure "Authorization state machine flow diagram" Table "Authorization FSM state transition matrix" and 11.9.10.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: On receiving an Auth Request containing an SAID that is different from that previously sent on the Basic CID, the IUT transmits an Auth Reject message with the error code set either to No Information or Unauthorized SAID.
Test strategy	
Notes	

5.2.15.1.2 Operational (OPN)

TP ID	TP/BS/PKM/AUTH1/OPN/BV-H000
P802.16 Reference	[3] and [12] Clauses 7.4.1.3, 7.5.4.3, and 11.1.2.1.
PICS Item	
Initial Condition	The IUT has terminated Network entry procedures. Two AKs are active for the IUT.
Expected Behaviour	Check that: For receiving the following messages: DSx-REQ, DSx-RSP, DSx-ACK, REG-REQ, TFTP-CPLT, MOB_SLP-REQ, MOB_SLP-RSP, MOB_SCN-REQ, MOB_SCN-RSP, MOB_BSHO-REQ, MOB_MSHO-REQ, MOB_BSHO-RSP,MOB HO-IND, and DREG-REQ with the older AK Sequence Number in the tuple, the IUT uses the active AK associated with the AK Sequence number given in the received tuple to calculate the HMAC-Digest. If the message requires a BS reply, check that the reply message has an HMAC Tuple with an HMAC-Digest and KEK calculated with HMAC_KEY_D using the older AK and the older AK Sequence Number.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/OPN/BV-H001
P802.16 Reference	[3] and [12] Clauses 7.4.1.3, 7.5.4.3, and 11.1.2.1.
PICS Item	
Initial Condition	The IUT has terminated Network entry procedures. Two AKs are active for the IUT.
Expected Behaviour	Check that: For receiving the following messages: DSx-REQ, DSx-RSP, DSx-ACK, REG-REQ, TFTP-CPLT, MOB_SLP-REQ, MOB_SLP-RSP, MOB_SCN-REQ, MOB_SCN-RSP, MOB_BSHO-REQ, MOB_MSHO-REQ, MOB_BSHO-RSP,MOB HO-IND, and DREG-REQ with the newer AK Sequence Number in the tuple, the IUT uses the active AK associated with the AK Sequence number given in the received tuple to calculate the HMAC-Digest. If the message requires a BS reply, check that the reply message has an HMAC Tuple with an HMAC-Digest and KEK calculated with HMAC_KEY_D using the newer AK and a new AK Sequence Number calculated as (old AK Sequence Number + 1) modulo 16 (a 4-bit AK sequence number).
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/OPN/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.4.1.3, 7.4.1.2, 7.5.4.3, and 11.1.2.1.
PICS Item	
Initial Condition	The IUT has terminated Network entry procedures. One AK is active for the IUT. The IUT has received a valid Auth Request message in response to which the IUT transmitted a valid Auth Reply message with a new AK.
Expected Behaviour	Check that: On receiving the following messages: DSx-REQ, DSx-RSP, DSx-ACK, REG-REQ, TFTP-CPLT, MOB_SLP-REQ, MOB_SLP-RSP, MOB_SCN-REQ, MOB_SCN-RSP, MOB_BSHO-REQ, MOB_MSHO-REQ, MOB_BSHO-RSP,MOB HO-IND, and DREG-REQ with the newer AK Sequence Number in the tuple, the IUT treats the received message as an implicit acknowledgement of the new AK and verifies the HMAC-Digest of the HMAC Tuple in the message with the HMAC_KEY_U associated with the newest AK Key Sequence Number in the same tuple. If the message requires a BS reply, check that the reply message has an HMAC Tuple with an HMAC-Digest and KEK calculated with HMAC_KEY_D using the newer AK and a new AK Sequence Number calculated as (old AK Sequence Number + 1) modulo 16 (a 4-bit AK sequence number).
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/OPN/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.4.1.3 and 7.5.4.3.
PICS Item	
Initial Condition	The IUT has terminated Network entry procedures. One AK is active for the IUT.
Expected Behaviour	Check that: For transmitting the following messages: DSx-REQ, DSx-RSP, DSx-ACK, REG-RSP, RES-CMD, and DREG-CMD, MOB_SLP-RSP, MOB_SCN-RSP, MOB_BSHO-REQ, MOB_BSHO-RSP, MOB HO-IND, and DREG-REQ the IUT uses the active AK to calculate the HMAC-Digest in the HMAC tuple and places the active AK Sequence Number into the tuple.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/OPN/BV-H004
P802.16 Reference	[3] and [12] Clauses 7.2.1, 7.2.1.6, and 6.3.2.3.9.3 Figure "Authorization state machine flow diagram" Table "Authorization FSM state transition matrix".
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. Static SAs are provisioned.
Expected Behaviour	Check that: On receiving a valid Auth Request message during the Authorization Grace period to reauthorize, the IUT transmits a valid Auth Reply with a SA whose SAID is identical to the Basic CID in the Auth Request message and a SA for each provisioned static SA.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/OPN/BV-H005
P802.16 Reference	[3] and [12] Clause 7.4.1.1.
PICS Item	
Initial Condition	The IUT has terminated Network entry procedures.
Expected Behaviour	Check that: When the SS fails to reauthorize before the expiration of the current AK, the IUT considers the SS unauthorized, holds no active AKs for the SS, and removes all TEKs associated with the SS's Primary SA.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/OPN/BI-H000
P802.16 Reference	[3] and [12] Clauses 7.2.1 Figure "Authorization state machine flow diagram" Table "Authorization FSM state transition matrix" and 11.9.10.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. An SS is no longer authorized for basic unicast service.
Expected Behaviour	Check that: On receiving an Auth Request from the unauthorized SS, the IUT transmits an Auth Reject message with the error code set either to No Information or Unauthorized SS.
Test strategy	
Notes	

TP ID	TP/BS/PKM/AUTH1/OPN/TI-H000
P802.16 Reference	[3] and [12] Clause 7.4.1.1.
PICS Item	
Initial Condition	The IUT has completed a successful Authorization transaction with the SS.
Expected Behaviour	Check that: From the time that the Auth Reply message is transmitted during the transaction, the IUT keeps the AK active for the parameter AK-Lifetime.
Test strategy	
Notes	System configuration parameter AK-Lifetime.

TP ID	TP/BS/PKM/AUTH1/OPN/TI-H001
P802.16 Reference	[3] and [12] Clause 7.4.1.1.
PICS Item	
Initial Condition	The IUT has completed a successful Authorization transaction with the SS that changed the AK-Lifetime value.
Expected Behaviour	Check that: The IUT maintains the AKs active during the AK-Lifetime value transmitted in the Auth Reply message.
Test strategy	
Notes	

5.2.15.2 Encryption Key Transfer (TEK)

5.2.15.2.1 Initialization (INIT)

TP ID	TP/BS/PKM/TEK1/INIT/BV-H000
P802.16 Reference	[3] and [12] Clause 7.2.1.4.1.
PICS Item	
Initial Condition	Basic Capabilities Negotiation and Authorization is completed.
Expected Behaviour	Check that: On receiving a valid Key Request message with an authorized SAID, the IUT transmits a valid Key Reply message for the given SAID.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/INIT/BV-H001
P802.16 Reference	[3] and [12] Clauses 7.2.1.7.2 and 6.3.2.3.9.7.
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed.
Expected Behaviour	Check that: On receiving a Key Request message with an unauthorized SAID, the IUT transmits a valid Key Reject message for the given SAID.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/INIT/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.2.1.4.1 and 7.2.1.7.2.
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed. A successful Key Request transaction has occurred and Key Request retry timer has been started with value Operational Wait Timeout.
Expected Behaviour	Check that: On receiving a valid Key Request message after Request retry timer expiry, the IUT transmits a valid Key Reply message for the SAID.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/INIT/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.4.1.3 and 7.5.4.3.
PICS Item	
Initial Condition	The IUT has terminated Network entry procedures. One AK is active for the IUT. A successful Authorization transaction for a new AK has just been completed.
Expected Behaviour	Check that: On receiving a Key Request with the new AK Sequence Number, the IUT treats the Key Request as an implicit acknowledgement of the new AK and verifies the HMAC-Digest in the Key Request with the HMAC_KEY_U associated with the newest AK Key Sequence Number. The IUT then transmits a valid Key Reply message with an HMAC-Digest and KEK calculated with HMAC_KEY_D using the newer AK and a new AK Sequence Number calculated as (old AK Sequence Number + 1) modulo 16 (a 4-bit AK sequence number).
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/INIT/BV-H004
P802.16 Reference	[3] and [12] Clause 7.2.1.4.1 Table "TEK state machine flow diagram" Figure "TEK FSM state transition diagram".
PICS Item	
Initial Condition	The IUT Is encrypting.
Expected Behaviour	Check that: On receiving a valid Key Request message with an authorized SAID within the refresh grace period, the IUT transmits a valid Key Reply message for the given SAID and increments the key sequence number with a new generation of keying material by using (n+1)mod 4 where n is the older sequence number. Encrypted MAC DATA PDUs for this SAID continue to be transmitted during and after the transaction.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/INIT/BV-H005
P802.16 Reference	[3] and [12] Clause 7.2.1.6.2 Table "Error-code attribute code values".
PICS Item	
Initial Condition	IUT is initializing.
Expected Behaviour	Check that: On receiving a Key Request with an HMAC-Digest attribute that will fail IUT verification, the IUT transmits an Auth Invalid message with error-code as either No Information or Message (Key Request) authentication failure.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/INIT/BV-H006
P802.16 Reference	[3] and [12] Clause 7.2.1.6.2 11.9.10 Table "Error-code attribute code values".
PICS Item	
Initial Condition	IUT is initializing.
Expected Behaviour	Check that: On receiving a Key Request with invalid AK sequence number, the IUT transmits an Auth Invalid message with a valid error-code.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/INIT/BV-H007
P802.16 Reference	[3] and [12] Clause 7.2.1.7.2.
PICS Item	
Initial Condition	The IUT is initializing.
Expected Behaviour	Check that: On receiving a Key Request message with an unauthorized SAID within the refresh grace period, the IUT transmits a valid Key Reject message for the given SAID and MAC DATA PDU encryption stops for this SAID.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/INIT/BV-H008
P802.16 Reference	[3] and [12] Clause 7.2.1.7.2 Table "TEK state machine flow diagram" Figure "TEK FSM state transition diagram".
PICS Item	
Initial Condition	The IUT is decrypting.
Expected Behaviour	Check that: On receiving a Key Request for key refresh within the refresh grace period and immediately afterwards a MAC DATA PDU with an invalid TEK key sequence number for the SAID, the IUT transmits a TEK Invalid message.
Test strategy	
Notes	This TP assumes that the IUT does not react in time to send the Key Reply before receiving the MAC DATA PDU with the invalid TEK key sequence number for the SAID.

TP ID	TP/BS/PKM/TEK1/INIT/BV-H009
P802.16 Reference	[3] and [12] Clauses 7.2.1.4.1 and 7.2.1.7.5.
PICS Item	
Initial Condition	Encryption/decryption is underway. A successful Key Reply transaction has occurred and TEK Refresh timer with value with value TEK Refresh timeout has just been started.
Expected Behaviour	Check that: On receiving a retransmitted Key Request after TEK Refresh timer has expired, the IUT transmits a valid Key Reply message for the given SAID to refresh the keys.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK/INIT/BI-H000
	Deleted.

5.2.15.2.2 Operational (OPN)

TP ID	TP/BS/PKM/TEK1/OPN/BV-H000
P802.16 Reference	[3] and [12] Clause 7.4.2.1.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. Two keys are active.
Expected Behaviour	Check that: The IUT deactivates the older key once it has expired.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/OPN/BV-H001
P802.16 Reference	[3] and [12] Clauses 7.4.1.3 and 7.5.4.3.
PICS Item	
Initial Condition	Two AKs are active for the IUT.
Expected Behaviour	Check that: On receiving a Key Request with the oldest active AK Key Sequence Number, the IUT verifies the HMAC-Digest in the Key Request with the HMAC_KEY_U associated with the given AK Key Sequence Number and transmits a Key Reply message with HMAC-Digest using HMAC-KEY-D and KEK derived from the older AK.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/OPN/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.4.1.3 and 7.5.4.3.
PICS Item	
Initial Condition	Two AKs are active for the IUT.
Expected Behaviour	Check that: On receiving a Key Request with the newest active AK Key Sequence Number, the IUT verifies the HMAC-Digest in the Key Request with the HMAC_KEY_U associated with the given AK Key Sequence Number and transmits a Key Reply message with HMAC-Digest using HMAC-KEY-D and KEK derived from the newer AK with a new AK Sequence Number calculated as (old AK Sequence Number + 1) modulo 16 (a 4-bit AK sequence number).
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/OPN/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.4.1.3 and 7.5.4.3.
PICS Item	
Initial Condition	One AK is active for the IUT.
Expected Behaviour	Check that: On receiving a valid Key Request, the IUT transmits a valid Key Reply message with an HMAC-Digest calculated with HMAC_KEY_D using the current AK and AK Key Sequence Number.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/OPN/BV-H004
P802.16 Reference	[3] and [12] Clauses 7.4.1.3 and 7.5.4.3.
PICS Item	
Initial Condition	One AK is active for the IUT. An Authorization transaction for a new AK has just been completed.
Expected Behaviour	Check that: On receiving a Key Request with the older AK Sequence Number, the IUT transmits a valid Key Reply message with an HMAC-Digest calculated with HMAC_KEY_D and KEK using the older AK and AK Key Sequence Number.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/OPN/BV-H005
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.1.1, 11.9.8, and 11.9.9.
PICS Item	
Initial Condition	The IUT has terminated Network entry procedures. The IUT is encrypting downlink MAC DATA PDU payloads.
Expected Behaviour	Check that: The IUT uses a CBC calculated by XOR-ing the CBC-IV transmitted in the TEK parameters sub attributes with current Frame Number (right justified).
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK/OPN/BV-H006
	Deleted.

TP ID	TP/BS/PKM/TEK1/OPN/BV-H006
P802.16 Reference	[3] and [12] Clauses 7.5 and 7.5.2.2.
PICS Item	
Initial Condition	The IUT is Key Exchanging. During authorization, the IUT has received 0x02 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the Auth Request message.
Expected Behaviour	Check that: On receiving a Key Request message, the IUT transmits a Key Reply message with the TEK in the TEK-parameters sub attributes encrypted using the RSA method.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/OPN/BV-H007
P802.16 Reference	[3] and [12] Clauses 7.5 and 7.5.2.3.
PICS Item	
Initial Condition	The IUT is Key Exchanging. During authorization, the IUT has received 0x03 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the Auth Request message.
Expected Behaviour	Check that: On receiving a Key Request message, the IUT transmits a Key Reply message with the TEK-128 in the TEK-parameters sub attributes encrypted using the 128-bit AES in ECB mode method.
Test strategy	
Notes	

TP ID	TP/BS/PKM/TEK1/OPN/BV-H008
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.1.1, 11.9.8 and 11.9.9.
PICS Item	
Initial Condition	The IUT is decrypting uplink MAC DATA PDU payloads.
Expected Behaviour	Check that: The IUT uses a CBC calculated by XOR-ing the CBC-IV transmitted in the TEK parameters sub attributes with the Frame Number of the frame where the relevant UL-MAP was transmitted.
Test strategy	
Notes	

5.2.15.3 Security Association Management (SAM)

TP ID	TP/BS/PKM/SAM1/ BV-H000
P802.16 Reference	[3] and [12] Clause 7.1.4.
PICS item	
Initial Condition	IUT has terminated Network entry procedures and adding a Dynamic Service (DSA) for each of several data transport connections.
Expected Behaviour	Check that: The IUT maps all transport connections to an existing SA.
Test strategy	
Notes	

TP ID	TP/BS/PKM/SAM1/ BV-H001
P802.16 Reference	[3] and [12] Clause 7.1.4.
PICS item	
Initial Condition	IUT has terminated Network entry procedures and adding a Dynamic Service (DSA) for each of several multicast data transport connections.
Expected Behaviour	Check that: The IUT maps the multicast transport connections to any Static or Dynamic SA.
Test strategy	
Notes	

TP ID	TP/BS/PKM/SAM1/ BV-H002
P802.16 Reference	[3] and [12] Clauses 7.3.2 and 7.3.1.
PICS item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: To initiate a dynamic service creation for a new SA, the IUT transmits first the SA Add message and then the SA in a DSA-REQ message.
Test strategy	
Notes	

TP ID	TP/BS/PKM/SAM1/ BV-H003
P802.16 Reference	[3] Clauses 7.1.4 and 11.9.17 [12] Clauses 7.1.4 and 11.9.16.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. An SA has been added to the SS through the use of an SA-Add transaction. The SA has yet to be used.
Expected Behaviour	Check that: On receiving an Auth Request, the IUT sends a valid Auth Reply and then sends a new SA Add renewing the SA.
Test strategy	
Notes	

TP ID	TP/BS/PKM/SAM1/ BV-H004
P802.16 Reference	[3] Clauses 7.1.4, 7.2.1.6.5 and 11.9.17 [12] Clauses 7.1.4, 7.2.1.6.5 and 11.9.16.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. An SA has been added to the SS through the use of an SA-Add transaction. The SA has been added to the set of Static SAs but has as yet to be used.
Expected Behaviour	Check that: On receiving an Auth Request, the IUT sends an Auth Reply listing the SA as authorized.
Test strategy	
Notes	

5.2.15.4 Encryption and Key Scheduling (EKS)

TP ID	TP/BS/PKM/EKS/BV-H000
P802.16 Reference	[3] and [12] Clauses 7.1.5 and 11.9.14.
PICS Item	
Initial Condition	IUT has begun SS authorization.
Expected Behaviour	Check that: The IUT supports at least one of the Cryptographic Suites in Table 378.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.3.6.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: The IUT never encrypts the generic (HT set to 0) MAC header.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/BV-H002
P802.16 Reference	[3] and [12] Clause 7.1.1.
PICS Item	
Initial Condition	The key parameters exchange is successful.
Expected Behaviour	Check that: Having exchanged the key parameters successfully, the IUT continues to send the MAC Management messages in clear.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/BV-H003
P802.16 Reference	[3] and [12] Clause 7.2.1.7.2 Table "TEK state machine flow diagram" Figure "TEK FSM state transition diagram".
PICS Item	
Initial Condition	The IUT is decrypting.
Expected Behaviour	Check that: On receiving a Key Request for key refresh within the refresh grace period and immediately afterwards a MAC DATA PDU with an invalid TEK key sequence number for the SAID, the IUT transmits a TEK Invalid message.
Test strategy	
Notes	This TP assumes that the IUT does not react in time to send the Key Reply and Auth Reply before receiving the MAC DATA PDU with the invalid TEK key sequence number for the SAID.

TP ID	TP/BS/PKM/EKS/BV-H004
P802.16 Reference	[3] and [12] Clauses 7.5.2.1 and 11.9.3 Table "TEK state machine flow diagram" Figure "TEK FSM state transition diagram".
PICS Item	
Initial Condition	Basic Capabilities Negotiation and Authentication are completed. The negotiated cryptographic suite is 0x01.
Expected Behaviour	Check that: On receiving a Key Request message the IUT transmits a Key Reply message containing older and newer generation of TEKs encrypted using 3-DES.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/BV-H005
P802.16 Reference	[3] and [12] Clauses 7.2.5.2 and 7.5.2.2 Table "TEK state machine flow diagram" Figure "TEK FSM state transition diagram".
PICS Item	
Initial Condition	Basic Capabilities Negotiation and Authentication are completed. The negotiated cryptographic suite is 0x02.
Expected Behaviour	Check that: On receiving a Key Request message containing the TEK encryption algorithm identifier to be used for SAs defined in the cryptographic suite as 0x02, the IUT transmits a Key Reply message containing older and newer generation of TEKs encrypted using RSA with 1 024 bit key.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/BV-H006
P802.16 Reference	[3] and [12] Clauses 7.1.1 and 7.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures. The key parameters exchange is successful. A service flow is established with no data encryption.
Expected Behaviour	Check that: The IUT transmits and receives correctly data over a non encrypted service flow.
Test strategy	
Notes	

5.2.15.4.1 Key Usage (KU)

TP ID	TP/BS/PKM/EKS/KU/BV-H000
P802.16 Reference	[3] and [12] Clauses 7.2.1 and 7.4.1.2.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: The IUT simultaneously supports two active AKs during re-authorization.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/KU/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.3.6.
PICS Item	
Initial Condition	IUT has terminated Network entry procedures.
Expected Behaviour	Check that: The IUT discards an unencrypted MAC data PDU received on a connection mapped to an SA requiring encryption.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/KU/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.2.1.7.2 Table "TEK state machine flow diagram" Figure "TEK FSM state transition diagram", 6.3.2.3.9.9, and 11.9.10.
PICS Item	
Initial Condition	The IUT is decrypting.
Expected Behaviour	Check that: On receiving an uplink MAC DATA PDU with an invalid TEK key sequence number for the SAID, the IUT transmits a PKM-RSP with TEK Invalid (Code=11 and Error code=4 "Invalid key sequence number" or Error code=0 "No Information").
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/KU/BV-H003
P802.16 Reference	[3] and [12] Clause 7.4.1.4 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	IUT is operational. The IUT has two valid TEKs.
Expected Behaviour	Check that: On receiving a valid Key Request the TE has sent in the grace period, the IUT transmits a valid Key Reply with two TEKs; where the older TEK is the currently active one and the newer TEK has a key sequence number one greater (modulo 4) than of the older TEK; and that the two TEK lifetimes reflect their remaining lifetimes at the time the Key Reply is sent.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/KU/BV-H004
P802.16 Reference	[3] and [12] Clause 7.4.1.4 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	IUT is operational. TEK_n has expired.
Expected Behaviour	Check that: The IUT no longer uses TEK_n.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/KU/BV-H005
P802.16 Reference	[3] and [12] Clause 7.4.1.5 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	The IUT is operational and encrypting MAC DATA PDUs. The current TEK is TEK_n.
Expected Behaviour	Check that: The IUT encrypts using TEK_{n+1} at the expiration of TEK_n. (TEK_n expires halfway through TEK_{n+1}'s lifetime). (Since TEK_{n+2} is immediately active at TEK_n's expiry, TEK_{n+1} is immediately the older of the two active TEKs).
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/KU/BV-H006
P802.16 Reference	[3] and [12] Clause 7.4.1.5 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	The IUT is operational and encrypting MAC DATA PDUs.
Expected Behaviour	Check that: The IUT encrypts MAC DATA PDUs using the older of the two active TEKs.
Test strategy	
Notes	

5.2.15.4.2 Encryption (ENC)

TP ID	TP/BS/PKM/EKS/ENC/BV-H000
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.1.1 and 11.9.14 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has transmitted an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x01 for CBC-Mode, 56-bit DES for a given SA.
Expected Behaviour	Check that: For the given SA, the IUT uses the CBC mode of the DES algorithm to encrypt the MAC DATA PDU payloads.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/ENC/BV-H001
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.1.2 and 11.9.14 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has transmitted an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x02 for CCM-Mode, AES for a given SA.
Expected Behaviour	Check that: For the given SA, the IUT uses the CCM mode of the AES algorithm to encrypt the MAC DATA PDU payloads.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/ENC/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.1.1, and 11.9.14 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has transmitted an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x00 for a given SA.
Expected Behaviour	Check that: For the given SA, the IUT does not encrypt the MAC DATA PDU payloads.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/ENC/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.5 and 7.5.1.1.
PICS Item	
Initial Condition	A downlink service flow is established using the CBC mode of DES algorithm for encrypting the data PDUs. The IUT is transmitting downlink MAC DATA PDU payloads. The final block of plaintext is of n bits where n is less than 64 bits.
Expected Behaviour	Check that: The IUT DES encrypts the next-to-last cipher block text a second time using the ECB mode, XORs the most significant n bits of the result with the final n bits of the payload for the short final cipher block.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/ENC/BV-H004
P802.16 Reference	[3] and [12] Clauses 7.5 and 7.5.1.1.
PICS Item	
Initial Condition	A downlink service flow is established using the CBC mode of DES algorithm for encrypting the data PDUs. The IUT is transmitting downlink MAC DATA PDU payloads. The entire plaintext is of n bits where n is less than 64 bits.
Expected Behaviour	Check that: The IUT DES encrypts the IV, and then XORs the most significant n bits of the cipher text with the n bits of the payload to generate the short cipher block.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/ENC/BV-H005
P802.16 Reference	[3] and [12] Clauses 7.5.3 and 7.5.4.3.
PICS Item	
Initial Condition	The IUT is authenticating the Key Reply, Key Reject, TEK Invalid, and SA Add Attribute messages with HMAC-Digest.
Expected Behaviour	Check that: The IUT uses the HMAC with the secure hash algorithm SHA-1 to calculate the HMAC_KEY_D used for the authentication downlink messages.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/ENC/BV-H006
P802.16 Reference	[3] and [12] Clause 7.4.1.5 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	The IUT is operational and encrypting downlink MAC DATA PDUs. The keying material for the primary SA has been exchanged. The connection is mapped to the primary SA. The MAC DATA PDUs are encrypted using the older of the two active TEKs.
Expected Behaviour	Check that: The IUT encrypts the MAC DATA PDUs.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/ENC/BV-H007
P802.16 Reference	[3] and [12] Clause 7.4.1.5 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	The IUT is operational and encrypting downlink MAC DATA PDUs. The keying material for the static SA has been exchanged. The connection is mapped to the static SA. The MAC DATA PDUs are encrypted using the older of the two active TEKs.
Expected Behaviour	Check that: The IUT encrypts the MAC DATA PDUs.
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/ENC/BV-H008
P802.16 Reference	[3] and [12] Clause 7.4.1.5 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	The IUT is operational and encrypting downlink MAC DATA PDUs. The IUT has more than one downlink connection in active state with the SS. The keying material for the Primary SA and Static SA has been exchanged. One of the connections is mapped to the Static SA. The remaining connections are mapped to the Primary SA. The MAC DATA PDUs are encrypted using the older of the two active TEKs.
Expected Behaviour	Check that: The IUT encrypts correctly the MAC DATA PDUs for all SAs (Primary or Static).
Test strategy	
Notes	

TP ID	TP/BS/PKM/EKS/ENC/BV-H009
P802.16 Reference	[3] and [12] Clause 7.4.1.5 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	The IUT is operational and encrypting downlink MAC DATA PDUs an SS. The keying material for the Primary SA of the SS has been exchanged. At least one downlink connection in active state is established with the SS. The MAC DATA PDUs are encrypted using the older of the two active TEKs.
Expected Behaviour	Check that: The IUT encrypts correctly the MAC DATA PDUs for the Primary SA of the SS.
Test strategy	
Notes	The TP is correct, but is not testable with the current test architecture. Valid behaviour in the case of TP/BS/PKM/EKS/ENC/BV-H008 should give some confidence that encryption is being done correctly.

5.2.15.4.3 Decryption (DEC)

TP ID	TP/BS/PKM/EKS/DEC/BV-H000
P802.16 Reference	[3] and [12] Clause 7.4.1.5 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	The IUT is operational and decrypting uplink MAC DATA PDUs. The MAC DATA PDUs are encrypted using the older of the two active TEKs.
Expected Behaviour	Check that: The IUT decrypts the MAC DATA PDUs.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/BS/PKM/EKS/DEC/BV-H001
P802.16 Reference	[3] and [12] Clause 7.4.1.5 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	The IUT is operational and decrypting uplink MAC DATA PDUs. The MAC DATA PDUs are encrypted using the newer of the two active TEKs.
Expected Behaviour	Check that: The IUT decrypts the MAC DATA PDUs.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/BS/PKM/EKS/DEC/BV-H002
P802.16 Reference	[3] and [12] Clause 7.4.1.5 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	The IUT is operational and decrypting uplink MAC DATA PDUs.
Expected Behaviour	Check that: The IUT decrypts with a TEK for the TEK's entire lifetime.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/BS/PKM/EKS/DEC/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.5 and 7.5.1.1.
PICS Item	
Initial Condition	The IUT is operational. The IUT is decrypting uplink MAC DATA PDU payloads using DES. The final block of plaintext is of n bits where n is less than 64 bits.
Expected Behaviour	Check that: The IUT DES decrypts the next-to-last cipher block text using the ECB mode, XORs the most significant n bits with the short final cipher block in order to recover the short final clear text block.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/BS/PKM/EKS/DEC/BV-H004
P802.16 Reference	[3] and [12] Clauses 7.5 and 7.5.1.1.
PICS Item	
Initial Condition	The IUT is operational. The IUT is decrypting uplink MAC DATA PDU payloads. The entire plaintext is of n bits where n is less than 64 bits.
Expected Behaviour	Check that: The IUT correctly decrypts the entire plaintext.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/BS/PKM/EKS/DEC/BV-H005
P802.16 Reference	[3] and [12] Clause 7.4.1.5 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	The IUT is operational with the keying material for the Primary SA of the SS has been exchanged. At least one uplink connection in active state is established with the SS. The IUT has granted sufficient bandwidth to the SS.
Expected Behaviour	Check that: The IUT correctly processes the transmission from SS and applies the correct SA on the received data.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/BS/PKM/EKS/DEC/BI-H000
P802.16 Reference	[3] and [12] Clause 6.3.3.6.
PICS Item	
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving an unencrypted MAC DATA PDU mapped to an SA requiring encryption, the IUT discards the MAC PDU.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

5.2.15.5 Certificates (CERT)

TP ID	TP/BS/PKM/CERT/BV-H000
P802.16 Reference	[3] and [12] Clause 7.6.3.
PICS Item	
Initial Condition	IUT is operational.
Expected Behaviour	Check that: The IUT validates the SS certificate's certification path or chain.
Test strategy	
Notes	

5.2.16 Security version 2 (SEC)

5.2.16.1 BS/SEC/PKMv2/AUTH/NWE - Initial Network Entry

TP ID	TP/BS/SEC/PKMv2/AUTH/NWE/BV-H000 {1} **
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	Initial network entry. (The IUT has the valid PMK context and AK context for the TESTER).
Expected Behaviour	Check that: During initial network entry, the IUT sends a PKMv2 SA-TEK-Challenge message with the CMAC-Digest.
Test strategy	
Notes	The value of the CMAC_KEY_COUNT is reset to zero by IUT and Tester (as MS/SS) upon successful completion of the EAP-based authentication.

TP ID	TP/BS/SEC/PKMv2/AUTH/NWE/BV-H001 {2} **W2
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	Initial network entry. (The IUT has sent a PKMv2 SA-TEK-Challenge message with the valid CMAC-Digest).
Expected Behaviour	Check that: For an initial network entry when timer SAChallenge Timer expires and no PKMv2 SA-TEK-Request message is received from the TESTER (as SS/MS), the IUT re-sends the previous PKMv2 SA-TEK-Challenge message.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/NWE/BV-H002 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	Initial network entry. (The IUT has sent a PKMv2 SA-TEK-Challenge message with the valid CMAC-Digest).
Expected Behaviour	Check that: For an initial network entry, after SAChallengeMaxResends repetition of PKMv2 SA-TEK-Challenge sending and when timer SAChallenge Timer expires and no PKMv2 SA-TEK-Request message is received from the TESTER (as SS/MS), the IUT either initiates another full authentication or drops the TESTER.
Test strategy	
Notes	

5.2.16.2 BS/SEC/PKMv2/AUTH/REA - Reauthorization

TP ID	TP/BS/SEC/PKMv2/AUTH/REA/BV-H000 {1} **
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	Reauthorization. (The IUT has the valid new PMK context and AK context for the TESTER).
Expected Behaviour	Check that: During reauthorization, the IUT sends a PKMv2 SA-TEK-Challenge message with the CMAC-Digest calculated with new AK.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/REA/BV-H001 {2} **W2
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	Reauthorization. (The IUT has sent a PKMv2 SA-TEK-Challenge message with the valid CMAC-Digest).
Expected Behaviour	Check that: For a reauthorization when timer SAChallenge expires and no PKMv2 SA-TEK-Request message is received from the TESTER (as SS/MS), the IUT re-sends the previous PKMv2 SA-TEK-Challenge message.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/REA/BV-H002 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	Reauthorization. (The IUT has sent a PKMv2 SA-TEK-Challenge message with the valid CMAC-Digest).
Expected Behaviour	Check that: For a reauthorization after SAChallengeMaxResends repetition of PKMv2 SA-TEK-Challenge sending and when timer SAChallenge expires and no PKMv2 SA-TEK-Request message is received from the TESTER (as SS/MS), the IUT either initiates another full re-authentication or drops the TESTER.
Test strategy	
Notes	

5.2.16.3 BS/SEC/PKMv2/AUTH/HAN - Handover process

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H000
	Deleted.

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H001
	Deleted.

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H002
	Deleted.

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H003 {1} **
P802.16e Reference	[3] and [12] Clauses 7.8.1 Numbering 2) and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	HO Process. (The IUT has received a RNG-REQ message with valid CMAC-Tuple TLV from the Tester (as SS/MS).
Expected Behaviour	Check that: The IUT sends a RNG-RSP message including CMAC Tuple TLV and the HO Process Optimization TLV with one of the following options: 1. Bit#1 set to 1 and Bit#2 set to 1 and then does not include SA-TEK-Update TLV nor SA Challenge Tuple TLV; or 2. Bit#1 set to 1 and Bit#2 set to 0 and includes SA-TEK-Update TLV; or 3. Bit#1 set to 1 and Bit#2 set to 0 and includes SA-Challenge Tuple TLV.
Test strategy	
Notes	Inclusion of CMAC Tuple is mandatory. In case of Bit#1 set to 1 and Bit#2 set to 0, option 2 is recommended.

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H004
	Deleted.

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H005
	Deleted.

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H006 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 2).
PICS Item	PIC_MOB1.
Initial Condition	HO Process. IUT has sent an SA-Challenge-Tuple TLV into a RNG-RSP message.
Expected Behaviour	Check that: For handover, when timer SAChallenge Timer expires and no PKMv2 SA-TEK-Request is received from the TESTER (as SS/MS), the IUT either initiates full re-authentication or drops the TESTER.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H007 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 2).
PICS Item	PIC_MOB1.
Initial Condition	HO Process. IUT has sent an SA-Challenge-Tuple TLV into a RNG-RSP message.
Expected Behaviour	Check that: On receiving a PKMv2 SA-TEK-Request message with the valid CMAC-Digest, the IUT transmits a PKMv2 SA-TEK-Response message including the SA-TEK-Update TLV.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H008 {2} **W2
P802.16e Reference	[3] and [12] Clauses 7.8.1 Numbering 2) and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	HO Process. (The IUT has received a RNG-REQ message from the Tester (as SS/MS).)
Expected Behaviour	Check that: The IUT sends a RNG-RSP message including HO Process Optimization TLV. (Bit#1 set to '0' and Bit#2 set to '0').
Test strategy	
Notes	A RNG-RSP message shall not include the CMAC-Tuple TLV.

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H009 {2} **W2
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	HO process. (The IUT has sent a RNG-RSP message including HO Process Optimization TLV. (Bit#1 set to '0' and Bit#2 set to '0'). In addition, the IUT has the valid PMK context and AK context for the TESTER).
Expected Behaviour	Check that: During HO process, the IUT sends a PKMv2 SA-TEK-Challenge message with the CMAC-Digest.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H010 {2} **W2
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	HO process. (The IUT has sent a RNG-RSP message including HO Process Optimization TLV. (Bit#1 set to '0' and Bit#2 set to '0'). In addition, the IUT has sent a PKMv2 SA-TEK-Challenge message with the valid CMAC-Digest).
Expected Behaviour	Check that: For a HO process when timer SAChallengeTimer expires and no PKMv2 SA-TEK-Request message is received from the TESTER (as SS/MS), the IUT re-sends the PKMv2 SA-TEK-Challenge message.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H011 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	HO process. (The IUT has sent a RNG-RSP message including HO Process Optimization TLV. (Bit#1 set to '0' and Bit#2 set to '0'). In addition, the IUT has sent a PKMv2 SA-TEK-Challenge message with the valid CMAC-Digest).
Expected Behaviour	Check that: For a HO process, after SAChallengeMaxResends repetition of PKMv2 SA-TEK-Challenge sending and when timer SAChallengeTimer expires and no PKMv2 SA-TEK-Request message is received from the TESTER (as SS/MS), the IUT either initiates another full authentication or drops the TESTER.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/HAN/BV-H012 {2} **W2
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 1) to 5).
PICS Item	PIC_MOB1.
Initial Condition	HO Process. IUT has sent a PKMv2 SA-TEK-Challenge message. The HO Process Optimization Bit #1 and Bit #2 of RNG-RSP sent previously shall be both set to zero.
Expected Behaviour	Check that: On receiving a PKMv2 SA-TEK-Request message with the valid CMAC-Digest, the IUT transmits a PKMv2 SA-TEK-Response message. The SA-TEK-Update TLV shall not be included in the PKMv2 SA-TEK-Response message even though data encryption is supported.
Test strategy	
Notes	In the case the data encryption is supported, the TEKs are updated by exchanging Key-Request/Response messages when the HO Process Optimization Bit #1 and #2 are set to zero.

5.2.16.3a BS/SEC/PKMv2/AUTH/IDM - Idle Mode

TP ID	TP/BS/SEC/PKMv2/AUTH/IDM/BV-H000 {1}**
P802.16 Reference	[3] Clauses 6.3.22.2.7, 6.3.24.9 and 11.6 [12] Clauses 6.3.21.2.7, 6.3.23.9 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	The MS is in Idle Mode with the IUT. During the ranging, the MS sends a valid RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, Ranging Purpose Indication TLV with Bit#0 set to 1, and CMAC tuple TLV. MS context is available at the IUT.
Expected Behaviour	Check that: During network re-entry, the IUT sends RNG-RSP including CMAC Tuple TLV and HO Process Optimization TLV with following options: 1) Bit#1 set to 1 and Bit#2 set to 0 with SA-TEK-Update TLV (recommended). 2) Bit#1 set to 1 and Bit#2 set to 0 with SA-Challenge Tuple TLV. 3) Bit#1 set to 1 and Bit#2 set to 1 without SA-TEK-Update TLV and without SA Challenge Tuple TLV.
Test strategy	
Notes	Inclusion of CMAC Tuple is mandatory. Network re-entry with or without TEK update. In case of Bit#1 set to 1 and Bit#2 set to 0, only option 1(using SA-TEK-Update TLV) is recommended.

TP ID	TP/BS/SEC/PKMv2/AUTH/IDM/BV-H001 {2} **W2
P802.16e Reference	[3] Clauses 6.3.22.2.7 and 7.8.1 Numbering 2) [12] Clauses 6.3.21.2.7 and 7.8.1 Numbering 2).
PICS Item	PIC_MOB1.
Initial Condition	Network re-entry process. (The IUT has received a RNG-REQ message from the Tester (as SS/MS).).
Expected Behaviour	Check that: The IUT sends a RNG-RSP message including HO Process Optimization TLV. (Bit#1 set to '0' and Bit#2 set to '0').
Test strategy	
Notes	A RNG-RSP message shall not include the CMAC-Tuple TLV when HO Process Optimization Bit#1 and Bit#2 are both set to 0.

TP ID	TP/BS/SEC/PKMv2/AUTH/IDM/BV-H002 {2} **W2
P802.16e Reference	[3] Clauses 6.3.22.2.7 and 7.8.1 Numbering 1) [12] Clauses 6.3.21.2.7 and 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	Network re-entry process. (The IUT has sent a RNG-RSP message including HO Process Optimization TLV. (Bit#1 set to '0' and Bit#2 set to '0'). In addition, the IUT has the valid PMK context and AK context for the TESTER).
Expected Behaviour	Check that: The IUT sends a PKMv2 SA-TEK-Challenge message with the CMAC-Digest.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/IDM/BV-H003 {3}
P802.16e Reference	[3] Clauses 6.3.22.2.7 and 7.8.1 Numbering 1) [12] Clauses 6.3.21.2.7 and 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	Network re-entry process. (The IUT has sent a RNG-RSP message including HO Process Optimization TLV. (Bit#1 set to '0' and Bit#2 set to '0'). In addition, the IUT has sent a PKMv2 SA-TEK-Challenge message with the valid CMAC-Digest).
Expected Behaviour	Check that: When timer SAChallengeTimer expires and no PKMv2 SA-TEK-Request message is received from the TESTER (as SS/MS), the IUT re-sends the PKMv2 SA-TEK-Challenge message.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/IDM/BV-H004 {3}
P802.16e Reference	[3] Clauses 6.3.22.2.7 and 7.8.1 Numbering 1) [12] Clauses 6.3.21.2.7 and 7.8.1 Numbering 1).
PICS Item	PIC_MOB1.
Initial Condition	Network re-entry process. (The IUT has sent a RNG-RSP message including HO Process Optimization TLV. (Bit#1 set to '0' and Bit#2 set to '0'). In addition, the IUT has sent a PKMv2 SA-TEK-Challenge message with the valid CMAC-Digest).
Expected Behaviour	Check that: After SAChallengeMaxResends repetition of PKMv2 SA-TEK-Challenge sending and when timer SAChallengeTimer expires and no PKMv2 SA-TEK-Request message is received from the TESTER (as SS/MS), the IUT either initiates another full authentication or drops the TESTER.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/IDM/BV-H005 {2} **W2
P802.16e Reference	[3] Clauses 6.3.22.2.7 and 7.8.1 Numbering 2) [12] Clauses 6.3.21.2.7 and 7.8.1 Numbering 2).
PICS Item	PIC_MOB1.
Initial Condition	Network re-entry process. IUT has sent a PKMv2 SA-TEK-Challenge message.
Expected Behaviour	Check that: On receiving a PKMv2 SA-TEK-Request message with the valid CMAC-Digest, the IUT transmits a PKMv2 SA-TEK-Response message.
Test strategy	
Notes	SA-TEK-Update TLV is not included in the PKMv2 SA-TEK-Response message.

5.2.16.4 BS/SEC/PKMv2/AUTH/AKI - Initial authorization AK

TP ID	TP/BS/SEC/PKMv2/AUTH/AKI/BV-H000 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 4).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in initial network entry, and has sent a PKMv2 SA-TEK-Challenge message to the Tester (as SS/MS).
Expected Behaviour	Check that: On receiving a PKM-REQ message containing a PKMv2 SA-TEK-Request message with an unrecognized AKID, the IUT ignores the received message.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/AKI/BV-H001 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 4).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in initial network entry, and has sent a PKMv2 SA-TEK-Challenge message to the Tester (as SS/MS).
Expected Behaviour	Check that: On receiving a PKM-REQ message containing a PKMv2 SA-TEK-Request message with invalid CMAC-Digest, the IUT ignores the received message.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/AKI/BV-H002
	Deleted.

TP ID	TP/BS/SEC/PKMv2/AUTH/AKI/BV-H003
	Deleted.

TP ID	TP/BS/SEC/PKMv2/AUTH/AKI/BV-H004
	Deleted.

TP ID	TP/BS/SEC/PKMv2/AUTH/AKI/BV-H005 {1} **
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 5).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in initial network entry, and has sent a PKMv2 SA-TEK-Challenge message to the Tester (as SS/MS).
Expected Behaviour	Check that: On receiving a PKM-REQ message containing a valid PKMv2 SA-TEK-Request message with the CMAC-Digest, if the IUT successfully verifies the CMAC-Digest included in the PKMv2 SA-TEK-Request message with the CMAC_KEY_U associated with the AK Key Sequence number, then the IUT treats the PKMv2 SA-TEK-Request message as an implicit acknowledgement that the Tester (as SS/MS) shares the same AK with the IUT. The IUT then transmits a valid PKMv2 SA-TEK-Response message with a CMAC-Digest calculated with the CMAC_KEY_D which is derived from the AK.
Test strategy	
Notes	A PKMv2 SA-TEK Response message includes a list of the SA-Descriptors that contain SA type to identify the Primary and Static SAs, their SA Identifiers (SAIDs), their SA service type and cryptographic-suite and includes the Security Negotiation Parameters attribute that specifies the security capabilities for the session.

5.2.16.5 BS/SEC/PKMv2/AUTH/AKR - Reauthorization AK

TP ID	TP/BS/SEC/PKMv2/AUTH/AKR/BV-H000 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 4).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in reauthorization, and has sent a PKMv2 SA-TEK-Challenge message to the Tester (as SS/MS).
Expected Behaviour	Check that: On receiving a PKM-REQ message containing a PKMv2 SA-TEK-Request message with an unrecognized AKID, the IUT ignores the received message.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/AKR/BV-H001 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 4).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in reauthorization, and has sent a PKMv2 SA-TEK-Challenge message to the Tester (as SS/MS).
Expected Behaviour	Check that: On receiving a PKM-REQ message containing a PKMv2 SA-TEK-Request message with invalid CMAC-Digest, the IUT ignores the received message.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMv2/AUTH/AKR/BV-H002
	Deleted.

TP ID	TP/BS/SEC/PKMv2/AUTH/AKR/BV-H003
	Deleted.

TP ID	TP/BS/SEC/PKMv2/AUTH/AKR/BV-H004
	Deleted.

TP ID	TP/BS/SEC/PKMv2/AUTH/AKR/BV-H005 {1} **
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 5).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in reauthorization, and has sent a PKMv2 SA-TEK-Challenge message to the Tester (as SS/MS).
Expected Behaviour	Check that: On receiving a PKM-REQ message containing a valid PKMv2 SA-TEK-Request message with the CMAC-Digest, if the IUT successfully verifies the CMAC-Digest included in the PKMv2 SA-TEK-Request message with the CMAC_KEY_U associated with the newer AK Key Sequence number, then the IUT treats the PKMv2 SA-TEK-Request message as an implicit acknowledgement that the Tester (as SS/MS) shares the same AK with the IUT. The IUT then transmits a valid PKMv2 SA-TEK-Response message with a CMAC-Digest calculated with the CMAC_KEY_D which is derived from the newer AK.
Test strategy	
Notes	The value of the CMAC_KEY_COUNT is reset to zero by IUT and Tester (as MS/SS) upon successful completion of the EAP-based re-authentication.

5.2.16.6 BS/SEC/PKMv2/TEK - Traffic Encryption Key

TP ID	TP/BS/SEC/PKMv2/TEK/BV-H000 {1} **
P802.16 Reference	[3] and [12] Clause 7.2.2.1.
PICS Item	PIC_MOB1.
Initial Condition	Exchange of the PKMv2 SA-TEK messages is completed.
Expected Behaviour	Check that: On receiving a valid PKMv2 Key-Request message with an authorized SAID, the IUT transmits a valid PKMv2 Key Reply message for the given SAID.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMV2/TEK/BV-H001 {3}
P802.16 Reference	[3] and [12] Clause 7.2.2.1.
PICS Item	PIC_MOB1.
Initial Condition	Exchange of the PKMv2 SA-TEK messages is completed.
Expected Behaviour	Check that: On receiving a PKMv2 Key-Request message with an unauthorized SAID, the IUT transmits a valid PKMv2 Key-Reject message for the given SAID.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMV2/TEK/BV-H002
	Deleted.

TP ID	TP/BS/SEC/PKMV2/TEK/BV-H003
	Deleted.

TP ID	TP/BS/SEC/PKMV2/TEK/BV-H004
	Deleted.

TP ID	TP/BS/SEC/PKMV2/TEK/BV-H005
	Deleted.

TP ID	TP/BS/SEC/PKMV2/TEK/BV-H006 {2} **\W2
P802.16 Reference	[3] and [12] Clauses 7.5 and 7.5.2.4.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is Key Exchanging. During the initial SA-TEK 3-way handshake, the IUT has selected the TEK encryption algorithm identifiers as 0x04 for the specific SAID.
Expected Behaviour	Check that: On receiving a PKMv2 Key-Request message for the given SAID, the IUT transmits a PKMv2 Key-Reply message with the TEK-128 in the TEK-parameters sub attributes encrypted using the 128-bit AES Key Wrap algorithm.
Test strategy	
Notes	

TP ID	TP/BS/SEC/PKMV2/TEK/BV-H007
	Deleted.

TP ID	TP/BS/SEC/PKMV2/TEK/BV-H008 {3}
P802.16 Reference	[3] and [12] Clause 7.2.2.1.
PICS Item	PIC_MOB1.
Initial Condition	Exchange of the PKMv2 SA-TEK-Challenge/Request/Response messages Is completed. A successful PKMv2 Key-Request/Reply transaction has occurred.
Expected Behaviour	Check that: On receiving a valid PKMv2 Key-Request message, the IUT transmits a valid PKMv2 Key-Reply message containing both old TEK-Parameters and new TEK-Parameters which are currently maintained by the IUT.
Test strategy	
Notes	The TEK lifetime shall reflect the remaining lifetime at the time the IUT transmits the PKMv2 Key-Reply message.

5.2.16.7 BS/SEC/PKMv2/GSA - Group Security Association

TP ID	TP/BS/SEC/PKMv2/GSA/BV-H000
	Deleted.

TP ID	TP/BS/SEC/PKMv2/GSA/BV-H001
	Deleted.

TP ID	TP/BS/SEC/PKMv2/GSA/BV-H002
	Deleted.

TP ID	TP/BS/SEC/PKMv2/GSA/BV-H003
	Deleted.

5.2.17 Channel Descriptors and Maps (CDM)

5.2.17.1 Map and Frame Structure (MFS)

TP ID	TP/BS/CDM/MFS/OPN/BV-H000a {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.2, 8.4.5.6.1, 8.4.4.2, 8.4.4.3, 8.4.5.1, 8.4.5.2 and 8.4.5.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: IUT transmits DLFP in FCH followed by Compressed DL-MAP or Normal DL-MAP messages in every frame.
Test strategy	Straightforward.
Notes	WiMAX Wave 1 TP. Detail in OPN Group.

TP ID	TP/BS/CDM/MFS/OPN/BV-H000b
P802.16 Reference	[3] and [12] Clause 6.3.2.3.2.
PICS Item	
Initial Condition	IUT is operating.
Expected Behaviour	Check that: IUT transmits DLFP in FCH followed by Compressed DL-MAP or Normal DL-MAP messages.
Test strategy	Straightforward.
Notes	WiMAX Wave 1 TP. Detail in OPN Group.

TP ID	TP/BS/CDM/MFS/OPN/BV-H001a {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.4, 6.3.2.3.2, 8.4.5.6.1 and 8.4.5.6.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: When transmitting a UL-MAP, the IUT places the UL-MAP: - either in the burst described by the first DL-MAP IE the Normal DL-MAP; or - appended as a Compressed UL-MAP immediately after a Compressed DL-MAP; or - as a normal UL-MAP after a compressed DL-MAP with UL-MAP appended bit set to 0.
Test strategy	Straightforward. Can be done before TE synchronizes.
Notes	WiMAX Wave 1 TP.

TP ID	TP/BS/CDM/MFS/OPN/BV-H001b
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.4 and 6.3.2.3.2.
PICS Item	
Initial Condition	IUT is operating.
Expected Behaviour	Check that: When transmitting a UL-MAP, the IUT places the UL-MAP: - either immediately following the DL-MAP (if one is present); or - immediately following the DLFP.
Test strategy	Straightforward. Can be done before TE synchronizes.
Notes	WiMAX Wave 1 TP. Follows directly from [3] and [12] clause 8.3.5.1.

TP ID	TP/BS/CDM/MFS/OPN/BV-H002
P802.16 Reference	[3] and [12] Clause 8.3.5.1.
PICS Item	
Initial Condition	IUT is operating in TDD mode.
Expected Behaviour	Check that: The IUT correctly decodes UL messages whose sub frame start position has changed.
Test strategy	1) Establish a DS UL data flow. 2) Provoke BS to transmit DL and UL-MAPs that change the end of the DL sub frame and the start of the UL sub frame. 3) For each frame, TE sends UL data per the UL-MAP. 4) Assign PASS if UL data received by the IUT is the same as the data that was sent.
Notes	WiMAX Wave 1 TP.

TP ID	TP/BS/CDM/MFS/OPN/BV-H003a
P802.16 Reference	[3] and [12] Clauses 8.3.5.1 and 8.2.1.4.2.2.
PICS Item	
Initial Condition	IUT is operating.
Expected Behaviour	Check that: When sending data to several SSs each having a different DL PHY mode, the IUT creates a correctly structured Frame Control Header and DL sub frame containing the multiple DL PHY modes.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MFS/OPN/BV-H003b {1} **W2
P802.16 Reference	[3] and [12] Clause 8.4.4.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: When sending data to an SS, the IUT creates a structured Frame Control Header (FCH) containing a DL_Frame_Prefix that specifies the length of the DL-MAP message and the repetition coding used for the DL-MAP message.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MFS/OPN/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.2.3.4.
PICS item	
Initial Condition	IUT is operating.
Expected Behaviour	Check that: For each UL-MAP message, the IUT generates at least one UL-MAP-IE that marks the end of the last allocated burst.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MFS/OPN/BV-H005 {1} **W2
	Deleted

TP ID	TP/BS/CDM/MFS/OPN/BV-H006 {4}
P802.16 Reference	[3] and [12] Clause 6.3.2.3.2.
PICS item	PIC_MOB1.
Initial Condition	
Expected Behaviour	Check that: The least significant 24 bits of the IUT's Base Station ID is programmable.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MFS/RLV/BV-H000a
P802.16 Reference	[3] and [12] Clauses 8.3.5.1 and 6.3.7.5.
PICS Item	
Initial Condition	IUT is operating and transmits UL Maps.
Expected Behaviour	Check that: On transmitting UL grants for minimum relevance, the IUT process the received UL data according to minimum relevance.
Test strategy	
Notes	Requires a means of provoking the IUT to direct minimum relevance.

TP ID	TP/BS/CDM/MFS/RLV/BV-H000b
P802.16 Reference	[3] and [12] Clause 6.3.7.5.
PICS Item	
Initial Condition	IUT is operating and transmits UL Maps.
Expected Behaviour	Check that: On transmitting UL grants for minimum relevance, the IUT process the received UL data in the next frame according to minimum relevance.
Test strategy	
Notes	Requires a means of provoking the IUT to direct minimum relevance.

TP ID	TP/BS/CDM/MFS/RLV/BV-H001a
P802.16 Reference	[3] and [12] Clauses 8.3.5.1 and 6.3.7.5.
PICS Item	
Initial Condition	IUT is operating and transmits UL Maps.
Expected Behaviour	Check that: On transmitting UL grants for maximum relevance, the IUT process the received UL data according to maximum relevance.
Test strategy	
Notes	Requires a means of provoking the IUT to direct maximum relevance.

TP ID	TP/BS/CDM/MFS/RLV/BV-H001b
P802.16 Reference	[3] and [12] Clause 6.3.7.5.
PICS Item	
Initial Condition	IUT is operating and transmits UL Maps.
Expected Behaviour	Check that: On transmitting UL grants for maximum relevance, the IUT process the received UL data in the next frame according to maximum relevance.
Test strategy	
Notes	Requires a means of provoking the IUT to direct maximum relevance.

TP ID	TP/BS/CDM/MFS/INIT/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.7.4.3.2.
PICS item	
Initial Condition	The IUT is ranging.
Expected Behaviour	Check that: The IUT transmits UL-MAPs for initial ranging specifying an interval in the Initial Ranging IE equivalent to the maximum round-trip propagation delay plus the transmission of the RNG-REQ message and that the grant is an integer multiple of the "Ranging request opportunity size" in the UCD message.
Test strategy	
Notes	

5.2.17.2 Channel Descriptors (CD)

TP ID	TP/BS/CDM/CD/BV-H000 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.1 and 10.1 DCD Interval.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: The IUT transmits with intervals less or equal to DCD Interval seconds DCD messages containing correct Configuration Change Count and PHY specific downlink burst profile(s).
Test strategy	Straightforward.
Notes	

TP ID	TP/BS/CDM/CD/BV-H001 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.3 and 10.1 UCD Interval.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: The IUT periodically transmits valid UCD messages with intervals not more than UCD Interval seconds. The intervals between UCD messages need not be of equal duration.
Test strategy	Straightforward.
Notes	

TP ID	TP/BS/CDM/CD/BV-H002
P802.16 Reference	[3] and [12] Clauses 6.3.15.7 and 10.1 DCD Interval.
PICS Item	
Initial Condition	IUT is operating license-exempt.
Expected Behaviour	Check that: The IUT transmits with period DCD Interval seconds DCD messages containing correct license-exempt parameters and downlink burst profile(s).
Test strategy	Straightforward.
Notes	WiMAX Wave 1 TP 1) License-exempt parameters for DCD are Channel Number and Channel Switch Frame Number from DCD Channel Encoding Table in [3] and [12] clause 11.4.1. 2) DCD requires other non license-exempt specific parameters as well. See same table.

TP ID	TP/BS/CDM/CD/BV-H003 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.3, 6.3.2.3, and 10.1 UCD Interval.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: The IUT transmits UCD messages with intervals not greater than UCD Interval seconds, and this UCD is transmitted on the Fragmentable Broadcast Connection (CID=0xFFFD).
Test strategy	
Notes	

TP ID	TP/BS/CDM/CD/BV-H004 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.3 and 10.1 UCD Interval.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating with an MSE. The current Configuration Change Count is i.
Expected Behaviour	Check that: To change the uplink channel descriptor, the IUT regularly transmits at least once to the MSE a UCD message with the Configuration Change Count = (i + 1 MOD 256).
Test strategy	
Notes	Requires means to provoke BS to send UCD with different configuration.

TP ID	TP/BS/CDM/CD/BV-H005 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.3, 6.3.2.3.4 and 10.1 UCD Interval.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating with an MSE. The current Configuration Change Count is i. To change the uplink channel descriptor, the IUT has transmitted a UCD message with the Configuration Change Count = (i + 1 MOD 256).
Expected Behaviour	Check that: To effect the change to the new uplink channel descriptor, the IUT transmits a UL-MAP with the UCD Count = (i + 1 MOD 256).
Test strategy	
Notes	Requires means to provoke BS to change the uplink channel descriptor.

TP ID	TP/BS/CDM/CD/BV-H006 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.15.7, 6.3.2.3.1 and 10.1 DCD Interval.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operating with an SS. The current Configuration Change Count is i.
Expected Behaviour	Check that: To change the downlink channel descriptor, the IUT regularly transmits a DCD message with the Configuration Change Count = (i + 1 MOD 256).
Test strategy	
Notes	Requires means to provoke BS to increment Configuration Change Count.

TP ID	TP/BS/CDM/CD/BV-H007 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.15.7, 6.3.2.3.1 and 10.1 DCD Interval.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating with an MSE. The current Configuration Change Count is i. To change the downlink channel descriptor, the IUT has transmitted a DCD message with the Configuration Change Count = (i + 1 MOD 256).
Expected Behaviour	Check that: To effect the change to the new downlink channel descriptor, the IUT transmits a DL-MAP with the DCD Count = (i + 1 MOD 256).
Test strategy	
Notes	

TP ID	TP/BS/CDM/CD/BV-H008
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.3 and 10.1 UCD Interval.
PICS Item	
Initial Condition	IUT is operating with several SSs.
Expected Behaviour	Check that: The IUT transmits a separate UCD message for each active uplink channel associated with the downlink channel.
Test strategy	
Notes	

TP ID	TP/BS/CDM/CD/BV-H009
P802.16 Reference	[3] and [12] Clause 11.3.1.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating. BS is configured to transmit MS Transmission Power Limitation TLV.
Expected Behaviour	Check that: The IUT periodically transmits a valid UCD message including the Maximum MS Transmission Power Limitation TLV.
Test strategy	Straightforward.
Notes	

5.2.17.3 Channel Descriptor Change (CDC)

5.2.17.3.1 Uplink (UL)

TP ID	TP/BS/CDM/CDC/UL/BV-H000 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "UCD update".
PICS item	PIC_MOB1.
Initial Condition	The IUT is operating with SS and has determined that the set of uplink burst profiles need to be changed.
Expected Behaviour	Check that: The IUT begins to send UCD with updated set of uplink burst profiles and with incremented Configuration Change Count such that the SS has a chance to receive the updated UCD message at least once before sending a UL-MAP with the corresponding UCD Count Configuration Change Count.
Test strategy	
Notes	Requires a means to provoke the IUT to change the current set of UL burst profiles.

TP ID	TP/BS/CDM/CDC/UL/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "UCD update".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operating with an MSE and has prepared for a change to a new generation of UCD message by sending the updated UCD message with incremented Configuration Change Count at least twice such that the MSE has a chance to receive it at least once.
Expected Behaviour	Check that: On sending UL-MAPs containing the new Configuration Change Count with grants for each burst profile, the IUT correctly processes uplink data using the new set of profiles.
Test strategy	
Notes	

TP ID	TP/BS/CDM/CDC/UL/BV-H002 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "UCD update".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operating with an SS and is preparing for a change to a new generation of UCD message by beginning to send the updated UCD message with incremented Configuration Change Count but the new UCD settings have not yet been activated in UL-MAPs.
Expected Behaviour	Check that: On sending UL-MAPs containing the old Configuration Change Count with grants for each burst profile, the IUT correctly processes uplink data using the old set of profiles.
Test strategy	
Notes	

5.2.17.3.2 Downlink (DL)

TP ID	TP/BS/CDM/CDC/DL/BV-H000 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "DCD update".
PICS item	PIC_MOB1.
Initial Condition	The IUT is operating with an SS and has determined that the set of downlink burst profiles need to be changed.
Expected Behaviour	Check that: The IUT begins to send a DCD with updated set of downlink burst profiles and with incremented Configuration Change Count such that the SS has a chance to receive the updated DCD message at least once before sending a DL-MAP with the corresponding DCD Configuration Change Count.
Test strategy	
Notes	Requires a means to provoke the IUT to change the current set of DL burst profiles.

TP ID	TP/BS/CDM/CDC/DL/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "DCD update".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operating with an MSE and has prepared for a change to a new generation of DCD message by sending the update DCD message with incremented Configuration Change Count one or more times such that the MSE has a chance to receive it at least once.
Expected Behaviour	Check that: On sending DL-MAPs containing the new Configuration Change Count with grants for each burst profile, the IUT correctly transmits downlink data using the new set of profiles.
Test strategy	
Notes	

TP ID	TP/BS/CDM/CDC/DL/BV-H002 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "DCD update".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operating with an SS and is preparing for a change to a new generation of DCD message by beginning to send the updated DCD message with incremented Configuration Change Count but the new DCD settings have not yet been activated in DL-MAPs.
Expected Behaviour	Check that: On sending DL-MAPs containing the old Configuration Change Count with grants for each burst profile, the IUT correctly transmits downlink data using the old set of profiles.
Test strategy	
Notes	

TP ID	TP/BS/CDM/CDC/DL/BV-H003
P802.16 Reference	[3] and [12] Clauses 8.3.5.4 and 6.3.2.3.1.
PICS item	
Initial Condition	IUT is initialized, using OFDM PHY, and a service flow is established.
Expected Behaviour	Check that: The IUT sends DCD messages containing a Frame Duration Code and that the time duration between two consecutive downlink preamble sequences matches the duration indicated by the Frame Duration Code.
Test strategy	
Notes	Tests have to be performed for different Frame Duration Codes.

TP ID	TP/BS/CDM/CDC/DL/BV-H004 {1}**
P802.16 Reference	[3] Clause 6.3.2.3.60 [12] Clause 6.3.2.3.55.
PICS item	PIC_MOB1.
Initial Condition	IUT is initialized.
Expected Behaviour	Check that: The IUT when sending SUB-DL-UL MAP messages these messages are preceded by compressed DL-MAP and compressed UL-MAP messages.
Test strategy	
Notes	

TP ID	TP/BS/CDM/CDC/DL/BV-H005 {2} **W2
P802.16 Reference	[3] Clause 6.3.2.3.60 [12] Clause 6.3.2.3.55.
PICS item	PIC_MOB1.
Initial Condition	IUT is initialized.
Expected Behaviour	Check that: The IUT when sending SUB-DL-UL-MAP message sets the SUB-DL-UL-MAP Indicator field to "0b111".
Test strategy	
Notes	

TP ID	TP/BS/CDM/CDC/DL/BV-H006 {4}
P802.16 Reference	[3] Clause 6.3.2.3.60 [12] Clause 6.3.2.3.55.
PICS item	PIC_MOB1.
Initial Condition	IUT is initialized.
Expected Behaviour	Check that: The IUT when sending SUB-DL-UL-MAP messages re-sets the INC_CID flag in the beginning of each SUB_DL-UL-MAP message.
Test strategy	
Notes	

TP ID	TP/BS/CDM/CDC/DL/BV-H007 {2} **W2
P802.16 Reference	[3] Clause 6.3.2.3.60 [12] Clause 6.3.2.3.55.
PICS item	PIC_MOB1.
Initial Condition	IUT is initialized.
Expected Behaviour	Check that: The IUT sending SUB-DL-UL-MAP messages, in each zone the SUB_DL-UL-MAP messages are allocated consecutively using the same uni-dimensional frequency-first slot mapping order used for the DL-MAP and HARQ MAP bursts.
Test strategy	
Notes	

5.2.17.4 MAP IEs (MAP)

TP ID	TP/BS/CDM/MAP/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clauses 8.4.5.1 and 6.3.2.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmits DL Maps.
Expected Behaviour	Check that: The IUT increments the Frame Number Field by 1 MOD 2^{24} in the PHY Synchronization field of each consecutive DL-MAP message.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MAP/BV-H001
P802.16 Reference	[3] and [12] Clauses 8.4.5.3.3 and 8.4.4.6.4.1.
PICS Item	
Initial Condition	IUT is operating and transmits DL Maps.
Expected Behaviour	Check that: The IUT when the DL-MAP contains AAS downlink IE (DIUC=15 with Extended DIUC Code Assignment = 02), and the downlink_preamble_config field specifies the number of the DL AAS preambles to be used before each DL burst in the AAS Zone, then these preambles are present before each DL burst.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MAP/BV-H002
P802.16 Reference	[3] and [12] Clause 8.4.5.3.3.
PICS Item	
Initial Condition	IUT is operating and transmits DL Maps.
Expected Behaviour	Check that: The IUT when the DL-MAP contains AAS downlink IE (DIUC=15 with Extended DIUC Code Assignment = 02), and the CID is used in the DL-MAP then the CID shall be set to the Broadcast CID.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MAP/BV-H003 {1} **W2
P802.16 Reference	[3] and [12] Clause 8.4.5.3.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmits DL Maps.
Expected Behaviour	Check that: The IUT when the DL-MAP contains a STC_DL_Zone_IE (DIUC=15 with Extended DIUC Code Assignment = 01), to indicate that subsequent allocations shall use a specific permutation and/or a specific transmit diversity mode, IUT transmits subsequent DL zone with the permutation and the transmit diversity mode specified by the STC_DL_Zone_IE.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MAP/BV-H004 {3}
P802.16 Reference	[3] and [12] Clause 8.4.5.3.7.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmits DL maps.
Expected Behaviour	Check that: When the IUT transmits initial DL-MAP-IE it starts in the mode where CIDs are not included in DL-MAP allocations, and when a DL-MAP is sent with DIUC=15 and CID_Switch_IE is included the IUT toggles the mode to include CIDs in the sub-sequent DL-MAP allocations.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MAP/BV-H005 {1}**
P802.16 Reference	[3] and [12] Clause 8.4.5.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmits UL maps
Expected Behaviour	Check that: Each UIUC with a value 1-13 used in the UL-MAPs transmitted by the IUT is defined by an Uplink Burst Profile in the UCD transmitted by the IUT.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MAP/BV-H006 {1}**
P802.16 Reference	[3] and [12] Clause 8.4.5.4.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmits UL maps.
Expected Behaviour	Check that: When the IUT transmits a UL-MAP it shall not contain more than one UL-MAP_IE with UIUC=0 for a UL frame.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MAP/BV-H007 {1}**
P802.16 Reference	[3] and [12] Clause 8.4.5.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmits UL Maps.
Expected Behaviour	Check that: When the IUT transmits a UL-MAP containing any UL-MAP-IE with value UIUC=0, UIUC=12, or UIUC=13, then these UL-MAP_IEs shall always appear first in the UL-MAP message.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MAP/BV-H008 {1}**
P802.16 Reference	[3] and [12] Clause 8.4.5.6.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmits compressed DL Maps.
Expected Behaviour	Check that: When the IUT is using a compressed DL-MAP the DCD messages shall contain the full 48-bit Base Station ID.
Test strategy	
Notes	

TP ID	TP/BS/CDM/MAP/BV-H009 {1}**
P802.16 Reference	[3] and [12] Clause 8.4.5.6.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmits compressed UL Maps.
Expected Behaviour	Check that: When the IUT transmits a compressed UL-MAP it is appended to a compressed DL-MAP message.
Test strategy	
Notes	

5.2.18 Multicast and Broadcast Services (MBS)

TP ID	TP/BS/MBS/BV-H000
	Deleted.

TP ID	TP/BS/MBS/BV-H001
	Deleted.

TP ID	TP/BS/MBS/BV-H002 {1} **W2
P802.16 Reference	[3] Clauses 6.3.23.2.4, 6.3.23.2, 11.13.23 and 11.13.29 [12] Clauses 6.3.22.2.4, 6.3.22.2, 11.13.22 and 11.13.27.
PICS Item	PIC_M_BS_MBS and PIC_BS_MBS_BSI, PIC_MOB2, IO-MBS
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: When the IUT initiates a multi-BS MBS connection, it sends a DSA-REQ message with at least the following TLVs: - MBS Zone Identifier Assignment; - MBS Service TLV; - Service Flow Identifier TLV; - CID TLV (Multicast CID); - QoS Parameter Set Type TLV; - Target SAID TLV (0xFFFF, (Null SAID)).
Test strategy	
Notes	According to the Mobile WiMAX System Profile, MBS has no encryption at MAC layer.

TP ID	TP/BS/MBS/BV-H003 {3}
P802.16 Reference	[3] Clauses 6.3.23.2 and 11.13.37 [12] Clauses 6.3.22.2 and 11.13.35.
PICS Item	PIC_M_BS_MBS and PIC_BS_MBS_MSI, PIC_MOB2, IO-MBS
Initial Condition	IUT has completed initialization and is operating.
Expected Behaviour	Check that: When the IUT receives a DSA-REQ for MBS service the IUT responds with a DSA-RSP message with at least the following TLVs: - MBS Zone Identifier Assignment TLV; - MBS Service TLV; - Service Flow Identifier TLV; - CID TLV (Multicast CID); - QoS Parameter Set Type TLV; - Target SAID TLV (0xFFFF, (Null SAID)).
Test strategy	
Notes	Requires a means to cause the IUT to establish the multi-BS MBS connection. According to the Mobile WiMAX System Profile, MBS has no encryption at MAC layer.

TP ID	TP/BS/MBS/BV-H004
	Deleted.

TP ID	TP/BS/MBS/BV-H005
	Deleted.

TP ID	TP/BS/MBS/BV-H006 {1} **W2
P802.16 Reference	[3] Clauses 6.3.23.2 and 11.4.1 [12] Clauses 6.3.22.2 and 11.4.1.
PICS Item	PIC_M_BS_MBS and PIC_BS_MBS_MSI, PIC_MOB2, IO-MBS
Initial Condition	IUT has completed initialization and is operating. The IUT is part of an MBS zone. An MBS connection has been established.
Expected Behaviour	Check that: The IUT includes the MBS zone identifier list in the DCD message.
Test strategy	
Notes	

TP ID	TP/BS/MBS/BV-H007 {1} **W2
P802.16 Reference	[3] Clauses 6.3.23.2, 6.3.2.3.47, 11.13.29, and 11.18.9 [12] Clauses 6.3.22.2, 6.3.2.3.42, 11.13.27, and 11.18.1.
PICS Item	PIC_M_BS_MBS and PIC_BS_MBS_MSI, PIC_MOB2, IO-MBS
Initial Condition	IUT has completed initialization and is operating. The IUT is part of an MBS zone and a neighbour BS has a different MBS zone identifier list. An MBS connection has been established.
Expected Behaviour	Check that: The IUT includes the MBS zone identifier list of this neighbour BS in the MOB_NBR-ADV message.
Test strategy	
Notes	

TP ID	TP/BS/MBS/BV-H008 {1} **W2
P802.16 Reference	[3] Clauses 6.3.23.2, 6.3.2.3.47, 11.13.29, and 11.18.9 [12] Clauses 6.3.22.2, 6.3.2.3.42, 11.13.27, and 11.18.1.
PICS Item	PIC_M_BS_MBS and PIC_BS_MBS_MSI, PIC_MOB2, IO-MBS
Initial Condition	IUT has completed initialization and is operating. The IUT is part of an MBS zone and the neighbour BS has the same MBS zone identifier list. An MBS connection has been established.
Expected Behaviour	Check that: The IUT does not include the MBS zone identifier list of this neighbour BS in the MOB_NBR-ADV message.
Test strategy	
Notes	

TP ID	TP/BS/MBS/BV-H009 {1} **W2
P802.16 Reference	[3] Clauses 6.3.2.3.57 and 8.4.5.3.12 [12] Clauses 6.3.2.3.52 and 8.4.5.3.12.
PICS Item	PIC_M_BS_MBS and PIC_BS_MBS_MSI, PIC_MOB2, IO-MBS
Initial Condition	IUT has completed initialization and is operating. The IUT is part of an MBS zone. An MBS connection has been established.
Expected Behaviour	Check that: When an MBS_MAP message is sent, an MBS_MAP_IE() shall be used if DL-MAP contains MAP_IE() for the MBS MAP message: - the Macro diversity enhanced field of the MBS_MAP_IE() shall be set to '1'; - the CID in MBS_MAP IE() shall be broadcast CID; and - the MBS_MAP IE() shall locate the MBS MAP message from the first subchannel and first OFDMA symbol of the MBS region.
Test strategy	
Notes	MBS_MAP_IE() can be omitted even if MBS_MAP message is present in the DL frame.

TP ID	TP/BS/MBS/BV-H010 {3}
P802.16 Reference	[3] Clause 6.3.2.3.57 [12] Clause 6.3.2.3.52.
PICS Item	PIC_M_BS_MBS and PIC_BS_MBS_MSI, PIC_MOB2, IO-MBS
Initial Condition	IUT has completed initialization and is operating. The IUT is part of an MBS zone. An MBS connection has been established.
Expected Behaviour	Check that: When an MBS_MAP message is sent with Downlink Burst Profile TLV, MBS DIUC in MBS_DATA_IE overrides the DIUC in DCD message for the MBS portion of the frame. If MBS MAP message has no Downlink Burst Profile TLV, DIUC in DCD message shall be used instead in MBS_DATA_IE.
Test strategy	
Notes	

5.2.19 Adaptive Antenna Support (AAS)

TP ID	TP/BS/AAS/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.7.6.4.
PICS item	
Initial Condition	IUT is ranging.
Expected Behaviour	Check that The IUT tunes the adaptive array during the ranging process.
Test strategy	
Notes	

TP ID	TP/BS/AAS/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.7.6.5.
PICS item	
Initial Condition	The IUT is operational. An SS is in AAS mode and has accomplished network entry.
Expected Behaviour	Check that: To determine channel state, the IUT transmits the AAS-FBACK-REQ message and an uplink allocation.
Test strategy	
Notes	

TP ID	TP/BS/AAS/BV-H002
P802.16 Reference	[3] and [12] Clause 10.4 Table "CIDs".
PICS item	
Initial Condition	IUT begins initial ranging.
Expected Behaviour	Check that: The IUT uses the AAS initial ranging CID (0xFEFF) to allocate an Initial Ranging period.
Test strategy	
Notes	

TP ID	TP/BS/AAS/BV-H003
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS item	
Initial Condition	
Expected Behaviour	Check that: For the AAS portion of the frame, the IUT transmits the DL-MAP, UL-MAP, DCD, UCD, MOB_NBR_ADV, MOB_TRF_IND, MOB_PAG_ADV and CLK-CMP messages with the Basic CID or the Broadcast CID.
Test strategy	
Notes	DL-MAP, UL-MAP, DCD, UCD, and CLK-CMP are transmitted with the Broadcast CID in the non-AAS portion of the frame.

TP ID	TP/BS/AAS/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.7.6.6 Table "RNG-REQ message encodings (row 4)" Table "RNG-RSP message encodings (row 1)".
PICS item	
Initial Condition	The IUT is operational. The IUT has received a RNG-REQ message with AAS broadcast capability TLV set to 0x01. (SS cannot receive broadcast messages).
Expected Behaviour	Check that: The IUT transmits a RNG-RSP message with the AAS broadcast permission field set to 0x01 (Contention-based bandwidth requests forbidden). Then check that the IUT provides a polling mechanism to obtain the bandwidth requirements or set to 0x00 (Contention-based bandwidth requests permitted) and correspondingly changes the array beam so that bandwidth requests are not lost.
Test strategy	
Notes	

TP ID	TP/BS/AAS/BV-H005
P802.16 Reference	[3] and [12] Clause 8.3.6.2.4.
PICS item	
Initial Condition	IUT is operating.
Expected Behaviour	Check that: In the DL-MAP, the IUT indicates that the switch from non-AAS to AAS-enabled traffic is marked by DIUC=15 and the AAS_IE to indicate the subsequent allocations until the end of the frame. When used, the CID in the DL-MAP-IE is set to the Broadcast CID. Check that subsequent AAS PHY bursts start with the short preamble.
Test strategy	
Notes	

TP ID	TP/BS/AAS/BV-H006
P802.16 Reference	[3] and [12] Clause 8.3.6.2.4.
PICS item	
Initial Condition	IUT is operating.
Expected Behaviour	Check that: In the DL-MAP, the IUT indicates that the switch from non-AAS to AAS-enabled traffic is marked by DIUC=15 and the AAS_IE to indicate the subsequent allocations until the start of the first UL-MAP allocation. When used, the CID in the DL-MAP-IE is set to the Broadcast ID. Check that subsequent AAS PHY bursts start with the short preamble.
Test strategy	
Notes	

TP ID	TP/BS/AAS/BV-H007
P802.16 Reference	[3] and [12] Clause 8.3.6.2.4.
PICS item	
Initial Condition	IUT is operating.
Expected Behaviour	Check that: In the UL-MAP, the IUT indicates that the switch from non-AAS to AAS-enabled traffic is marked by DIUC=15 and the AAS_IE to indicate the subsequent AAS allocations until the end of the frame. When used, the CID in the DL-MAP-IE shall be set to the Broadcast CID. Check that subsequent AAS PHY bursts start with the short preamble.
Test strategy	
Notes	

5.2.20 Reset and Re-registration (RER)

TP ID	TP/BS/RER/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.2.3.22.
PICS Item	
Initial Condition	The IUT is operational. A downlink service is active.
Expected Behaviour	Check that: To reset the SS, the IUT sends the RES-CMD on the basic CID. The IUT accepts SS re-entry. The service is disrupted then resumes.
Test strategy	
Notes	Require a means to force the IUT to reset the SS.

TP ID	TP/BS/RER/BV-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational. A downlink service is active. The IUT has not received any DREG-REQ from the SS.
Expected Behaviour	Check that: To deregister the SS and direct it to go to another channel, the IUT sends the DREG-CMD (action code 0x00) on the basic CID. The service is terminated.
Test strategy	
Notes	Require a means to force the IUT to deregister the SS with action code 0x00.

TP ID	TP/BS/RER/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26.
PICS Item	
Initial Condition	The IUT is operational. A downlink service is active.
Expected Behaviour	Check that: To make the SS only listen to the current BS until an RES-CMD message or DREG-CMD with Action Code 0x02 or 0x03 is transmitted, the IUT sends the DREG-CMD (action code 0x01) on the basic CID. The service is disrupted.
Test strategy	
Notes	Require a means to force the IUT to make the SS go to listen only mode with action code 0x01.

TP ID	TP/BS/RER/BV-H003
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.26 and 6.3.2.3.22.
PICS Item	
Initial Condition	The IUT is operational. A downlink service is active. The IUT has sent a DREG-CMD message with action code 0x01.
Expected Behaviour	Check that: After having sent a RES-CMD on the basic CID, the IUT successfully accepts SS re-entry to the system. The service resumes.
Test strategy	
Notes	Require a means to force the IUT to reset the SS with RES-CMD.

TP ID	TP/BS/RER/BV-H003a
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26.
PICS Item	
Initial Condition	The IUT is operational. The IUT has sent a DREG-CMD message with Action Code 0x01.
Expected Behaviour	Check that: To fully resume the service to the SS, the IUT sends a DREG-CMD message with action code 0x03 on the Basic Connection. The service resumes.
Test strategy	
Notes	Require a means to force the IUT to resume the service with Action Code 0x03.

TP ID	TP/BS/RER/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26.
PICS Item	
Initial Condition	The IUT is operational. A downlink service is active.
Expected Behaviour	Check that: To make the SS listen to the current BS but only transmit on the Basic, and Primary Management connections, the IUT sends the DREG-CMD (action code 0x02) on the basic CID. The service is disrupted.
Test strategy	
Notes	Require a means to force the IUT to make the SS listen to the current BS but only transmit on the Basic, and Primary Management connections.

TP ID	TP/BS/RER/BV-H005
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26.
PICS Item	
Initial Condition	The IUT is operational. The IUT has sent a DREG-CMD message with action code 0x02.
Expected Behaviour	Check that: To fully resume the service to the SS, the IUT sends a DREG-CMD message with action code 0x03 on the basic CID. The service resumes.
Test strategy	
Notes	Require a means to force the IUT to resume the service with action code 0x03.

TP ID	TP/BS/RER/BV-H006 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a valid DREG-REQ with *De-Registration_Request_Code* = 0x00 (MS De-Registration request for deregistration from BS and network), the IUT transmits a valid DREG-CMD with action code 0x04 on the Basic CID.
Test strategy	
Notes	"Valid" DREG-REQ/CMD implies valid CMAC when CMAC is included in DREG-REQ/CMD to comply with authorization policy and MAC mode negotiation.

TP ID	TP/BS/RER/BI-H000
	Deleted.

TP ID	TP/BS/RER/BI-H001
	Deleted.

TP ID	TP/BS/RER/BI-H002
	Moved and re-named as TP/BS/RER/BV-H006.

5.2.21 Clock Comparison (CCC)

TP ID	TP/BS/CCC/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.2.3.25.
PICS Item	
Initial Condition	The IUT has initiated a UGS connection and is transmitting CLK-CMP messages.
Expected Behaviour	Check that: When it uses different sources for symbol and network clocks and when the network clock varies, the IUT transmits the corresponding clock values in the CLK-CMP message.
Test strategy	
Notes	

TP ID	TP/BS/CCC/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.2.3.25 Table "Parameters and constants".
PICS item	
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: The IUT transmits every 50 ms on a broadcast connection a valid CLK-CMP message.
Test strategy	
Notes	

TP ID	TP/BS/CCC/BV-H002
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.25, 6.3.7.6 and 6.3.2.3 Table "Parameters and constants".
PICS item	
Initial Condition	The IUT is operational and AAS is in use.
Expected Behaviour	Check that: The IUT transmits every 50 ms a valid CLK-CMP message either on a broadcast connection when the time to transmit is not in the AAS portion of the frame or on the Basic CID when the time to transmit is in the AAS portion of the frame.
Test strategy	
Notes	AAS in use.

5.3 Test purposes for SS (SS)

5.3.1 CS Options: Encapsulation (CSOE)

TP ID	TP/SS/CSOE/BI-H000
	Deleted.

5.3.1.1 IP version 4 (IP4)

TP ID	TP/SS/CSOE/IP4/BV-H000 {1} **
P802.16 Reference	[3] Clauses 5.2, 5.2.1, 5.2.2 and 5.2.6.1 [12] Clauses 5.2, 5.2.1, 5.2.2 and 5.2.5.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is initialized and a connection is established with IPv4 CS without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving DL, the IUT passes a valid MAC SDU to the CS IPv4 SAP.
Test strategy	
Notes	

TP ID	TP/SS/CSOE/IP4/BV-H001 {1} **
P802.16 Reference	[3] Clause 5.2.6 [12] Clause 5.2.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is initialized and a connection is established with IPv4 CS without Payload Header Suppression.
Expected Behaviour	Check that: To transmit UL IPv4 packets, the IUT sends MAC PDUs containing the IPv4 packets and omits the PHSI field.
Test strategy	
Notes	

5.3.1.2 IP version 6 (IP6)

TP ID	TP/SS/CSOE/IP6/BV-H000 {1} **W2
P802.16 Reference	[3] Clauses 5.2, 5.2.1, 5.2.2 and 5.2.6.1 [12] Clauses 5.2, 5.2.1, 5.2.2 and 5.2.5.1.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv6 CS and without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving DL, the IUT passes a valid MAC SDU to the CS IPv6 SAP.
Test strategy	
Notes	

TP ID	TP/SS/CSOE/IP6/BV-H001 {1} **W2
P802.16 Reference	[3] Clause 5.2.6 [12] Clause 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv6 CS and without Payload Header Suppression.
Expected Behaviour	Check that: To transmit UL IPv6 packets, the IUT sends MAC PDUs containing the IPv6 packets and omits the PHSI field.
Test strategy	
Notes	

5.3.1.3 IP version 4 with ROHC/ECRTP (IP4R)

TP ID	TP/SS/CSOE/IP4R/BV-H000 {4}
P802.16 Reference	[3] Clauses 5.2, 5.2.1 and 5.2.7 [12] Clauses 5.2, 5.2.1 and 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv4 CS and ROHC header compression and without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving DL, the IUT passes a valid MAC SDU to the CS IPv4 SAP.
Test strategy	
Notes	Means of associating packets with a ROHC channel are required. Means of associating a ROHC channel to a SFID are required. "ROHC Parameter Payload" defaults may need definition.

TP ID	TP/SS/CSOE/IP4R/BV-H001 {4}
P802.16 Reference	[3] Clause 5.2.7 [12] Clause 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv4 CS and ROHC header compression and without Payload Header Suppression.
Expected Behaviour	Check that: To transmit UL IPv4 packets, the IUT sends MAC PDUs with compressed IPv4 header information.
Test strategy	
Notes	Means of associating packets with a ROHC channel are required. Means of associating a ROHC channel to a SFID are required. "ROHC Parameter Payload" defaults may need definition.

5.3.1.4 IP version 6 with ROHC/ECRTP (IP6R)

TP ID	TP/SS/CSOE/IP6R/BV-H000 {4}
P802.16 Reference	[3] Clauses 5.2, 5.2.1 and 5.2.7 [12] Clauses 5.2, 5.2.1 and 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv6 data flow with ROHC header compression and without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving DL, the IUT passes a valid MAC SDU to the CS IPv6 SAP.
Test strategy	
Notes	Means of associating packets with a ROHC channel are required. Means of associating a ROHC channel to a SFID are required. "ROHC Parameter Payload" defaults may need definition.

TP ID	TP/SS/CSOE/IP6R/BV-H001 {4}
P802.16 Reference	[3] Clause 5.2.7 [12] Clause 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is initialized and a connection is established with IPv6 data flow with ROHC header compression and without Payload Header Suppression.
Expected Behaviour	Check that: To transmit UL IPv6 packets, the IUT sends MAC PDUs with compressed IPv6 header information.
Test strategy	
Notes	Means of associating packets with a ROHC channel are required. Means of associating a ROHC channel to a SFID are required. "ROHC Parameter Payload" defaults may need definition.

5.3.1.5 Ethernet (ENET)

TP ID	TP/SS/CSOE/ENET/BV-H000 {2*}
P802.16 Reference	[3] and [12] Clauses 5.2, 5.2.1, 5.2.2 and 5.2.4.1.
PICS Item	IO-ETH1.
Initial Condition	IUT is initialized and a connection is established with Ethernet CS data flow without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving DL, the IUT passes a valid MAC SDU to the CS Ethernet SAP. The IUT does not include the Ethernet FCS when transmitting over this CS.
Test strategy	
Notes	

TP ID	TP/SS/CSOE/ENET/BV-H001
	Deleted.

TP ID	TP/SS/CSOE/ENET/BV-H002 {2*}
P802.16 Reference	[3] and [12] Clause 5.2.4.1.
PICS Item	IO-ETH1.
Initial Condition	IUT is initialized and a connection is established with Ethernet CS and without PHS.
Expected Behaviour	Check that: To transmit UL Ethernet packets, the IUT sends MAC PDUs containing the Ethernet packet and omit the PHSI field.
Test strategy	
Notes	

TP ID	TP/SS/CSOE/ENET/BV-H003
	Deleted.

5.3.1.6 IP version 4 over Ethernet (IP4oE)

TP ID	TP/SS/CSOE/IP4oE/BV-H000 {2}
P802.16 Reference	[3] and [12] Clauses 5.2, 5.2.1 and 5.2.2.
PICS Item	IO-ETH2.
Initial Condition	IUT is initialized and a connection is established with IPv4/Ethernet CS data flow without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving DL, the IUT passes a valid MAC SDU to the CS IPv4/Ethernet SAP.
Test strategy	
Notes	

TP ID	TP/SS/CSOE/IP4oE/BV-H001 {2*}
P802.16 Reference	[3] and [12] Clauses 5.2.3 and 5.2.4.
PICS Item	IO-ETH2.
Initial Condition	IUT is initialized and a connection is established with IPv4 over Ethernet CS and without PHS.
Expected Behaviour	Check that: To transmit UL IPv4 over Ethernet packets, the IUT sends MAC PDUs containing the IPv4 over Ethernet packet and omits the PHSI field.
Test strategy	
Notes	

5.3.1.7 IP version 6 over Ethernet (IP6oE)

TP ID	TP/SS/CSOE/IP6oE/BV-H000
P802.16 Reference	[3] and [12] Clauses 5.2, 5.2.1 and 5.2.2.
PICS Item	IO-ETH3.
Initial Condition	IUT is initialized and a connection is established with IPv6/Ethernet CS data flow without Payload Header Suppression.
Expected Behaviour	Check that: Upon receiving DL, the IUT passes a valid MAC SDU to the CS IPv6/Ethernet SAP.
Test strategy	
Notes	

TP ID	TP/SS/CSOE/IP6oE/BV-H001
P802.16 Reference	[3] and [12] Clauses 5.2.3 and 5.2.4.
PICS Item	IO-ETH3.
Initial Condition	IUT is initialized and a connection is established with IPv6 over Ethernet CS and without PHS.
Expected Behaviour	Check that: To transmit UL IPv6 over Ethernet packets, the IUT sends MAC PDUs containing the IPv6 over Ethernet packet and omits the PHSI field.
Test strategy	
Notes	

5.3.2 CS Options: Classification (CSOC)

5.3.2.1 Classifier DSx Signalling (CDS)

TP ID	TP/SS/CSOC/CDS/BV-H000 {1} **
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.4 [12] Clauses 5.2.2 and 11.13.18.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a valid DSA-REQ containing a packet classifier, the IUT sends a DSA-RSP.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/CDS/BV-H000a {4}
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.4 [12] Clauses 5.2.2 and 11.13.18.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On setting up a new connection the IUT transmits a DSA-REQ containing a packet classifier.
Test strategy	
Notes	Requires a means to initiate a connection set up. When the CS type is IPv4/IPv6-based, the set up will require an agreed upon method for the SS to obtain an IPv4/v6 address as part of as the set up (for example DHCP).

TP ID	TP/SS/CSOC/CDS/BV-H001 {3}
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.2 [12] Clauses 5.2.2 and 11.13.18.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and an UL service flow is established.
Expected Behaviour	Check that: On receiving a valid DSC-REQ containing a DSC Add Classifier parameter for the service flow, the IUT sends a DSC-RSP.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/CDS/BV-H001a {3}
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.2 [12] Clauses 5.2.2 and 11.13.18.3.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and an UL service flow is established by the SS.
Expected Behaviour	Check that: To add a classifier the IUT transmit a DSC-REQ containing a DSC Add Classifier parameter for the service flow.
Test strategy	
Notes	Requires a means for adding a classifier. When the CS type is IPv4/IPv6-based, the set up will require an agreed upon method for the SS to obtain an IPv4/v6 address as part of as the set up (for example DHCP).

TP ID	TP/SS/CSOC/CDS/BV-H002 {3}
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.2 [12] Clauses 5.2.2 and 11.13.18.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and an UL service flow is established. A DSC transaction for the service flow to add a classifier is successful.
Expected Behaviour	Check that: The IUT classifies packets correctly according to the existing and added classifiers.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/CDS/BV-H003 {3}
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.2 [12] Clauses 5.2.2 and 11.13.18.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and an UL service flow is established.
Expected Behaviour	Check that: On receiving a valid DSC-REQ containing a DSC Replace Classifier parameter for the service flow, the IUT sends a DSC-RSP.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/CDS/BV-H004 {3}
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.2 [12] Clauses 5.2.2 and 11.13.18.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and an UL service flow is established. A BS-initiated DSC transaction for the service flow to replace a classifier is successful.
Expected Behaviour	Check that: The IUT classifies packets correctly according to the existing classifiers that include the replacing classifier.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/CDS/BV-H005 {3}
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.2 [12] Clauses 5.2.2 and 11.13.18.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and an UL service flow is established.
Expected Behaviour	Check that: On receiving a valid DSC-REQ containing a DSC Delete Classifier parameter for the service flow, the IUT sends a DSC-RSP.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/CDS/BV-H006 {3}
P802.16 Reference	[3] Clauses 5.2.2 and 11.13.19.3.2 [12] Clauses 5.2.2 and 11.13.18.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and an UL service flow is established. A DSC transaction for the service flow to delete a classifier is successful.
Expected Behaviour	Check that: The IUT classifies packets correctly according to the remaining classifiers.
Test strategy	
Notes	It is not clear what the behaviour is if the last classifier was deleted.

5.3.2.2 IPv4 Classification (IP4C)

TP ID	TP/SS/CSOC/IP4C/BV-H000 {1} **
P802.16 Reference	[3] and [12] Clause 5.2.2 paragraph 3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two UL connections for IPv4 CS service flows are established. Packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IPv4 CS SDUs matching the classifier for the first connection on the first connection and transmits IPv4 CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/IP4C/BV-H001 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two UL connections for IPv4 CS service flows are established. Different IP Type of Service/DSCP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/IP4C/BV-H002 {3}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.3 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two UL connections for IPv4 CS service flows are established. Different IP Protocol packet classifiers (with different classifier rule priorities) are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	This feature is general, covered by other TPs that address particular classification rules.

TP ID	TP/SS/CSOC/IP4C/BV-H003 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.4 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two UL connections for IPv4 CS service flows are established. Different IPv4 Masked Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and if the IUT supports multiple IP addressed, check if IUT transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/IP4C/BV-H004 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.5 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two UL IPv4 CS service flows are established. Different IPv4 Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/IP4C/BV-H005 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.6 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two UL connections for IPv4 CS service flows are established. Different IPv4 Protocol Source Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/IP4C/BV-H006 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.7.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two UL connections for IPv4 CS service flows are established. Different IPv4 Protocol Destination Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/IP4C/BV-H007 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2-7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2-7.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and two UL connections for IPv4 CS service flows are established. Each connection has a single classifier rule than includes Identical IP Protocol Destination Port, IP Type of Service/DSCP, IP Protocol, IP Masked Source Address, IP Protocol Source Port, and different IP Destination Address.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching all classifier fields for the first connection on the first connection and transmits CS SDUs matching all classifier fields for the second connection on the second connection. Also check the IUT does not transmit packets that match only some of the fields in the classifier rules on either connection.
Test strategy	
Notes	Testing of particular classification rule.

5.3.2.3 IPv6 Classification (IP6C)

TP ID	TP/SS/CSOC/IP6C/BV-H000
	Deleted.

TP ID	TP/SS/CSOC/IP6C/BV-H001 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two UL connections for IPv6 CS service flows are established. Different IP Traffic Class/DSCP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/IP6C/BV-H002
	Deleted.

TP ID	TP/SS/CSOC/IP6C/BV-H003 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.4 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.4.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two UL connections for IPv6 CS service flows are established. Different IPv6 Masked Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and if the IUT supports multiple IP addressed, check if IUT transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/IP6C/BV-H004 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.5 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two UL IPv6 CS service flows are established. Different IPv6 Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing a particular classification option.

TP ID	TP/SS/CSOC/IP6C/BV-H005 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.6 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.6.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two UL connections for IPv6 CS service flows are established. Different IPv6 Protocol Source Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing a particular classification option.

TP ID	TP/SS/CSOC/IP6C/BV-H006 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.7.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two UL connections for IPv6 CS service flows are established. Different IPv6 Protocol Destination Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/IP6C/BV-H007 {1} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2-7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2-7.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and two UL connections for IPv6 CS service flows are established. Each connection has a single classifier rule than includes Identical IP Protocol Destination Port, IP Traffic Class/DSCP, IP Protocol, IP Masked Source Address, IP Protocol Source Port, and different IP Destination Address.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching all classifier fields for the first connection on the first connection and transmits CS SDUs matching all classifier fields for the second connection on the second connection. Also check the IUT does not transmit packets that match only some of the fields in the classifier rules on either connection.
Test strategy	
Notes	

5.3.2.4 Ethernet Classification (ENTC)

5.3.2.4.1 Pure Ethernet Classification (PETC)

TP ID	TP/SS/CSOC/ENTC/PETC/BV-H000 {1*}
P802.16 Reference	[3] and [12] Clause 5.2.2 paragraph 3.
PICS Item	IO-ETH1.
Initial Condition	IUT is operational and two UL Ethernet CS service flows are established. Packet classifiers are defined for both connections. Incoming CS SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits Ethernet CS SDUs matching the classifier for the first connection on the first connection and transmits Ethernet CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/PETC/BV-H001 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.8 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.8.
PICS Item	IO-ETH1.
Initial Condition	IUT is operational and two UL Ethernet CS service flows are established. Different Ethernet MAC Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits Ethernet CS SDUs matching the classifier for the first connection on the first connection and transmits Ethernet CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/ENTC/PETC/BV-H002 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.9 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.9.
PICS Item	IO-ETH1.
Initial Condition	IUT is operational and two UL Ethernet CS service flows are established. Different Ethernet MAC Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits Ethernet CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/PETC/BV-H003 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.10 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.10.
PICS Item	IO-ETH1.
Initial Condition	IUT is operational and two UL Ethernet CS service flows are established. Different Ethernet SAP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits Ethernet CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/PETC/BV-H004
	Deleted.

TP ID	TP/SS/CSOC/ENTC/PETC/BV-H005 {2} **W2
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.8-11 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.8-11.
PICS Item	IO-ETH1.
Initial Condition	IUT is operational and two UL Ethernet CS service flows are established. Each connection has a single classifier rule than includes Identical Ethernet MAC Source Address, Ethertype SAP and different Ethernet MAC Destination Address.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching all classifier fields for the first connection on the first connection and transmits CS SDUs matching all classifier fields for the second connection on the second connection. Also check that the IUT does not transmit packets that match only some of the fields in the classifier rules of either connection.
Test strategy	
Notes	

5.3.2.4.2 IPv4 over Ethernet (IP4oE)

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H000 {1*}
P802.16 Reference	[3] and [12] Clause 5.2.2 paragraph 3.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two UL IPv4 over Ethernet CS service flows are established. Packet classifiers are defined for both connections. Incoming CS SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IP over Ethernet SDUs matching the classifier for the first connection on the first connection and transmits IPv4 over Ethernet CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H001 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two UL IPv4 over Ethernet CS service flows are established. Different IP Types of Service/DSCP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H002 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.3 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.3.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two UL IPv4 over Ethernet CS service flows are established. Different IP Protocol packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H003 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.4 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.4.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two UL IPv4 over Ethernet CS service flows are established. Different IP Masked Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H004 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.5 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.5.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two UL IPv4 over Ethernet CS service flows are established. Different IP Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H005 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.6 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.6.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two UL IPv4 over Ethernet CS service flows are established. Different IP Source Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H006 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.7.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two UL IPv4 over Ethernet CS service flows are established. Different IP Protocol Destination Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H007 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.8 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.8.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two UL IPv4 over Ethernet CS service flows are established. Different Ethernet MAC Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H008 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.9 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.9.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two UL IPv4 over Ethernet CS service flows are established. Different Ethernet MAC Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H009 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.10 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.10.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two UL IPv4 over Ethernet CS service flows are established. Different Ethernet SAP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	Testing of particular classification rule.

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H010
	Deleted.

TP ID	TP/SS/CSOC/ENTC/IP4oE/BV-H011 {2*}
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2-11 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2-11.
PICS Item	IO-ETH2.
Initial Condition	IUT is operational and two UL IPv4 over Ethernet CS service flows are established. Identical IP Protocol Destination Port, IP Type of Service/DSCP, IP Protocol, IP Masked Source Address, IP Destination Address, IP Protocol Source Port, Ethernet MAC Destination Address, Ethernet MAC Source Address and Ethertype SAP.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

5.3.2.4.3 IPv6 over Ethernet (IP6oE)

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H000
P802.16 Reference	[3] and [12] Clause 5.2.2 paragraph 3.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two UL IPv6 over Ethernet CS service flows are established. Packet classifiers are defined for both connections. Incoming CS SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits IP over Ethernet SDUs matching the classifier for the first connection on the first connection and transmits IPv6 over Ethernet CS SDUs matching the classifier for the second connection on the second connection.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H001
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.2.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two UL IPv6 over Ethernet CS service flows are established. Different Traffic Class/DSCP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H002
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.3 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.3.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two UL IPv6 over Ethernet CS service flows are established. Different IP Protocol packet classifiers are defined for both connections.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H003
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.4 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.4.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two UL IPv6 over Ethernet CS service flows are established. Different IP Masked Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H004
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.5 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.5.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two UL IPv6 over Ethernet CS service flows are established. Different IP Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H005
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.6 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.6.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two UL IPv6 over Ethernet CS service flows are established. Different IP Source Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H006
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.7 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.7.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two UL IPv6 over Ethernet CS service flows are established. Different IP Protocol Destination Port packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H007
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.8 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.8.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two UL IPv6 over Ethernet CS service flows are established. Different Ethernet MAC Destination Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H008
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.9 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.9.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two UL IPv6 over Ethernet CS service flows are established. Different Ethernet MAC Source Address packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H009
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.10 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.10.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two UL IPv6 over Ethernet CS service flows are established. Different Ethernet SAP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H010
	Deleted.

TP ID	TP/SS/CSOC/ENTC/IP6oE/BV-H011
P802.16 Reference	[3] Clauses 5.2.2 paragraph 3 and 11.13.19.3.4.2-11 [12] Clauses 5.2.2 paragraph 3 and 11.13.18.3.3.3-11.
PICS Item	IO-ETH3.
Initial Condition	IUT is operational and two UL IPv6 over Ethernet CS service flows are established. Identical IP Protocol Destination Port, IP Type of Service/DSCP, IP Protocol, IP Masked Source Address, IP Destination Address, IP Protocol Source Port, Ethernet MAC Destination Address, Ethernet MAC Source Address and Ethertype SAP packet classifiers are defined for both connections. Incoming SDUs match classifier(s) of at most one service flow.
Expected Behaviour	Check that: The IUT transmits CS SDUs matching the classifier for the first connection on the first connection and transmits IP CS SDUs matching the classifier for the second connection on the second.
Test strategy	
Notes	

5.3.2.5 VLAN (VLAN)

TP ID	TP/SS/CSOC/VLAN/BV-H000
	Deleted.

TP ID	TP/SS/CSOC/VLAN/BV-H001
	Deleted.

5.3.2.5.1 IP over VLAN (IPoV)

TP ID	TP/SS/ CSOC/VLAN/IpoV/BV-H000
	Deleted.

TP ID	TP/SS/CSOC/VLAN/IPoV/BV-H001
	Deleted.

TP ID	TP/SS/CSOC/VLAN/IPoV/BV-H002
	Deleted.

TP ID	TP/SS/CSOC/VLAN/IPoV/BV-H003
	Deleted.

TP ID	TP/SS/CSOC/VLAN/IPoV/BV-H004
	Deleted.

TP ID	TP/SS/CSOC/VLAN/IPoV/BV-H005
	Deleted.

TP ID	TP/SS/CSOC/VLAN/IPoV/BV-H006
	Deleted.

TP ID	TP/SS/CSOC/VLAN/IPoV/BV-H007
	Deleted.

TP ID	TP/SS/CSOC/VLAN/IPoV/BV-H008
	Deleted.

5.3.3 Payload Header Suppression (PHS)

TP ID	TP/SS/PHS/BV-H000 {3}
P802.16 Reference	[3] and [12] Clauses 5.2.3.2 paragraph 3 and 6.3.2.3.10.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: To create a PHS rule in connection with adding a new service flow, the IUT uses DSA-REQ message and the included PHS rule definition does not contain a PHSI value.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H000x {1}**
P802.16 Reference	[3] and [12] Clauses 5.2.3.2 paragraph 3 and 6.3.2.3.13.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. The IUT has received a DSA-REQ message requesting creation of a PHS rule to a new service flow and include a PHSI value.
Expected Behaviour	Check that: The IUT responds to the DSA-REQ message requesting creation of a PHS rule to a new service flow by sending a DSA-RSP.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H001 {3}
P802.16 Reference	[3] and [12] Clause 5.2.3.2 paragraph 5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and defining PHS rules using one DSA transaction and one DSC transaction.
Expected Behaviour	Check that: For each step using a DSA message and one DSC message, the IUT generates the messages containing SFID (or reference) where relevant.
Test strategy	
Notes	Requires means to provoke this behaviour.

TP ID	TP/SS/PHS/BV-H001x {3}
P802.16 Reference	[3] and [12] Clause 5.2.3.2 paragraph 5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and defining PHS rules using one DSA transaction and one DSC transaction.
Expected Behaviour	Check that: For each step using a DSA and DSC message, the IUT generates these messages containing both the SFID and the PHSI index where relevant.
Test strategy	
Notes	Requires means to provoke this behaviour.

TP ID	TP/SS/PHS/BV-H002 {3}
P802.16 Reference	[3] and [12] Clause 5.2.3.2, paragraph 3 Figure: "PHS Signaling Example".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating. IUT is creating a PHS rule by initiating a DSA transaction.
Expected Behaviour	Check that: When generating the DSA-REQ, the IUT does not include the PHSI field but does include at least one or more of the following: PHSM, PHSS or PHSF.
Test strategy	
Notes	Requires means to provoke MS initiated SF creation.

TP ID	TP/SS/PHS/BV-H002x {2}
P802.16 Reference	[3] and [12] Clause 5.2.3.2, paragraph 3 Figure: "PHS Signaling Example".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. The TE is creating a PHS rule including PHSI using the DSC-REQ.
Expected Behaviour	Check that: When generating the DSC-RSP, the IUT does not include the PHSI field.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H002y
P802.16 Reference	[3] and [12] Clause 5.2.3.2, paragraph 3 Figure: "PHS Signaling Example".
PICS Item	
Initial Condition	IUT is operating and a service flow has been established.
Expected Behaviour	Check that: When the IUT sends a DSC-REQ to create a new PHS rule to the existing service flow, the PHS rule definition in the DSC-REQ does not include the PHSI value.
Test strategy	
Notes	Requires a means to provoke the MS to initiate a PHS rule creation.

TP ID	TP/SS/PHS/BV-H003 {3}
P802.16 Reference	[3] Clauses 5.2.3.2 paragraph 3 and 11.13.19.3.5 [12] Clauses 5.2.3.2 paragraph 3 and 11.13.18.3.4.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: To change or delete a PHS rule, the IUT uses a REQ message with the PHS DSC action value set to 2 to delete a PHS rule, and another DSC-REQ message with the PHS DSC action value set to 0 to add changes to a PHS rule.
Test strategy	
Notes	Requires means of provoking DSC-REQ messages from the IUT.

TP ID	TP/SS/PHS/BV-H003a {2} **W2
P802.16 Reference	[3] Clauses 5.2.3.2 paragraph 3 and 11.13.19.3.5 [12] Clauses 5.2.3.2 paragraph 3 and 11.13.18.3.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: IUT responds to DSC message requesting deletion of specific PHS rule and its associated set of TLVs with PHS DSC action parameter value 2 and the associated PHSI TLV indicating the PHS rule to be deleted.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H003x
	Deleted.

TP ID	TP/SS/PHS/BV-H004 {3}
P802.16 Reference	[3] and [12] Clause 5.2.3, paragraph 2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. A packet CS service flow with PHS is established with a PHS rule associated with certain classifier.
Expected Behaviour	Check that: When receiving a DSC-REQ from TE with Classifier DSC action parameter value 2 and PHS DSC action parameter value 2, the IUT deletes a Packet Classification Rule and the PHS rule associated with it.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H004x {2} **W2
P802.16 Reference	[3] Clauses 5.2.3.2 paragraph 3 and 11.13.19.3.5 [12] Clauses 5.2.3.2 paragraph 3 and 11.13.18.3.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: IUT deletes all PHS rules on a UL service flow after received a DSC message from BS with PHS DSC action parameter value 3.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H005 {3}
P802.16 Reference	[3] Clauses 5.2.3, paragraph 2 and 11.13.19.3.5 [12] Clauses 5.2.3, paragraph 2 and 11.13.18.3.4.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating. A connection with PHS is established for a packet classifier. The PHS rule is established when PHSI, PHSM, PHSS and PHSF are defined.
Expected Behaviour	Check that: To change the value of a PHSF on the service, the IUT removes the old PHS rule including PHSI, using a DSC message with PHS DSC action parameter with value 2 and adds a new PHS rule reflecting the change by using one or more DSC transactions using PHS DSC action parameter with value 0, and including PHSI, PHSM, PHSS and PHSF.
Test strategy	
Notes	TP/SS/PHS/BV-H000 through TP/SS/PHS/BV-H001x could be used to accomplish adding the PHS rule change.

TP ID	TP/SS/PHS/BV-H006
	Deleted.

TP ID	TP/SS/PHS/BV-H007 {1}**
P802.16 Reference	[3] and [12] Clause 5.2.3.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. A connection with PHS is established for a packet classifier.
Expected Behaviour	Check that: On receiving a valid MAC Data PDU for the connection with a known PHSI not equal to zero, the IUT correctly reconstructs the header according to the PHSI and transmits the SDU to CS.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H008 {1}**
P802.16 Reference	[3] Clauses 5.2.3.1, 5.2.4.1, 5.2.5.1, and 5.2.6.1 [12] Clauses 5.2.3.1, 5.2.4.1, and 5.2.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. A DL packet CS service flow with PHS is established for a packet classifier.
Expected Behaviour	Check that: On receiving a valid MAC Data PDU for the connection with a PHSI = zero, the IUT submits the CS PDU as received without header reconstruction to the CS.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H009 {2*}
P802.16 Reference	[3] and [12] Clauses 5.2.3.1, paragraph 2 and 5.2.4.1.
PICS Item	IO_ETH1.
Initial Condition	IUT is operating. An Ethernet CS UL connection with PHS is established. The PHSV was not present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: For the upper layer protocol, the IUT correctly suppresses the payload header according to the payload header suppression rule for packets matching PHSF.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H009x
	Deleted.

TP ID	TP/SS/PHS/BV-H009y {2} **W2
P802.16 Reference	[3] Clauses 5.2.3.1 paragraph 2 and 5.2.6.1 [12] Clauses 5.2.3.1 paragraph 2 and 5.2.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. An IPv4 UL connection with PHS is established. The PHSV was not present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: The IUT correctly suppresses the payload header according to the payload header suppression rule.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H009z {2} **W2
P802.16 Reference	[3] Clauses 5.2.3.1 paragraph 2 and 5.2.6.1 [12] Clauses 5.2.3.1 paragraph 2 and 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating. An IPv6 UL connection with PHS is established. The PHSV was not present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: The IUT correctly suppresses the payload header according to the payload header suppression rule.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H009w
	Deleted.

TP ID	TP/SS/PHS/BV-H010
P802.16 Reference	[3] and [12] Clauses 5.2.3.1 paragraph 2 and 5.2.4.1.
PICS Item	IO_ETH1.
Initial Condition	IUT is operating. An Ethernet UL connection with PHS is established. The PHSV was present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: For the upper layer protocol, the IUT correctly suppresses the payload header according to the payload header suppression rule.
Test strategy	
Notes	In order to detect the disabling of PHSV requires that a packet known not to pass verification is still transmitted with header suppression but it incorrectly suppressed and incorrectly reconstructed.

TP ID	TP/SS/PHS/BV-H010x
P802.16 Reference	[3] Clauses 5.2.3.1 paragraph 2 and 5.2.5.1 [12] Clauses 5.2.3.1 paragraph 2 and 5.2.4.
PICS Item	
Initial Condition	IUT is operating. A VLAN UL connection with PHS is established. The PHSV was present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: For the upper layer protocol, the IUT correctly suppresses the payload header according to the payload header suppression rule.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H010y {2} **W2
P802.16 Reference	[3] Clauses 5.2.3.1 paragraph 2 and 5.2.6.1 [12] Clauses 5.2.3.1 paragraph 2 and 5.2.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. An IPv4 UL connection with PHS is established. The PHSV=1 (don't verify) was present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: The IUT correctly suppresses the payload header according to the payload header suppression rule.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H010z {2} **W2
P802.16 Reference	[3] Clauses 5.2.3.1 paragraph 2 and 5.2.6.1 [12] Clauses 5.2.3.1 paragraph 2 and 5.2.5.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating. An IPv6 UL connection with PHS is established. The PHSV=1 (don't verify) was present during the DSx transaction establishing the suppression rule.
Expected Behaviour	Check that: The IUT correctly suppresses the payload header according to the payload header suppression rule.
Test strategy	
Notes	

TP ID	TP/SS/PHS/BV-H010w
	Deleted.

5.3.4 MAC PDU Construction (MAC)

TP ID	TP/SS/MAC/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.1.1 Table "Generic MAC Header Fields".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and generating a MAC PDU.
Expected Behaviour	Check that: The IUT calculates the HCS value for the first five bytes of the cell header and inserts the results into the HCS. The HCS is the remainder of the division (Modulo 2) by the generator polynomial $g(D)=D^8+D^2+D+1$ of the polynomial D^8 multiplied by the content of the header excluding the HCS field.
Test strategy	
Notes	

TP ID	TP/SS/MAC/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and generating a MAC PDU.
Expected Behaviour	Check that: When a Grant Management subheader and a Fragmentation subheader are in the PDU, the IUT places the Grant Management subheader before the Fragmentation subheader.
Test strategy	
Notes	

TP ID	TP/SS/MAC/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.2.2.
PICS Item	
Initial Condition	IUT is operating and generating a MAC PDU.
Expected Behaviour	Check that: When Mesh and other subheaders are in the same PDU, the IUT places the Mesh subheader first in the subheader order except for the extended subheader if present.
Test strategy	
Notes	Mesh not supported in OFDMA.

TP ID	TP/SS/MAC/BV-H003
	Deleted.

TP ID	TP/SS/MAC/BV-H004 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and generating a MAC PDU.
Expected Behaviour	Check that: The IUT does not place both Packing and Fragmentation subheaders in the same MAC PDU.
Test strategy	
Notes	

TP ID	TP/SS/MAC/BV-H005 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.2.2.
PICS Item	PIC-MOB1.
Initial Condition	IUT is operating and generating a MAC PDU.
Expected Behaviour	Check that: When both per-PDU subheaders and per-SDU subheaders are in the same MAC PDU, the IUT places the per-PDU subheaders always before first per-SDU subheader.
Test strategy	
Notes	

TP ID	TP/SS/MAC/BV-H006 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and generating a MAC PDU.
Expected Behaviour	Check that: The IUT neither fragments nor packs MAC Management messages on the Basic and Initial Ranging connections.
Test strategy	
Notes	

TP ID	TP/SS/MAC/BV-H007 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.7.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and generating a MAC PDU.
Expected Behaviour	Check that: When space within an allocated data burst cannot be used and the unused space is less than the size of a MAC header, the IUT sets each byte of the unused space to the stuff byte value 0xFF.
Test strategy	
Notes	

TP ID	TP/SS/MAC/BV-H008 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.7 Table "CIDs".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and generating a MAC PDU.
Expected Behaviour	Check that: When space within an allocated data burst cannot be used and the unused space size is at least the size of a MAC header: - either the IUT sets each byte of the unused space to the stuff byte value 0xFF; or - the IUT formats the unused space as a MAC PDU. In this PDU, the MAC CID is set to the value of Padding CID. The CI, EC, HT, and Type fields are set to zero. The Length field is set to the number of unused bytes including the MAC header size for creating the padding MAC PDU. The HCS is calculated in the usual way.
Test strategy	
Notes	

TP ID	TP/SS/MAC/BV-H009
	Deleted.

TP ID	TP/SS/MAC/BV-H009a {2}
	Deleted.

TP ID	TP/SS/MAC/BV-H010 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.1.1 Table "Generic MAC Header Fields".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and generating a MAC PDU.
Expected Behaviour	Check that: When an Extended Subheader is present it appears immediately after the Generic MAC Header and before all other subheaders.
Test strategy	
Notes	

TP ID	TP/SS/MAC/BV-H011 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.2.2 Table "Generic MAC Header Fields" and 6.3.2.2.7.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and generating a MAC PDU.
Expected Behaviour	Check that: When Extended Subheaderd are present they are not encrypted.
Test strategy	
Notes	Extended subheader is wave2 feature.

TP ID	TP/SS/MAC/BI-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: On receiving a MAC Management Message containing a "reserved" Type value, the IUT silently discards the message.
Test strategy	To be tested by sending an "invalid" MAC management message and observing no "reply" to this message and after some time initiate a valid action that can be successfully performed. The "invalid" MAC management message should be discarded and not cause the IUT to stop operating.
Notes	

TP ID	TP/SS/MAC/BI-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: On receiving a MAC Management Message not containing all required parameters, the IUT silently discards the message.
Test strategy	To be tested by sending an "invalid" MAC management message and observing no "reply" to this message and after some time initiate a valid action that can be successfully performed. The "invalid" MAC management message should be discarded and not cause the IUT to stop operating.
Notes	

TP ID	TP/SS/MAC/BI-H002 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: On receiving a MAC Management Message containing erroneously encoded parameters, the IUT silently discards the message.
Test strategy	To be tested by sending an "invalid" MAC management message and observing no "reply" to this message and after some time initiate a valid action that can be successfully performed. The "invalid" MAC management message should be discarded and not cause the IUT to stop operating.
Notes	

5.3.4.1 PDU Concatenation (CAT)

TP ID	TP/SS/MAC/CAT/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: On receiving a downlink burst that contains concatenated MAC PDUs, the IUT presents the MAC SDUs after reassembly of the MAC PDUs to the correct MAC SAP.
Test strategy	
Notes	

TP ID	TP/SS/MAC/CAT/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating.
Expected Behaviour	Check that: When generating contents of an uplink burst, the IUT: - either concatenates MAC Management, User Data, and Bandwidth Request PDUs to fill the burst; or - transmits the MAC Management, User Data, Bandwidth Request PDUs in separate bursts.
Test strategy	
Notes	Concatenation is a mandatory function but an implementation is not required to concatenate MAC PDUs even when the possibility exists to concatenate them. Since the purpose is to observe concatenated MAC PDUs, the following logic for verdict assignment applies: If the test system receives concatenated MAC PDUs a pass verdict is assigned. If the test system does not receive any concatenated PDUs an inconclusive verdict is assigned.

5.3.4.2 Fragmentation (FRAG)

TP ID	TP/SS/MAC/FRAG/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. Fragmentation enabled.
Expected Behaviour	Check that: On processing fragmented DL MAC PDUs, the IUT reassembles fragments into SDUs.
Test strategy	
Notes	

TP ID	TP/SS/MAC/FRAG/BV-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.3.3.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating a non-ARQ DL connection with HARQ disabled.
Expected Behaviour	Check that: When the IUT processes fragments in sequence but detects the loss of intermediate packets, the IUT discards all MAC PDUs on the connection: - either until a new first fragment is detected; or - until a non-fragmented MAC PDU is detected.
Test strategy	
Notes	

TP ID	TP/SS/MAC/FRAG/BV-H002
P802.16 Reference	[3] and [12] Clauses 5.1.2.3 paragraph 1 and 12.1.1.1.
PICS Item	
Initial Condition	IUT implements Basic ATM MAC system profile and is operating.
Expected Behaviour	Check that: When generating MAC PDUs, the IUT fragments oversized SDUs on the Primary and Secondary Management connections.
Test strategy	
Notes	

TP ID	TP/SS/MAC/FRAG/BV-H003 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.3.3, 12.1.1.2, and 6.3.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. Data Transport connection is established.
Expected Behaviour	Check that: When generating MAC PDUS, the IUT fragments oversized SDUs on Data Transport connections.
Test strategy	
Notes	

TP ID	TP/SS/MAC/FRAG/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.3.3.1.
PICS Item	
Initial Condition	IUT is operating on a non-ARQ UL connection.
Expected Behaviour	Check that: When generating MAC PDUs containing fragments, the IUT transmits the fragments only once and in sequence.
Test strategy	
Notes	Only valid for non-HARQ connection.

TP ID	TP/SS/MAC/FRAG/BV-H005 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.4.1.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on a non-ARQ UL connection.
Expected Behaviour	Check that: When generating MAC PDUs for variable-length SDUs, the IUT places the fragmentation information for individual MAC SDU fragments in the Packing Subheader (if packing is enabled) or in the Fragmentation subheader.
Test strategy	
Notes	

TP ID	TP/SS/MAC/FRAG/BV-H006 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an UL ARQ connection. Packing is OFF.
Expected Behaviour	Check that: The IUT generates fragments for transmission by concatenating sets of ARQ blocks with adjacent sequence numbers.
Test strategy	
Notes	

TP ID	TP/SS/MAC/FRAG/BV-H007 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.4.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ UL connection.
Expected Behaviour	Check that: When generating MAC PDUs containing variable-length SDUs, the IUT places the fragmentation information for individual MAC SDU fragments in the corresponding Fragment subheader.
Test strategy	
Notes	Needs means to enforce fragmentation.

TP ID	TP/SS/MAC/FRAG/BV-H008 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating using a fragmentable broadcast connection.
Expected Behaviour	Check that: The IUT uses the 11 bit FSN.
Test strategy	
Notes	

TP ID	TP/SS/MAC/FRAG/BV-H009 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. TE transmits a primary management message with fragmentation.
Expected Behaviour	Check that: The IUT receives and decodes the primary management PDUs with the 11 bit FSN.
Test strategy	
Notes	

5.3.4.3 Packing (PACK)

TP ID	TP/SS/MAC/PACK/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. Packing is ON.
Expected Behaviour	Check that: On processing packed DL MAC PDUs, the IUT unpacks the SDUs from the DL MAC PDU.
Test strategy	
Notes	

TP ID	TP/SS/MAC/PACK/BV-H001 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. Packing and Fragmentation are ON. TE transmits DL MAC PDUs with fragmentation.
Expected Behaviour	Check that: On processing packed DL MAC PDUs containing fragments, the IUT unpacks and defragments the SDUs from the DL MAC PDU.
Test strategy	
Notes	

TP ID	TP/SS/MAC/PACK/BV-H002 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. Packing is ON.
Expected Behaviour	Check that: When generating MAC PDUS, the IUT: - either packs multiple MAC SDUs into a single MAC PDU; or - transmits each MAC SDU into a single MAC PDU for each SDU.
Test strategy	
Notes	Packing is a mandatory function but an implementation is not required to pack SDUs even when the possibility exists to pack them.

TP ID	TP/SS/MAC/PACK/BV-H003 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. Packing is ON.
Expected Behaviour	Check that: When the IUT transmits variable length MAC SDUs that may be packed, the IUT: - either precedes each packed SDU with a Packing subheader in the MAC PDU; or - transmits each MAC SDU in a single MAC PDU.
Test strategy	
Notes	Packing is a mandatory function but an implementation is not required to pack SDUs even when the possibility exists to pack them. Since the purpose is to observe packed SDUs, the following logic for verdict assignment applies: If the test system receives packed SDUs a pass verdict is assigned. If the test system does not receive any packed SDUs an inconclusive verdict is assigned.

TP ID	TP/SS/MAC/PACK/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.3.4.1.2.
PICS Item	
Initial Condition	IUT is operating. Packing and Fragmentation is ON.
Expected Behaviour	Check that: When packing variable-length MAC SDUs that are fragmented, the IUT precedes each packed SDU with a Packing subheader that contains the fragmentation information for the MAC SDU fragments.
Test strategy	
Notes	Packing is a mandatory function but an implementation is not required to pack SDUs even when the possibility exists to pack them.

TP ID	TP/SS/MAC/PACK/BV-H005
	Deleted.

TP ID	TP/SS/MAC/PACK/BV-H006
P802.16 Reference	[3] and [12] Clause 6.3.3.4.1.1.
PICS Item	
Initial Condition	IUT is operating on a non-ARQ UL connection.
Expected Behaviour	Check that: For packing fixed-length blocks, the Request/Transmission policy is set to allow packing and to prohibit fragmentation.
Test strategy	
Notes	No Fixed-length SDUs in Mobility profile.

TP ID	TP/SS/MAC/PACK/BV-H007
P802.16 Reference	[3] and [12] Clause 6.3.3.4.1.1.
PICS Item	
Initial Condition	IUT is setting up use of a Packet CS on a non-ARQ UL connection. The DSA transaction will be SS-initiated.
Expected Behaviour	Check that: When generating the DSA-REQ for fixed-length SDUs, the IUT includes the SDU size in the DSA-REQ.
Test strategy	
Notes	No Fixed-length SDUs in Mobility profile.

5.3.4.4 Cyclic Redundancy Check (CRC)

TP ID	TP/SS/MAC/CRC/BV-H000
P802.16 Reference	[3] and [12] Clauses 6.3.1.1 paragraph 2, 6.3.3.5, and 6.3.3.5.1.
PICS Item	
Initial Condition	
Expected Behaviour	Check that: When generating a generic MAC header, the IUT includes a CRC defined as: *G(x) = x32+x26+x23+x22+x16+x12+x11+x10+x8+x7+x5+x4+x2+x+1* where, the hexadecimal representation of truncated G(x) is "0x04c11db7" and the CRC is the 1's complement of the sum (modulo 2) of the following: 1) the remainder of: xk (x31 + x30 + x29 + …+ x2 + x + 1) divided (modulo 2) by G(x), where k is the number of bits in the input data; and 2) the remainder after multiplication of the bit-flipped input data (treated as a polynomial) by x32 and then division by G(x). The CRC covers the generic MAC header and MAC PDU payload after its encryption.
Test strategy	
Notes	

TP ID	TP/SS/MAC/CRC/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.5.
PICS Item	PIC_MOB1.
Initial Condition	
Expected Behaviour	Check that: When generating signalling headers (i.e. PDUs with HT=1), the IUT does not protect the MAC header with a CRC.
Test strategy	
Notes	

TP ID	TP/SS/MAC/CRC/BV-H002 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.3 paragraph 1.
PICS Item	PIC_MOB1.
Initial Condition	
Expected Behaviour	Check that: When generating messages carried on the Initial Ranging, Broadcast, Fragmentable Broadcast, Basic, and Primary Management connections, the IUT enables CRC usage.
Test strategy	
Notes	For SCa, OFDM, and OFDMA PHY layers.

TP ID	TP/SS/MAC/CRC/BV-H003 {3}
P802.16 Reference	[3] Clause 11.13.12 [12] Clause 11.13.11.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. An UL service flow has been established with a Request/Transmission policy bit #6 set to excluding the CRC in MAC Data PDUs.
Expected Behaviour	Check that: When generating MAC PDUs for an UL service flow, the IUT does not include the CRC field in the MAC Data PDU for this service flow.
Test strategy	
Notes	May not be testable. The question is whether CRC can be obtained from the test tool hardware.

TP ID	TP/SS/MAC/CRC/BV-H004 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.1.1 paragraph 2 and 6.3.3.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating. CRC use is on.
Expected Behaviour	Check that: When generating a generic MAC header, the IUT includes a CRC defined as: $G(x) = x^{32}+x^{26}+x^{23}+x^{22}+x^{16}+x^{12}+x^{11}+x^{10}+x^{8}+x^{7}+x^{5}+x^{4}+x^{2}+x+1$ (where, the hexadecimal representation of truncated $G(x)$ is "0x04c11db7") and, the following procedure is applied: 1) First 32 bits are complemented, which is equivalent to setting the initial value of the CRC register as 0xFFFFFFFF. 2) The first bit of the first field (MSB of the first byte of the MAC header) corresponds to the xn-1 term and the last bit of the last field corresponds to the x0 term, where n is the number of bits in the input data sequence. 3) The resulting polynomial multiplied by x32 is divided by G(x). 4) The remainder bit sequence is complemented. 5) The 32 bits of the CRC value are placed in the CRC field so that the x31 term is the left-most bit of the first byte, and the x0 term is the right most bit of the last byte. 6) The resulting CRC field is sent MSB first (clause 6.3.3.1). The CRT covers the generic MAC header and MAC PDU payload after its encryption.
Test strategy	
Notes	

5.3.5 Automatic Repeat Request (ARQ)

TP ID	TP/SS/ARQ/BV-H000 {1} **W2
P802.16 Reference	[3] Clause 11.13.18.1 [12] Clause 11.13.17.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: When the IUT has accepted a BS-Initiated DSA transaction with the ARQ Enable field in the DSA-REQ set to ARQ Not Requested (0), the IUT does not implement ARQ for the service flow.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/BV-H001 {2} **W2
P802.16 Reference	[3] Clause 11.13.18.1 [12] Clause 11.13.17.1.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: When the IUT has accepted an SS-Initiated DSA transaction with the ARQ Enable field in the DSA-RSP set to ARQ Not Accepted (0), the IUT does not implement ARQ for the service flow.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/BV-H002 {2} **W2
P802.16 Reference	[3] Clause 11.13.18.1 [12] Clause 11.13.17.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the ARQ Enable field set to ARQ requested (1), the IUT transmits a DSA-RSP that: - either rejects the DSA-REQ; or - accepts the DSA-REQ and implements ARQ on the service flow.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/BV-H003
	Deleted (moved to RXD section as TP/SS/ARQ/RXD/BV-H011).

TP ID	TP/SS/ARQ/BV-H004 {1} **W2
P802.16 Reference	[3] Clause 11.13.18.2 [12] Clause 11.13.17.2.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is operational and has transmitted a DSA-REQ to enable ARQ with an ARQ_WINDOW_SIZE field.
Expected Behaviour	Check that: On receiving a DSA-RSP with an ARQ_WINDOW_SIZE value smaller than that in the DSA-REQ, the IUT uses the smaller of the two values.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/BV-H005 {4}
P802.16 Reference	[3] Clause 11.13.18.2 [12] Clause 11.13.17.2.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is operational and has transmitted a DSA-REQ to enable ARQ with an ARQ_WINDOW_SIZE field.
Expected Behaviour	Check that: On receiving a DSA-RSP with an ARQ_WINDOW_SIZE value larger than that in the DSA-REQ, the IUT uses the smaller of the two values.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/BV-H006 {1}**
P802.16 Reference	[3] Clause 11.13.18.8 [12] Clause 11.13.17.8.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: When the IUT receives a DSA-REQ with minimum and maximum values of ARQ_BLOCK_SIZE to setup an ARQ service flow, the IUT transmits a DSA-RSP with a selected value of ARQ_BLOCK_SIZE within the range in the DSA-REQ message. For a successful DSA transaction, the IUT uses the ARQ_BLOCK_SIZE value in the DSA-RSP.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/BV-H007 {2} **W2
P802.16 Reference	[3] Clause 11.13.18.8 [12] Clause 11.13.17.8.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: When the IUT receives a DSA-REQ to setup an ARQ service flow and the ARQ_BLOCK_SIZE is missing, the IUT transmits a DSA-RSP containing ARQ_BLOCK_SIZE less than or equal to the maximum value allowed for ARQ_BLOCK_SIZE. For a successful DSA transaction, the IUT uses the ARQ_BLOCK_SIZE value in the DSA-RSP.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TI-H000 {3}
P802.16 Reference	[3] Clause 11.13.18.3 [12] Clause 11.13.17.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational and has received a DSA-REQ with appropriate ARQ_RETRY_TIMEOUT parameters. The DSA transaction is successful.
Expected Behaviour	Check that: The IUT sets the ARQ_RETRY_TIMEOUT to the sum of ARQ transmitter's TRANSMITTER_DELAY and ARQ receiver's RECEIVER_DELAY.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TI-H001 {3}
P802.16 Reference	[3] Clause 11.13.18.4 [12] Clause 11.13.17.4.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational. A BS-Initiated DSA-REQ to setup an ARQ service flow contains ARQ_BLOCK_LIFETIME set to zero. The DSA transaction is successful.
Expected Behaviour	Check that: The IUT considers ARQ_BLOCK_LIFETIME as infinite.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TI-H002 {3}
P802.16 Reference	[3] Clause 11.13.18.5 [12] Clause 11.13.17.5.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational. A BS-Initiated DSA-REQ to setup an ARQ service flow contains ARQ_SYNC_LOSS_TIMEOUT set to zero. The DSA transaction is successful.
Expected Behaviour	Check that: The IUT considers ARQ_SYNC_LOSS_TIMEOUT as infinite.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TI-H003
	Deleted.

TP ID	TP/SS/ARQ/TI-H004 {3}
P802.16 Reference	[3] Clause 11.13.18.7 [12] Clause 11.13.17.7.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational. A BS-Initiated DSA-REQ to setup an ARQ service flow contains ARQ_RX_PURGE_TIMEOUT set to zero. The DSA transaction is successful.
Expected Behaviour	Check that: The IUT considers ARQ_RX_PURGE_TIMEOUT as infinite.
Test strategy	
Notes	

5.3.5.1 Receiver Operations (RXD)

TP ID	TP/SS/ARQ/RXD/BV-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.4 and 6.3.3.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled connection.
Expected Behaviour	Check that: On receiving ARQ data blocks, the IUT transmits ARQ feedback information: - either in an unfragmented ARQ Feedback standalone message; or - in the first piggy-backed packed PDU subheader where bit #4 in the Type field of the generic MAC header is set to 1 and the subheader FC bits are set to 00b.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a receiver on an ARQ-enabled connection.
Expected Behaviour	Check that: When the receiving data blocks with block BSN_n missing and block BSN_{n+1} is received, the IUT sends an ACK: - either cumulative (type 1) which ACK blocks up to BSN_{n-1}; or - cumulative with selective (type 2) which ACK blocks up to BSN_{n-1}, NACK BSN_n and selective ACKs later blocks if any; or - cumulative with block (type 3) which ACK blocks up to BSN_{n-1}, NACK BSN_n and block ACKs later blocks if any.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H002 {2} **\W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3 Figure "ARQ block reception".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a receiver on an ARQ-enabled connection.
Expected Behaviour	Check that: On receiving an ARQ data block that is in the ARQ window that has not been acknowledged, the IUT acknowledges the ARQ data block.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H003 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3 Figure "ARQ block reception".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a receiver on an ARQ-enabled connection. ARQ block BSN_n has been acknowledged.
Expected Behaviour	Check that: On receiving an ARQ data block BSN_n that is in the ARQ window and has already been acknowledged, the IUT again acknowledges the ARQ data block by: - either cumulative (type 1); or - cumulative with selective (type 2); or - cumulative with block (type 3).
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H004 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3 Figure "ARQ block reception".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a receiver on an ARQ-enabled connection.
Expected Behaviour	Check that: On receiving an ARQ data block that is not in the ARQ window, the IUT sends an acknowledgement of ACK/NACK status inside the window and discards the block.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H005 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.4.6.2 and 6.3.2.3.31.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a receiver on an ARQ-enabled connection and is receiving ARQ data blocks.
Expected Behaviour	Check that: On receiving an ARQ Discard message to skip all blocks up to the BSN value in the message, the IUT acknowledges skipping of all the blocks up to the BSN value in an ARQ Feedback IE.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H006 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.4.6.2 and 6.3.2.3.31.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a receiver on an ARQ-enabled connection and was receiving ARQ data blocks. It then received an ARQ Discard message to skip all blocks up to the BSN value in the message. The IUT acknowledged skipping of all the blocks up to the BSN value in an ARQ Feedback IE.
Expected Behaviour	Check that: On receiving ARQ data blocks starting at BSN+2, the IUT acknowledges the blocks starting with BSN+2 and NACKs the block BSN+1.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H007 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a receiver on an ARQ-enabled connection. ARQ_DELIVER_IN_ORDER is not enabled.
Expected Behaviour	Check that: On receiving an incomplete set of blocks for a MAC SDU followed by a complete set of blocks for another MAC SDU, the IUT passes to the convergence sublayer the complete SDU immediately upon receiving that SDU's last block.
Test strategy	Requires an Upper Tester.
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H008 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a receiver on an ARQ-enabled connection. ARQ_DELIVER_IN_ORDER is enabled.
Expected Behaviour	Check that: On receiving an incomplete set of blocks for a MAC SDU followed by a complete set of blocks for another MAC SDU, the IUT passes to the convergence sublayer the complete SDU only after the incomplete set of blocks have been purged after ARQ_RX_PURGE_TIMEOUT.
Test strategy	Requires an Upper Tester.
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H009
	Deleted.

TP ID	TP/SS/ARQ/RXD/BV-H010 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a receiver on an ARQ-enabled DL connection. The IUT has received a set of contiguous ARQ data blocks, then a gap in data blocks, then another set of contiguous ARQ data blocks.
Expected Behaviour	Check that: The IUT acknowledges the first contiguous set with a cumulative acknowledgement and acknowledges the second set with either a specific cumulative and block acknowledgement (type 3), a cumulative acknowledgement (type 1), or cumulative with selective acknowledgement (type 2). The acknowledgements are sent in the order of the ARQ block numbers as they were received.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H011 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.5.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection.
Expected Behaviour	Check that: The IUT uses CRC-32 for error detection in MAC PDUs on the connection.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H012 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection.
Expected Behaviour	Check that: On receiving ARQ blocks, the IUT does not fragment ARQ feedback messages.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RXD/BV-H013 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.3.
PICS item	PIC_MOB1.
Initial Condition	An ARQ connection is established and the IUT is the receiver on this connection. The IUT receives a stream of PDUs (containing ARQ blocks to BSN_n) where one PDU (containing ARQ block BSN_{n-k}) has a CRC-32 error.
Expected Behaviour	Check that: The IUT transmits no ACK for BSN_{n-k} and transmits ACK for the rest of the PDUs.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RXD/TI-H000
	Deleted.

TP ID	TP/SS/ARQ/RXD/TI-H001
	Deleted.

5.3.5.2 Transmitter Operations (TXD)

TP ID	TP/SS/ARQ/TXD/BV-H000 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4 Table "Type encodings".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: When the IUT receives ARQ feedback information either in an ARQ Feedback standalone message or in the ARQ Feedback Payload in the first subheader of a packed PDU, the IUT correctly processes the ARQ feedback information.
Test strategy	
Notes	Need means of making receiver generate feedback in both formats.

TP ID	TP/SS/ARQ/TXD/BV-H001 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.3.4.3.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is operational. An UL ARQ-enabled data flow is established.
Expected Behaviour	Check that: On receiving a fragmented and packed MAC PDU containing ARQ Feedback Payload, the IUT ignores the FSN/BSN in the Packing subheader and processes the ARQ Feedback Payload.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H002 {3}
P802.16 Reference	[3] and [12] Clause 6.3.3.4.3.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is operational. An ARQ connection is established and the IUT is the transmitter on this connection. An DL non-ARQ data flow is also established on the connection.
Expected Behaviour	Check that: On receiving a fragmented and packed MAC PDU on the non-ARQ connection containing ARQ Feedback Payload for ARQ-enabled connection, the IUT ignores the FSN/BSN in the Packing subheader and processes the ARQ Feedback Payload for the ARQ connection.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H003 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled UL connection. UL ARQ-enabled data is in process. Fragmentation is ON.
Expected Behaviour	Check that: The IUT fragments the SDU according to ARQ block boundaries.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H004 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.4.1 and 6.3.4.6.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled connection where ARQ_WINDOW_SIZE is ≤ ARQ_BSN_MODULUS/2. UL ARQ-enabled data is in process. Packing is OFF.
Expected Behaviour	Check that: The IUT transmits in non packed MAC PDUs ARQ blocks with contiguous BSNs normalized by the following: bsn' = (bsn - BSN_base) mod ARQ_BSN_MODULUS.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H005 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled connection. UL ARQ-enabled data is in process. Packing is ON.
Expected Behaviour	Check that: The IUT transmits in packed MAC PDUs the sequence of blocks immediately between the MAC subheaders and the sequence of blocks after the last packing subheader with contiguous sequence numbers.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H006 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.4.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled connection. UL ARQ-enabled data is in process. Packing or fragmentation is ON.
Expected Behaviour	Check that: When the PDU contains packing or fragmentation sub headers the IUT places into the subheader's BSN field the sequence number of the first ARQ block in the sequence of blocks following the subheader.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H007 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving a NACK in a cumulative with selective ACK map (type 2) for an ARQ block, the IUT retransmits the NACK block.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H007a {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving a NACK in a cumulative ACK (type 1) for an ARQ block, the IUT retransmits the NACK block.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H007b {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving a NACK in a cumulative ACK with block sequence map (type 3) for an ARQ block, the IUT retransmits the NACK block.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H008 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled UL connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving NACKs in a cumulative with Selective ACK map (type 2) for several ARQ blocks, the IUT first retransmits the NACK blocks.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H008a {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled UL connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving NACKs in a cumulative ACK (type 1) for several ARQ blocks, the IUT first retransmits the NACK blocks.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H008b {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled UL connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving NACKs in a cumulative ACK with Block Sequence ACK map (type 3) for several ARQ blocks, the IUT first retransmits the NACK blocks.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H009
	Deleted.

TP ID	TP/SS/ARQ/TXD/BV-H010 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled UL connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving a block ACK for an invalid BSN, the IUT ignores the block ACK.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H011 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving a cumulative ACK for a subset of transmitted blocks, the IUT does not retransmit any of the blocks in the cumulative ACK and retransmits the un-ACKed part of the set after ARQ_RETRY_TIMEOUT for those blocks.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H012 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving a cumulative with Selective ACK (type 2) with gaps (indicating a NACK for some of the blocks), the IUT does not retransmit any of the blocks selectively ACKd and retransmits the blocks not selectively ACKd.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H012a {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving a cumulative ACK (type 1), the IUT does not retransmit any of the blocks with BSN number equal or less than the specified BSN value in the ARQ Feedback IE.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H012b {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving a cumulative ACK with Block Sequence ACK map (type 3) with gaps (indicating a NACK for some of the blocks), the IUT does not retransmit any of the blocks with BSN less or equal to the cumulative ACK value or any of the blocks contained in the ACK Block Sequences but retransmits only blocks not ACKd.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/BV-H013
	Deleted.

TP ID	TP/SS/ARQ/TXD/BV-H014 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled UL connection. UL ARQ-enabled data is in process.
Expected Behaviour	Check that: On receiving an ACK for all blocks up to BSN=k except for block BSN=i where i<k, the IUT retransmits block BSN=i and additional blocks whose BSN > k.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/TI-H000
	Deleted.

TP ID	TP/SS/ARQ/TXD/TI-H001 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled UL connection. UL ARQ-enabled data is in process. The IUT has retransmitted block BSN=n after ARQ_RETRY_TIMEOUT expiry and restarted ARQ_RETRY_TIMEOUT.
Expected Behaviour	Check that: On the next expiry of ARQ_RETRY_TIMEOUT without receiving an ACK or NACK for block BSN=n, the IUT retransmits block BSN=n.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/TI-H002 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.4.3.4 and 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled UL connection. UL ARQ-enabled data is in process. The IUT has transmitted block BSN=n and started ARQ_BLOCK_LIFETIME.
Expected Behaviour	Check that: On expiry of ARQ_BLOCK_LIFETIME without receiving an ACK or NACK for block BSN=n and later, the IUT transmits an ARQ Discard message at a time between ARQ_BLOCK_LIFETIME expiry and ARQ_RX_PURGE_TIMEOUT + ARQ_RETRY_TIMEOUT expiry.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/TXD/TI-H003
	Deleted.

TP ID	TP/SS/ARQ/TXD/TI-H004 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is a transmitter on an ARQ-enabled UL connection. UL ARQ-enabled data is in process. The IUT has transmitted block BSN=n. No ACK or NACK for the block BSN=n has been received. The IUT has transmitted an ARQ Discard and started ARQ_RETRY_TIMEOUT.
Expected Behaviour	Check that: Each time ARQ_RETRY_TIMEOUT expires without receiving an ACK for the discarded block BSN=n, the IUT retransmits the ARQ Discard and restarts ARQ_RETRY_TIMEOUT until receiving an ACK for the discarded BSN.
Test strategy	
Notes	

5.3.5.3 Reset (RE)

TP ID	TP/SS/ARQ/RE/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – transmitter initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled DL service flow.
Expected Behaviour	Check that: On receiving an ARQ Reset(Request, type 0x0), the IUT resets ARQ_RX_WINDOW_START to zero and transmits ARQ Reset(Responder Ack, type 0x1).
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RE/BV-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – transmitter initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled DL service flow. A transmitter-initiated ARQ Reset transaction is successful.
Expected Behaviour	Check that: On receiving new ARQ blocks starting with BSN = zero, the IUT acknowledges receiving the ARQ blocks.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RE/BV-H002 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – receiver initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled UL service flow. ARQ data blocks are being transferred.
Expected Behaviour	Check that: On receiving an ARQ Reset(Request, type 0x0), the IUT stops transmitting ARQ data blocks and transmits an ARQ Reset(Responder Ack, type 0x1).
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RE/BV-H003 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – receiver initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled UL service flow. The IUT has received an ARQ Reset(Request, type 0x0), transmitted an ARQ Reset(Responder Ack, type 0x1), and stopped transmitting ARQ data blocks.
Expected Behaviour	Check that: On receiving a valid ARQ Reset(Confirmation, type 0x02), the IUT begins transmitting ARQ data blocks with the first block having BSN=0.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RE/BV-H004 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – receiver initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled DL service flow. The IUT has started ARQ_SYNC_LOSS_TIMEOUT for block BSN_{n+1}. On expiry of ARQ_SYNC_LOSS_TIMEOUT for block BSN_{n+1} without having received this block, the IUT transmitted an ARQ Reset (Request, type 0x0).
Expected Behaviour	Check that: On receiving an ARQ Reset(Responder Ack, type 0x1), the IUT transmits an ARQ Reset(Confirmation, type 0x02).
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RE/BV-H005 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – receiver initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled DL service flow that has just been reset with a complete ARQ Reset transaction.
Expected Behaviour	Check that: On receiving ARQ data blocks starting with BSN = zero, the IUT acknowledges these data blocks.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RE/TI-H000 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – transmitter initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled UL service flow and transmitting blocks. It has started ARQ_SYNC_LOSS_TIMEOUT for BSN_{n+1}.
Expected Behaviour	Check that: After repeated transmissions of the block BSN_{n+1} and after expiry of ARQ_SYNC_LOSS_TIMEOUT without receiving an ACK for block BSN_{n+1}, the IUT sends an ARQ Reset(Request, type 0x0) and stops transmitting data on the connection.
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RE/TI-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – transmitter initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled UL service flow. It has transmitted an ARQ Reset(Request, type 0x0) and stopped transmitting data on the connection.
Expected Behaviour	Check that: On receiving an ARQ Reset(Responder Ack, type 0x1), the IUT resumes transmitting ARQ blocks with the first BSN set to zero.
Test strategy	A means of providing upper layer data to the IUTs ARQ layer after reset may be required in order for the IUT to resume transmitting ARQ blocks.
Notes	ARQ_WINDOW_START=0 implies that BSN=0.

TP ID	TP/SS/ARQ/RE/TI-H002 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – transmitter initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled UL service flow. It has transmitted an ARQ Reset(Request, type 0x0), stopped transmitting data on the connection, and started T22.
Expected Behaviour	Check that: On expiry of T22 without receiving an ARQ Reset(type 0x1 or 0x2), the IUT retransmits the ARQ Reset(Request, type 0x0).
Test strategy	
Notes	Data transmission is already stopped at the time of expected behaviour.

TP ID	TP/SS/ARQ/RE/TI-H003
	Deleted.

TP ID	TP/SS/ARQ/RE/TI-H004 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – receiver initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled UL service flow. The IUT has received an ARQ Reset(Request, type 0x0), transmitted an ARQ Reset(Responder Ack, type 0x1), stopped transmitting ARQ data blocks, and started T22.
Expected Behaviour	Check that: On expiry of T22 without having received an ARQ Reset(Confirmation, type 0x02), the IUT retransmits the ARQ Reset(Responder Ack, type 0x1).
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RE/TI-H005
	Deleted.

TP ID	TP/SS/ARQ/RE/TI-H006 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – receiver initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled DL service flow. The IUT has started ARQ_SYNC_LOSS_TIMEOUT for block $BSN_{n+1.}$
Expected Behaviour	Check that: On expiry of ARQ_SYNC_LOSS_TIMEOUT for block BSN_{n+1} without receiving this block, the IUT transmits an ARQ Reset (Request, type 0x0).
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RE/TI-H007 {3}
P802.16 Reference	[3] and [12] Clause 6.3.4.6.2 Figure "ARQ Reset message dialog – receiver initiated".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating on an ARQ-enabled DL service flow and has just transmitted an ARQ Reset(Request, type 0x0) and started T22.
Expected Behaviour	Check that: On expiry of T22 without having received an ARQ Reset(Responder Ack, type 0x1), the IUT retransmits the ARQ Reset(Request, type 0x0).
Test strategy	
Notes	

TP ID	TP/SS/ARQ/RE/TI-H008
	Deleted.

5.3.6 Radio Link Control (RLC)

5.3.6.1 Initial Ranging (IRNG)

TP ID	TP/SS/RLC/IRNG/BV-H000
P802.16 Reference	[3] and [12] Clauses 6.3.9.5.1 and 6.3.8.
PICS Item	
Initial Condition	The IUT is synchronized and UL and DL parameters are established.
Expected Behaviour	Check that: The IUT transmits a RNG-REQ with CID=0 in the nth Transmission Opportunity where n is a random value in the range $0 < n < (2^m - 1)$. 'm' is the value in the latest UCD message's Ranging Backoff Start field.
Test strategy	1) The TE transmits valid DCD, DL-MAP, and UCD during sufficient time to allow the IUT to become synchronized and to establish UL and DL parameters. The TE also transmits UL-MAP messages that do not contain Initial Ranging Intervals. 2) The TE then transmits UL-MAPs containing Initial Ranging Intervals. 3) A PASS verdict is assigned if the IUT transmits a valid RNG-REQ with CID=0 in one of the UL-MAP's Initial Ranging Intervals with backoff.
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.9.5.
PICS Item	
Initial Condition	The IUT has started Initial Ranging and has transmitted the first RNG-REQ message on the Initial Ranging CID (zero).
Expected Behaviour	Check that: On receiving a RNG-RSP message with timing and power corrections and the Status field set to Continue, the IUT applies the power and timing corrections and transmits a RNG-REQ using the Basic CID in the RNG-RSP message in an invited Initial Ranging Interval.
Test strategy	Straightforward.
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.9.5.1.
PICS Item	
Initial Condition	The IUT is in Initial Ranging and has just transmitted a RNG-REQ message.
Expected Behaviour	Check that: On receiving a RNG-RSP message containing Status = Continue and timing adjustments, the IUT incorporates the timing adjustments to transmit a RNG-REQ message.
Test strategy	Straightforward.
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H003
P802.16 Reference	[3] and [12] Clause 6.3.9.5.1 paragraph 10.
PICS Item	
Initial Condition	IUT is in Initial Ranging.
Expected Behaviour	Check that: On receiving a RNG-RSP on its Basic CID with Status = Continue requiring a frequency adjustment, the IUT transmits at the adjusted frequency a valid RNG-REQ message.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H004
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.5-6 and 6.3.9.5 Table "RNG-RSP Message Encodings" Figure: "Initial Ranging – SS (Part 2)".
PICS Item	
Initial Condition	IUT is Initializing and has finished the contention part of Initial Ranging.
Expected Behaviour	Check that: Each time on receiving a RNG-RSP containing a Ranging Status set to continue (1) and Contention Ranging Retries is not exhausted, the IUT sends a RNG-REQ containing the Basic CID in its MAC header until it receives a RNG-RSP containing a Ranging Status set to success (3).
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H005
P802.16 Reference	[3] and [12] Clause 8.3.7.2 paragraph 8 Figure: "Subchannelized Initial Ranging – SS (Parts 1a and 1b)".
PICS Item	
Initial Condition	IUT supports subchannelization and is initialization. IUT has attempted to use the maximum power level without success. IUT has then sent a Subchannelization Ranging Signal on a subchannel.
Expected Behaviour	Check that: On receiving a UL-MAP with a Subchannelized Network_Entry_IE for the Initial Ranging CID (= zero), the IUT sends a subchannelized RNG-REQ at maximum power.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H006
P802.16 Reference	[3] and [12] Clause 6.3.9.6 Figure "Initial Ranging-SS (part 2)".
PICS Item	
Initial Condition	The IUT is in Initial Ranging and has just transmitted at maximum power a RNG-REQ message.
Expected Behaviour	Check that: On receiving a RNG-RSP message containing Status = Continue and an increase in power, the IUT transmits a RNG-REQ in the next grant (UIUC=1) on its Basic CID with Ranging Anomalies set to "SS already at maximum power".
Test strategy	Straightforward.
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H007
P802.16 Reference	[3] and [12] Clause 6.3.9.6 Figure "Initial Ranging-SS (part 2)".
PICS Item	
Initial Condition	The IUT is in Initial Ranging and has just transmitted at minimum power a RNG-REQ message.
Expected Behaviour	Check that: On receiving a RNG-RSP message containing Status = Continue and a decrease in power, the IUT transmits a RNG-REQ in the next grant (UIUC=1) on its Basic CID with Ranging Anomalies set to "SS already at minimum power".
Test strategy	Straightforward.
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H008
P802.16 Reference	[3] and [12] Clause 6.3.9.6 Figure "Initial Ranging-SS (part 2)".
PICS Item	
Initial Condition	The IUT is in Initial Ranging and has just transmitted RNG-REQ message.
Expected Behaviour	Check that: On receiving a RNG-RSP message containing Status = Continue with timing adjustments whose sum is too large, the IUT transmits a RNG-REQ in the next grant (UIUC=1) on its Basic CID with Ranging Anomalies set to "Sum of commanded timing adjustments is too large".
Test strategy	Straightforward.
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H009
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.5-6, 6.3.9.5 Figure: "Initial Ranging – SS (Part 2)", and 11.6.
PICS Item	
Initial Condition	For License-exempt operation. The IUT is in Initial Ranging.
Expected Behaviour	Check that: On receiving a RNG-RSP containing an Uplink Channel ID Override TLV, the IUT moves to the designated channel and sends a RNG-REQ with Initial Ranging CID.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H010 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.5 Figure:" Initial Ranging – SS (Part 2)" and 6.3.10.3.1 Figure "CDMA Initial Ranging – SS (Part 2)".
PICS Item	PIC_MOB1.
Initial Condition	IUT is in Initial Ranging.
Expected Behaviour	Check that: On receiving a RNG-RSP with Status = Abort and containing a DL Frequency Override TLV, the IUT moves to the frequency given in the DL Frequency Override TLV and scans for a valid DL-MAP.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H011 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.5.1 Figure "Initial Ranging-SS (part 2)" and 6.3.10.3.1 Figure "CDMA Initial Ranging – SS (Part 2)".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is in Initial Ranging.
Expected Behaviour	Check that: On receiving a RNG-RSP message with Status = Abort and not containing a DL Frequency Override TLV, the IUT scans for DL channel.
Test strategy	1) Straightforward up to the SS receiving the RNG-RSP message with the criteria in the Test Purpose. 2) Begin receiving DL-MAPs, DCDs, UL-MAPs, and UCDs on the new DL channel. 3) Assign a PASS if the IUT transmits an Initial Ranging Code on the UL channel used in (2).
Notes	This TP also applies for an unsolicited RNG-RSP outside of initial Ranging. It should be also copied to PRNG parts.

TP ID	TP/SS/RLC/IRNG/BV-H012
P802.16 Reference	[3] and [12] Clause 11.1.3.
PICS Item	
Initial Condition	The IUT conforms to only the current versions of IEEE P802.16. It is initializing and transmitted a RNG-REQ containing the current MAC version value. The IUT has received a RNG-RSP indicating a prior MAC version value.
Expected Behaviour	Check that: IUT disables any attempt for uplink transmission.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H013
P802.16 Reference	[3] and [12] Clause 11.1.3.
PICS Item	
Initial Condition	The IUT conforms to past and current versions of IEEE P802.16. It is initializing and transmitted a RNG-REQ containing the current MAC version value. The IUT has received a RNG-RSP indicating a prior MAC version value.
Expected Behaviour	Check that: IUT continues operation in conformance with the prior MAC version.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H014
P802.16 Reference	[3] and [12] Clause 6.3.9.5.1 paragraph 8 Table "Ranging and automatic adjustments procedure (continued)".
PICS Item	
Initial Condition	The IUT has started Initial Ranging and has transmitted the first RNG-REQ message on the Initial Ranging CID (zero).
Expected Behaviour	Check that: On receiving a RNG-RSP message on the Initial Ranging CID (zero) with transmission parameters, the Frame Number, and the Initial Ranging Opportunity Number, the IUT adjusts transmission parameters and transmits another RNG-REQ on the Initial Ranging CID in the next transmission opportunity.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H015 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.9.5.1 and 6.3.10.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is synchronized and UL and DL parameters are established.
Expected Behaviour	Check that: The IUT transmits a CDMA code with Ranging Code chosen from the Initial Ranging Domain.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H016 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.9.5.1 and 6.3.10.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has started Initial Ranging and has transmitted Initial ranging code chosen from initial ranging domain (Defined in UCD). Initial ranging code is sent in initial ranging region (Defined in UL-MAP or UCD message).
Expected Behaviour	Check that: On receiving a RNG-RSP message with matching Ranging Code and Ranging Slot, with power corrections, and the Status field set to Continue, the IUT applies the power corrections and transmits another initial CDMA ranging code with Ranging Code chosen from the Initial Ranging Domain in the relevant UCD message. The new initial ranging code shall be transmitted on periodic ranging region.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H017 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.9.5.1 and 6.3.10.3.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is in Initial Ranging and has transmitted initial ranging code chosen from initial ranging domain (Defined in UCD). Initial ranging code is sent in initial ranging region (Defined in UL-MAP or UCD message).
Expected Behaviour	Check that: On receiving a RNG-RSP message containing Status = Continue and timing adjustments, the IUT applies the timing adjustments and transmits another initial CDMA ranging code with Ranging Code chosen from the Initial Ranging Domain in the last received UCD message. The new initial ranging code shall be transmitted on periodic ranging region.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H018 {3}
P802.16 Reference	[3] and [12] Clause 6.3.10.3.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in Initial Ranging and has transmitted initial ranging code chosen from initial ranging domain (Defined in UCD). Initial ranging code is sent in initial ranging region (Defined in UL-MAP or UCD message).
Expected Behaviour	Check that: On receiving a RNG-RSP on the initial ranging CID with Status = Continue requiring a frequency adjustment, the IUT transmits at the adjusted frequency an Initial Ranging CDMA code chosen from the Initial Ranging Domain in the UCD message with Configuration Change Count (i.e. CCC) matching the CCC in UL-MAP message. The new Initial Ranging CDMA code shall be transmitted on periodic ranging region.
Test strategy	
Notes	Normally, the BS will not send RNG-RSP message with Ranging Status = Continue since SS itself can adjust frequency more accurately than that of BS.

TP ID	TP/SS/RLC/IRNG/BV-H019 {1} **
P802.16 Reference	[3] and [12] Clause 6.3.10.3.1, Figure: "CDMA Initial Ranging – SS (Part 2)".
PICS Item	PIC_MOB1.
Initial Condition	IUT is Initializing and has finished the contention part of Initial Ranging.
Expected Behaviour	Check that: Each time on receiving a RNG-RSP containing a Ranging Status = Continue, the IUT waits until proper Periodic Ranging Region to send another CDMA Ranging code with proper adjustment.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H019a {1} **
P802.16 Reference	[3] and [12] Clause 6.3.10.3.1, Figure: "CDMA Initial Ranging – SS (Part 2)".
PICS Item	PIC_MOB1.
Initial Condition	IUT is Initializing and has finished the contention part of Initial Ranging.
Expected Behaviour	Check that: On receiving a RNG-RSP containing a Ranging Status = Success, the IUT does not transmit Initial Ranging codes until the timer T3 expires.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H020
	Deleted.

TP ID	TP/SS/RLC/IRNG/BV-H021
	Deleted.

TP ID	TP/SS/RLC/IRNG/BV-H022
	Deleted.

TP ID	TP/SS/RLC/IRNG/BV-H023
P802.16 Reference	[3] and [12] Clause 6.3.2.3.6, 6.3.9.5, and 11.6.
PICS Item	
Initial Condition	For License-exempt operation. The IUT is in Initial Ranging.
Expected Behaviour	Check that: On receiving a RNG-RSP containing an Uplink Channel ID Override TLV, the IUT moves to the designated channel and sends a new Ranging Code from the initial Ranging domain.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/BV-H024
	Deleted.

TP ID	TP/SS/RLC/IRNG/BV-H025 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.8, 6.3.9.5.1, 6.3.10, and 8.4.7.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has started Initial Ranging and transmitted an initial Ranging Code.
Expected Behaviour	Check that: The IUT decodes a CDMA Allocation IE and sends a valid RNG-REQ on Ranging CID=0 in the designated UL allocation with: - MS MAC Address TLV; - MAC Version TLV.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/TI-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.3 Figure: Obtaining Uplink Parameters, 6.3.9.5.1 Figure: "Initial Ranging – SS (Part 1)", and 6.3.10.3.1 Figure: "CDMA Initial Ranging – SS (Part 1)".
PICS Item	PIC_MOB1.
Initial Condition	IUT has found a valid DL channel, obtained UL parameters, started T2, and is waiting for a contention ranging opportunity.
Expected Behaviour	Check that: On T2 expiry without receiving a contention ranging opportunity, the IUT scans for valid downlink channel.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/TI-H001
P802.16 Reference	[3] and [12] Clauses 6.3.9.5.1, paragraph 7 Figure: "Initial Ranging – SS (Part 2)" and 6.3.8,paragraph 7.
PICS Item	
Initial Condition	IUT has begun initialization and sent the first contention RNG-REQ (CID = ZERO) with backoff.
Expected Behaviour	Check that: On not receiving a valid RNG-RSP, the IUT transmits another contention RNG-REQ in a backoff window whose Start and End values are 2 times greater than the first backoff window.
Test strategy	
Notes	The TE should ensure that the 2nd backoff window's end value will be less than the maximum backoff window end value.

TP ID	TP/SS/RLC/IRNG/TI-H002
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.5-6, 6.3.9.5, and 6.3.8 Table "Parameters and Constants", Contention Ranging Retries.
PICS Item	
Initial Condition	IUT is has begun contention Initial Ranging and is receiving Initial Contention ranging slots. The IUT has sent a RNG-REQ (CID = zero) with backoff and started T3.
Expected Behaviour	Check that: Each time T3 expires and a RNG-RSP is not received, the IUT sends a RNG-REQ message (CID = zero) in a backoff window twice as large as the previous window or maximum backoff window (whichever is smaller) and re-started T3 until Contention Request Retries is exhausted.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/TI-H003 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.5.1 Figure: "Initial Ranging – SS (Part 2)" and 6.3.10.3.1 Figure: "CDMA Initial Ranging – SS (Part 2)".
PICS Item	PIC_MOB1.
Initial Condition	IUT has begun Initialization, sent Initial Ranging Code for Contention Ranging Retries times to which there has been no response and started T3.
Expected Behaviour	Check that: When T3 expires, the IUT scans for a valid DL channel.
Test strategy	
Notes	

TP ID	TP/SS/RLC/IRNG/TI-H004
P802.16 Reference	[3] and [12] Clauses 6.3.9.5.1 paragraph 7, 6.3.10.3.1 Figure: "CDMA Initial Ranging – SS (Part 2)", and 6.3.8 paragraph 7.
PICS Item	
Initial Condition	IUT has begun initialization and sent the first contention Ranging Code.
Expected Behaviour	Check that: When T3 expires due to not receiving a valid RNG-RSP, the IUT transmits another contention Ranging Code in a backoff window whose Start and End values are 2 times greater than the first backoff window.
Test strategy	
Notes	The TE should ensure that the 2nd backoff window's end value will be less than the maximum backoff window end value.

TP ID	TP/SS/RLC/IRNG/TI-H005 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.5, 6.3.9.5, 6.3.8, and 6.3.10.3.1 Table "Parameters and Constants", Contention Ranging Retries.
PICS Item	PIC_MOB1.
Initial Condition	IUT is has begun contention Initial Ranging and is receiving Initial Contention ranging slots. The IUT has sent a Ranging Code and started T3.
Expected Behaviour	Check that: Each time T3 expires and a RNG-RSP is not received, the IUT sends a Ranging Code in a backoff window twice as large as the previous window or maximum backoff window (whichever is smaller) and re-starts T3 as long as Contention Request Retries is not exhausted.
Test strategy	
Notes	The TE should ensure that the 2nd backoff window's end value will be less than the maximum backoff window end value.

5.3.6.2 Periodic Ranging (PRNG)

TP ID	TP/SS/RLC/PRNG/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established with data being sent. The IUT has transmitted a MAC DATA PDU.
Expected Behaviour	Check that: On receiving a RNG-RSP message to adjust power with Status = Continue that does not cause Ranging Anomalies followed by a Data grant, the IUT implements the RNG-RSP's power correction, stops sending data, and transmits a short preamble with: - either a RNG-REQ without anomalies*; or - a padding PDU; or - stuff bytes.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established with data being sent.
Expected Behaviour	Check that: On receiving a RNG-RSP message to change the timing advance with Status = Continue that does not cause Ranging Anomalies followed by a Data grant, the IUT implements the RNG-RSP's timing adjustments, stops sending data, and transmits a short preamble with: - either a RNG-REQ without anomalies*; or - a padding PDU; or - stuff bytes.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established with data being sent.
Expected Behaviour	Check that: On receiving a RNG-RSP message to adjust power with Status = Continue that does not cause Ranging Anomalies followed by an Invited Ranging opportunity, the IUT implements the RNG-RSP's corrections, stops sending data, and transmits a long preamble with: - either a RNG-REQ without anomalies*; or - a padding PDU; or - stuff bytes.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H003
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established with data being sent.
Expected Behaviour	Check that: On receiving a RNG-RSP message to change the timing advance with Status = Continue that does not cause Ranging Anomalies followed by an Invited Ranging opportunity, the IUT implements the RNG-RSP's timing adjustments, stops sending data, and transmits a long preamble with: - either a RNG-REQ without anomalies*; or - a padding PDU; or - stuff bytes.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. An uplink data flow is established. There is no UL data pending transfer or being transferred.
Expected Behaviour	Check that: On receiving a RNG-RSP with Status = Success that does not cause Ranging Anomalies followed by a Data grant, the IUT implements the RNG-RSP's corrections and transmits a short preamble with: - either a RNG-REQ without anomalies*; or - a padding PDU; or - stuff bytes.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H005
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established. There is no UL data pending transfer or being transferred.
Expected Behaviour	Check that: On receiving an FPC that does not cause Ranging Anomalies followed by a Data grant, the IUT implements the FPC's corrections and transmits a short preamble with: - either a RNG-REQ without anomalies*; or - a padding PDU; or - stuff bytes.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H006
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established. There is no UL data pending transfer or being transferred.
Expected Behaviour	Check that: On receiving a Power Control IE that does not cause Ranging Anomalies followed by a Data grant, the IUT implements the Power Control IE's corrections and transmits a short preamble with: - either a RNG-REQ without anomalies*; or - a padding PDU; or - stuff bytes.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H007
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established. UL data is being transferred.
Expected Behaviour	Check that: On receiving a RNG-RSP with Status = Success followed by a Data grant, the IUT: - either continues transmitting data in the UL allocation; or - transmits a RNG-REQ without anomalies in the Data grant*; or - transmits data and a RNG-REQ without anomalies using the Data grant.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H008
P802.16 Reference	[3] and [12] Clauses 6.3.10.2 and 6.3.2.3.34.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established. UL data is being transferred.
Expected Behaviour	Check that: On receiving an FPC that does not cause Ranging Anomalies followed by a Data grant, the IUT implements the FPC's corrections and: - either continues transmitting data in the Data grant; or - transmits a RNG-REQ without anomalies in the Data grant*; or - transmits data and a RNG-REQ without anomalies in the Data grant.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H008a {4}
P802.16 Reference	[3] and [12] Clauses 6.3.10.2 and 6.3.2.3.34.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. An UL data flow is established. UL data is being transferred.
Expected Behaviour	Check that: On receiving an FPC message, the IUT implements the FPC's corrections.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H009
P802.16 Reference	[3] and [12] Clauses 6.3.10.2, 8.1.5.1.2.2, 8.2.1.9.3.2, 8.3.6.3.5, and 8.4.5.4.5.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established. UL data is being transferred.
Expected Behaviour	Check that: On receiving a UL-MAP Power Control IE that does not cause Ranging Anomalies followed by a Data grant, the IUT implements the Power Control IE's corrections and: - either continues transmitting data in the Data grant; or - transmits a RNG-REQ without anomalies in the Data grant*; or - transmits data and a RNG-REQ without anomalies in the Data grant.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H009a {3}
P802.16 Reference	[3] and [12] Clauses 6.3.10.2, 8.1.5.1.2.2, 8.2.1.9.3.2, 8.3.6.3.5, and 8.4.5.4.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. An UL data flow is established. UL data is being transferred.
Expected Behaviour	Check that: On receiving a UL-MAP Power Control IE, the IUT implements the Power Control IE's corrections.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H010
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established. UL data is being transferred.
Expected Behaviour	Check that: On receiving a RNG-RSP with Status = Success followed by an Invited Ranging Opportunity, the IUT transmits: - either a padding PDU; or - stuff bytes; or - a RNG-REQ without anomalies.*
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H011
P802.16 Reference	[3] and [12] Clauses 6.3.10.2 and 6.3.2.3.34.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established. UL data is being transferred.
Expected Behaviour	Check that: On receiving an FPC that does not cause Ranging Anomalies followed by an Invited Ranging Opportunity, the IUT implements the FPC's corrections and transmits: - either a padding PDU; or - stuff bytes; or - a RNG-REQ without anomalies.*
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H012
P802.16 Reference	[3] and [12] Clauses 6.3.10.2, 8.1.5.1.2.2, 8.2.1.9.3.2, 8.3.6.3.5, and 8.4.5.4.5.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established. UL data is being transferred.
Expected Behaviour	Check that: On receiving a UL-MAP Power Control IE that does not cause Ranging Anomalies followed by an Invited Ranging Opportunity, the IUT implements the Power Control IE's corrections and transmits: - either a padding PDU; or - stuff bytes; or - a RNG-REQ without anomalies.*
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H013
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near maximum power.
Expected Behaviour	Check that: On receiving a RNG-RSP message with Status = Continue or success to increase power above the IUT's maximum power followed by a Data grant, the IUT stops transmitting data, adjusts transmission power to the maximum if required, and sends a RNG-REQ with Ranging Anomalies = "SS already at maximum power" in the Data grant.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H014
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near minimum power.
Expected Behaviour	Check that: On receiving a RNG-RSP message with Status = Continue or success to decrease power below the IUT's minimum power followed by a Data grant, the IUT stops transmitting data, adjusts transmission power to the minimum if required, and sends a RNG-REQ with Ranging Anomalies = "SS already at minimum power" in the Data grant.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H015
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near maximum power.
Expected Behaviour	Check that: On receiving a RNG-RSP message with Status = Continue to increase power above the IUT's maximum power followed by an Invited Ranging opportunity (UIUC=1), the IUT stops transmitting data, adjusts transmission power to maximum if required, and sends a RNG-REQ with Ranging Anomalies = "SS already at maximum power" in the Invited Ranging opportunity.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H016
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near minimum power.
Expected Behaviour	Check that: On receiving a RNG-RSP message with Status = Continue to decrease power the IUT's minimum power followed by an Invited Ranging opportunity (UIUC=1), the IUT stops transmitting data, adjusts transmission power to minimum if required, and sends a RNG-REQ with Ranging Anomalies = "SS already at minimum power" in the Invited Ranging opportunity.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H017 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving a RNG-RSP containing the Ranging Status set to Abort, the IUT re-initializes its MAC layer and restarts its MAC operations.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H018
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT was transmitting data at or near maximum power, received an RNG-RSP message with Status = Continue to increase power above the IUT's maximum power, stopped transmitting data, and sent a RNG-REQ with Ranging Anomalies = "SS already at maximum power".
Expected Behaviour	Check that: On receiving Data grants, the IUT transmits in the Data grants at maximum power: - either a padding PDU; or - stuff bytes; or - a RNG-REQ without anomalies.*
Test strategy	
Notes	IUT does not send a RNG-REQ with anomalies nor does it send data. *It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H019
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT was transmitting data at or near minimum power, received an RNG-RSP message with Status = Continue to decrease power below the IUT's minimum power, stopped transmitting data, and sent a RNG-REQ with Ranging Anomalies = "SS already at minimum power".
Expected Behaviour	Check that: On receiving Data grants, the IUT transmits in the Data grants at minimum power: - either a padding PDU; or - stuff bytes; or - a RNG-REQ without anomalies.*
Test strategy	
Notes	IUT does not send a RNG-REQ with anomalies nor does it send data. *It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H020
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT was transmitting data at or near maximum power, received an RNG-RSP message with Status = Continue to increase power above the IUT's maximum power, stopped transmitting data, and sent a RNG-REQ with Ranging Anomalies = "SS already at maximum power".
Expected Behaviour	Check that: On receiving an Invited Ranging Opportunity, the IUT transmits in the Opportunity at maximum power: - either a padding PDU; or - stuff bytes; or - a RNG-REQ without anomalies.*
Test strategy	
Notes	IUT does not send a RNG-REQ with anomalies nor does it send data. *It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H021
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT was transmitting data at or near minimum power, received an RNG-RSP message with Status = Continue to decrease power below the IUT's minimum power, stopped transmitting data, and sent a RNG-REQ with Ranging Anomalies = "SS already at minimum power".
Expected Behaviour	Check that: On receiving an Invited Ranging Opportunity, the IUT transmits in the Opportunity at minimum power: - either a padding PDU; or - stuff bytes; or - a RNG-REQ without anomalies.*
Test strategy	
Notes	IUT does not send a RNG-REQ with anomalies nor does it send data. *It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H022
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near maximum power.
Expected Behaviour	Check that: On receiving a RNG-RSP message with Status = Success to increase power above the IUT's maximum power followed by a Data grant, the IUT adjusts to maximum power if required and sends: - either a RNG-REQ with Ranging Anomalies = "SS already at maximum power" in the Data grant;* or - a RNG-REQ with Ranging Anomalies = "SS already at maximum power" and a DATA PDU in the Data grant.
Test strategy	
Notes	The IUT continues transmitting data using subsequent Data grants. *It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H023
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established with no data pending transfer or being transferred. IUT is transmitting at or near maximum power.
Expected Behaviour	Check that: On receiving a RNG-RSP message with Status = Success to increase power above the IUT's maximum power followed by a Data grant, the IUT adjusts to maximum power if required and transmits a RNG-REQ with Ranging Anomalies = "SS already at maximum power" in the grant.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H024
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near minimum power.
Expected Behaviour	Check that: On receiving a RNG-RSP message with Status = Success to decrease power below the IUT's minimum power followed by a Data grant, the IUT adjusts to minimum power if required and sends: - either a RNG-REQ with Ranging Anomalies = "SS already at minimum power" in the Data grant;* or - a RNG-REQ with Ranging Anomalies = "SS already at minimum power" and a DATA PDU in the Data grant.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H025
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established with no data pending transfer or being transferred. IUT is transmitting at or near minimum power.
Expected Behaviour	Check that: On receiving a RNG-RSP message with Status = Success to decrease power below the IUT's minimum power followed by a Data grant, the IUT adjusts to minimum power if required and transmits a RNG-REQ with Ranging Anomalies = "SS already at minimum power" in the grant.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H026
P802.16 Reference	[3] and [12] Clause 6.3.10.2
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near maximum power.
Expected Behaviour	Check that: On receiving a RNG-RSP message with Status = Success to increase power above the IUT's maximum power followed by an Invited Ranging Opportunity, the IUT adjusts to maximum power if required and transmits a RNG-REQ with Ranging Anomalies = "SS already at maximum power" in the Opportunity.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H027
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near minimum power.
Expected Behaviour	Check that: On receiving a RNG-RSP message with Status = Success to decrease power below the IUT's minimum power followed by an Invited Ranging Opportunity, the IUT adjusts to minimum power if required and transmits a RNG-REQ with Ranging Anomalies = "SS already at minimum power" in the Opportunity.
Test strategy	
Notes	The IUT continues transmitting Data PDUs using the Data grants.

TP ID	TP/SS/RLC/PRNG/BV-H028 {3}
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near maximum power.
Expected Behaviour	Check that: On receiving an FPC message to increase power above the IUT's maximum power followed by a Data grant, the IUT adjusts to maximum power if required and sends: - either a RNG-REQ with Ranging Anomalies = "SS already at maximum power" in the Data grant;* or - a RNG-REQ with Ranging Anomalies = "SS already at maximum power" and a DATA PDU in the Data grant.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H029 {3}
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. The UL data flow is established with no data pending transfer or being transferred. IUT is transmitting at or near maximum power.
Expected Behaviour	Check that: On receiving an FPC message to increase power above the IUT's maximum power followed by a Data grant, the IUT adjusts to maximum power if required and sends a RNG-REQ with Ranging Anomalies = "SS already at maximum power" in the grant.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H030 {3}
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near minimum power.
Expected Behaviour	Check that: On receiving an FPC message to decrease power below the IUT's minimum power followed by a Data grant, the IUT adjusts to minimum power if required and sends: - either a RNG-REQ with Ranging Anomalies = "SS already at minimum power" in the Data grant;* or - a RNG-REQ with Ranging Anomalies = "SS already at minimum power" and a DATA PDU in the Data grant.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H031 {3}
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. The UL data flow is established with no data pending transfer or being transferred. IUT is transmitting at or near minimum power.
Expected Behaviour	Check that: On receiving an FPC message to decrease power below the IUT's minimum power followed by a Data grant, the IUT adjusts to minimum power if required and sends a RNG-REQ with Ranging Anomalies = "SS already at minimum power" in the grant.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H032
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near maximum power.
Expected Behaviour	Check that: On receiving an FPC message to increase power above the IUT's maximum power followed by a Invited Ranging Opportunity, the IUT adjusts to maximum power if required and sends a RNG-REQ with Ranging Anomalies = "SS already at maximum power" in the opportunity.
Test strategy	
Notes	IUT continues transmitting data on Data grants.

TP ID	TP/SS/RLC/PRNG/BV-H033
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near minimum power.
Expected Behaviour	Check that: On receiving an FPC message to decrease power below the IUT's minimum power followed by a Invited Ranging Opportunity, the IUT adjusts to minimum power if required and sends a RNG-REQ with Ranging Anomalies = "SS already at minimum power" in the opportunity.
Test strategy	
Notes	IUT continues transmitting data on Data grants.

TP ID	TP/SS/RLC/PRNG/BV-H034 {3}
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near maximum power.
Expected Behaviour	Check that: On receiving a UL-MAP Power Control IE to increase power above the IUT's maximum power followed by a Data grant, the IUT adjusts to maximum power if required and sends: - either a RNG-REQ with Ranging Anomalies = "SS already at maximum power" in the Data grant;* or - a RNG-REQ with Ranging Anomalies = "SS already at maximum power" and a DATA PDU in the Data grant.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H035 {3}
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. The UL data flow is established with no data pending transfer or being transferred. IUT is transmitting at or near maximum power.
Expected Behaviour	Check that: On receiving a UL-MAP Power Control IE to increase power above the IUT's maximum power followed by a Data grant, the IUT adjusts to maximum power if required and sends a RNG-REQ with Ranging Anomalies = "SS already at maximum power" in the grant.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H037 {3}
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near minimum power.
Expected Behaviour	Check that: On receiving a UL-MAP Power Control IE to decrease power below the IUT's minimum power followed by a Data grant, the IUT adjusts to minimum power if required and sends: - either a RNG-REQ with Ranging Anomalies = "SS already at minimum power" in the Data grant;* or - a RNG-REQ with Ranging Anomalies = "SS already at minimum power" and a DATA PDU in the Data grant.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H038 {3}
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. The UL data flow is established with no data pending transfer or being transferred. IUT is transmitting at or near minimum power.
Expected Behaviour	Check that: On receiving a UL-MAP Power Control IE to decrease power below the IUT's minimum power followed by a Data grant, the IUT adjusts to minimum power if required and sends a RNG-REQ with Ranging Anomalies = "SS already at minimum power" in the grant.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H039
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near maximum power.
Expected Behaviour	Check that: On receiving a UL-MAP Power Control IE to increase power above the IUT's maximum power followed by an Invited Ranging Opportunity, the IUT adjusts to maximum power if required and sends a RNG-REQ with Ranging Anomalies = "SS already at maximum power" in the opportunity.
Test strategy	
Notes	IUT continues transmitting data on Data grants.

TP ID	TP/SS/RLC/PRNG/BV-H040
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. The UL data flow is established. IUT is transmitting UL data at or near minimum power.
Expected Behaviour	Check that: On receiving a UL-MAP Power Control IE to decrease power below the IUT's minimum power followed by an Invited Ranging Opportunity, the IUT adjusts to minimum power if required and sends a RNG-REQ with Ranging Anomalies = "SS already at minimum power" in the opportunity.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H041
P802.16 Reference	[3] and [12] Clause 6.3.10.2
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established with data being sent.
Expected Behaviour	Check that: On receiving a RNG-RSP message to change the timing advance with Status = Continue that does not cause Ranging Anomalies followed by a Data grant, the IUT implements the RNG-RSP's timing changes, stops sending data, and transmits a short preamble with: - either a RNG-REQ without anomalies;* or - a padding PDU; or - stuff bytes.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H042
P802.16 Reference	[3] and [12] Clause 6.3.10.2.
PICS Item	
Initial Condition	IUT is operational. An UL data flow is established with data being sent.
Expected Behaviour	Check that: On receiving a RNG-RSP message to change the frequency with Status = Continue that does not cause Ranging Anomalies followed by an Invited Ranging opportunity, the IUT implements the RNG-RSP's frequency adjustments, stops sending data, and transmits a long preamble with: - either a RNG-REQ without anomalies;* or - a padding PDU; or - stuff bytes.
Test strategy	
Notes	*It is implicit that there are stuff bytes or a padding PDU in the remainder of the burst filled by the RNG-REQ.

TP ID	TP/SS/RLC/PRNG/BV-H043 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.10.3.2 Figure 90.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. An UL data flow is established and a Periodic Ranging CDMA code has been sent.
Expected Behaviour	Check that: If the IUT does not receive a RNG-RSP as a response to the Periodic Ranging code and the number of retries is less than "Ranging code retries" and after expiration of T3 and the backoff procedure, the IUT sends a new Periodic Ranging CDMA code.
Test strategy	
Notes	No specific value for parameter "Ranging code retries" has been defined in the base standard.

TP ID	TP/SS/RLC/PRNG/BV-H044 {3}
P802.16 Reference	[3] and [12] Clause 6.3.10.3.2 Figure 90.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. An UL data flow is established. Periodic Ranging CDMA code has been sent and "Contention Ranging Retries" has been exceeded.
Expected Behaviour	Check that: If the IUT does not receive RNG-RSP before expiration of the timer T3, it does not send another Periodic Ranging CDMA code but reinitializes its MAC.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H045 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.10.3.2 Figure 90.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. An UL data flow is established and a Periodic Ranging CDMA code has been sent.
Expected Behaviour	Check that: When the IUT receives a RNG-RSP with status code Continue and a set of valid parameter for needed adjustments, the IUT implements these adjustments and sends a new Periodic Ranging CDMA code.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/BV-H046 {1} **
P802.16 Reference	[3] and [12] Clause 6.3.10.3.2 Figure 90.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. A Periodic Ranging CDMA code has been sent.
Expected Behaviour	Check that: When the IUT receives a RNG-RSP with status code Success and a set of valid parameter for needed adjustments, the IUT implements these adjustments and does not send a new Periodic Ranging CDMA code until T4 expires.
Test strategy	
Notes	Requires a means to check that the parameter adjustments have been implemented, e.g. in a later uplink data transmission.

TP ID	TP/SS/RLC/PRNG/BV-H047 {1} **
P802.16 Reference	[3] and [12] Clause 6.3.10.3.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. A Periodic Ranging CDMA code has not been sent.
Expected Behaviour	Check that: When the IUT receives an unsolicited RNG-RSP with status code Success and a set of valid parameter adjustments the IUT implements these adjustments and does not send a Periodic Ranging CDMA code until T4 expires.
Test strategy	
Notes	Requires a means to check that the parameter adjustments have been implemented, e.g. in a later uplink data transmission.

TP ID	TP/SS/RLC/PRNG/TI-H000
P802.16 Reference	[3] and [12] Clauses 6.3.10.2 paragraph 2(2) and 8.3.6.3.1.
PICS Item	
Initial Condition	IUT is operational. IUT has received an uplink data grant UIUC = (5 to 12) or invited ranging opportunity UIUC = (1) and started T4.
Expected Behaviour	Check that: On T4 expiry without receiving any Data grants or Invited Ranging Opportunities, the IUT re-initializes its MAC layer and restarts its MAC operations.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/TI-H000a
P802.16 Reference	[3] and [12] Clauses 6.3.10.2 paragraph 2(2) and 8.4.5.4.1.
PICS Item	
Initial Condition	IUT is operational. IUT has received an uplink data grant UIUC = (1 to 10) or invited ranging opportunity UIUC = (1) and started T4.
Expected Behaviour	Check that: On T4 expiry without receiving any Data grants or Invited Ranging Opportunities, the IUT re-initializes its MAC layer and restarts its MAC operations.
Test strategy	
Notes	

TP ID	TP/SS/RLC/PRNG/TI-H001 {1} **
P802.16 Reference	[3] and [12] Clause 6.3.10.3.2 Figure 90.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational. An UL data flow is established.
Expected Behaviour	Check that: On T4 expiry without receiving any Data grants, the IUT sends a Periodic Ranging code to initiate periodic ranging.
Test strategy	
Notes	

5.3.6.3 Downlink Burst Profile Management (DBPC)

5.3.6.3.1 To a Less Robust Profile (LRP)

TP ID	TP/SS/RLC/DBPC/LRP/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a less robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with a burst profile more or equally robust as the Downlink Burst Profile defined by DIUC Y.
Expected Behaviour	Check that: On receiving data at a CINR that is high enough to receive data at a less robust profile denoted by DIUC Z, the IUT transmits in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC Z. The IUT monitors the DL data on a DIUC more or equally robust as DIUC Z.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/LRP/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a less robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with a burst profile more or equally robust as the Downlink Burst Profile defined by DIUC Y. On receiving data at a CINR that is high enough to receive data at a less robust profile denoted by DIUC Z, the IUT has transmitted in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC Z. The IUT is monitoring the DL data on a DIUC more or equally robust as DIUC Z.
Expected Behaviour	Check that: On receiving a valid DBPC-RSP with the DIUC field set to DIUC Z, the IUT sets the operational burst profile to DIUC Z and monitors the DL data having a burst profile more or equally robust as DIUC Z.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/LRP/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a less robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with burst profile DIUC Y. On receiving data at a CINR that is high enough to receive data at a less robust profile denoted by DIUC Z, the IUT has transmitted in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC Z. The IUT is monitoring the DL data on a DIUC more or equally robust as DIUC Z.
Expected Behaviour	Check that: On receiving a valid DBPC-RSP with the DIUC field set to DIUC Y, the IUT resets the operational burst profile to DIUC Y and monitors the DL data having a burst profile more or equally robust as DIUC Y.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/LRP/TI-H000
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a less robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with burst profile DIUC Y. On receiving data at a CINR that is high enough to receive data at a less robust profile denoted by DIUC Z, the IUT has transmitted in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC Z. The IUT is monitoring the DL data on a DIUC more or equally robust as DIUC Z. On receiving a valid DBPC-RSP with the DIUC field set to DIUC Y, the IUT has reset the operational burst profile to DIUC Y, is monitoring the DL data having a burst profile more or equally robust as DIUC Y, and has started T28.
Expected Behaviour	Check that: On receiving data before T28 expiry at a CINR that is high enough to receive data at a less robust profile denoted by DIUC Z, the IUT continues to monitor data having a burst profile more or equally robust as DIUC Y and does not transmit a valid DBPC-REQ.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/LRP/TI-H001
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a less robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with burst profile DIUC Y. On receiving data at a CINR that is high enough to receive data at a less robust profile denoted by DIUC Z, the IUT has transmitted in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC Z. The IUT is monitoring the DL data on a DIUC more or equally robust as DIUC Z. On receiving a valid DBPC-RSP with the DIUC field set to DIUC Y, the IUT has reset the operational burst profile to DIUC Y, is monitoring the DL data having a burst profile more or equally robust as DIUC Y, and has started T28. On receiving data before T28 expiry at a CINR that is high enough to receive data at a less robust profile denoted by DIUC Z, the IUT continues to monitor data having a burst profile more or equally robust as DIUC Y and has not transmitted a valid DBPC-REQ.
Expected Behaviour	Check that: On T28 expiry, the IUT transmits a valid DBC-REQ containing the DIUC field set to DIUC Z. The IUT monitors the DL data on a DIUC more or equally robust as DIUC Z.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/LRP/TI-H002
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a less robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with burst profile DIUC Y. On receiving data at a CINR that is high enough to receive data at a less robust profile denoted by DIUC Z, the IUT has transmitted in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC Z. The IUT is monitoring the DL data on a DIUC more or equally robust as DIUC Z and has started T30.
Expected Behaviour	Check that: On expiry of T30 without receiving a valid DBPC-RSP, the IUT sets the operational burst profile to DIUC Y and monitors the DL data having a burst profile more or equally robust as DIUC Y.
Test strategy	
Notes	

5.3.6.3.2 To a More Robust Profile (MRP)

TP ID	TP/SS/RLC/DBPC/MRP/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a more robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with a burst profile more or equally robust as the Downlink Burst Profile defined by DIUC Y.
Expected Behaviour	Check that: On receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X: - either the IUT transmits in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC X. The IUT continues to monitor the DL data on a DIUC more or equally robust as DIUC Y; or - the IUT transmits in an Initial Ranging Interval a valid RNG-REQ containing the DIUC field set to DIUC X. The IUT continues to monitor the DL data on a DIUC more or equally robust as DIUC Y.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/MRP/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a more robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with a burst profile more or equally robust as the Downlink Burst Profile defined by DIUC Y. On receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT has transmitted in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC X. The IUT is monitoring the DL data on a DIUC more or equally robust as DIUC Y.
Expected Behaviour	Check that: On receiving a valid DBPC-RSP message containing the DIUC field set to DIUC X, the IUT changes the operational burst profile to DIUC X and processes data on a burst profile more or equally robust as the DIUC X profile.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/MRP/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a more robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with a burst profile more or equally robust as the Downlink Burst Profile defined by DIUC Y. On receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT has transmitted in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC X. The IUT is monitoring the DL data on a DIUC more or equally robust as DIUC Y.
Expected Behaviour	Check that: On receiving a valid DBPC-RSP message containing the DIUC field set to DIUC Y, the IUT keeps the operational burst profile at DIUC Y and processes data on a burst profile more or equally robust as the DIUC Y profile.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/MRP/BV-H003
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a more robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with a burst profile more or equally robust as the Downlink Burst Profile defined by DIUC Y. On receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT has transmitted in an Initial Ranging Interval a valid RNG-REQ containing the DIUC field set to DIUC X. The IUT is monitoring the DL data on a DIUC more or equally robust as DIUC Y.
Expected Behaviour	Check that: On receiving a valid RNG-RSP message containing the DIUC field set to DIUC X, the IUT changes the operational burst profile to DIUC X and processes data on a burst profile more or equally robust as the DIUC X profile.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/MRP/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a more robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with a burst profile more or equally robust as the Downlink Burst Profile defined by DIUC Y. On receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT has transmitted in an Initial Ranging Interval a valid RNG-REQ containing the DIUC field set to DIUC X. The IUT is monitoring the DL data on a DIUC more or equally robust as DIUC Y.
Expected Behaviour	Check that: On receiving a valid RNG-RSP message containing the DIUC field set to DIUC Y, the IUT keeps the operational burst profile at DIUC Y and processes data on a burst profile more or equally robust as the DIUC Y profile.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/MRP/TI-H000
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a more robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with a burst profile more or equally robust as the Downlink Burst Profile defined by DIUC Y. On receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT has transmitted in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC X. The IUT monitors the DL data on a DIUC more or equally robust as DIUC Y. The IUT then received a valid DBPC-RSP message containing the DIUC field set to DIUC Y, keeps the operational burst profile at DIUC Y, processes data on a burst profile more or equally robust as the DIUC Y profile, and starts T29.
Expected Behaviour	Check that: On receiving data before T29 expiry at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT continues to monitor data having a burst profile more or equally robust as DIUC Y and does not transmit a valid DBPC-REQ or RNG-REQ.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/MRP/TI-H001
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a more robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with a burst profile more or equally robust as the Downlink Burst Profile defined by DIUC Y. On receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT has transmitted in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC X. The IUT monitors the DL data on a DIUC more or equally robust as DIUC Y. The IUT then received a valid DBPC-RSP message containing the DIUC field set to DIUC Y, keeps the operational burst profile at DIUC Y, processes data on a burst profile more or equally robust as the DIUC Y profile, and starts T29.
Expected Behaviour	Check that: After T29 expiry and on receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X: - either the IUT transmits in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC X. The IUT continues to monitor the DL data on a DIUC more or equally robust as DIUC Y; or - the IUT transmits in an Initial Ranging Interval a valid RNG-REQ containing the DIUC field set to DIUC X. The IUT continues to monitor the DL data on a DIUC more or equally robust as DIUC Y.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/MRP/TI-H002
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a more robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with burst profile DIUC Y. On receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT has transmitted in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC X. The IUT is monitoring the DL data on a DIUC more or equally robust as DIUC Y and has started T30.
Expected Behaviour	Check that: On expiry of T30 without receiving a valid DBPC-RSP, the IUT sets the operational burst profile to DIUC Y and monitors the DL data having a burst profile more or equally robust as DIUC Y.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/MRP/TI-H003
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a more robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with a burst profile more or equally robust as the Downlink Burst Profile defined by DIUC Y. On receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT has transmitted in a data grant a valid RNG-REQ containing the DIUC field set to DIUC X. The IUT monitors the DL data on a DIUC more or equally robust as DIUC Y. The IUT then received a valid RNG-RSP message containing the DIUC field set to DIUC Y, keeps the operational burst profile at DIUC Y, processes data on a burst profile more or equally robust as the DIUC Y profile, and starts T29.
Expected Behaviour	Check that: On receiving data before T29 expiry at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT continues to monitor data having a burst profile more or equally robust as DIUC Y and does not transmit a valid DBPC-REQ or RNG-REQ.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/MRP/TI-H004
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a more robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with a burst profile more or equally robust as the Downlink Burst Profile defined by DIUC Y. On receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT has transmitted in a data grant a valid RNG-REQ containing the DIUC field set to DIUC X. The IUT monitors the DL data on a DIUC more or equally robust as DIUC Y. The IUT then received a valid RNG-RSP message containing the DIUC field set to DIUC Y, keeps the operational burst profile at DIUC Y, processes data on a burst profile more or equally robust as the DIUC Y profile, and starts T29.
Expected Behaviour	Check that: After T29 expiry and on receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X: - either the IUT transmits in a data grant a valid DBPC-REQ containing the DIUC field set to DIUC X. The IUT continues to monitor the DL data on a DIUC more or equally robust as DIUC Y; or - the IUT transmits in an Initial Ranging Interval a valid RNG-REQ containing the DIUC field set to DIUC X. The IUT continues to monitor the DL data on a DIUC more or equally robust as DIUC Y.
Test strategy	
Notes	

TP ID	TP/SS/RLC/DBPC/MRP/TI-H005
P802.16 Reference	[3] and [12] Clause 6.3.10.1 Figure "State transition diagram for downlink burst profile management – SS" Figure "Transition to a more robust operational burst profile".
PICS Item	
Initial Condition	The IUT is operational and receiving data on a DL data transport connection with burst profile DIUC Y. On receiving data at a CINR that is low enough to receive data at a more robust profile denoted by DIUC X, the IUT has transmitted in a data grant a valid RNG-REQ containing the DIUC field set to DIUC X. The IUT is monitoring the DL data on a DIUC more or equally robust as DIUC Y and has started T3.
Expected Behaviour	Check that: On expiry of T3 without receiving a valid RNG-RSP, the IUT sets the operational burst profile to DIUC Y and monitors the DL data having a burst profile more or equally robust as DIUC Y.
Test strategy	
Notes	

5.3.6.4 Negotiate Basic Capabilities (SBC)

TP ID	TP/SS/RLC/SBC/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.9.7.
PICS Item	
Initial Condition	The IUT has completed Initial Ranging.
Expected Behaviour	Check that: The IUT transmits a valid SBC-REQ on its Basic CID containing the Physical Parameters supported and Bandwidth Allocation Support.
Test strategy	Straightforward.
Notes	

TP ID	TP/SS/RLC/SBC/BV-H000a {1} **
P802.16 Reference	[3] and [12] Clause 6.3.9.7.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed Initial Ranging.
Expected Behaviour	Check that: The IUT transmits a valid SBC-REQ on its Basic CID containing the required TLVs.
Test strategy	
Notes	

TP ID	TP/SS/RLC/SBC/BV-H001 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.24, 6.3.9.7 Figure: "70d – Network entry state-machine SS side", 6.3.9.9, 6.3.9.8, and 11.8.4.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed Initial Ranging and has transmitted a valid SBC-REQ on its Basic CID with PKM enabled, that is Authorization supported.
Expected Behaviour	Check that: On receiving an SBC-RSP and a PKM-RSP(PKMv2 EAP Transfer) sequentially, the IUT sends a PKM-REQ(PKMv2 EAP Transfer) message.
Test strategy	
Notes	The use of EAP Start to initiate an EAP session during initial network entry is optional (clause 6.3.2.3.9.15).

TP ID	TP/SS/RLC/SBC/BV-H001a {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.24, 6.3.9.7 Figure: "70d – Network entry state-machine SS side", 6.3.9.9, 6.3.9.8, and 11.8.4.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed Initial Ranging and has transmitted a valid SBC-REQ on its Basic CID with PKM disabled, that is Authorization unsupported.
Expected Behaviour	Check that: On receiving an SBC-RSP, the IUT transmits a REG-REQ.
Test strategy	
Notes	

TP ID	TP/SS/RLC/SBC/BV-H002
	Replaced by TP/SS/RLC/SBC/BV-H003 and TP/SS/RLC/SBC/BV-H004.

TP ID	TP/SS/RLC/SBC/BV-H003
	Deleted.

TP ID	TP/SS/RLC/SBC/BV-H004
	Deleted.

TP ID	TP/SS/RLC/SBC/BV-H005
P802.16 Reference	[3] and [12] Clause 11.1.1.
PICS Item	
Initial Condition	The IUT has just finished Initial Ranging and its current transmitted power is outside the range -84 dBm to 43,5 dBm.
Expected Behaviour	Check that: On sending the SBC-REQ, the IUT assigns the closest of these extremes to the Current Transmit Power in the SBC-REQ.
Test strategy	
Notes	This is not realistic. In RCT it is verified that MS doesn't transmit above 30 dBm (max expected transmission power wrt. power classes). For the lower bound, there is no reason the MS transmits at that low value. Anyway, even so the message will never reach the other end.

TP ID	TP/SS/RLC/SBC/BV-H006
P802.16 Reference	[3] and [12] Clause 11.8.3.2.
PICS Item	
Initial Condition	The IUT does not support QAM64 and has just finished Initial Ranging.
Expected Behaviour	Check that: On sending the SBC-REQ, the IUT sets Byte 3 of the Maximum Power TLV to zero (QAM64 not supported).
Test strategy	
Notes	MS shall support QAM64 for DL and not support QAM64 for UL.

TP ID	TP/SS/RLC/SBC/BV-H007
P802.16 Reference	[3] Clause 6.3.2.3.23, [12] Clauses 6.3.2.3.23 and 11.8.11.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has not completed initial network entry with the TE. The IUT has just received RNG-RSP with status "success". The IUT needs realm.
Expected Behaviour	Check that: The IUT transmits a valid SBC-REQ on its Basic CID containing Visited NSP ID TLV.
Test strategy	Requires means to provoke SS to send SBC-REQ containing Visited NSP ID TLV.
Notes	

TP ID	TP/SS/RLC/SBC/BV-H008
P802.16 Reference	[3] Clause 6.3.2.3.23, [12] Clauses 6.3.2.3.23 and 11.8.9.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has not completed initial network entry with the TE. The IUT has just received RNG-RSP with status "success". The IUT needs NSP list, or both NSP list and verbose NSP name list.
Expected Behaviour	Check that: The IUT transmits a valid SBC-REQ on its Basic CID containing SIQ TLV with bit#0 is set to 1 and bit#1 is either 1 or 0.
Test strategy	Requires means to provoke SS to send SBC-REQ containing SIQ TLV.
Notes	

TP ID	TP/SS/RLC/SBC/TI-H000 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.23 and 24, and 6.3.9.7 Figure: "70d – Network entry state-machine SS side" Table "Parameters and Constants" SBC Request Retries.
PICS Item	PIC_MOB1.
Initial Condition	IUT has just finished Initial Ranging, sent a valid SBC-REQ, and started T18.
Expected Behaviour	Check that: While the number of retries is lower than SBC-Request-Retries, each time T18 expires without receiving a valid SBC-RSP, the IUT retransmits the SBC-REQ and restarts T18.
Test strategy	
Notes	

TP ID	TP/SS/RLC/SBC/TI-H001 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.23 and 24, and 6.3.9.7 Figure:" 70d – Network entry state-machine SS side" Table "Parameters and Constants "SBC Request Retries.
PICS Item	PIC_MOB1.
Initial Condition	IUT has finished Ranging, started Basic Capabilities negotiation, and re-transmitted the SBC-REQ for SBC Request Retries without receiving any SBC-RSP. IUT has re-started T18.
Expected Behaviour	Check that: After T18 expiry, the IUT reinitializes the MAC layer.
Test strategy	
Notes	All retries are exhausted and after T18 expires, the IUT reinitializes the MAC.

5.3.6.5 Feedback Mechanism (FBK)

5.3.6.5.1 Feedback Polling

TP ID	TP/SS/RLC/FBK/BV-H000 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.2.1.2.2.1.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is synchronized and UL and DL parameters are established.
Expected Behaviour	Check that: When the IUT receives a Feedback Polling IE with: - Feedback Type = 0b000. The IUT sends a Feedback header with: - Feedback Type = 0b000 (MIMO feedback type + feedback payload). - Feedback content - determined by Feedback Polling IE using the assigned resource indicated in the Feedback Polling IE.
Test strategy	
Notes	

TP ID	TP/SS/RLC/FBK/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.2.1.2.2.1.
PICS Item	
Initial Condition	The IUT is synchronized and UL and DL parameters are established.
Expected Behaviour	Check that: When the IUT receives a Feedback request extended subheader, the IUT sends a Feedback header using the assigned resource indicated in the Feedback request extended subheader.
Test strategy	
Notes	

TP ID	TP/SS/RLC/FBK/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.2.1.2.2.1.
PICS Item	
Initial Condition	The IUT is synchronized and UL and DL parameters are established.
Expected Behaviour	Check that: If the IUT receives a Feedback header on the downlink it discards this PDU.
Test strategy	
Notes	

TP ID	TP/SS/RLC/FBK/BV-H003 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.2.1.2.2.1 Figure 20h.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is synchronized and UL and DL parameters are established.
Expected Behaviour	Check that: When the IUT sends a Feedback header using a UL resource requested by BW request ranging, the Feedback header includes the Basic CID of the IUT.
Test strategy	
Notes	Requires a means to make the IUT send an unsolicited Feedback header.

TP ID	TP/SS/RLC/FBK/BV-H004 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.2.1.2.2.1 Figure 20i.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is synchronized and UL and DL parameters are established.
Expected Behaviour	Check that: When the IUT sends a Feedback header using a UL resource that is not requested by BW request ranging, the Feedback header does not include the Basic CID of the IUT.
Test strategy	
Notes	Requires a means to make the IUT send an unsolicited Feedback header.

TP ID	TP/SS/RLC/FBK/BV-H005 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.2.1.2.2.1.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is synchronized and UL and DL parameters are established.
Expected Behaviour	Check that: When the IUT sends a Feedback header the feedback payload shall be placed at the first available bits of the feedback content field and any unused bit in the content field shall be set to zero.
Test strategy	
Notes	

5.3.6.5.2 Fast-Feedback

TP ID	TP/SS/RLC/FBK/BV-H006 {1} **
P802.16 Reference	[3] Clauses 6.3.18, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9 [12] Clauses 6.3.17, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating with at least one DL connection.
Expected Behaviour	Check that: When the BS sends a CQICH allocation IE with: - feedback type=0b00 (physical); - report type=0b0 (preamble); - CINR preamble report type=0b0 (Frequency reuse factor=1 configuration). The IUT decodes the fast-feedback channel IE (UIUC=0) in the UL-MAP or the Fast Feedback Region TLV in the UCD, and transmits the correct 6 bit value in the reserved Fast-feedback channel.
Test strategy	
Notes	Physical CINR on Preamble

TP ID	TP/SS/RLC/FBK/BV-H007 {2} **W2
P802.16 Reference	[3] Clauses 6.3.18, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9 [12] Clauses 6.3.17, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating with at least one DL connection.
Expected Behaviour	Check that: When the BS sends a CQICH allocation IE with: - feedback type=0b00 (physical); - report type= 0b1 (zone); - Zone Permutation=0b000 (PUSC with all subchannels); - Zone Type=0b00 (non-STC zone); - CINR zone measurement type=0b0 (pilots); - Major Group Indicator=0 (use any subchannel in the PUSC zone). The IUT decodes the fast-feedback channel IE (UIUC=0) in the UL-MAP or the Fast Feedback Region TLV in the UCD, and transmits 6 bits value in the reserved Fast-feedback channel.
Test strategy	
Notes	Physical CINR on pilots in PUSC non-STC zone.

TP ID	TP/SS/RLC/FBK/BV-H008 {2} **W2
P802.16 Reference	[3] Clauses 6.3.18, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9 [12] Clauses 6.3.17, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating with at least one DL connection.
Expected Behaviour	Check that: When the BS sends a CQICH allocation IE with: - feedback type=0b00 (physical); - report type=0b1 (zone); - Zone Permutation=0b000 (PUSC with all subchannels); - Zone Type=0b01 (STC zone); - CINR zone measurement type=0b0 (pilots); - Major Group Indicator=0 (use any subchannel in the PUSC zone). The IUT decodes the fast-feedback channel IE (UIUC=0) in the UL-MAP or the FastFeedback Region TLV in the UCD, and transmits the correct 6 bit value in the reserved Fast-feedback channel.
Test strategy	
Notes	Physical CINR on pilots in PUSC STC zone.

TP ID	TP/SS/RLC/FBK/BV-H009 {2} **W2
P802.16 Reference	[3] Clauses 6.3.18, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9 [12] Clauses 6.3.17, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating with at least one DL connection.
Expected Behaviour	Check that: When the BS sends a CQICH allocation IE with: - feedback type=0b00 (physical); - report type= 0b1 (zone); - Zone Permutation=0b000 (PUSC with all subchannels); - Zone Type=0b10 (AAS or dedicated pilot zone); - CINR zone measurement type=0b0 (pilots); - Major Group Indicator=0 (use any subchannel in the PUSC zone). The IUT decodes the fast-feedback channel IE (UIUC=0) in the UL-MAP or the FastFeedback Region TLV in the UCD, and transmits the correct 6 bit value in the reserved Fast-feedback channel.
Test strategy	
Notes	Physical CINR on pilots in PUSC zone with dedicated pilots.

TP ID	TP/SS/RLC/FBK/BV-H010
P802.16 Reference	[3] Clauses 6.3.18, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9 [12] Clauses 6.3.17, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating with at least one DL connection.
Expected Behaviour	Check that: When the BS sends a CQICH allocation IE with: - feedback type=0b01 (effective); - report type=0b0 (preamble); - CINR preamble report type=0b0 (Frequency reuse factor=1 configuration). The IUT decodes the fast-feedback channel IE (UIUC=0) in the UL-MAP or the FastFeedback Region TLV in the UCD, and transmits the correct 6 bit value in the reserved Fast-feedback channel.
Test strategy	
Notes	Effective CINR on Preamble.

TP ID	TP/SS/RLC/FBK/BV-H011 {2} **W2
P802.16 Reference	[3] Clauses 6.3.18, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9 [12] Clauses 6.3.17, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating with at least one DL connection.
Expected Behaviour	Check that: When the BS sends a CQICH allocation IE with: - feedback type=0b01 (effective); - report type=0b1 (zone); - CINR zone measurement type=0b0 (pilots). The IUT decodes the fast-feedback channel IE (UIUC=0) in the UL-MAP or the FastFeedback Region TLV in the UCD, and transmits the correct 6 bit value in the reserved Fast-feedback channel.
Test strategy	
Notes	Effective CINR on Pilots.

TP ID	TP/SS/RLC/FBK/BV-H012 {2} **W2
P802.16 Reference	[3] Clauses 6.3.18, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9 [12] Clauses 6.3.17, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating with at least one DL connection.
Expected Behaviour	Check that: When the BS sends a CQICH allocation IE with: - feedback type=0b00 (physical); - report type=0b1 (zone); - Zone Permutation=0b000 (PUSC with all subchannels); - Zone Type=0b01 (STC zone); - CINR zone measurement type=0b0 (pilots); - Major Group Indicator=0 (use any subchannel in the PUSC zone); - MIMO_permutation_feedback_cycle=0b01, 0b10, or 0b11. The IUT decodes the fast-feedback channel IE (UIUC=0) in the UL-MAP or the FastFeedback Region TLV in the UCD, and transmits the correct 6 bit value in the reserved Fast-feedback channel.
Test strategy	
Notes	MIMO Feedback in PUSC STC zone.

TP ID	TP/SS/RLC/FBK/BV-H013 {3}
P802.16 Reference	[3] Clauses 6.3.18, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9 [12] Clauses 6.3.17, 8.4.5.4.12, 8.4.11.3 and 8.4.5.4.9.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and reporting fast-feedback on one CQI channel.
Expected Behaviour	Check that: When the BS sends a CQICH allocation IE, the IUT decodes the fast-feedback channel IE (UIUC=0) in the UL-MAP or the FastFeedback Region TLV in the UCD, and transmits the correct 6 bit value in the second CQI channel.
Test strategy	
Notes	Up to fast-feedback channels allocated. Based on mWiMAX profile, it is possible to allocate two CQICH.

5.2.6.5.3 Channel Reporting

TP ID	TP/SS/RLC/FBK/BV-H014 {2} **W2
P802.16 Reference	[3] Clauses 6.3.18, 11.11, and 11.12 [12] Clauses 6.3.17, 11.11, and 11.12.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating with at least on DL connection.
Expected Behaviour	Check that: When the BS sends a REP-REQ the IUT responds with a REP-RSP.
Test strategy	
Notes	

TP ID	TP/SS/RLC/FBK/BV-H015 {2} **W2
P802.16 Reference	[3] Clauses 6.3.18, 11.11, and 11.12 [12] Clauses 6.3.17, 11.11, and 11.12.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating with at least one DL connection.
Expected Behaviour	Check that: When the BS sends a REP-REQ with TLV 1.4 asking for the mean PCINR for the first PUSC zone with SC=0 (bits#0-2="000", bit#18="0"), the IUT responds with a REP-RSP with TLV 2.6 of length 1 byte.
Test strategy	
Notes	TLV 1.4: Zone-specific physical CINR request. TLV 2.6: PUSC Zone with 'use all SC=0'.

TP ID	TP/SS/RLC/FBK/BV-H016 {3}
P802.16 Reference	[3] Clauses 6.3.18, 11.11, and 11.12 [12] Clauses 6.3.17, 11.11, and 11.12.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating with at least one DL connection.
Expected Behaviour	Check that: When the BS sends a REP-REQ with TLV 1.4 asking for the mean PCINR for the first PUSC zone with SC=1(bits#0-2="001", bit#18="0"), the IUT responds with a REP-RSP with TLV 2.7 of length 1 byte.
Test strategy	
Notes	TLV 1.4: Zone-specific physical CINR request. TLV 2.7: PUSC zone with 'use all SC=1'.

TP ID	TP/SS/RLC/FBK/BV-H017 {3}
P802.16 Reference	[3] Clauses 6.3.18, 11.11, and 11.12 [12] Clauses 6.3.17, 11.11, and 11.12.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating with at least one DL connection.
Expected Behaviour	Check that: When the BS sends a REP-REQ with TLV 1.5 asking for the mean PCINR for preamble for reuse=1 (bits#0-1="00", bit#6="0"), the IUT responds with a REP-RSP with TLV 2.12 of length 1 byte.
Test strategy	
Notes	TLV 2.12: The estimation of physical CINR measured from preamble for frequency reuse configuration=1.

TP ID	TP/SS/RLC/FBK/BV-H018 {2} **W2
P802.16 Reference	[3] Clauses 6.3.18, 11.11, and 11.12 [12] Clauses 6.3.17, 11.11, and 11.12.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating with at least one DL connection.
Expected Behaviour	Check that: When the BS sends a REP-REQ with TLV 1.5 asking for the mean PCINR for preamble for reuse=3 (bits#0-1="01", bit#6="0"), the IUT responds with a REP-RSP with TLV 2.13 of length 1 byte.
Test strategy	
Notes	TLV 2.13: The estimation of physical CINR measured from preamble for frequency reuse configuration=3.

5.3.6.6 MAC-support for HARQ (HARQ)

TP ID	TP/SS/RLC/HARQ/BV-H000
P802.16 Reference	[3] Clauses 6.3.17.1, 6.3.2.3.43.6.5, and 11.3.1 Table 353 [12] Clauses 6.3.16.1, 6.3.2.3.38.6.5, and 11.3.1 Table 353.
PICS Item	
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Incremental Redundancy (IR) variant of HARQ for a UL HARQ connection.
Expected Behaviour	Check that: When receiving no acknowledgements on transmission of a subpacket, the IUT retransmits one of the 4 sub-packets no more than "maximum retransmission" times as defined in the UCD message.
Test strategy	
Notes	

TP ID	TP/SS/RLC/HARQ/BV-H001
P802.16 Reference	[3] Clause 6.3.17.1, 8.4.5.4.13, and 8.4.5.4.25 [12] Clause 6.3.16.1, 8.4.5.4.13, and 8.4.5.4.25.
PICS Item	
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Incremental Redundancy (IR) variant of HARQ for a DL HARQ connection.
Expected Behaviour	Check that: When the IUT has successfully received a DL HARQ burst in frame *i* it sends an ACK value (the acknowledgement bit of the *i*'th ACK channel shall be set to '0') in the fast feedback UL subchannel in the ACKCH region at frame *(i+j)* where *j* is the frame offset specified in the "HARQ ACK Delay for DL Burst" field in the UCD message.
Test strategy	
Notes	

TP ID	TP/SS/RLC/HARQ/BV-H002
P802.16 Reference	[3] Clause 6.3.17.1, 8.4.5.4.13, and 8.4.5.4.25 [12] Clause 6.3.16.1, 8.4.5.4.13, and 8.4.5.4.25.
PICS Item	
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Incremental Redundancy (IR) variant of HARQ for a DL HARQ connection.
Expected Behaviour	Check that: When the IUT has failed to correctly receive a DL HARQ burst in frame *i* it sends an NAK value (the acknowledgement bit of the *i*'th ACK channel shall be set to '1') in the fast feedback UL subchannel in the ACKCH region at frame *(i+j)* where *j* is the frame offset specified in the "HARQ ACK Delay for DL Burst" field in the UCD message.
Test strategy	
Notes	

TP ID	TP/SS/RLC/HARQ/BV-H002b {1} **
P802.16 Reference	[3] and [12] Clause 8.4.5.3.21.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating; has completed Network entry procedures and has a DL connection with HARQ support enabled. BS makes a DL allocation using the HARQ DL MAP IE in frame N with DL HARQ chase sub-burst IE and with ACK disable = 0.
Expected Behaviour	Check that: Upon successfully receiving the DL allocation in frame N, the IUT decodes the HARQ ACKCH Region allocation IE in frame N and transmits an ACK in the correct channel in the UL ACK region in frame N+HARQ ACK Delay for DL burst.
Test strategy	
Notes	The correct location for the UL ACK is relative to the position of the DL allocation in the HARQ DL MAP.

TP ID	TP/SS/RLC/HARQ/BV-H002c {1} **
P802.16 Reference	[3] and [12] Clause 8.4.5.3.21.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating; has completed Network entry procedures and has a DL connection with HARQ support enabled. BS makes a DL allocation using the HARQ DL MAP IE in frame N with DL HARQ chase sub-burst IE and with ACK disable = 0.
Expected Behaviour	Check that: Upon unsuccessfully receiving the DL allocation in frame N, the IUT decodes the HARQ ACKCH Region allocation IE in frame N and transmits a NACK in the correct channel in the UL ACK region in frame N+1.
Test strategy	
Notes	The correct location for the UL ACK is relative to the position of the DL allocation in the HARQ DL MAP.

TP ID	TP/SS/RLC/HARQ/BV-H002d {3}
P802.16 Reference	[3] and [12] Clause 8.4.5.3.21.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating; has completed Network entry procedures and has a DL connection with HARQ support enabled. BS makes a DL allocation using the HARQ DL MAP IE in frame N with DL HARQ chase sub-burst IE and with ACK disable = 1.
Expected Behaviour	Check that: Upon receiving the DL allocation in frame N, the IUT does not transmit either an ACK or NACK in UL ACK region.
Test strategy	
Notes	ACK disable = 1 prevents MS from sending ACK.

TP ID	TP/SS/RLC/HARQ/BV-H002e {2} **W2
P802.16 Reference	[3] and [12] Clause 8.4.5.3.21.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating; has completed Network entry procedures and has a DL connection with HARQ support enabled. BS makes a DL allocation using the HARQ DL MAP IE in frame N with MIMO DL Chase HARQ sub-burst IE with ACK disable = 0.
Expected Behaviour	Check that: Upon successfully receiving the DL allocation in frame N, the IUT decodes the HARQ ACKCH Region allocation IE in frame N and transmits an ACK in the correct channel in the UL ACK region in frame N+1.
Test strategy	
Notes	The correct location for the UL ACK is relative to the position of the DL allocation in the HARQ DL MAP.

5.3.6.6.1 UL HARQ Operation

TP ID	TP/SS/RLC/HARQ/BV-H003
	Deleted.

TP ID	TP/SS/RLC/HARQ/BV-H004
P802.16 Reference	[3] and [12] Clauses 8.4.5.4.24 and 8.4.5.4.24 Table 302l.
PICS Item	
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Incremental redundancy variant of HARQ for a UL HARQ connection and UL HARQ IR CTC sub-burst IE has set ACK disable ('1').
Expected Behaviour	Check that: When the IUT does not receive an acknowledgement for a HARQ uplink transmission the IUT does not perform retransmission.
Test strategy	
Notes	

TP ID	TP/SS/RLC/HARQ/BV-H005
P802.16 Reference	[3] and [12] Clauses 8.4.5.4.24 and 8.4.5.4.24 Table 302m.
PICS Item	
Initial Condition	IUT is operating and has completed Network entry procedures and is using the Incremental Redundancy HARQ for Convolutional Code (IR-CC) for an UL HARQ connection and UL HARQ IR CC sub-burst IE has set ACK disable ('1').
Expected Behaviour	Check that: When the IUT does not receive an acknowledgement for a HARQ uplink transmission the IUT does not perform retransmission.
Test strategy	
Notes	

TP ID	TP/SS/RLC/HARQ/BV-H006 {1} **
P802.16 Reference	[3] and [12] Clause 8.4.5.4.24.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating; has completed Network entry procedures and has an UL connection with HARQ support enabled. The BS makes an UL allocation using the HARQ UL MAP IE with: - UL HARQ Chase sub-burst IE; - ACK-Disable bit to 0; and - the same AI_SN value as used in a prior UL allocation with same ACID.
Expected Behaviour	Check that: The IUT uses the new allocation to retransmit the encoder packet (with same ACID).
Test strategy	
Notes	

TP ID	TP/SS/RLC/HARQ/BV-H007 {1} **
P802.16 Reference	[3] and [12] Clause 8.4.5.4.25.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating; has completed Network entry procedures and has an UL connection with HARQ support enabled. The BS makes an UL allocation using the HARQ UL MAP IE with: - UL HARQ Chase sub-burst IE; - ACK-Disable bit to 0; and - different AI_SN value as used in a prior UL allocation with same ACID.
Expected Behaviour	Check that: The IUT uses the new allocation to transmit new encoder packet.
Test strategy	
Notes	This TP assumes that the IUT has additional PDUs to send.

TP ID	TP/SS/RLC/HARQ/BV-H008 {3}
P802.16 Reference	[3] and [12] Clause 8.4.5.4.25.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating; has completed Network entry procedures and has an UL connection with HARQ support enabled. BS makes an UL allocation using the HARQ UL MAP IE with ACK-Disable bit to 1.
Expected Behaviour	Check that: The IUT uses the new allocation to transmit new encoder packet.
Test strategy	
Notes	ACK disable = 1 prevents MS from retransmitting data. This TP assumes that the IUT has additional PDUs to send.

TP ID	TP/SS/RLC/HARQ/BV-H009 {1} **W2
P802.16 Reference	[3] and [12] Clause 8.4.5.4.24.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating; has completed Network entry procedures and has an UL connection with HARQ support enabled. The BS makes an UL allocation using the HARQ UL MAP IE with: - MIMO UL Chase HARQ sub-burst IE; - ACK-Disable bit to 0; and - the same AI_SN value as used in a prior UL allocation with same ACID.
Expected Behaviour	Check that: The IUT uses the new allocation to retransmit the PDUs from the prior UL allocation (with same ACID).
Test strategy	
Notes	

TP ID	TP/SS/RLC/HARQ/BV-H010 {1} **W2
P802.16 Reference	[3] and [12] Clause 8.4.5.3.21.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating; has completed Network entry procedures and has an UL connection with HARQ support enabled. The BS makes an UL allocation using the HARQ UL MAP IE with: - MIMO UL Chase HARQ sub-burst IE; - ACK-Disable bit to 0; and - different AI_SN value as used in a prior UL allocation with same ACID.
Expected Behaviour	Check that: The IUT uses the new allocation to transmit new PDUs.
Test strategy	
Notes	

5.3.7 Registration, IP Connectivity and Parameter Transfer (INI)

5.3.7.1 Registration (REG)

TP ID	TP/SS/INI/REG/BV-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.7 and 6.3.9.9.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is initializing and has negotiated Basic Capabilities where SS Authorization and Key Exchange are not required.
Expected Behaviour	Check that: On receiving an UL bandwidth grant, the IUT sends a valid REG-REQ message on the Primary CID containing at a minimum the SS Management Support, the IP Management Mode, the CID Support, the Handover supported, the Mobility parameters support, and the CMAC tuple TLVs.
Test strategy	1) Perform initialization. During the SBC transaction, the TE sets Authorization Policy Support to "Not Supported" ([3] and [12] clause 11.8.5). 2) Straightforward hereafter assuming that Authorization and Key Exchange are not required.
Notes	1) The trigger to REG-REQ in case of (no-authorization/no-encryption) is the SBC-RSP. 2) The CMAC TLV can be included only if authorization and key exchange was performed. Therefore, the standard must be amended to make inclusion of the CMAC conditional.

TP ID	TP/SS/INI/REG/BV-H000a
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.7 and 6.3.9.9.
PICS Item	
Initial Condition	The IUT is initializing and has negotiated Basic Capabilities where SS Authorization and Key Exchange are not required.
Expected Behaviour	Check that: On receiving an UL bandwidth grant, the IUT sends a valid REG-REQ message on the Primary CID containing at a minimum the SS Management Support, the IP Management Mode, the CID Support, the Handover supported, the Mobility parameters support, and the HMAC tuple TLVs.
Test strategy	1) Perform initialization. During the SBC transaction, the TE sets Authorization Policy Support to "Not Supported" ([3] and [12] clause 11.8.5). 2) Straightforward hereafter assuming that Authorization and Key Exchange are not required.
Notes	

TP ID	TP/SS/INI/REG/BV-H001 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.7 and 6.3.9.9.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is initializing and has negotiated SS Authorization and Key Exchange.
Expected Behaviour	Check that: On receiving an UL bandwidth grant, the IUT sends a valid REG-REQ message on the Primary CID containing at a minimum the SS Management Support, the IP Management Mode, the CID Support, the Handover supported, the Mobility parameters support, and the CMAC tuple TLVs.
Test strategy	1) The trigger to send the REG-REQ may be completion of the PKMv2 SA-TEK three way handshake.
Notes	

TP ID	TP/SS/INI/REG/BV-H001a
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.7 and 6.3.9.9.
PICS Item	
Initial Condition	The IUT is initializing and has negotiated SS Authorization and Key Exchange.
Expected Behaviour	Check that: On receiving an UL bandwidth grant, the IUT sends a valid REG-REQ message on the Primary CID containing at a minimum the SS Management Support, the IP Management Mode, the CID Support, the Handover supported, the Mobility parameters support, and the HMAC tuple TLVs.
Test strategy	
Notes	

TP ID	TP/SS/INI/REG/BV-H002
	Deleted.

TP ID	TP/SS/INI/REG/BV-H003
P802.16 Reference	[3] and [12] Clause 11.1.5 paragraph 2.
PICS Item	PIC_VNDID
Initial Condition	IUT is starting Registration.
Expected Behaviour	Check that: On sending a REG-REQ containing a Vendor ID TLV, the ID assigned to the IUT's Vendor is the value in the Vendor ID TLV.
Test strategy	
Notes	Vendor ID TLV is optional.

TP ID	TP/SS/INI/REG/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.2.3.7.
PICS Item	
Initial Condition	IUT is a managed SS and Authorization is complete.
Expected Behaviour	Check that: To request fragmentation and ARQ for the Secondary Management connection, the IUT transmits a REG-REQ containing the ARQ Parameters.
Test strategy	
Notes	ARQ Parameters TLV is optional.

TP ID	TP/SS/INI/REG/BI-H000 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.7, 6.3.2.3.8 paragraph 3 "Response", and 6.3.9.9. Figure: "70d—Network entry state-machine SS side".
PICS Item	PIC_MOB1.
Initial Condition	IUT is in Registration phase, the retry counter is less than Registration Request Retries, and it has sent a valid REG-REQ.
Expected Behaviour	Check that: On receiving a REG-RSP containing an invalid CMAC value, the IUT silently discards it.
Test strategy	It is observed that the IUT has discarded the REG-RSP message through the next REG-REQ message sent by the IUT as it would otherwise not send more REG-REQ messages.
Notes	Figure 70c and 70d have same title.

TP ID	TP/SS/INI/REG/BI-H000a
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.7 and 6.3.2.3.8 paragraph 3 "Response" 70d—Network entry state-machine SS side Figure: "70d—Network entry state-machine SS side".
PICS Item	
Initial Condition	IUT is in Registration phase, the retry counter is less than Registration Request Retries, and it has sent a valid REG-REQ.
Expected Behaviour	Check that: On receiving a REG-RSP containing an invalid HMAC value, the IUT silently discards it.
Test strategy	It is observed that the IUT has discarded the REG-RSP message through the next REG-REQ message sent by the IUT as it would otherwise not send more REG-REQ messages.
Notes	Figure 70c and 70d have same title.

TP ID	TP/SS/INI/REG/BI-H001
P802.16 Reference	[3] and [12] Clause 11.1.6 paragraph 1.
PICS Item	PIC_VNDID
Initial Condition	IUT has started Registration and sent a REG-REQ.
Expected Behaviour	Check that: On receiving a REG-RSP containing a Vendor-specific Information Compound TLV whose first TLV is not of Vendor ID type, the IUT discards the Vendor-specific Information Compound TLV.
Test strategy	
Notes	Requires that Vendor ID Encoding TLV was included in the REG-REQ.

TP ID	TP/SS/INI/REG/TI-H000
	Deleted.

TP ID	TP/SS/INI/REG/TI-H001 {1} **
P802.16 Reference	[3] and [12] Clauses 6.3.9.9 Figure "70d—Network entry state-machine SS side" and 10.1 Table "Parameters and Constants" "Registration Request Retries" and "T6".
PICS Item	PIC_MOB1.
Initial Condition	IUT is in Registration, has sent a valid REG-REQ and started T6.
Expected Behaviour	Check that: For Registration Request Retries, each time the IUT does not receive a REG-RSP and T6 expires, the IUT retransmits the REG-REQ, increments the retry count and restarts T6.
Test strategy	
Notes	Figure 70c and 70d have same title

TP ID	TP/SS/INI/REG/TI-H002 {2}
P802.16 Reference	[3] and [12] Clauses 6.3.9.9 Figure "70d—Network entry state-machine SS side" and 10.1 Table "Parameters and Constants" "Registration Request Retries".
PICS Item	PIC_MOB1.
Initial Condition	IUT is in Registration, has sent a valid REG-REQ, and started T6.
Expected Behaviour	Check that: After Registration Request Retries of T6 expiry and resending the REG-REQ without receiving a REG-RSP, the IUT reinitializes its MAC layer.
Test strategy	
Notes	Figure 70c and 70d have same title.

TP ID	TP/SS/INI/REG/TI-H003 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.9 Figure "70d—Network entry state-machine SS side" and 10.1 Table "Parameters and Constants" "Registration Request Retries".
PICS Item	PIC_MOB1.
Initial Condition	IUT is in Registration, has sent a valid REG-REQ.
Expected Behaviour	Check that: For Registration Request Retries, each time the IUT receives a REG-RSP containing response = 1 (message authentication failure) and the retry counter is less than Registration Request Retries, the IUT retransmits the REG-REQ.
Test strategy	
Notes	Figure 70c and 70d have same title.

TP ID	TP/SS/INI/REG/TI-H004 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.9 Figure "70d—Network entry state-machine SS side" and 10.1 Table "Parameters and Constants" "Registration Request Retries".
PICS Item	PIC_MOB1.
Initial Condition	IUT is in Registration, has sent a valid REG-REQ. For Registration Request Retries, each time the IUT received a REG-RSP containing response = 1 (message authentication failure), the IUT retransmitted the REG-REQ.
Expected Behaviour	Check that: On receiving a REG-RSP containing response = 1 (message authentication failure), and Registration Request Retries are exhausted, the IUT reinitializes its MAC layer.
Test strategy	
Notes	Figure 70c and 70d have same title.

5.3.7.2 IP Connectivity (IPC)

TP ID	TP/SS/INI/IPC/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.9.10 Table "Establishing IP Connectivity".
PICS Item	
Initial Condition	IUT is registered. A Secondary Management Connection is required. The IUT has sent a valid REG-REQ.
Expected Behaviour	Check that: On receiving a valid REG-RSP, the IUT establishes the Secondary Management Connections and sends a valid DHCP-Discover message on this connection.
Test strategy	
Notes	

TP ID	TP/SS/INI/IPC/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.9.11.
PICS Item	
Initial Condition	IUT is registered and has an IP-address.
Expected Behaviour	Check that: The IUT invokes the Time Protocol above UDP with the Time Server over Secondary Management Connection.
Test strategy	
Notes	

TP ID	TP/SS/INI/IPC/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.9.12.
PICS Item	
Initial Condition	IUT is registered, has an IP-address and Time of Day is initialized.
Expected Behaviour	Check that: The IUT downloads the SS Configuration file at the TFTP server over the Secondary Management Connection.
Test strategy	
Notes	

TP ID	TP/SS/INI/IPC/BV-H003
P802.16 Reference	[3] and [12] Clause 6.3.9.12.
PICS Item	
Initial Condition	IUT is registered, has an IP-address and Time of Day is initialized. The IUT has terminated the download of the configuration file.
Expected Behaviour	Check that: To complete the download of the configuration file, the IUT sends a TFTP-CPLT message.
Test strategy	
Notes	

TP ID	TP/SS/INI/IPC/BV-H004
P802.16 Reference	[3] and [12] Clauses 6.3.9.12 and 9.2.1.
PICS Item	
Initial Condition	IUT is registered, has an IP-address and Time of Day is initialized. The IUT downloads the SS Configuration file at the TFTP server on the Secondary Management Connection. The file contains configuration settings that the IUT cannot interpret.
Expected Behaviour	Check that: The IUT ignores the configurations settings that cannot be interpreted.
Test strategy	
Notes	

TP ID	TP/SS/INI/IPC/BV-H005
P802.16 Reference	[3] and [12] Clauses 6.3.9.12 and 9.2.1.
PICS Item	
Initial Condition	IUT is registered, has an IP-address and Time of Day is initialized. The IUT downloads the SS Configuration file at the TFTP server on the Secondary Management Connection.
Expected Behaviour	Check that: The IUT supports at a minimum an 8 192 byte configuration file.
Test strategy	
Notes	

TP ID	TP/SS/INI/IPC/BV-H006
P802.16 Reference	[3] and [12] Clauses 6.3.9.12 and 9.2.1.
PICS Item	
Initial Condition	IUT is registered, has an IP-address and Time of Day is initialized. The IUT downloads the SS Configuration file at the TFTP server on the Secondary Management Connection.
Expected Behaviour	Check that: The IUT supports the following Configuration File Settings: - SS MIC Configuration Setting; - TSTP Server Timestamp; - Software Upgrade Filename Configuration Setting; - Software Server IP Address; - Vendor-specific configuration settings.
Test strategy	
Notes	

TP ID	TP/SS/INI/IPC/BV-H007
P802.16 Reference	[3] and [12] Clauses 6.3.9.12 and 9.2.1.
PICS Item	
Initial Condition	IUT is registered, has an IP-address and Time of Day is initialized. The IUT downloads the SS Configuration file at the TFTP server on the Secondary Management Connection. The file contains configuration an incorrect SS MIC configuration setting.
Expected Behaviour	Check that: The IUT discards the configuration file.
Test strategy	
Notes	

TP ID	TP/SS/INI/IPC/TI-H000
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.28-29 and 6.3.9.12.
PICS Item	
Initial Condition	IUT is registered, has an IP-address and Time of Day is initialized. The IUT has terminated the download of the configuration file and has informed the SS of the completion by sending a TFTP-CPLT message.
Expected Behaviour	Check that: On expiry of timer T26 and having not received a TFTP-RSP message, the IUT resends the TFTP-CPLT message each time for TFTP Request Retries times.
Test strategy	
Notes	

TP ID	TP/SS/INI/IPC/TI-H001
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.28-29 and 6.3.9.12.
PICS Item	
Initial Condition	IUT is registered, has an IP-address and Time of Day is initialized. The IUT has terminated the download of the configuration file and has informed the SS of the completion by sending a TFTP-CPLT message.
Expected Behaviour	Check that: On expiry of timer T26 and after TFTP Request Retries number of retransmission of the TFTP-CPLT message, the IUT resets and starts over.
Test strategy	
Notes	

5.3.8 Dynamic Services (DS)

5.3.8.1 Dynamic Services Addition (DSA)

TP ID	TP/SS/DS/DSA/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.7.1.2 and 6.3.2.3.11.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initialization and is now operational.
Expected Behaviour	Check that: For each uplink grant scheduling type (e.g. BE, etc) the IUT supports, on receiving a DSA-REQ containing all necessary Service Flow Parameters and Convergence Sub layer Parameters and HMAC/CMAC Tuple unless negotiation of authorization policy resulted in "no authorization" to establish an UL service flow, the IUT transmits a valid DSA-RSP with a Confirmation Code set to OK/success.
Test strategy	Straightforward.
Notes	

TP ID	TP/SS/DS/DSA/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.7.1.2 and 6.3.2.3.11.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initialization and is now operational.
Expected Behaviour	Check that: On receiving a DSA-REQ containing all necessary Service Flow Parameters and Convergence Sub layer Parameters and HMAC/CMAC Tuple unless negotiation of authorization policy resulted in "no authorization" to establish a DL service flow, the IUT transmits a valid DSA-RSP with a Confirmation Code set to OK/success.
Test strategy	Straightforward.
Notes	

TP ID	TP/SS/DS/DSA/BV-H002 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.7.1.2 and 6.3.2.3.12.
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for an UL service flow and sent a valid DSA-RSP accepting the DSA-REQ.
Expected Behaviour	Check that: For each uplink grant scheduling type (e.g. BE, etc). the IUT supports, on receiving a DSA-ACK with Confirmation Code set to OK/success; the IUT is able to transmit service flow data on the connection.
Test strategy	Straightforward up to the point where the IUT begins transmitting data. Requires the IUT to have an application or another means to begin sending data over the service flow.
Notes	

TP ID	TP/SS/DS/DSA/BV-H003 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.7.1.2 and 6.3.2.3.12.
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for a DL service flow and sent a valid DSA-RSP accepting the DSA-REQ.
Expected Behaviour	Check that: On receiving a DSA-ACK with Confirmation Code set to OK/success; the IUT is able to receive service flow data on the connection.
Test strategy	Straightforward.
Notes	

TP ID	TP/SS/DS/DSA/BV-H004 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.1, and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is aurthorized and registered.
Expected Behaviour	Check that: To create a Service flow, the IUT sends a DSA-REQ.
Test strategy	Straightforward.
Notes	Requires a means to provoke the IUT to establish the service flow with a DSA-REQ.

TP ID	TP/SS/DS/DSA/BV-H005 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.14.7.1.1, and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is aurthorized and registered. The IUT has sent a DSA-REQ message.
Expected Behaviour	Check that: On receiving a DSX-RVD and then a DSA-RSP containing the Confirmation Code set to OK/success, the IUT does not retransmit the DSA-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to establish the service flow with a DSA-REQ.

TP ID	TP/SS/DS/DSA/BV-H006 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.1, and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is aurthorized and registered. The IUT has sent a DSA-REQ message.
Expected Behaviour	Check that: On receiving a DSX-RVD and then a DSA-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSA-ACK.
Test strategy	
Notes	Requires a means to provoke the IUT to establish the service flow with a DSA-REQ.

TP ID	TP/SS/DS/DSA/BV-H007 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, and 6.3.14.7.1.2.
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for a service flow and sent a valid DSA-RSP accepting the DSA-REQ.
Expected Behaviour	Check that: On receiving a DSA-ACK containing the associated Transaction ID, the Confirmation Code set to reject-other, the IUT accepts the message.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BV-H008 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.2, and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for a service flow and has sent a valid DSA-RSP accepting the DSA-REQ. Then the IUT has received a valid DSA-ACK and has started timer T10.
Expected Behaviour	Check that: On receiving a DSA-ACK containing the associated Transaction ID and the Confirmation Code set to OK/success, the IUT accepts the message.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BV-H009 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.2, and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for a service flow and has sent a valid DSA-RSP accepting the DSA-REQ. Then the IUT has received a valid DSA-ACK and has started timer T10.
Expected Behaviour	Check that: On receiving a DSA-ACK containing the associated Transaction ID and the Confirmation Code set to reject-other, the IUT accepts the message.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BV-H010 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.1, and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is aurthorized and registered. The IUT has sent a DSA-REQ message.
Expected Behaviour	Check that: On receiving a DSX-RVD and then a DSA-RSP containing the Confirmation Code set to reject-other, the IUT sends a DSA-ACK containing the Confirmation Code set to reject-other.
Test strategy	
Notes	Requires a means to provoke the IUT to establish the service flow with a DSA-REQ.

TP ID	TP/SS/DS/DSA/BV-H011 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.1, and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is aurthorized and registered. The IUT has sent a DSA-REQ message.
Expected Behaviour	Check that: On receiving a DSA-RSP containing the Confirmation Code set to OK/success, the IUT sends a DSA-ACK containing the Confirmation Code set to OK/success.
Test strategy	
Notes	Requires a means to provoke the IUT to establish the service flow with a DSA-REQ.

TP ID	TP/SS/DS/DSA/BV-H012 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.1, and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is aurthorized and registered. The IUT has sent a DSA-REQ message.
Expected Behaviour	Check that: On receiving a DSA-RSP containing the Confirmation Code set to reject-other, the IUT sends a DSA-ACK containing the Confirmation Code set to reject-other.
Test strategy	
Notes	Requires a means to provoke the IUT to establish the service flow with a DSA-REQ.

TP ID	TP/SS/DS/DSA/BV-H013 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.1, and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is aurthorized and registered. The IUT has sent a DSA-REQ message. Then the IUT has received a DSA_RSP and has sent a DSA-ACK. The IUT is now into DSA Local Holding Down state of the DSA state machine.
Expected Behaviour	Check that: On receiving a DSA-RSP containing the Confirmation Code set to OK/success, the IUT re-sends the previously saved DSA-ACK message.
Test strategy	
Notes	Requires a means to provoke the IUT to establish the service flow with a DSA-REQ.

TP ID	TP/SS/DS/DSA/BV-H014
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10 and 6.3.2.3.11.
PICS Item	
Initial Condition	IUT is aurthorized and registered. The IUT has started the TFTP transaction. There are no preprovisioned DS service flows to establish.
Expected Behaviour	Check that: On receiving a valid TFTP-RSP followed by a BS-initiated DSA-REQ, the IUT transmits a DSA-RSP.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BV-H015 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction DSA-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT has sent a DSA-REQ message.
Expected Behaviour	Check that: On receiving a DSX-RVD for the pending DSA transaction, the IUT stops the timer T14.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BV-H016 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving a DSA-RSP for the pending DSA transaction, the transmits a DSA-ACK and starts timer T10.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BV-H016a {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving a DSA-RSP for the pending DSA transaction, the IUT transmits a DSA-ACK. If the DSA-RSP indicates accept establishing the service flow, the IUT enables the service flow.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BO-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.3.12.
PICS Item	PIC_MOB1.
Initial Condition	IUT is registered.
Expected Behaviour	Check that: On receiving a DSA-ACK for a non existing service flow, the IUT ignores the received DSA-ACK message.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BO-H001 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.2, and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for a service flow and has sent a valid DSA-RSP accepting the DSA-REQ. Then the IUT has received a valid DSA-ACK.
Expected Behaviour	Check that: On receiving a DSA-REQ message, the IUT sends a DSA-RSP with Confirmation Code reject-service-flow-exists.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BO-H002 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction DSA-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the DSA-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSA/BO-H003 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction DSA-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the DSA-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF Delete-Local command, the IUT sends no message and goes to the Deleting Service Flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/SS/DS/DSA/BO-H004 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.2 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction DSA-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the DSA-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF DSA-ACK Lost command and retries are available, the IUT retransmits the DSA-RSP and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSA-ACK Lost.

TP ID	TP/SS/DS/DSA/BO-H005 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.2 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction DSA-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the DSA-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF DSA-ACK Lost command and retries are exhausted, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSA-ACK Lost.

TP ID	TP/SS/DS/DSA/BO-H006 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has started timer T10.
Expected Behaviour	Check that: On receiving the SF Changed command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Changed.

TP ID	TP/SS/DS/DSA/BO-H007 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has started timer T10.
Expected Behaviour	Check that: On receiving the SF Deleted command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/SS/DS/DSA/BO-H008 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has started timer T10.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSA/BO-H009 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has started timer T10.
Expected Behaviour	Check that: On receiving the SF Delete-Local command, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/SS/DS/DSA/BO-H010 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has started timer T10.
Expected Behaviour	Check that: On receiving the SF Change-Remote command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Remote.

TP ID	TP/SS/DS/DSA/BO-H011 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Deleting Service state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the SF Deleted command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/SS/DS/DSA/BO-H012 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Deleting Service state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSA/BO-H013 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Deleting Service state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSA-REQ, the IUT sends no message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BO-H014 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Deleting Service state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSA-ACK, the IUT sends no message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BO-H015 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction DSA-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the DSA-RSP pending state.
Expected Behaviour	Check that: On receiving a SF Delete-Remote command for the pending DSA transaction, the IUT stops the Local DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSA/BO-H016 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction DSA-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the DSA-RSP pending state.
Expected Behaviour	Check that: On receiving a SF Abort Add command for the pending DSA transaction, the IUT stops T7 and starts T10.
Test strategy	
Notes	Requires a means of provoking the SF Abort Add.

TP ID	TP/SS/DS/DSA/BO-H017 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Holding state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving a SF Delete-Local command for the pending DSA transaction, the IUT sends no message and goes to the Deleting Service Flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/SS/DS/DSA/BO-H018 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Holding state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving a SF Changed command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Changed.

TP ID	TP/SS/DS/DSA/BO-H019 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Holding state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving a SF Change-Remote command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Remote.

TP ID	TP/SS/DS/DSA/BO-H020 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Holding state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving a SF Delete-Remote command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSA/BO-H021 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving a SF Delete-Remote command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSA/BO-H022 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving a SF Abort Add command for the pending DSA transaction, the IUT sends no message and goes to the Holding Down state.
Test strategy	
Notes	Requires a means of provoking the SF Abort Add.

TP ID	TP/SS/DS/DSA/BO-H023 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSA-RSP for the pending DSA transaction, the IUT transmits the DSA-ACK Lost and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BO-H024 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a SF Deleted command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/SS/DS/DSA/BO-H025 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving an SF Delete-Remote command for the pending DSA transaction, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSA/TI-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.14.7.1.1, 6.3.14.9.2 and 6.3.14.9.3.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is aurthorized and registered. IUT has transmitted its first DSA-REQ.
Expected Behaviour	Check that: When each time timer T14 or T7 expires and no reply is received, the IUT re-sends, DSx Request Retries times, the DSA-REQ message and then stops the initiated DSA-transaction.
Test strategy	
Notes	Requires a means to provoke the IUT to establish the service flow with a DSA-REQ.

TP ID	TP/SS/DS/DSA/TI-H001
	Deleted.

TP ID	TP/SS/DS/DSA/TI-H002
	Deleted.

TP ID	TP/SS/DS/DSA/TI-H003 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.2, 6.3.14.9.2 and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for a service flow and sent a valid DSA-RSP accepting the DSA-REQ.
Expected Behaviour	Check that: Before expiry of timer T8 and on receiving more DSA-REQ messages, the IUT sends the saved DSA-RSP for each received DSA-REQ.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/TI-H004 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.2, 6.3.14.9.2 and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for a service flow and sent a valid DSA-RSP accepting the DSA-REQ. The IUT has re-sent the DSA-RSP message "DSx Response Retries" times due to expiration of T8,
Expected Behaviour	Check that: On receiving a DSA-REQ, the IUT takes no action.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/TI-H005 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.2, 6.3.14.9.2 and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for a service flow and sent a valid DSA-RSP accepting the DSA-REQ.
Expected Behaviour	Check that: On expiry of timer T8 and on no DSA-ACK message received from the test equipment, the IUT re-sends for DSx Response Retries times the DSA-RSP.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/TI-H006 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10, 6.3.2.3.11, 6.3.2.3.12, 6.3.14.7.1.2, 6.3.14.9.2 and 6.3.14.9.3.3.
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT has received a valid DSA-REQ for a service flow and sent a valid DSA-RSP accepting the DSA-REQ.
Expected Behaviour	Check that: On expiry of timer T8 when the number of retries is exhausted and on no DSA-ACK message received from the test equipment, the IUT does not re-send the DSA-RSP message and stops the procedure.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/TI-H007 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction DSA-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT waits for the DSA-RSP.
Expected Behaviour	Check that: When each time T7 expires, no reply is received, and retries are available, the IUT re-sends the DSA-REQ message and restarts T7.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/TI-H008 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction DSA-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT waits for the DSA-RSP.
Expected Behaviour	Check that: When T7 expires, no reply is received, and retries are exhausted the IUT transmits no message, starts T10, and goes to the Retries Exhausted state.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/TI-H009 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction DSA-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT waits for the DSA-RSP.
Expected Behaviour	Check that: When T14 expires, no reply is received, and retries are exhausted, the IUT transmits no message, starts T10, and goes to the Retries Exhausted state.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/TI-H010 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Holding state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started.
Expected Behaviour	Check that: When T10 expires, the IUT ends the DSA transaction.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/TI-H011 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On T10 expiry without receiving any messages, the IUT ends the DSA transaction.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/TI-H012 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA – Locally Initiated Transaction state transition diagram" Figure "DSA – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	An SS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On T10 expiry without receiving any messages, the IUT ends the DSA transaction.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/TI-H013 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction DSA-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT waits for the DSA-ACK.
Expected Behaviour	Check that: On T8 expiry and Retries Exhausted, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/TI-H014 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has progressed to the point where DSA-ACK has been received by the IUT.
Expected Behaviour	Check that: On T10 expiry without receiving any more messages, the IUT ends the DSA transaction.
Test strategy	When T10 expires data transfer on established service flow should be possible.
Notes	

TP ID	TP/SS/DS/DSA/TI-H015 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.2 and 6.3.14.9.3.3 Figure "DSA - Remotely Initiated Transaction state transition diagram" Figure "DSA - Remotely Initiated Transaction Deleting Service state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On T10 expiry, the IUT sends no message and ends the DSA transaction.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSA/BI-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.10 and 6.3.14.7.1.2.
PICS Item	PIC_MOB1.
Initial Condition	A BS-initiated DSA transaction has started.
Expected Behaviour	Check that: On receiving a DSA-REQ containing the Service Flow Parameters set to an unsupported value, the IUT sends a DSA-RSP containing the Confirmation Code set to any reject reason.
Test strategy	
Notes	

5.3.8.2 Dynamic Services Change (DSC)

TP ID	TP/SS/DS/DSC/BV-H000 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.2.3.13.
PICS Item	PIC_MOB2.
Initial Condition	IUT is authorized, registered and a DS flow is established.
Expected Behaviour	Check that: To change a Service flow, the IUT sends a valid DSC-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow with a DSC-REQ.

TP ID	TP/SS/DS/DSC/BV-H001 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.2.3.14.
PICS Item	PIC_MOB2.
Initial Condition	IUT is authorized, registered and a DS flow is established. The IUT has sent a DSC-REQ message.
Expected Behaviour	Check that: On receiving a DSX-RVD and then a DSC-RSP containing the Confirmation Code set to OK/success, the IUT sends a valid DSC-ACK.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow with a DSC-REQ.

TP ID	TP/SS/DS/DSC/BV-H002 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.2.3.23.
PICS Item	PIC_MOB2.
Initial Condition	IUT is authorized, registered and a DS flow is established. The IUT has sent a DSC-REQ message.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to reject-other, the IUT sends a valid DSC-ACK.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow with a DSC-REQ.

TP ID	TP/SS/DS/DSC/BV-H003 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1 and 6.3.2.3.14.
PICS Item	PIC_MOB2.
Initial Condition	IUT is authorized, registered and a DS flow is established. The IUT has sent a DSC-REQ message.
Expected Behaviour	Check that: On receiving a DSX-RVD and then a DSC-RSP containing the Confirmation Code set to reject-other, the IUT sends a valid DSC-ACK.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow with a DSC-REQ.

TP ID	TP/SS/DS/DSC/BV-H004
	Deleted.

TP ID	TP/SS/DS/DSC/BV-H005
	Deleted.

TP ID	TP/SS/DS/DSC/BV-H006 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 paragraph 9, 6.3.14.9.4.1, and 6.3.2.3.13.
PICS Item	PIC_MOB2.
Initial Condition	IUT is authorized, registered and a DS flow is established. The IUT has sent a DSC-REQ message.
Expected Behaviour	Check that: On receiving a DSC-REQ, the IUT respects the priority, aborts its transaction and sends a valid DSC-RSP.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow with a DSC-REQ.

TP ID	TP/SS/DS/DSC/BV-H007 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 paragraph 9, 6.3.14.9.4.1, and 6.3.2.3.13.
PICS Item	PIC_MOB2.
Initial Condition	IUT is authorized, registered and a DS flow is established. The IUT has sent a DSC-REQ message.
Expected Behaviour	Check that: On receiving a DSX-RVD and then a DSC-REQ, the IUT respects the priority, aborts its transaction and sends a valid DSC-RSP.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow with a DSC-REQ.

TP ID	TP/SS/DS/DSC/BV-H008 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4 paragraph 9, 6.3.14.9.4.1, and 6.3.2.3.13.
PICS Item	PIC_MOB2.
Initial Condition	IUT is authorized, registered and a DS flow is established. The IUT has sent a DSC-REQ message.
Expected Behaviour	Check that: On receiving a DSX-RVD, a DSC-RSP containing the Confirmation Code set to OK/success and then a DSC-REQ, IUT sends a DSC-ACK, respects the priority, the IUT aborts its transaction and sends a valid DSC-RSP.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow with a DSC-REQ.

TP ID	TP/SS/DS/DSC/BV-H009 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1, 6.3.2.3.14, and 6.3.14.9.4.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is authorized, registered and a DS flow is established. The IUT has sent a DSC-ACK message to complete the service flow change procedure.
Expected Behaviour	Check that: On receiving a DSC-RSP containing the Confirmation Code set to OK/success, the IUT sends a valid DSC-ACK.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow with a DSC-REQ.

TP ID	TP/SS/DS/DSC/BV-H010 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14, and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DL DS flow is established.
Expected Behaviour	Check that: On receiving a DSC-REQ, the IUT sends a valid DSC-RSP.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BV-H011 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14, 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and an UL DS flow is established.
Expected Behaviour	Check that: On receiving a DSC-REQ, the IUT sends a valid DSC-RSP.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BV-H012 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14, and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow is established.
Expected Behaviour	Check that: On receiving a DSC-REQ containing the Service Flow Parameters set to an unsupported value, the IUT sends a DSC-RSP with the Confirmation Code set to any reject reason.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BV-H013 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14, and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow is established. The IUT has received a DSC-REQ and then has sent a DSC-RSP.
Expected Behaviour	Check that: On receiving a DSC-ACK containing the Confirmation Code set to OK/success and after T10 expiry, the IUT considers the transaction has ended.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BV-H014 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14, and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow is established. The IUT has received a DSC-REQ and then has sent a DSC-RSP.
Expected Behaviour	Check that: On receiving a DSC-ACK containing the Confirmation Code set to reject-other and after T10 expiry, the IUT considers the transaction has ended.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BV-H015 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14, and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow is established. The IUT has received a DSC-REQ, then has sent a DSC-RSP, and then has received a DSA-ACK.
Expected Behaviour	Check that: On receiving a redundant copy of the DSC-ACK containing the Confirmation Code set to OK/success and after T8 expiry, the IUT considers the transaction has ended.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BV-H016 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14, and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow is established. The IUT has received a DSC-REQ, then has sent a DSC-RSP, and then has received a DSA-ACK.
Expected Behaviour	Check that: On receiving a redundant copy of the DSC-ACK containing the Confirmation Code set to reject-other and after T8 expiry, the IUT considers the transaction has ended.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BV-H017 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT waits for the DSC-RSP.
Expected Behaviour	Check that: On receiving a DSX-RVD, the IUT sends no message and stops T14.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BV-H018 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving a DSC-RSP accepting the change, the IUT transmits a DSC-ACK, incorporates the changes and starts T10.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BV-H019 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving a DSC-RSP refusing the change, the IUT transmits a DSC-ACK and starts T10.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BV-H020 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT waits for the DSC-ACK.
Expected Behaviour	Check that: On receiving a DSC-REQ and retries are available, the IUT retransmits the DSC-RSP.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BV-H021 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT waits for the DSC-ACK.
Expected Behaviour	Check that: On receiving a DSC-REQ and retries are exhausted, the IUT sends no message.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BI-H000
	Deleted.

TP ID	TP/SS/DS/DSC/BI-H001
	Deleted.

TP ID	TP/SS/DS/DSC/BI-H002 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.1, 6.3.2.3.13, and 6.3.14.9.4.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is registered and a DS flow is established. The IUT has sent a DSC-REQ message.
Expected Behaviour	Check that: On receiving a DSC-RSP rejecting the service flow change request and indicating an erroneous parameter that caused the rejection, the IUT re-sends the DSC-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to change the service flow with a DSC-REQ.

TP ID	TP/SS/DS/DSC/BO-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.15, and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is registered and a DS flow is established.
Expected Behaviour	Check that: On receiving a DSC-ACK for a non existing service flow, the IUT ignores the message.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BO-H001 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.15, and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is registered and a DS flow is established. The IUT has received a DSC-REQ, has then sent a DSC-RSP and has then received a DSC-ACK.
Expected Behaviour	Check that: On receiving a redundant copy of the previously received DSC-REQ, the IUT ignores the message.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BO-H002 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.15, and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is registered and a DS flow is established. The IUT has received a DSC-REQ, has then sent a DSC-RSP and has then received a DSC-ACK.
Expected Behaviour	Check that: On receiving a redundant copy of the previously received DSC-ACK, the IUT ignores the message.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BO-H003 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the DSC-RSP Pending state.
Expected Behaviour	Check that: On receiving the command SF DSC-REQ Lost and retries are available, the IUT resends the DSC-REQ and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSC-REQ Lost.

TP ID	TP/SS/DS/DSC/BO-H004 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the DSC-RSP Pending state.
Expected Behaviour	Check that: On receiving the command SF DSC-REQ Lost and retries are exhausted, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSC-REQ Lost.

TP ID	TP/SS/DS/DSC/BO-H005 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the DSC-RSP Pending state.
Expected Behaviour	Check that: On receiving the command SF Change-Remote, the IUT ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Remote.

TP ID	TP/SS/DS/DSC/BO-H006 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the DSC-RSP Pending state.
Expected Behaviour	Check that: On receiving the command SF Delete-Remote, the IUT ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSC/BO-H007 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the DSC-RSP Pending state.
Expected Behaviour	Check that: On receiving the command SF Delete-Local, the IUT stops T7, starts T10, and goes to the Deleting Service flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/SS/DS/DSC/BO-H008 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the command SF Changed, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Changed.

TP ID	TP/SS/DS/DSC/BO-H009 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the command SF Change-Remote, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Remote.

TP ID	TP/SS/DS/DSC/BO-H010 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the command SF Delete-Remote, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSC/BO-H011 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the command SF Delete-Local, the IUT sends no message and goes to the Deleting Service Flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/SS/DS/DSC/BO-H012 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving the command SF Delete-Remote, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSC/BO-H013 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On receiving the command SF Delete-Local, the IUT sends no message and goes to the Deleting Service Flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/SS/DS/DSC/BO-H014 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the command SF Deleted, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/SS/DS/DSC/BO-H015 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the command SF Delete-Remote, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSC/BO-H016 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSC-RSP, the IUT sends no message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BO-H017 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the DSC-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF DSC-ACK Lost command and retries are available, the IUT retransmits the DSC-RSP and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSC-ACK Lost.

TP ID	TP/SS/DS/DSC/BO-H018 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the DSC-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF DSC-ACK Lost command and retries are exhausted, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSC-ACK Lost.

TP ID	TP/SS/DS/DSC/BO-H019 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the DSC-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSC/BO-H020 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the DSC-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF Change-Local command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Local.

TP ID	TP/SS/DS/DSC/BO-H021 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction DSC-ACK Pending state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the DSC-ACK Pending state.
Expected Behaviour	Check that: On receiving the SF Delete-Local command, the IUT sends no message, stops T8, starts T10, and goes to the Deleting Service Flow state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/SS/DS/DSC/BO-H022 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Changed command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Changed.

TP ID	TP/SS/DS/DSC/BO-H023 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Deleted command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/SS/DS/DSC/BO-H024 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSC/BO-H025 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Change-Local command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Local.

TP ID	TP/SS/DS/DSC/BO-H026 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Delete-Local command, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Local.

TP ID	TP/SS/DS/DSC/BO-H027 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving the SF Change-Remote command, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF Change-Remote.

TP ID	TP/SS/DS/DSC/BO-H028 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the SF Deleted command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/SS/DS/DSC/BO-H029 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the SF Delete-Remote command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSC/BO-H030 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving the SF Change-Local command, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	Requires a means of provoking the SF Change-Local.

TP ID	TP/SS/DS/DSC/BO-H031 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSC-REQ, the IUT sends no message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/BO-H032 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On receiving a DSC-ACK, the IUT sends no message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/TI-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14, and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is registered and a DS flow is established. The IUT has received a DSC-REQ and then has sent a DSC-RSP.
Expected Behaviour	Check that: On T8 expiry without receiving a DSC-ACK, the IUT resends the previously transmitted DSC-RSP for DSx Response Retries times.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/TI-H002 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14, and 6.3.14.9.4.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is registered and a DS flow is established. The IUT has received a DSC-REQ and then has sent a DSC-RSP.
Expected Behaviour	Check that: On T8 expiry without receiving a DSC-ACK for more than DSx Response Retries times, the IUT stops the DSC transaction.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/TI-H003 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT waits for the DSC-RSP.
Expected Behaviour	Check that: On not receiving a DSC-RSP after T7 expiry and retries are available, the IUT retransmits the DSC-REQ and restarts T7.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/TI-H004 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT waits for the DSC-RSP.
Expected Behaviour	Check that: On not receiving a DSC-RSP after T7 expiry and retries are not available, the IUT sends no message and starts T10.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/TI-H005 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT waits for the DSC-RSP.
Expected Behaviour	Check that: On not receiving a DSX-RVD after T14 expiry and retries are available, the IUT retransmits the DSC-REQ and restarts T7.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/TI-H006 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction DSC-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT waits for the DSC-RSP.
Expected Behaviour	Check that: On not receiving a DSX-RVD after T7 expiry and retries are exhausted, the IUT sends no message and starts T10.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/TI-H007 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On T10 expiry, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/TI-H008 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Retries Exhausted state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Retries Exhausted state.
Expected Behaviour	Check that: On T10 expiry, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/TI-H009 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC – Locally Initiated Transaction state transition diagram" Figure "DSC – Locally Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On T10 expiry, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSC/TI-H010 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.3 Figure "DSC - Remotely Initiated Transaction state transition diagram" Figure "DSC - Remotely Initiated Transaction Deleting Service Flow state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSC transaction has started. The IUT is in the Deleting Service Flow state.
Expected Behaviour	Check that: On T10 expiry, the IUT sends no message and ends the DSC transaction.
Test strategy	
Notes	

5.3.8.3 Dynamic Services Deletion (DSD)

TP ID	TP/SS/DS/DSD/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5.2, 6.3.2.3.17, and 6.3.14.9.5.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and a DL DS flow is established.
Expected Behaviour	Check that: On receiving a DSD-REQ for the established DL DS flow, the IUT transmits a valid DSD-RSP.
Test strategy	Straightforward.
Notes	

TP ID	TP/SS/DS/DSD/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5.2, 6.3.2.3.17 and 6.3.14.9.5.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and an UL DS flow is established.
Expected Behaviour	Check that: On receiving a DSD-REQ for the established UL service flow, the IUT transmits a valid DSD-RSP and deletes the service flow.
Test strategy	Straightforward.
Notes	

TP ID	TP/SS/DS/DSD/BV-H002 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5.1, 6.3.2.3.16 and 6.3.14.9.5.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a DS flow is established.
Expected Behaviour	Check that: To delete a Service flow, the IUT sends a DSD-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to delete the service flow with a DSD-REQ.

TP ID	TP/SS/DS/DSD/BV-H003 {1} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5.1, 6.3.2.3.17 and 6.3.14.9.5.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a DS flow is established. The IUT waits for DSD-RSP.
Expected Behaviour	Check that: On receiving a DSD-RSP, the IUT accepts it, does not retransmit the DSD-REQ.
Test strategy	
Notes	Requires a means to provoke the IUT to delete the service flow with a DSD-REQ.

TP ID	TP/SS/DS/DSD/BV-H004 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction state transition diagram" Figure "DSD – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSD transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving a DSD-RSP, the IUT sends no message.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSD/BI-H000
	Deleted.

TP ID	TP/SS/DS/DSD/BI-H001
	Deleted.

TP ID	TP/SS/DS/DSD/BO-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.1, 11.13, 6.3.14.9.5.2, and 6.3.2.3.16.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and a DS flow is established.
Expected Behaviour	Check that: On receiving a DSD-REQ for a non existing service flow, the IUT sends DSD-RSP with Confirmation Code = reject-service-flow-not-found.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSD/BO-H001 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction state transition diagram" Figure "DSD – Locally Initiated Transaction DSD-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSD transaction has started. The IUT waits for the DSD-RSP.
Expected Behaviour	Check that: On receiving an SF DSD-REQ Lost Command and retries are available, the IUT retransmits the DSD-REQ message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSD-REQ Lost Command.

TP ID	TP/SS/DS/DSD/BO-H002 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction state transition diagram" Figure "DSD – Locally Initiated Transaction DSD-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSD transaction has started. The IUT is in the DSD-RSP Pending state.
Expected Behaviour	Check that: On receiving an SF DSD-REQ Lost Command and retries are exhausted, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF DSD-REQ Lost Command.

TP ID	TP/SS/DS/DSD/BO-H003 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction state transition diagram" Figure "DSD – Locally Initiated Transaction DSD-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSD transaction has started. The IUT is in the DSD-RSP Pending state.
Expected Behaviour	Check that: On receiving an SF Delete-Remote Command, the IUT sends no message, stops T7, starts T10, and goes to the Holding Down state.
Test strategy	
Notes	Requires a means of provoking the SF Delete-Remote.

TP ID	TP/SS/DS/DSD/BO-H004 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction state transition diagram" Figure "DSD – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSD transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving an SF Deleted command, the IUT sends no message and remains in the same state.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/SS/DS/DSD/BO-H005 {4}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.3 Figure "DSD – Remotely Initiated Transaction state transition diagram" Figure "DSD – Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSD transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On receiving an SF Deleted command, the IUT sends no message and ends the DSD transaction.
Test strategy	
Notes	Requires a means of provoking the SF Deleted.

TP ID	TP/SS/DS/DSD/TI-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5.1; 6.3.2.3.16 and 6.3.14.9.5.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and a DS flow is established. The IUT has sent a DSD-REQ.
Expected Behaviour	Check that: When each time timer T7 expires with no reply received, the IUT re-sends a DSD-REQ "DSx Request Retries" times and finally stops the initiated DSD-transaction.
Test strategy	
Notes	Requires a means to provoke the IUT to delete the service flow with a DSD-REQ.

TP ID	TP/SS/DS/DSD/TI-H001 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.5.2; 6.3.2.3.17 and 6.3.14.9.5.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and an UL DS flow is established. The IUT has received a DSD-REQ and has replied with a DSD-RSP.
Expected Behaviour	Check that: On receiving a redundant copy of DSD-REQ for the service flow that the BS has just requested to delete, the IUT retransmits the DSD-RSP with CC set to 0 if T10 timer for the service flow has neither expired nor been stopped yet and sends a DSD-RSP with CC set to 6 if T10 timer expired or stopped.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSD/TI-H002 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction state transition diagram" Figure "DSD – Locally Initiated Transaction DSD-RSP Pending state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSD transaction has started. The IUT waits for the DSD-RSP.
Expected Behaviour	Check that: On expiry of T7 and retries are exhausted, the IUT sends no message and ends the DSD transaction.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSD/TI-H003 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.3 Figure "DSD – Locally Initiated Transaction state transition diagram" Figure "DSD – Locally Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB2.
Initial Condition	IUT is operating and a service flow is established. An SS-Initiated DSD transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On expiry of T10, the IUT sends no message and ends the DSD transaction.
Test strategy	
Notes	

TP ID	TP/SS/DS/DSD/TI-H004 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.14.9.5.3 Figure "DSD – Remotely Initiated Transaction state transition diagram" Figure "DSD – Remotely Initiated Transaction Holding Down state flow diagram".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and a service flow is established. A BS-Initiated DSD transaction has started. The IUT is in the Holding Down state.
Expected Behaviour	Check that: On expiry of T10, the IUT sends no message and ends the DSD transaction.
Test strategy	
Notes	

5.3.8.4 QoS Parameter Sets (QPS)

TP ID	TP/SS/DS/QPS/BV-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14 and 6.3.14.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow in provisioned state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ to change the state of the service flow to the admitted state, the IUT transmits a DSC-RSP accepting the request.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H001 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14 and 6.3.14.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow in provisioned state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ to change the state of the service flow to the active state, the IUT transmits a DSC-RSP accepting the request.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H002 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14 and 6.3.14.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow in active state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ to change the state of the service flow to the admitted state, the IUT transmits a DSC-RSP accepting the request.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H003 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14 and 6.3.14.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow in active state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ to change the state of the service flow to the provisioned state, the IUT transmits a DSC-RSP accepting the request.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H004 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14 and 6.3.14.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow in admitted state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ to change the state of the service flow to the provisioned state, the IUT transmits a DSC-RSP accepting the request.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H005 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4.2, 6.3.2.3.14 and 6.3.14.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow in admitted state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ to change the state of the service flow to the active state, the IUT transmits a DSC-RSP accepting the request.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H006 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4 and 11.13.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow in active state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ containing a null ActiveQoSParamSet, the IUT deactivates the referenced service flow after the DSC transaction is complete.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H007 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 11.13 and 6.3.14.8.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow in active state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ containing only an AdmitQoSParamSet, the IUT deactivates the referenced service flow after the DSC transaction is complete.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H008 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.14.9.4, 11.13 and 6.3.14.8.
PICS Item	PIC_MOB1.
Initial Condition	IUT is authorized, registered and a DS flow in active state is established.
Expected Behaviour	Check that: On receiving a DSC-REQ containing only a null AdmitQoSParamSet and a null ActiveQoSParamSet, the IUT changes the referenced service flow to not admitted after the DSC transaction is complete.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H009 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.6.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and a service flow is Admitted.
Expected Behaviour	Check that: On receiving a DSA-REQ for an additional service flow that exceeds the provisioned QoS, the IUT transmits a DSA-RSP accepting the additional service flow and reserves resources for the service flow already admitted.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H010 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.6.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ for the active service flow with an AdmittedQoSParameterSet that is a subset of the current AdmittedQoSParameterSet and the ActiveQoSParameterSet remains a subset of the new AdmittedQoSParameterSet, the IUT transmits a DSC-RSP accepting the new AdmittedQoSParameterSet.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H011
	Deleted.

TP ID	TP/SS/DS/QPS/BV-H012 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.8.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ message for the service flow containing only an AdmittedQoSParameter set and the on the DSC transaction being successful, the IUT deactivates the service flow.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H013
	Deleted.

TP ID	TP/SS/DS/QPS/BV-H014 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.8.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ containing both an ActiveQoSParameter set and an AdmittedQoSParameter set and on successful completion of the DSC transaction, the IUT implements the QoS contained in the new Admitted and Active QoS Parameter sets. (The ActiveQoSParameter set is a subset of the AdmittedQoSParameter set).
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H015
	Deleted.

TP ID	TP/SS/DS/QPS/BV-H016 {3}
P802.16 Reference	[3] and [12] Clause 6.3.14.9.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ with a null ActiveQoSParameter set, the IUT transmits a DSC-RSP accepting the transaction and after successful transaction completion the IUT deactivates the service flow.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H017 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.2 and 11.13.4 paragraph 2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has just initialized and is now provisioning a service flow.
Expected Behaviour	Check that: The IUT has service flow parameters containing a ProvisionedQoSParameter set.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H018 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.14.2 and 11.13.4 paragraph 2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has just initialized. A service flow is preprovisioned.
Expected Behaviour	Check that: The IUT has service flow parameters containing a ProvisionedQoSParameter set.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H019
P802.16 Reference	[3] and [12] Clause 11.13.5.
PICS Item	
Initial Condition	IUT is operating with two service flows.
Expected Behaviour	Check that: Given that two service flows are identical in al QoS parameters besides priority, the IUT gives the higher priority service flow lower delay and higher buffering preference.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H020
	Deleted.

TP ID	TP/SS/DS/QPS/BV-H021
	Deleted.

TP ID	TP/SS/DS/QPS/BV-H022
	Deleted.

TP ID	TP/SS/DS/QPS/BV-H023
	Deleted.

TP ID	TP/SS/DS/QPS/BV-H024
P802.16 Reference	[3] Clause 11.13.10 [12] Clause 11.13.9.
PICS Item	
Initial Condition	The IUT is operational and a service flow is Active.
Expected Behaviour	Check that: On receiving a DSC-REQ containing Vendor-specific QoS Parameters that does not embed the Vendor ID as its first element, the IUT discards the Vendor-specific QoS Parameters, processes the remainder of the DSC-REQ, and transmits a valid DSC-RSP.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H025
	Deleted.

TP ID	TP/SS/DS/QPS/BV-H026
	Deleted.

TP ID	TP/SS/DS/QPS/BV-H027 {3}
P802.16 Reference	[3] Clause 11.13.12 [12] Clause 11.13.11.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the Request/transmission Policy Bit #2 set to prohibit piggy-backing requests with data followed by a successful DSA transaction, the IUT does not piggy-back requests with data for the service flow.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H028 {3}
P802.16 Reference	[3] Clause 11.13.12 [12] Clause 11.13.11.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the Request/transmission Policy Bit #3 set to prohibit data fragmentation followed by a successful DSA transaction, the IUT does not fragment data for the service flow.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H029 {3}
P802.16 Reference	[3] Clause 11.13.12 [12] Clause 11.13.11.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the Request/transmission Policy Bit #4 set to prohibit payload header suppression followed by a successful DSA transaction, the IUT does not suppress headers for the service flow.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H030 {4}
P802.16 Reference	[3] Clause 11.13.12 [12] Clause 11.13.11.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a DSA-REQ with the Request/transmission Policy Bit #5 set to prohibit packing multiple SDUs (or fragments) into single MAC PDUs followed by a successful DSA transaction, the IUT does not pack multiple SDUs (or fragments) into single MAC PDUs for the service flow.
Test strategy	
Notes	

TP ID	TP/SS/DS/QPS/BV-H031
	Deleted.

5.3.9 Bandwidth Allocation and Polling (BWA)

5.3.9.1 CDMA Bandwidth Request (CBR)

TP ID	TP/SS/BWA/CBR/BV-H000 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.6.5.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry procedure. The IUT has requested bandwidth sending a ranging code onto the Ranging Channel.
Expected Behaviour	Check that: On receiving uplink allocation on the broadcast CID in combination with a CDMA_Allocation_IE specifying the transmit region and Ranging Code used by the IUT, the IUT uses the allocation to transmit a Bandwidth request (e.g. Bandwidth Request Header, BW Request and Tx Power Report Header, etc). and/or data and/or padding.
Test strategy	
Notes	IUT may respond to the CDMA Allocation IE with either aggregate or incremental BR.

TP ID	TP/SS/BWA/CBR/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.6.5 and 8.4.5.4.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is has completed initial network entry procedure. The IUT has requested bandwidth sending a ranging code onto the Ranging Channel and received an uplink allocation with a CDMA_Allocation_IE - with the "bandwidth request mandatory" flag set.
Expected Behaviour	Check that: The IUT transmits a Bandwidth request (e.g. Bandwidth Request Header, BW Request and Tx Power Report Header, etc). in the uplink allocation.
Test strategy	
Notes	IUT may respond to the CDMA Allocation IE with either aggregate or incremental BR.

TP ID	TP/SS/BWA/CBR/BV-H002 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.6.5 and 8.4.5.4.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational. The IUT has requested bandwidth sending a ranging code onto the Ranging Channel.
Expected Behaviour	Check that: If the IUT does not receive an uplink allocation, the IUT follows the contention resolution method to request bandwidth after contention-based reservation timeout.
Test strategy	
Notes	

TP ID	TP/SS/BWA/CBR/BV-H003
	Deleted.

5.3.9.2 Request/Grant (REQ)

TP ID	TP/SS/BWA/REQ/BV-H000
	Deleted.

TP ID	TP/SS/BWA/REQ/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.4, 8.3.5.5, and 8.4.5.5.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational and a UL connection is established and there is MAC DATA PDUs to transmit.
Expected Behaviour	Check that: On receiving a UL-MAP, the IUT transmits the connection's MAC DATA PDUs per the Uplink Burst Profile corresponding to the UIUC in the UL-MAP.
Test strategy	1) Establish an UL connection. 2) TE transmits UL-MAPs containing IEs granting Bandwidth to the IUT. 3) Verdict is assigned on IUT transmitting the MAC DATA PDU(s) for this connection per the Uplink Burst Profile for each successive UL-MAP. UIUC values are in the range 5 to 12 for OFDM and in the range 1 to 10 for OFDMA.
Notes	

TP ID	TP/SS/BWA/REQ/BV-H002 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.3.7, Table "OFDM UIUC values", Table "OFDMA UIUC values".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational. A UL connection is established and data is being passed on the flow.
Expected Behaviour	Check that: On receiving a UL-MAP granting bandwidth larger than the connection requires, the IUT transmits per the UIUC in the UL-MAP the connection data and does one of the following with remaining space of the UL grant bandwidth: - either fills each unused byte with the value 0xFF; or - formats the unused space as a MAC PDU containing the Padding CID. The CI, EC, HT, and Type fields shall be set to zero. The length field shall be set to the number of unused bytes (including the size of the MAC header created for the padding MAC PDU) in the data burst. The HCS shall be computed in the normal way; or - a Bandwidth Header Request with BR=0 on the IUT's Basic CID.
Test strategy	Straightforward. UIUC values are in the range 5 to 12 for OFDM and in the range 1 to 10 for OFDMA.
Notes	

TP ID	TP/SS/BWA/REQ/BV-H003
P802.16 Reference	[3] and [12] Clauses 6.3.6.1 and 8.3.7.3.
PICS Item	
Initial Condition	The IUT is operational. An UL connection is established. No MAC management message protocol exchanges are in process.
Expected Behaviour	Check that: On having data packets to transmit on the UL connection and on receiving a UL-MAP IE for REQ Region Full, the IUT transmits a bandwidth request using REG Region-Full.
Test strategy	1) Bring the IUT to operational state. 2) Do not allocate grants to IUT. At the same time, provoke the IUT to send data packets for the UL connection. 3) Transmit a UL-MAP with a REQ Region Full IE. 4) Assign PASS if IUT transmits a full contention bandwidth request in the REG Region-Full.
Notes	

TP ID	TP/SS/BWA/REQ/BV-H004
P802.16 Reference	[3] and [12] Clauses 6.3.6.1 and 8.3.7.3.
PICS Item	
Initial Condition	The IUT is operational. An UL connection is established. The IUT receives grants.
Expected Behaviour	Check that: On having additional data packets for the UL connection and on receiving a UL-MAP IE with the IUT's Basic CID and a UIUC in the range (5 to 12) and a REQ Region-Full, the IUT transmits one of the following to request bandwidth: - either a bandwidth request header message in a REQ Region Full; or - a bandwidth request header message in a burst with UIUC = (5 to 12); or - a piggyback bandwidth request.
Test strategy	1) Bring the IUT to operational state. 2) Establish an UL connection. 3) Provoke the IUT to send data packets on the connection. 4) Transmit a UL-MAP with a REQ Region Full UIUC in an IE and an IE with the IUT's Basic CID and UIUC = (5 to 12). 5) Assign PASS: - if IUT transmits a bandwidth request message in a REQ Region Full; or - IUT transmits a bandwidth request header message in a burst with UIUC = (5 to 12); or - IUT transmits a piggyback bandwidth request.
Notes	

TP ID	TP/SS/BWA/REQ/BV-H005
	Deleted.

TP ID	TP/SS/BWA/REQ/BV-H006
P802.16 Reference	[3] and [12] Clause 6.3.6.1 paragraph 1-2.
PICS Item	
Initial Condition	IUT implements PiggyBack Bandwidth Requests. The IUT is operational and an UL connection is established. The IUT's allocated bandwidth has been reduced to the point that the IUT needs uplink bandwidth allocation.
Expected Behaviour	Check that: When the uplink bandwidth allocation is insufficient, the IUT transmits during any uplink unicast allocation a bandwidth request as either a bandwidth request header or as a Piggyback Request using the Grant Management subheader.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H007
	Deleted.

TP ID	TP/SS/BWA/REQ/BV-H008 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.6.3.1 and 6.3.6.5.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational and an UL connection is established. There is no uplink bandwidth allocated to the IUT.
Expected Behaviour	Check that: The IUT transmits the Bandwidth Request CDMA code.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H008a
P802.16 Reference	[3] and [12] Clauses 6.3.8, paragraph 4, 6.3.6.3.1, and 6.3.6.4.
PICS Item	
Initial Condition	The IUT is operational and an UL connection is established. The IUT's allocated bandwidth has been reduced to the point that the IUT needs uplink bandwidth allocation.
Expected Behaviour	Check that: In Contention Resolution for bandwidth requests, the IUT transmits the Bandwidth Request within its backoff window.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H009 {1}**
P802.16 Reference	[3] and [12] Clauses 6.3.8, paragraph 7, 6.3.6.3.1, and 6.3.6.5.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is performing initialization procedure and has completed initial ranging. IUT has transmitted a Bandwidth Request CDMA code.
Expected Behaviour	Check that: On not receiving a bandwidth grant for the CDMA request, the IUT sends another Bandwidth Request CDMA code placed randomly within a new backoff window increased by a factor two as long as the new window is less than the maximum backoff window.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H009a
P802.16 Reference	[3] and [12] Clauses 6.3.8, paragraph 7, 6.3.6.3.1, and 6.3.6.4.
PICS Item	
Initial Condition	The IUT is operational and an UL connection is established. The IUT is using Contention Resolution to obtain bandwidth and has transmitted its first Bandwidth Request in the backoff window.
Expected Behaviour	Check that: On not receiving a bandwidth grant for the request, the IUT sends another Bandwidth Request placed randomly within a new backoff window increased by a factor two as long as the new window is less than the maximum backoff window.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H010 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.8, paragraph 8, 10.1 Table "Parameters and constants" "Request Retries", and 6.3.6.5.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational and an UL connection is established. The IUT is using Contention Resolution to obtain a bandwidth and has transmitted a Bandwidth Request CDMA code.
Expected Behaviour	Check that: After Request Retries of retransmitting the Bandwidth Request CDMA code without receiving a bandwidth grant for the request, the IUT no longer requests the bandwidth and the discards the proposed user data PDU.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H010a
P802.16 Reference	[3] and [12] Clauses 6.3.8, paragraph 8, 10.1 Table "Parameters and constants" "Request Retries", and 6.3.6.4.
PICS Item	
Initial Condition	The IUT is operational and an UL connection is established. The IUT is using Contention Resolution to obtain bandwidth and has transmitted its first Bandwidth Request in the backoff window.
Expected Behaviour	Check that: After Request Retries of retransmitting the Bandwidth Request without receiving a bandwidth grant for the request, the IUT no longer requests the bandwidth and the discards the proposed user data PDU.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H011
P802.16 Reference	[3] and [12] Clause 6.3.8, paragraph 9.
PICS Item	
Initial Condition	The IUT is operational and has established an UL connection. The IUT has started to request bandwidth using Contention Resolution.
Expected Behaviour	Check that: On receiving a unicast Request IE, the IUT stops Contention Resolution and uses the burst given in the Request IE.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H012
	Deleted.

TP ID	TP/SS/BWA/REQ/BV-H012a
P802.16 Reference	[3] and [12] Clauses 6.3.8, paragraph 6 and 6.3.6.4.
PICS Item	
Initial Condition	The IUT is operational and has established an UL connection. The IUT has started to request bandwidth using Contention Resolution.
Expected Behaviour	Check that: On receiving a Data Grant Burst Type IE, the IUT stops Contention Resolution and uses the burst given in the Data Grant Burst Type IE.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H013
P802.16 Reference	[3] and [12] Clause 8.3.7.3.3 paragraph 1.
PICS Item	
Initial Condition	IUT supports Focused Contention.
Expected Behaviour	Check that: On receiving a UL-MAP with an IE (UIUC=3) with a REQ Region Focused IE, the IUT sends the Phase 1 Focused Contention bandwidth requesting signal described in clause [3] and [12] 8.3.7.3.3 paragraph 2-5. (Phase 1 is now complete).
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H014
P802.16 Reference	[3] and [12] Clause 8.3.7.3.3 paragraph 1.
PICS Item	
Initial Condition	IUT supports Focused Contention and has completed Phase 1.
Expected Behaviour	Check that: On receiving a UL-MAP with and IE (UIUC=4) containing a Focused Contention IE with the Phase 1 parameters that identify the IUT, the IUT transmits a bandwidth request MAC header using the most robust burst profile in the burst indicated in the UL-MAP IE (UIUC=4).
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H015 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.5.2.4.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operating and an UL BE connection is established.
Expected Behaviour	Check that: To obtain uplink user data transmission opportunities, the IUT uses unicast request opportunities or data transmission opportunities or CDMA request.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H016 **W2
P802.16 Reference	[3] and [12] Clause 6.3.5.2.2 paragraph 2.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and has established an UL rtPS connection that is transmitting data and there is no other UL transport connection.
Expected Behaviour	Check that: To obtain uplink transmission opportunities on this connection, the IUT does not use CDMA bandwidth request.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H017 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.5.2.2.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operational and has established an UL extended rtPS connection that is transmitting data.
Expected Behaviour	Check that: To change the size of the UL allocation the IUT either uses an extended piggyback request field of the Grant Management subheader or uses the BR field of the signalling headers, or sends a codeword over CQICH.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H018 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.5.2.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT is operational and has established an UL nrtPS connection that is transmitting data.
Expected Behaviour	Check that: To obtain uplink transmission opportunities on this connection, the IUT uses unicast uplink allocation or CDMA code.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H019
P802.16 Reference	[3] and [12] Clause 6.3.5.2.1.
PICS Item	
Initial Condition	IUT is operating and an UL UGS connection is established.
Expected Behaviour	Check that: When it detects that the connection exceeds its transmit queue size, the IUT sets to 1 the Slip Indicator bit in the Grant Management field.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H020
P802.16 Reference	[3] and [12] Clause 6.3.5.2.1 paragraph 2.
PICS Item	
Initial Condition	IUT is operational and has established an UL UGS connection that is transmitting data. The IUT is transmitting a Grant Management field with the Slip Indicator bit set to 1.
Expected Behaviour	Check that: When the connection is back within the IUT's transmit queue size, the IUT clears the Slip Indicator bit to 0 in the Grant Management field.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BV-H021 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.6.3.3 and 6.3.2.2.2 Figure "PM bit usage".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational and transmitting on a UL UGS connection.
Expected Behaviour	Check that: To request bandwidth for requirements in addition to the UGS connection, the IUT sets the PM bit to 0x1 in the Grant Management subheader.
Test strategy	
Notes	

TP ID	TP/SS/BWA/REQ/BI-H000
P802.16 Reference	[3] and [12] Clauses 6.3.5.2.1 and 6.3.3.
PICS Item	
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a bandwidth request, the IUT discards the PDU.
Test strategy	
Notes	An MS can only initiate bandwidth requests.

5.3.9.3 Multicast Polling (MCP)

TP ID	TP/SS/BWA/MCP/BV-H000
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.18, 6.3.2.3.19, and 6.3.12 Figure "Multicast Polling Assignment – SS".
PICS Item	
Initial Condition	The IUT is operational but inactive.
Expected Behaviour	Check that: On receiving a valid MCA-REQ, the IUT sends transmits a valid MCA-RSP message.
Test strategy	
Notes	

TP ID	TP/SS/BWA/MCP/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.2.3.18, 6.3.2.3.19, 6.3.12 Figure "Multicast Polling Assignment – SS", and 6.3.6.3.2 paragraph 3.
PICS Item	
Initial Condition	The IUT is operational. It has received a valid MCA-REQ and IUT transmitted a valid MCA-RSP message with the Confirmation Code = Successful.
Expected Behaviour	Check that: On receiving bandwidth grants for the Multicast CID in the MCA-REQ and on needing bandwidth, the IUT requests bandwidth using the contention resolution algorithm.
Test strategy	
Notes	

TP ID	TP/SS/BWA/MCP/BV-H002
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.18, 6.3.2.3.19, 6.3.12 Figure "Multicast Polling Assignment – SS", and 6.3.6.3.2 paragraph 3.
PICS Item	
Initial Condition	The IUT is operational but inactive. It has received a valid MCA-REQ and IUT transmitted a valid MCA-RSP message with the Confirmation Code = Successful.
Expected Behaviour	Check that: On receiving bandwidth grants for the Multicast CID in the MCA-REQ and not needing bandwidth, the IUT neither requests bandwidth nor transmits zero-length bandwidth requests.
Test strategy	
Notes	

TP ID	TP/SS/BWA/MCP/BV-H003
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.18, 6.3.2.3.19, 6.3.12 Figure "Multicast Polling Assignment – SS", and 6.3.6.3.2 paragraph 4.
PICS Item	
Initial Condition	The IUT is operational. It is in a Multicast Polling Group and has transmitted a bandwidth request on the Multicast CID using the contention resolution algorithm.
Expected Behaviour	Check that: On not receiving any grant in the number of subsequent UL-MAP messages specified by the parameter Contention-based reservation timeout, the IUT resends another bandwidth request according to the contention resolution algorithm in the case of failed bandwidth requests.
Test strategy	
Notes	

TP ID	TP/SS/BWA/MCP/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.8 paragraph 9.
PICS Item	
Initial Condition	The IUT is operational. It is in a Multicast Polling Group and has transmitted a bandwidth request on the Multicast CID using the contention resolution algorithm. Having not received any grant in the number of subsequent UL-MAP messages specified by the parameter Contention-based reservation timeout, the IUT resent another bandwidth requests according to the contention resolution algorithm in the case of failed bandwidth requests.
Expected Behaviour	Check that: Having received a Data Grant Burst Type IE for the Multicast CID, the IUT stops contention resolution and uses the data transmission opportunity.
Test strategy	
Notes	

TP ID	TP/SS/BWA/MCP/BV-H005
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.18, 6.3.2.3.19, and 6.3.12 Figure "Multicast Polling Assignment – SS".
PICS Item	
Initial Condition	The IUT is operational and in a Multicast Polling Group.
Expected Behaviour	Check that: On receiving an MCA-REQ for leaving the multicast group indicated by the Multicast CID, the IUT transmits a valid MCA-RSP.
Test strategy	
Notes	

TP ID	TP/SS/BWA/MCP/BV-H006
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.18, 6.3.2.3.19, and 6.3.12 Figure "Multicast Polling Assignment – SS".
PICS Item	
Initial Condition	The IUT is operational and in a Multicast Polling Group. It has then received an MCA-REQ for leaving the multicast group indicated by the Multicast CID, and transmitted a valid MCA-RSP with Confirmation Code = Successful.
Expected Behaviour	Check that: On receiving bandwidth grants for the former Multicast CID in the MCA-REQ and needing bandwidth, the IUT no longer requests bandwidth using the Multicast Polling method.
Test strategy	
Notes	

TP ID	TP/SS/BWA/MCP/BV-H007
P802.16 Reference	[3] and [12] Clauses 6.3.6.3.2 and 6.3.8.
PICS Item	
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a poll on a broadcast CID and needing bandwidth, the IUT replies using the contention resolution algorithm to select the slot in which to transmit the initial bandwidth request.
Test strategy	
Notes	

TP ID	TP/SS/BWA/MCP/BV-H008
P802.16 Reference	[3] and [12] Clauses 6.3.6.3.2 and 6.3.8.
PICS Item	
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a poll on a broadcast CID and not needing bandwidth, the IUT does not reply and does not send zero-length Bandwidth Requests.
Test strategy	
Notes	

TP ID	TP/SS/BWA/MCP/BV-H009
P802.16 Reference	[3] and [12] Clauses 6.3.6.3.2 and 6.3.8.
PICS Item	
Initial Condition	The IUT is operational and has transmitted a bandwidth request on the Broadcast CID using the contention resolution algorithm.
Expected Behaviour	Check that: On not receiving any grant in the number of subsequent UL-MAP messages specified by the parameter Contention-based reservation timeout, the IUT resends another bandwidth request according to the contention resolution algorithm in the case of failed bandwidth requests.
Test strategy	
Notes	

TP ID	TP/SS/BWA/MCP/BV-H010
P802.16 Reference	[3] and [12] Clause 6.3.8 paragraph 9.
PICS Item	
Initial Condition	The IUT is operational and has transmitted a bandwidth request on the Broadcast CID using the contention resolution algorithm. Having not received any grant in the number of subsequent UL-MAP messages specified by the parameter Contention-based reservation timeout, the IUT resent another bandwidth requests according to the contention resolution algorithm in the case of failed bandwidth requests.
Expected Behaviour	Check that: Having received a Data Grant Burst Type IE for the Broadcast CID, the IUT stops contention resolution and uses the data transmission opportunity.
Test strategy	
Notes	

5.3.10 General Handover Functionality (GHF)

5.3.10.1 Network Topology Acquisition (NTA)

5.3.10.1.1 Network advertisement (NWA)

None.

5.3.10.1.2 Scanning (SCAN)

TP ID	TP/MS/GHF/NTA/SCAN/BV-H000 {1}**
P802.16 Reference	[3] Clause 6.3.22.1.2 [12] Clause 6.3.21.1.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. Trigger Action parameter of the recently received DCD message is encoded as 0x3. (On trigger, MS starts the neighbour BS scanning process by sending MOB_SCN-REQ, by initiating autonomous neighbour cell scanning (see clause 8.4.13.1.3) or both). Trigger metric type is set to 0x0 or 0x1. Trigger Function is set to 0x5 or 0x6. (0x5: Metric of serving BS greater than absolute value. 0x6: Metric of serving BS less than absolute value).
Expected Behaviour	Check that: Upon reaching trigger condition, the IUT performs one of following behaviours: - The IUT sends a valid MOB_SCN-REQ indicating the group of neighbour BSs for which scanning is requested. - The IUT initiates autonomous neighbour cell scanning. - The IUT sends a valid MOB_SCN-REQ and initiates autonomous neighbour cell scanning.
Test strategy	
Notes	Trigger metric type: 0x0: CINR metric, 0x1: RSSI metric, 0x2: RTD metricCINR or RSSI metric is more general case than RTD.

TP ID	TP/MS/GHF/NTA/SCAN/BV-H000a {3}
P802.16 Reference	[3] Clause 6.3.22.1.2 [12] Clause 6.3.21.1.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. Trigger Action parameter of the recently received DCD message is encoded as 0x3. (On trigger, MS starts the neighbour BS scanning process by sending MOB_SCN-REQ, by initiating autonomous neighbour cell scanning (see clause 8.4.13.1.3) or both). Trigger metric type is set to 0x2. Trigger Function is set to 0x5 or 0x6. (0x5: Metric of serving BS greater than absolute value. 0x6: Metric of serving BS less than absolute value).
Expected Behaviour	Check that: Upon reaching trigger condition, the IUT performs one of following behaviours: - The IUT sends a valid MOB_SCN-REQ indicating the group of neighbour BSs for which scanning is requested. - The IUT initiates autonomous neighbour cell scanning. - The IUT sends a valid MOB_SCN-REQ and initiates autonomous neighbour cell scanning.
Test strategy	
Notes	Trigger metric type: 0x0: CINR metric, 0x1: RSSI metric, 0x2: RTD metric.

TP ID	TP/MS/GHF/NTA/SCAN/BV-H001 {2} **W2
P802.16 Reference	[3] Clauses 6.3.22.1.2 and 6.3.2.3.49 [12] Clauses 6.3.21.1.2 and 6.3.2.3.44.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. Trigger metric type is set to 0x0 or 0x1. Trigger Function parameter of the recently received DCD message is encoded as 0x1, 0x2, 0x3, 0x4, 0x5, or 0x6. Trigger Action parameter is set to 0x1. IUT has transmitted MOB_SCN-REQ message or initiated autonomous neighbour cell scanning. IUT has received a valid MOB_SCN-RSP message with report mode field of 0b10 and has scanned the recommended BSs.
Expected Behaviour	Check that: After Report metric condition has been satisfied, the IUT sends a MOB_SCN-REP including all recommended BSs for which the IUT holds a valid and updated metric measure.
Test strategy	
Notes	Implementation of this test needs some means to enforce the corresponding MS to do this behaviour. It is recommend to have only a single neighbour BS in test environment to make sure the success of the operation. RSSI and CINR are more general than RTD.

TP ID	TP/MS/GHF/NTA/SCAN/BV-H001a {2} **W2
P802.16 Reference	[3] Clauses 6.3.22.1.2 and 6.3.2.3.49 [12] Clauses 6.3.21.1.2 and 6.3.2.3.44.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has transmitted MOB_SCN-REQ message or initiated autonomous neighbour cell scanning. IUT has received a valid MOB_SCN-RSP message with report mode field of 0b01 (periodic reporting) and has scanned the recommended BSs.
Expected Behaviour	Check that: At periodic intervals as specified in the MOB_SCN-RSP, the IUT sends a MOB_SCN-REP including all recommended BSs for which the IUT holds a valid and updated metric measure.
Test strategy	
Notes	It is recommend to have only a single neighbour BS in test environment to make sure the success of the operation. Requires a mechanism to trigger MS to transmit MOB_SCN-REQ message.

TP ID	TP/MS/GHF/NTA/SCAN/BV-H002
	Deleted.

TP ID	TP/MS/GHF/NTA/SCAN/BV-H002a
	Deleted.

TP ID	TP/MS/GHF/NTA/SCAN/BV-H003 {4}
P802.16 Reference	[3] Clause 6.3.22.1.2 [12] Clause 6.3.21.1.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has received scanning information related to neighbour BSs that are included in MOB_NBR-ADV message. IUT has received a MOB_SCN_RSP message with non-zero scan duration. IUT has met the condition to report.
Expected Behaviour	Check that: The total scanning duration performed by the IUT on all neighbour BSs does not exceed the timer: Max_Dir_Scan_Time.
Test strategy	
Notes	Based on MTG System Profile the Max_Dir_Scan_Time is 2 sec.

TP ID	TP/MS/GHF/NTA/SCAN/BV-H004 {2} **W2
	Deleted

5.3.10.2 HO process (HO)

5.3.10.2.1 HO initiation (INI)

5.3.10.2.1.1 MS initiated HO (MS)

5.3.10.2.1.1.1 Valid Behaviour

TP ID	TP/MS/GHF/HO/INI/MS/BV-H000 {1}**
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. Cell reselection completed and IUT ready for Handover. IUT is configured to respond on trigger with MOB_MSHO-REQ by Trigger Action
Expected Behaviour	Check that: To proceed with HO notification, the IUT sends a valid MOB_MSHO-REQ message.
Test strategy	
Notes	The IUT may indicate one or more target BS.

TP ID	TP/MS/GHF/HO/INI/MS/BV-H001 {1}**
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has transmitted its first MOB_MSHO-REQ message. Target BS is available.
Expected Behaviour	Check that: Having received a valid MOB_BSHO-RSP message with HO operation mode = "0b1" and the IUT can treat the HO request as accepted, sends a MOB_HO-IND message with HO_IND_type="0b00".
Test strategy	
Notes	The TE sets "Unsolicited UL grant for HO-IND flag" to 1 in MOB_BSHO-RSP and is expected to allocate UL slots for HO-IND immediately after the expiration of Handover Indication Readiness Timer.

TP ID	TP/MS/GHF/HO/INI/MS/BV-H002 {2} **W2
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has transmitted its first MOB_MSHO-REQ message. All candidate BSs are not available for MS.
Expected Behaviour	Check that: Having received a valid MOB_BSHO-RSP message with HO operation mode = "0b1" and the IUT is unable to handover with any of the recommended BSs, sends a MOB_HO-IND message with HO_IND_type="0b10" (HO reject).
Test strategy	
Notes	

5.3.10.2.1.1.2 Timer

TP ID	TP/MS/GHF/HO/INI/MS/TI-H000 {3}
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has transmitted its first MOB_MSHO-REQ message.
Expected Behaviour	Check that: When each time the MS_handover_retransmission_timer expires and no reply is received, the IUT re-sends, HO-REQ-Retries times, the MOB_MSHO-REQ message and stops the initiated procedure.
Test strategy	
Notes	

TP ID	TP/MS/GHF/HO/INI/MS/TI-H001
	Deleted.

TP ID	TP/MS/GHF/HO/INI/MS/TI-H002
	Deleted.

5.3.10.2.1.2 BS initiated HO (BS)

5.3.10.2.1.2.1 Valid Behaviour

TP ID	TP/MS/GHF/HO/INI/BS/BV-H000 {1} **W2
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initial network entry and is operating. Cell reselection completed and IUT ready for Handover.
Expected Behaviour	Check that: On receiving a valid MOB_BSHO-REQ message with valid parameters and with HO operation mode = "0b1", the IUT sends a MOB_HO-IND message containing the same handover mode parameter.
Test strategy	
Notes	The IUT may indicate one or more target BS. MS may decline the HO request from BS.

TP ID	TP/MS/GHF/HO/INI/BS/BV-H001 {3}
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initial network entry and is operating. Cell reselection completed and IUT ready for Handover.
Expected Behaviour	Check that: On receiving a valid MOB_BSHO-REQ message with Network Assisted HO flag set to 1, the IUT performs an handover to any BS among the recommended BS in MOB_BSHO-REQ and the IUT may send a MOB_HO-IND message.
Test strategy	
Notes	The target BS id is not necessarily set to 0 in this case. It can be either 0 or the actual target BS id. Also, sending the MOB_HO-IND is optional in this case. Network assisted HO is very rare case.

TP ID	TP/MS/GHF/HO/INI/BS/BV-H003 {2} **W2
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initial network entry and is operating. Cell reselection completed and IUT ready for Handover.
Expected Behaviour	Check that: Having received a valid MOB_BSHO-REQ message with HO operation mode = "0b1" and the IUT can treat the HO request as required, sends a MOB_HO-IND message with HO_IND_type="0b00" (serving BS release).
Test strategy	
Notes	

TP ID	TP/MS/GHF/HO/INI/BS/BV-H004 {3}
P802.16 Reference	[3] Clause 6.3.22.2.2 [12] Clause 6.3.21.2.2.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initial network entry and is operating. Cell reselection completed and IUT ready for Handover.
Expected Behaviour	Check that: Having received a valid MOB_BSHO-REQ message with HO operation mode = "0b1" and the IUT is unable to handover with any of the recommended BSs, sends a MOB_HO-IND message with HO_IND_type="0b10" (HO reject).
Test strategy	
Notes	

5.3.10.2.1.2.2 Timer

TP ID	TP/MS/GHF/HO/INI/BS/TI-H000
	Deleted.

5.3.10.2.2 HO cancellation (CCL)

TP ID	TP/MS/GHF/HO/CCL/BV-H000 {2} **W2
P802.16 Reference	[3] Clause 6.3.22.2.3 [12] Clause 6.3.21.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has initiated HO with MOB_MSHO-REQ.
Expected Behaviour	Check that: To proceed with HO cancellation, the IUT sends a valid MOB_HO-IND message with the HO_IND_type="0b01" (HO cancel).
Test strategy	
Notes	MS initiated HO. Requires a means to trigger IUT to cancel HO.

TP ID	TP/MS/GHF/HO/CCL/BV-H001 {2} **W2
P802.16 Reference	[3] Clause 6.3.22.2.3 [12] Clause 6.3.21.2.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initial network entry and is operating. IUT has received MOB_BSHO-REQ.
Expected Behaviour	Check that: To proceed with HO cancellation, the IUT sends a valid MOB_HO-IND message with the HO_IND_type="0b01" (HO cancel).
Test strategy	
Notes	BS initiated HO. Requires a means to trigger IUT to cancel HO

TP ID	TP/MS/GHF/HO/CCL/BV-H002 {2} **W2
P802.16 Reference	[3] Clause 6.3.22.2.3. [12] Clause 6.3.21.2.3.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has initiated HO.
Expected Behaviour	Check that: Having sent a valid MOB_HO-IND message with the HO_IND_type="0b01" (HO cancel), the IUT resumes Normal Operation communication with the serving BS.
Test strategy	
Notes	MS initiated HO. Requires a means to trigger IUT to cancel HO Resource retain timer only starts after serving BS is released.

TP ID	TP/MS/GHF/HO/CCL/BV-H003 {2} **W2
P802.16 Reference	[3] Clause 6.3.22.2.3 [12] Clause 6.3.21.2.3.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initial network entry and is operating. IUT has received MOB_BSHO-REQ.
Expected Behaviour	Check that: Having sent a valid MOB_HO-IND message with the HO_IND_type="0b01" (HO cancel), the IUT resumes Normal Operation communication with the serving BS.
Test strategy	
Notes	BS initiated HO. Requires a means to trigger IUT to cancel HO.

TP ID	TP/MS/GHF/HO/CCL/BV-H003a
	Deleted.

5.3.10.2.3 HO Termination (TER)

TP ID	TP/MS/GHF/HO/TER/BV-H000 {1}**
P802.16 Reference	[3] Clause 6.3.22.2.5 [12] Clause 6.3.21.2.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has completed handover initiation. HO operation mode was set to "0b1" by the BS.
Expected Behaviour	Check that: To release the serving BS, the IUT sends a MOB_HO-IND message with HO_IND_type="0b00" (serving BS release).
Test strategy	
Notes	Requires a means to trigger IUT to terminate HO.

5.3.10.2.4 Drops during HO (DRO)

TP ID	TP/MS/GHF/HO/DRO/BV-H000 {3}
P802.16 Reference	[3] Clause 6.3.22.2.6 [12] Clause 6.3.21.2.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: When detecting a drop during network re-entry with a target BS, the IUT attempt network re-entry with its preferred target BS with CDMA ranging using HO CDMA codes.
Test strategy	
Notes	

TP ID	TP/MS/GHF/HO/DRO/BV-H001 {3}
P802.16 Reference	[3] Clause 6.3.22.2.6 [12] Clause 6.3.21.2.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: When detecting a drop during network re-entry with a target BS and the resource_retain timer does not expire, the IUT resume communication with serving BS by sending MOB_HO-IND message with HO_IND_type="0b01" (HO cancel).
Test strategy	
Notes	

5.3.10.3 Network Re-Entry (NWR)

TP ID	TP/MS/GHF/NWR/BV-H000 {1}**
P802.16 Reference	[3] Clause 6.3.22.2.7 [12] Clause 6.3.21.2.7.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: To signal the target BS of a current HO attempt, the IUT: 1) sends a RNG-REQ message on Fast_Ranging allocation including a serving BSID TLV and a Ranging Purpose Indication TLV with Bit#0 set to 1; or 2) performs CDMA ranging and sends a RNG-REQ message including a serving BSID TLV and a Ranging Purpose Indication TLV with Bit#0 set to 1.
Test strategy	
Notes	

TP ID	TP/MS/GHF/NWR/BV-H001
	Deleted.

TP ID	TP/MS/GHF/NWR/BV-H002 {1}**
P802.16 Reference	[3] Clauses 6.3.22.2.7 and 11.6 [12] Clauses 6.3.21.2.7 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: On receipt of RNG-RSP including HO Process Optimization TLV Bit#0, Bit#1, Bit#3, Bit#4, Bit#5, Bit#7, Bit#8, Bit#10, and Bit#12 set to 1, and including SBC encodings and REG encodings TLVs, the IUT skips SBC exchange (Bit#0), IP connectivity (Bit#3), ToD exchange (Bit#4), TFTP exchange (Bit#5), REG exchange (Bit#7) and performs one of following operations: - IUT transmits data in unsolicited UL grant by the target BS (i.e. MS has pending UL data) using newly assigned traffic CID. IUT transmits Bandwidth request header of type 0b000, 0b001, 0b011 or 0b101 (in case the RNG-RSP message includes PowerSavingClassParameter compound TLV) with BR per desired BW when MS has pending UL data using newly assigned traffic CID. - IUT transmits Bandwidth request header of type 0b000, 0b001, 0b011 or 0b101 (in case the RNG-RSP message includes PowerSavingClassParameter compound TLV) with BR=0 when MS has no pending UL data using newly assigned basic CID. - IUT transmits HARQ ACK using the ACKCH slot assigned by the target BS. - IUT transmits CQI code using the CQICH slot assigned by the target BS.
Test strategy	BS does not send any unsolicited message.
Notes	This is fully optimized scenario. The HO Process Optimization bit#2 is missing because the expected behaviour does not cover TEK phase. The value of bit #2 does not matter.

TP ID	TP/MS/GHF/NWR/BV-H003 {3}
P802.16 Reference	[3] Clauses 6.3.22.2.7 and 11.6 [12] Clauses 6.3.21.2.7 and 11.6.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initial network entry and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: On receipt of RNG-RSP including HO Process Optimization TLV Bit#0, Bit#1, Bit#3, Bit#4, Bit#5, Bit#7 and Bit#12 set to 1, and Bit#8, Bit#10 set to 0, and omitting SBC and REG encodings (capabilities of Target BS are not different from the ones of Serving BS), the IUT skips SBC-REQ (Bit#0), REG-REQ(Bit#7), accepts the unsolicited SBC-RSP and REG-RSP and performs one of following operations: - IUT transmits data in unsolicited UL grant by the target BS (i.e. MS has pending UL data) using newly assigned traffic CID. - IUT transmits Bandwidth request header of type 0b000 or 0b001 with BR per desired BW when MS has pending UL data using newly assigned traffic CID. - IUT transmits Bandwidth request header of type 0b000 or 0b001 with BR=0 when MS has no pending UL data using newly assigned basic CID. - IUT transmits HARQ ACK using the ACKCH slot assigned by the target BS. - IUT transmits CQI code using the CQICH slot assigned by the target BS.
Test strategy	BS sends unsolicited messages.
Notes	This is unsolicited SBC-RSP and REG-RSP case. The HO Process Optimization bit#2 is missing because the expected behaviour does not cover TEK phase. The value of bit #2 does not matter.

TP ID	TP/MS/GHF/NWR/BV-H004
	Deleted.

TP ID	TP/MS/GHF/NWR/BV-H005 {3}
P802.16 Reference	[3] Clauses 6.3.22.2.7 and 11.6 [12] Clauses 6.3.21.2.7 and 11.6.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initial network entry and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: On receipt of RNG-RSP including HO Process Optimization TLV Bit#3, Bit#4, and Bit#5, set to 1, and Bit#0, Bit#7 and Bit#12 set to 1, and Bit#1, Bit#2, Bit#8 set to 0, and omitting SBC encoding and REG encoding TLVs, the IUT transmits SBC-REQ (Bit#0), REG-REQ (Bit#7), accepts the SBC-RSP and REG-RSP and performs one of following operations: - IUT transmits data in unsolicited UL grant by the target BS (i.e. MS has pending UL data) using newly assigned traffic CID. - IUT transmits Bandwidth request header of type 0b000 or 0b001 with BR per desired BW when MS has pending UL data using newly assigned traffic CID. - IUT transmits Bandwidth request header of type 0b000 or 0b001 with BR=0 when MS has no pending UL data using newly assigned basic CID. - IUT transmits HARQ ACK using the ACKCH slot assigned by the target BS. - IUT transmits CQI code using the CQICH slot assigned by the target BS.
Test strategy	BS sends unsolicited messages.
Notes	This is the full network entry case.

TP ID	TP/MS/GHF/NWR/BV-H006
	Deleted.

TP ID	TP/MS/GHF/NWR/BV-H007
	Deleted.

TP ID	TP/MS/GHF/NWR/BV-H008
	Deleted.

TP ID	TP/MS/GHF/NWR/BV-H009
	Deleted.

TP ID	TP/MS/GHF/NWR/BV-H010 {1}**
P802.16 Reference	[3] Clauses 6.3.22.2 and 11.7.10 [12] Clauses 6.3.21.2 and 11.7.9.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: On receipt of RNG-RSP or REG-RSP including CID Update TLV, the IUT updates CIDs and sends or receives data via updated connections.
Test strategy	TE transmits MAP messages containing DL and/or UL allocations using the updated CIDs.
Notes	

TP ID	TP/MS/GHF/NWR/BV-H011 {2} **W2
P802.16 Reference	[3] Clauses 6.3.22.2 and 11.7.10.1 [12] Clauses 6.3.21.2 and 11.7.9.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry and is operating. IUT has completed handover initiation.
Expected Behaviour	Check that: On receipt of RNG-RSP or REG-RSP including Compressed CID Update TLV, the IUT updates the CIDs and sends or receives data via the updated connections.
Test strategy	TE transmits MAP messages containing DL and/or UL allocations using the updated CIDs.
Notes	

5.3.11 Sleep Mode (SLM)

5.3.11.1 Power saving class type 1 (PW1)

5.3.11.1.1 Valid behaviour

TP ID	TP/MS/SLM/PW1/BV-H000
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H001
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H001a
P802.16 Reference	[3] Clauses 6.3.2.3.6 and 6.3.21.2 [12] Clauses 6.3.2.3.6 and 6.3.20.2.
PICS Item	
Initial Condition	The BS includes Power_Saving_Class_Parameters of type 1 in the RNG-RSP for definition of the Power Saving Class of type 1 in response to definition request of a PSC in RNG-REQ during HO. After the IUT transmits a MOB_SLP-REQ containing the Power_Saving_Class_ID field activating the Power Saving Class of type 1 defined in RNG-RSP, the BS sends a MOB_SLP-RSP field with Sleep_Approved field indicating approval.
Expected Behaviour	Check that: The IUT transits into sleep mode according to the Power_Saving_Class_Parameters.
Test strategy	Sleep mode is tested by: - BS sends MOB_TRF-IND with positive indication; - BS sends an UL allocation and no data to be transmitted; - the IUT sends a BR with BR field set to 0.
Notes	

TP ID	TP/MS/SLM/PW1/BV-H002
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H002a
P802.16 Reference	[3] Clauses 6.3.2.3.6 and 6.3.21.2 [12] Clauses 6.3.2.3.6 and 6.3.20.2.
PICS Item	
Initial Condition	The BS includes Power_Saving_Class_Parameters of type 1 in the RNG-RSP for definition of the Power Saving Class of type 1 in response to definition request of a PSC in RNG-REQ during HO. After the BS transmits DL sleep control extended subheader containing the Power_Saving_Class_ID field activating the Power Saving Class of type 1 defined in RNG-RSP.
Expected Behaviour	Check that: The IUT transits into sleep mode according to the Power_Saving_Class_Parameters.
Test strategy	Sleep mode is tested by: - BS sends MOB_TRF-IND with positive indication; - BS sends an UL allocation and no data to be transmitted; - the IUT sends a BR with BR field set to 0.
Notes	

TP ID	TP/MS/SLM/PW1/BV-H003 {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.44 and 6.3.21.2 [12] Clauses 6.3.2.3.39 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry with the BS.
Expected Behaviour	Check that: The IUT sends a MOB_SLP-REQ for definition or activation of one or more than one Power Saving Classes of type 1.
Test strategy	The MS vendor provides the method to trigger for initiating sleep mode.
Notes	Requires a means to trigger IUT to define or activate Power Saving Classes of type 1. The number of Power Saving Class instances supported by the MS sufficient for the conformance with the profile is 1.

TP ID	TP/MS/SLM/PW1/BV-H003a {2} ** W2
P802.16 Reference	[3] Clauses 6.3.2.3.44 and 6.3.21.2 [12] Clauses 6.3.2.3.39 and 6.3.20.2.
PICS Item	PIC_MOB2.
Initial Condition	The IUT has completed initial network entry with the BS and a Power Saving Class of type 1 has been defined. PSC ID shall be allocated to MS.
Expected Behaviour	Check that: When the IUT activates the PSC, it uses MOB_SLP-REQ or Bandwidth request and uplink sleep control header.
Test strategy	The MS vendor provides the method to trigger for initiating sleep mode.
Notes	Requires a means to trigger IUT to define and subsequently activate Power Saving Class of type 1.

TP ID	TP/MS/SLM/PW1/BV-H003b {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.44, 6.3.2.3.45 and 6.3.21.2 [12] Clauses 6.3.2.3.39, 6.3.2.3.40 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry with the BS a Power Saving Class of type 1 has been defined. PSC ID shall be allocated to MS. The IUT transmits MOB_SLP-REQ to activate the PSC.
Expected Behaviour	Check that: When the IUT receives a MOB_SLP-RSP for activation of the PSC the IUT transits into sleep mode.
Test strategy	
Notes	

TP ID	TP/MS/SLM/PW1/BV-H003c
P802.16 Reference	[3] Clauses 6.3.2.3.44, 6.3.2.3.45, and 6.3.21.2 [12] Clauses 6.3.2.3.39, 6.3.2.3.40 and 6.3.20.2.
PICS Item	
Initial Condition	The IUT has completed initial network entry with the BS a Power Saving Class of type 1 has been defined. PSC ID shall be allocated to MS.
Expected Behaviour	Check that: When the IUT receives a DL sleep control extended subheader indicating activation of the PSC unsolicitedly, the IUT transits into sleep mode.
Test strategy	Sleep mode is tested by: - BS sends MOB_TRF-IND with positive indication; - BS sends an UL allocation and no data to be transmitted; - the IUT sends a BR with BR field set to 0.
Notes	

TP ID	TP/MS/SLM/PW1/BV-H004
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H005
P802.16 Reference	[3] Clauses 6.3.2.3.45 and 6.3.21.2 [12] Clauses 6.3.2.3.40 and 6.3.20.2.
PICS Item	
Initial Condition	The IUT has completed initial network entry with the BS. The BS has a deactivated Power Saving Class of type 1 containing all the MS CIDs. The BS sends another MOB_SLP-RSP with the Operation field set to 1 activating the Power_Saving_Class with the designated Power_Saving_Class_ID.
Expected Behaviour	Check that: The IUT transits into sleep mode by activating the PSC with the designated Power_Saving_Class_ID included in the MOB_SLP-RSP message.
Test strategy	
Notes	Requires a means to control the IUT to activate the PSC.

TP ID	TP/MS/SLM/PW1/BV-H006
P802.16 Reference	[3] Clauses 6.3.2.2.7.2, 6.3.2.3.45, and 6.3.21.2 [12] Clauses 6.3.2.2.7.2, 6.3.2.3.40 and 6.3.20.2.
PICS Item	
Initial Condition	The IUT has completed initial network entry with the BS. The BS has a deactivated Power Saving Class of type 1 containing all the MS CIDs. The BS sends a DL Sleep control extended subheader activating the Power_Saving_Class with the designated Power_Saving_Class_ID.
Expected Behaviour	Check that: The IUT transits into sleep mode by activating the PSC with the designated Power_Saving_Class_ID included in the DL Sleep control extended subheader.
Test strategy	
Notes	DL sleep control extended subheader support is Wave 2 feature. Requires a means to control the IUT to activate the PSC.

TP ID	TP/MS/SLM/PW1/BV-H007 {1}**
P802.16 Reference	[3] Clauses 6.3.2.1.2.1.1 and 6.3.21.2 [12] Clauses 6.3.2.1.2.1.1 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The TE has: - established a best effort DL and UL connection with the IUT, SLPID has been assigned to the IUT; - defined and activated a PSC type I; - sent a MOB_TRF-IND with positive indication during a listening window; - sent an UL allocation during a previously defined sleep window for the connection associated with the deactivated PSC. The IUT does not have any data to be transmitted. The IUT operates properly.
Expected Behaviour	Check that: The IUT sends a BR with BR field set to 0 on the UL allocation allocated by the BS.
Test strategy	
Notes	

TP ID	TP/MS/SLM/PW1/BV-H008 {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.45 and 6.3.21.2 [12] Clauses 6.3.2.3.40 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The TE has: - established a best effort DL and UL connection with the IUT; - Traffic_triggered_wakening_flag is set to 0; - defined and activated a PSC type I; - sent IUT a valid MOB_SLP-RSP deactivating the Power Saving Class during a listening window. - sent an UL allocation during the previously defined sleep window for the connection associated with the deactivated PSC. The IUT does not have any data to be transmitted. The IUT operates properly.
Expected Behaviour	Check that: The IUT deactivates the PSC by responding to an UL allocation.
Test strategy	
Notes	

TP ID	TP/MS/SLM/PW1/BV-H009 {1} ** W2
P802.16 Reference	[3] Clauses 6.3.2.2.7.2 and 6.3.21.2 [12] Clauses 6.3.2.2.7.2 and 6.3.20.2.
PICS Item	PIC_MOB2.
Initial Condition	The BS has: - established a best effort DL and UL connection with the IUT; - Traffic_triggered_wakening_flag is set to 0; - defined and activated a PSC; - sent the IUT a valid DL Sleep control extended subheader deactivating the Power_Saving_Class_ID.
Expected Behaviour	Check that: The IUT deactivates the PSC.
Test strategy	Proposed data traffic: BS sends an ICMP Echo Request to the IUT and the IUT sends an ICMP Echo Reply back. Traffic should be continued over the sleep window.
Notes	

TP ID	TP/MS/SLM/PW1/BV-H010 {1}**
P802.16 Reference	[3] Clause 6.3.21.2 [12] Clause 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The BS has: - established a best effort DL and UL connection with the IUT; - defined and activated a PSC with Traffic triggered wakening flag set to 1; - sent IUT a DL traffic on any connection belonging to the PSC during Availability Interval.
Expected Behaviour	Check that: On receipt of a MAC SDU during the Availability interval, the IUT returns to Normal Operation by deactivating the PSC and replies to the data traffic.
Test strategy	Proposed data traffic: BS sends an ICMP Echo Request to the IUT and the IUT sends an ICMP Echo Reply back.
Notes	

TP ID	TP/MS/SLM/PW1/BV-H011 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.2.3.46 and 6.3.21.2 [12] Clauses 6.3.2.3.41 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The BS has: - established a best effort DL and UL connection with the IUT; - defined and activated a PSC with Traffic triggered wakening flag set to 1. The IUT has data to be transmitted. The IUT has transmitted Bandwidth request CDM ranging code. The BS has allocated an UL allocation for the BR to be transmitted.
Expected Behaviour	Check that: On receipt of an UL allocation, the IUT sends any MAC PDU.
Test strategy	Proposed data traffic: BS sends an ICMP Echo Request to the IUT and the IUT sends an ICMP Echo Reply back. Traffic should be continued over the sleep window.
Notes	Requires a means to enforce the IUT to transmit data.

TP ID	TP/MS/SLM/PW1/BV-H012 {4}
P802.16 Reference	[3] Clause 6.3.21.2 [12] Clause 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The BS has: - established a best effort DL and UL connection with the IUT; - put the IUT in sleep mode.
Expected Behaviour	Check that: On receipt of a MOB_TRF-IND with positive indication for a certain Power Saving Class in IUT, the IUT returns to Normal Operation and replies to data traffic.
Test strategy	Proposed data traffic: BS sends an ICMP Echo Request to the IUT and the IUT sends an ICMP Echo Reply back.
Notes	

TP ID	TP/MS/SLM/PW1/BV-H013 {3}
P802.16 Reference	[3] Clauses 6.3.2.3.46 and 6.3.21.2 [12] Clauses 6.3.2.3.41 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The BS has: - established a best effort DL and UL connection with the IUT; - defines and activates a PSC with TRF-IND required set to 1; - SLPID has been assigned; - sent a MOB_TRF-IND with negative indication and a SLPID_Update TLV.
Expected Behaviour	Check that: On receipt of a MOB_TRF-IND with positive indication and the updated SLPID, the IUT returns to Normal Operation and replies to data traffic.
Test strategy	Proposed data traffic: BS sends an ICMP Echo Request to the IUT and the IUT sends an ICMP Echo Reply back.
Notes	

TP ID	TP/MS/SLM/PW1/BV-H013a
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H014 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.2.3.46 and 6.3.21.2 [12] Clauses 6.3.2.3.41 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The BS has established a best effort DL and UL connection with the IUT. The IUT has set TRF_IND_Required flag in MOB_SLP-REQ. The BS has set TRF_IND_Required flag in MOB_SLP-RSP. BS does not send MOB_TRF_IND during any Availability interval which contains at least one listening window of Power Saving Class of Type 1.
Expected Behaviour	Check that: The IUT deactivates the Power Saving Class.
Test strategy	Deactivated Power Saving Class is tested by: BS sends an ICMP Echo Request to the IUT and the IUT sends an ICMP Echo Reply back.
Notes	Requires a means to trigger IUT to set TRF_IND_Required flag in MOB_SLP-REQ.

TP ID	TP/MS/SLM/PW1/BV-H015
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H015a
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H016
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H017
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H018 {4}
P802.16 Reference	[3] Clauses 6.3.21.2, 6.3.2.3.44, and 6.3.2.3.45 [12] Clauses 6.3.20.2, 6.3.2.3.39, and 6.3.2.3.41.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has established a best effort DL connection with the BS and a MOB_SLP-REQ/RSP message exchange has been performed to define a PSC for the BE connection with Traffic triggered wakening flag set to "0" and the IUT has activated the PSC and is in sleep mode.
Expected Behaviour	Check that: When the IUT receives a DL data on the connection in the listening window the IUT does not deactivate the PSC.
Test strategy	
Notes	

TP ID	TP/MS/SLM/PW1/BV-H019
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H020
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H021
	Deleted.

TP ID	TP/MS/SLM/PW1/BV-H022
	Deleted.

5.3.11.1.2 Timer

TP ID	TP/MS/SLM/PW1/TI-H001 {2} **W2
P802.16 Reference	[3] Clauses 6.3.2.3.44 and 6.3.21.2 [12] Clauses 6.3.2.3.39 and 6.3.20.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry with the BS and has sent MOB_SLP-REQ for definition or activation of a Power Saving Class of type 1. The BS does not reply.
Expected Behaviour	Check that: The IUT shall not retransmit MOB_SLP-REQ before expiry of the T43 timer.
Test strategy	
Notes	Requires a means to trigger IUT to define or activate a Power Saving Class of type 1.

TP ID	TP/MS/SLM/PW1/TI-H001a {2} ** W2
P802.16 Reference	[3] Clauses 6.3.2.3.44 and 6.3.21.2 [12] Clauses 6.3.2.3.39 and 6.3.20.2.
PICS Item	PIC_MOB2.
Initial Condition	The IUT has completed initial network entry with the BS and has sent a Bandwidth request and uplink sleep control header for activation of a Power Saving Class of type 1. The BS does not reply.
Expected Behaviour	Check that: The IUT shall not retransmit Bandwidth request and uplink sleep control header before expiry of the T43 timer.
Test strategy	
Notes	Requires a means to trigger IUT to define or activate a Power Saving Class of type 1. When the PSC is defined Traffic_triggered_wakening_flag and TRF_IND required are set to 1. The MS may use either MOB_SLP-REQ or Bandwidth request and uplink sleep control header. For testing purpose, the IUT may be configured to send Bandwidth request and uplink sleep control header.

5.3.11.2 Power saving class type 2 (PW2)

Void.

5.3.11.3 Power saving class type 3 (PW3)

Void.

5.3.11.4 Periodic Ranging during Sleep Mode (PRSM)

TP ID	TP/MS/SLM/PRSM/BV-H000
P802.16 Reference	[3] Clauses 6.3.21.5 and 6.3.21.7.1 [12] Clauses 6.3.20.5 and 6.3.20.7.1.
PICS Item	
Initial Condition	The IUT has established a best effort DL connection with the BS and a MOB_SLP-REQ/RSP message exchange has been performed to define a PSC 1 for the BE connection. The IUT has activated the PSC and is in sleep mode. The IUT has received information about the next periodic ranging frame in a Next Periodic Ranging TLV.
Expected Behaviour	Check that: When during next periodic ranging frame the IUT receives a UL unicast transmission opportunity the IUT transmits a RNG-REQ.
Test strategy	
Notes	The capability of checking aliveness during sleep mode is not required by the Mobile WiMAX System Profile release 1.0.

TP ID	TP/MS/SLM/PRSM/BV-H001
	Deleted.

TP ID	TP/MS/SLM/PRSM/BV-H002 {3}
P802.16 Reference	[3] Clauses 6.3.21.5, 6.3.24.1, and 6.3.10.3 [12] Clauses 6.3.20.5, 6.3.23.1, and 6.3.10.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has established a best effort DL connection with the BS and a MOB_SLP-REQ/RSP message exchange has been performed to define a PSC 1 for the BE connection. The IUT has activated the PSC and is in sleep mode. The IUT has received a ranging region for periodic ranging and initiated the periodic ranging by sending a periodic ranging CDMA code.
Expected Behaviour	Check that: When IUT receives a RNG-RSP with ranging status "abort" the IUT performs initial ranging procedure.
Test strategy	
Notes	The periodic ranging period parameter is to be provided by IUT vendors.

TP ID	TP/MS/SLM/PRSM/BV-H003
P802.16 Reference	[3] Clauses 6.3.21.5 and 6.3.21.7.1 [12] Clauses 6.3.20.5 and 6.3.20.7.1.
PICS Item	
Initial Condition	The IUT has established a best effort DL connection with the BS and a MOB_SLP-REQ/RSP message exchange has been performed to define a PSC 1 for the BE connection. The IUT has activated the PSC and is in sleep mode. The IUT has received a ranging region for periodic ranging and initiated the periodic ranging by sending a periodic ranging CDMA code.
Expected Behaviour	Check that: When IUT receives a RNG-RSP with ranging status "success" and with a Next Periodic Ranging TLV with value zero due to DL data pending, the IUT resume Normal Operation to receive the DL data.
Test strategy	
Notes	The capability of checking aliveness during sleep mode is not required by the Mobile WiMAX System Profile release 1.0.

TP ID	TP/MS/SLM/PRSM/BV-H004 {3}
P802.16 Reference	[3] Clauses 6.3.21.5 and 11.16.1 [12] Clauses 6.3.20.5 and 11.16.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has established a best effort DL connection with the BS and a MOB_SLP-REQ/RSP message exchange has been performed to define a PSC 1 for the BE connection. The IUT has activated the PSC and is in sleep mode. The IUT received unsolicited RNG-RSP including a SLPID_Update TLV with a new SLPID and containing the old SLPID.
Expected Behaviour	Check that: The IUT updates its SLPID to the new SLPID.
Test strategy	
Notes	

5.3.12 Idle Mode (IDM)

5.3.12.1 Transition to Idle Mode (TDIM)

5.3.12.1.1 Valid Behaviour

TP ID	TP/MS/IDM/TIDM/BV-H000 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.2.3.26, 6.3.2.3.42, and 6.3.24.1 [12] Clauses 6.3.2.3.26, 6.3.2.3.37, and 6.3.23.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry. The BS sends a valid unsolicited DREG-CMD with: - Action Code = 0x05; - Paging information TLV; - Paging Controller ID TLV; - Idle Mode Retain Information TLV; - Valid CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization". There is no UL traffic when the unsolicited DREG-CMD is sent.
Expected Behaviour	Check that: The IUT sends DREG-REQ with a De-Registration_Request_Code=0x02 and with a CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Test strategy	
Notes	BS-initiated idle mode.

TP ID	TP/MS/IDM/TIDM/BV-H000a {3}
P802.16 Reference	[3] Clauses 6.3.2.3.26, 6.3.2.3.42, and 6.3.24.1 [12] Clauses 6.3.2.3.26, 6.3.2.3.37, and 6.3.23.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry. The BS sends a valid unsolicited DREG-CMD with: - Action Code = 0x05; - Paging information TLV; - Paging Controller ID TLV; - Idle Mode retain Information TLV; and - a valid CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization". The MS is configured with a unique UL BE SF with a low peak rate. The test set-up provide to the MS a higher input traffic to send in the UL than this peak rate, to make sure there is always pending UL data to transmit at the MS.
Expected Behaviour	Check that: The IUT sends DREG-REQ with a De-Registration_Request_Code=0x03.
Test strategy	
Notes	BS-initiated idle mode.

TP ID	TP/MS/IDM/TIDM/BV-H001 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.2.3.26, 6.3.2.3.42, and 6.3.24.1 [12] Clauses 6.3.2.3.26, 6.3.2.3.37, and 6.3.23.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry. The BS sends a valid unsolicited DREG-CMD with: - Action Code = 0x05; - Paging information TLV; - Paging Controller ID TLV; - Idle Mode Retain Information TLV; and - a valid CMAC tuple TLV unless negotiation of authorization policy resulted in "no authorization"; - REQ-duration TLV.
Expected Behaviour	Check that: The IUT sends DREG-REQ with a De-Registration_Request_Code=0x01 and Idle Mode Retain Information TLV at REQ-duration expiration.
Test strategy	
Notes	BS-initiated idle mode with REQ-duration.

TP ID	TP/MS/IDM/TIDM/BV-H002 {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.42 and 6.3.24.1 [12] Clauses 6.3.2.3.37 and 6.3.23.1
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry at least one pre-provisioned Service Flow has been established in the UL and DL, and an IP address has been assigned to the MS. The IUT has decided to enter idle mode.
Expected Behaviour	Check that: In order to start Idle Mode, the IUT sends DREG-REQ with a De-Registration_Request_Code=0x01.
Test strategy	TLVs transmitted with De-Registration_Request_Code=0x01 - Paging Cycle Request TLV; - Idle Mode Retain Information TLV; - CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Notes	MS-initiated Idle mode. Requires a means to trigger IUT to send DREG-REQ to start Idle Mode.

5.3.12.1.2 Timer

TP ID	TP/MS/IDM/TIDM/TI-H000 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.2.3.42 and 6.3.24.1 [12] Clauses 6.3.2.3.37 and 6.3.23.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry at least one pre-provisioned Service Flow has been established in the UL and DL, and an IP address has been assigned to the MS.
Expected Behaviour	Check that: In order to start Idle Mode, the IUT sends DREG-REQ with a De-Registration_Request_Code=0x01, and on no reply from the BS within T45 timer expiry after sending the DREG-REQ, it retransmits the DREG-REQ as long as DREG-Request-Retry-Count is not exhausted.
Test strategy	
Notes	Requires a means to trigger IUT to send DREG-REQ to start Idle Mode.

TP ID	TP/MS/IDM/TIDM/TI-H001 {3}
P802.16 Reference	[3] Clauses 6.3.2.3.42 and 6.3.24.1 [12] Clauses 6.3.2.3.37 and 6.3.23.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has completed initial network entry.
Expected Behaviour	Check that: In order to start Idle Mode, the IUT sends DREG-REQ with a de-registration request code=0x01 and start timer T45. When T45 expires, the IUT retransmits the DREG-REQ message as long as DREG-Request-Retry-Count has not been exhausted. Otherwise, the MS re-initializes MAC.
Test strategy	
Notes	Requires a means to trigger IUT to send DREG-REQ to start Idle Mode.

TP ID	TP/MS/IDM/TIDM/TI-H002 {1}**
P802.16 Reference	[3] Clauses 6.3.2.3.42, 6.3.2.3.5, 6.3.24.1 and 6.3.24.9 [12] Clauses 6.3.2.3.37, 6.3.2.3.5, 6.3.23.1 and 6.3.23.9.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is in Idle Mode.
Expected Behaviour	Check that: In order to demonstrate network presence, the IUT sends RNG-REQ with Ranging_Purpose_Indication TLV bit#1 set to 1 to indicate Idle Mode Location Update Process with Paging Controller ID TLV, MS MAC Address TLV, and a CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization", before the expiry of Idle Mode Timer.
Test strategy	
Notes	

5.3.12.2 Broadcast Paging message (PG)

TP ID	TP/MS/IDM/PG/BV-H000 {2} ** W2
P802.16 Reference	[3] Clause 6.3.24.7.1 [12] Clause 6.3.23.7.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is in Idle Mode. The BS sends a MOB_PAG-ADV with the IUT's MS MAC Address hash and Action Code = 0b01 "Perform Ranging".
Expected Behaviour	Check that: the IUT starts initial ranging after a random delay determined by the Initial_ranging_backoff_start and Initial_ranging_backoff_end window size and the IUT sends RNG-REQ with Ranging_Purpose_Indication TLV bit#1 set to 1 indicating "MS action of Idle Mode Location Update Process", Paging Controller ID TLV, MS MAC Address TLV, and a CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Test strategy	
Notes	

TP ID	TP/MS/IDM/PG/BV-H001 {1}**
P802.16 Reference	[3] Clause 6.3.24.7.1 [12] Clause 6.3.23.7.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is in Idle Mode. The BS sends a MOB_PAG-ADV with the IUT's MS MAC Address hash and Action Code = 0b10 "Enter Network".
Expected Behaviour	Check that: the IUT starts initial ranging after a random delay determined by the Initial_ranging_backoff_start and Initial_ranging_backoff_end window size and the IUT sends RNG-REQ with Ranging_Purpose_Indication bit#0 set to 1 indicating "Network Re-entry from Idle Mode", Paging Controller ID TLV, MS MAC Address TLV, and a CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Test strategy	
Notes	

TP ID	TP/MS/IDM/PG/BV-H002
	Deleted.

5.3.12.3 Power Down Update (PWD)

TP ID	TP/MS/IDM/PWD/BV-H000 {2} ** W2
P802.16 Reference	[3] Clause 6.3.24.8.1.3 [12] Clause 6.3.23.8.1.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is in Idle Mode. The IUT has detected a power down condition.
Expected Behaviour	Check that: The IUTs sends RNG-REQ with: - Power_Down_Indicator TLV; - MS MAC Address TLV; - Ranging Purpose Indication TLV; - Paging Controller ID TLV; and - a CMAC TLV unless negotiation of authorization policy resulted in "no authorization".
Test strategy	
Notes	Requires a means to trigger a power down condition.

TP ID	TP/MS/IDM/HST/BV-H000
	Deleted.

5.3.12.4 Network Re-Entry (NWR)

TP ID	TP/MS/IDM/NWRI/BV-H000
	Deleted.

TP ID	TP/MS/IDM/NWRI/BV-H001
	Deleted.

TP ID	TP/MS/IDM/NWRI/BV-H002 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.24.7.1 and 6.3.24.9 [12] Clauses 6.3.23.7.1 and 6.3.23.9.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is performing network re-entry from Idle Mode.
Expected Behaviour	Check that: On receipt of RNG-RSP including HO Process Optimization TLV Bit#0, Bit#7 and Bit#12 set to 1, and Bit#8, Bit#10 set to 1, and including SBC encoding and REG encoding TLVs, the IUT skips SBC-REQ (Bit#0), REG-REQ(Bit#7) and performs one of the following operations: - MS transmits data in unsolicited UL grant by the target BS (i.e. MS has pending UL data) using newly assigned traffic CID. - MS transmits Bandwidth request header of type 0b000, 0b001, 0b011 or 0b101 (in case the RNG-RSP message includes PowerSavingClassParameter compound TLV) with BR per desired BW when MS has pending UL data using newly assigned traffic CID. - MS transmits Bandwidth request header of type 0b000, 0b001, 0b011 or 0b101 (in case the RNG-RSP message includes PowerSavingClassParameter compound TLV) with BR=0 when MS has no pending UL data using newly assigned basic CID. - MS transmits HARQ ACK using the ACKCH slot assigned by the target BS. - MS transmits CQI code using the CQICH slot assigned by the target BS.
Test strategy	Network re-entry can be triggered by sending MOB_PAG-ADV with Action Code 0b10 "Enter Network" and the IUT's MS MAC Address hash.
Notes	

TP ID	TP/MS/IDM/NWRI/BV-H003 {3}
P802.16 Reference	[3] Clause 6.3.24.9 [12] Clause 6.3.23.9.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is performing network re-entry from Idle Mode.
Expected Behaviour	Check that: On receipt of RNG-RSP including HO Process Optimization TLV Bit#0, Bit#7 and Bit#12 set to 1, and Bit#8, Bit#10 set to 0, and omitting SBC encoding and REG encoding TLVs, the IUT skips SBC-REQ (Bit#0), REG-REQ (Bit#7), accepts the unsolicited SBC-RSP and REG-RSP and performs one of the following operations: - MS transmits data in unsolicited UL grant by the target BS (i.e. MS has pending UL data) using newly assigned traffic CID. - MS transmits Bandwidth request header of type 0b000 or 0b001 with BR per desired BW when MS has pending UL data using newly assigned traffic CID. - MS transmits Bandwidth request header of type 0b000 or 0b001 with BR=0 when MS has no pending UL data using newly assigned basic CID. - MS transmits HARQ ACK using the ACKCH slot assigned by the target BS. - MS transmits CQI code using the CQICH slot assigned by the target BS.
Test strategy	Network re-entry can be triggered by sending MOB_PAG-ADV with Action Code "Enter Network" and the IUT's MS MAC Address hash.
Notes	

TP ID	TP/MS/IDM/NWRI/BV-H004
	Deleted.

TP ID	TP/MS/IDM/NWRI/BV-H005
	Deleted.

TP ID	TP/MS/IDM/NWRI/BV-H006
	Deleted.

TP ID	TP/MS/IDM/NWRI/BV-H007
	Deleted.

TP ID	TP/MS/IDM/NWRI/BV-H007a
	Deleted.

TP ID	TP/MS/IDM/NWRI/BV-H008 {1}**
P802.16 Reference	[3] Clause 6.3.24.9 [12] Clause 6.3.23.9.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is performing network re-entry from Idle Mode.
Expected Behaviour	Check that: The IUT sends a valid RNG-REQ message with: - MS MAC Address TLV; - Ranging Purpose Indication TLV = 0x01 (network re-entry); - Paging Controller ID TLV; and - a CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Test strategy	Network re-entry can be triggered by sending MOB_PAG-ADV with Action Code "Enter Network" and the IUT's MS MAC Address hash or sending UL data at the IUT.
Notes	

TP ID	TP/MS/IDM/NWRI/BV-H009
	Deleted.

TP ID	TP/MS/IDM/NWRI/BV-H010
	Deleted.

TP ID	TP/MS/IDM/NWRI/BV-H011
	Deleted.

5.3.12.5 Location Update (LOC)

TP ID	TP/MS/IDM/LOC/BV-H000 {2} ** W2
P802.16 Reference	[3] Clause 6.3.24.9 [12] Clause 6.3.23.9.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is in Idle Mode.
Expected Behaviour	Check that: On receipt of a MOB_PAG-ADV message with Action Code=0b01 "Perform Ranging" and the IUT's MS MAC Address hash, the IUT sends a valid RNG-REQ message with: - MS MAC Address TLV; - Ranging Purpose Indication TLV = 0x02 (LU request); - Paging Controller ID TLV; and - a CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Test strategy	
Notes	LU trigger from paging message.

TP ID	TP/MS/IDM/LOC/BV-H001 {1}**
P802.16 Reference	[3] Clause 6.3.24.9 [12] Clause 6.3.23.9.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is in Idle Mode and the idle mode timer (from REG-RSP) is close to expiration.
Expected Behaviour	Check that: The IUT sends a valid RNG-REQ message with: - MS MAC Address TLV; - Ranging Purpose Indication TLV = 0x02 (LU request); - Paging Controller ID TLV; and - a CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Test strategy	
Notes	LU trigger from timer.

TP ID	TP/MS/IDM/LOC/BV-H002 {1}**
P802.16 Reference	[3] Clause 6.3.24.8.1.1 [12] Clause 6.3.23.8.1.1.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is in Idle Mode.
Expected Behaviour	Check that: On detection of a change in the paging group (PG_ID in DCD or MOB_PAG-ADV), the IUT sends RNG-REQ with Ranging_Purpose_Indication TLV bit#1 set to 1 indicating "MS action of Idle Mode Location Update Process", MS MAC Address TLV, Paging Controller ID TLV, and a CMAC Tuple TLV unless negotiation of authorization policy resulted in "no authorization".
Test strategy	
Notes	LU trigger from paging group ID.

TP ID	TP/MS/IDM/LOC/BV-H003 {2} ** W2
P802.16 Reference	[3] Clauses 6.3.24.5 and 8.4.5.3.25 [12] Clauses 6.3.23.5 and 8.4.5.3.25.
PICS Item	PIC_MOB2.
Initial Condition	The IUT is in idle mode.
Expected Behaviour	Check that: On receipt of DL-MAP and/or UL-MAP of which DCD count and/or UCD count are different from CCC of DCD and/or UCD the IUT retains and on receipt of Broadcast Control Pointer IE during paging interval, the IUT awakens at DCD_UCD Transmission Frame in time to synchronize to the DL and decode the DCD and UCD message in the frame.
Test strategy	The BS transmits a new burst profile in DCD and/or UCD in the frame where Broadcast Control Pointer IE directs the IUT to decode DCD and/or UCD.
Notes	

TP ID	TP/MS/IDM/LOC/BV-H004 {3}
P802.16 Reference	[3] Clauses 6.3.24.8.2.1 and 6.3.24.8.2.2 [12] Clauses 6.3.23.8.2.1 and 6.3.23.8.2.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is in Idle Mode and performed Secure Location Update. The BS evaluates the CMAC Tuple as invalid and cannot supply a corresponding authenticating CMAC Tuple. The BS includes Location Update Response TLV in RNG-RSP with a value of 0x01=Failure of Location Update.
Expected Behaviour	Check that: The IUT performs network re-entry from Idle Mode.
Test strategy	
Notes	Unsecure Location Update process.

5.3.13 Multicast Traffic Connections (MTC)

Void.

5.3.14 Supported Cryptographic Suites (SCS)

5.3.14.1 No data encryption, No data authentication and No key encryption

TP ID	TP/SS/SCS/DES/BV-H000
P802.16 Reference	[3] and [12] Clause 11.9.14 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has received an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x00 for no data encryption, value 0x00 for no data authentication, and no key encryption.
Expected Behaviour	Check that: For the given SA, the IUT sends UL MAC DATA PDU payloads without encryption.
Test strategy	
Notes	

TP ID	TP/SS/SCS/DES/BV-H001
P802.16 Reference	[3] and [12] Clause 11.9.14 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has received an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x00 for no data encryption, value 0x00 for no data authentication, and no key encryption.
Expected Behaviour	Check that: For the given SA, the IUT receives DL MAC DATA PDU payloads which are not encrypted.
Test strategy	
Notes	

5.3.14.2 CCM-mode 128-bit AES, CCM-Mode and AES Key Wrap with 128-bit key (AES)

TP ID	TP/SS/SCS/AES/BV-H000
P802.16 Reference	[3] and [12] Clause 7.5.1.2 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has received an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x02 for CCM-Mode, AES for a given SA and using TEK encryption algorithm AES Key Wrap with 128-bit key.
Expected Behaviour	Check that: For the given SA, the IUT uses the CCM mode of the AES algorithm to encrypt the UL MAC DATA PDU payloads.
Test strategy	
Notes	

TP ID	TP/SS/SCS/AES/BV-H001
P802.16 Reference	[3] and [12] Clause 7.5.1.2.1 Table "Data encryption algorithm identifiers" Table "SA-descriptor attributes"
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has received an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x02 for CCM-Mode, AES for a given SA and using TEK encryption algorithm AES Key Wrap with 128-bit key.
Expected Behaviour	Check that: For the given SA, the IUT sends UL MAC DATA PDU payload with a packet number that is XORed with 0x80000000 prior to transmission.
Test strategy	
Notes	

TP ID	TP/SS/SCS/AES/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.5.1.2.4 and 7.5.1.2.1.
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has received an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x02 for CCM-Mode, AES for a given SA and using TEK encryption algorithm AES Key Wrap with 128-bit key.
Expected Behaviour	Check that: For the given SA, when IUT receives DL MAC DATA PDU packets which fail to be decrypted the IUT shall discard these packets.
Test strategy	
Notes	

TP ID	TP/SS/SCS/AES/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.5.1.2.4 and 7.5.1.2.1.
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has received an SA-Descriptor sub attribute with Cryptographic suite identifier equal to 0x02 for CCM-Mode, AES for a given SA and using TEK encryption algorithm AES Key Wrap with 128-bit key.
Expected Behaviour	Check that: For the given SA, when IUT receives a DL MAC DATA PDU packet with a packet number equal or less than the recorded maximum for the SA then the packet shall be discarded.
Test strategy	
Notes	

5.3.15 Privacy and Key Management (PKM)

5.3.15.1 PKM Version 1 Authentication/Authorization (AUTH1)

5.3.15.1.1 Initialization (INIT)

TP ID	TP/SS/PKM/AUTH1/INIT/BV-H000
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5 1-A and 7.2.1.6.
PICS Item	
Initial Condition	IUT is initializing.
Expected Behaviour	Check that: On completion of Basic Capabilities negotiation, the IUT transmits a valid Auth Info message followed by a valid Auth Request message.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BV-H001
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5 4-B Figure "TEK state machine flow diagram" and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT has begun Authorization and sent a valid Auth Info and Auth Request messages.
Expected Behaviour	Check that: On receiving an Auth Reply, the IUT goes to the Authorized State and sends one Key request message for each SAID in the Auth Reply.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5, 2-B Table "Operational ranges for privacy configuration settings" "Authorize Reject Wait Timeout" and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message and started Auth Request retry timer. (The IUT is now in the Auth Wait state).
Expected Behaviour	Check that: On receiving an Auth Reject message (no permanent error), the IUT clears Auth Request retry timer, sets Auth Reject Wait Timeout timer and waits for Authorize Reject Wait expiry and then retransmits the Auth Info and the Auth Request.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5, 3-B, 7.2.1.6.3 "Permanent Authorization Reject" paragraph 2, and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	Negotiate Basic Capabilities is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message.
Expected Behaviour	Check that: On receiving an Auth Reject message with a failure due to a permanent error condition, the IUT continues to respond to management messages.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/TI-H000
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5, 5-B Table "Operational ranges for privacy configuration settings" "Authorize Wait Timeout" and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	Negotiate Basic Capabilities is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message and started Auth Request retry timer.
Expected Behaviour	Check that: On Auth Request retry timer expiry without receiving an Auth Reject or Perm Auth Reject, the IUT retransmits the Auth Info followed by the Auth Request.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/TI-H001
P802.16 Reference	[3] and [12] Clause 7.2.1.6.5, 5-B Table "Operational ranges for privacy configuration settings" "Authorize Wait Timeout".
PICS Item	
Initial Condition	IUT is operational.
Expected Behaviour	Check that: The IUT repeats the cycle of sending a valid Auth Info message followed by a valid Auth Request message and waiting the default Auth Wait duration until receiving an Auth Reply message.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BI-H000
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9 paragraph 5 "Code" and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT is has negotiated basic capabilities and transmitted PKM-REQ Auth Info and Auth Req messages. (The IUT is now in Auth Wait State).
Expected Behaviour	Check that: On receiving a PKM-RSP message with an invalid Code value, the IUT silently discards the PKM-RSP and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BI-H001
P802.16 Reference	[3] and [12] Clauses 6.3.2.3, paragraph 1 and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message and started Auth Request retry timer. (The IUT is now in Auth Wait State).
Expected Behaviour	Check that: On receiving an Auth Reply with erroneously encoded parameters, the IUT ignores the Auth Reply and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H000
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9 paragraph 5 and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT is has negotiated basic capabilities and transmitted PKM-REQ Auth Info and Auth Req messages. (The IUT is now in Auth Wait State).
Expected Behaviour	Check that: On receiving a PKM-RSP Auth Reply message with an Identifier field not matching that of the Auth Req message, the IUT silently discards the message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H001
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9 paragraph 5 and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT is has negotiated basic capabilities and transmitted PKM-REQ Auth Info and Auth Req messages.
Expected Behaviour	Check that: On receiving a PKM-RSP Auth Reject message with an Identifier field not matching that of the Auth Req message, the IUT silently discards the message and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H002
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 and 7.2.1.6 Table "Authorization FSM State Transition Matrix".
PICS Item	
Initial Condition	Basic Capabilities Negotiation is in process.
Expected Behaviour	Check that: On receiving a valid SBC-RSP to close out Basic Capabilities negotiation immediately followed by an Auth Reply message, the IUT ignores the Auth Reply message and transmits a valid Auth Info followed by a valid Auth Request message.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H003
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 and 7.2.1.6 Table "Authorization FSM State Transition Matrix".
PICS Item	
Initial Condition	Basic Capabilities Negotiation is in process.
Expected Behaviour	Check that: On receiving a valid SBC-RSP to close out Basic Capabilities negotiation immediately followed by an Auth Invalid message, the IUT ignores the Auth Invalid message and transmits a valid Auth Info followed by a valid Auth Request message.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H004
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 and 7.2.1.6 Table "Authorization FSM State Transition Matrix".
PICS Item	
Initial Condition	Basic Capabilities Negotiation is in process.
Expected Behaviour	Check that: On receiving a valid SBC-RSP to close out Basic Capabilities negotiation immediately followed by an Auth Reject message, the IUT ignores the Auth Reject message and transmits a valid Auth Info followed by a valid Auth Request message.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H005
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 and 7.2.1.6 Table "Authorization FSM State Transition Matrix".
PICS Item	
Initial Condition	Basic Capabilities Negotiation is in process.
Expected Behaviour	Check that: On receiving a valid SBC-RSP to close out Basic Capabilities negotiation immediately followed by a Perm Auth Reject message, the IUT ignores the Perm Auth Reject message and transmits a valid Auth Info followed by a valid Auth Request message.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H006
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5 and 7.2.1.6 Figure "Authorization state machine flow diagram" Table "Operational ranges for privacy configuration settings" "Authorize Wait Timeout".
PICS Item	
Initial Condition	Negotiating Basic Capabilities is completed. The IUT has transmitted a valid Auth Info and Auth Request messages and started Auth Request retry timer. (The IUT is now in Auth Wait State).
Expected Behaviour	Check that: On receiving an Auth Invalid message, the IUT ignores the Auth Invalid and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H007
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM State Transition Matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram" Table "Operational ranges for privacy configuration settings" "Authorize Reject Wait Timeout".
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message. The IUT then received an Auth Reject message not due to a permanent error condition. (The IUT is now in the Auth Reject Wait State).
Expected Behaviour	Check that: On receiving an Auth Reply message, the IUT ignores the Auth Reply and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H008
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM State Transition Matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram" Table "Operational ranges for privacy configuration settings" "Authorize Reject Wait Timeout".
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message. The IUT then received an Auth Reject message not due to a permanent error condition. (The IUT is now in the Auth Reject Wait State).
Expected Behaviour	Check that: On receiving an Auth Invalid message, the IUT ignores the Auth Invalid and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H009
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM State Transition Matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram" Table "Operational ranges for privacy configuration settings" "Authorize Reject Wait Timeout".
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message. The IUT then received an Auth Reject message not due to a permanent error condition. (The IUT is now in the Auth Reject Wait State).
Expected Behaviour	Check that: On receiving an Auth Reject message, the IUT ignores the Auth Reject and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H010
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM State Transition Matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram" Table "Operational ranges for privacy configuration settings" "Authorize Reject Wait Timeout".
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message. The IUT then received an Auth Reject message not due to a permanent error condition. (The IUT is now in the Auth Reject Wait State).
Expected Behaviour	Check that: On receiving a Perm Auth Reject message, the IUT ignores the Perm Auth Reject and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H011
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 Table "Authorization FSM State Transition Matrix" and 7.2.1.6.3 "Permanent Authorization Reject" paragraph 2.
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message. The IUT then received an Auth Reject message due to a permanent error condition. (The IUT is now in the Silent state).
Expected Behaviour	Check that: On receiving a Auth Reply message, the IUT ignores the Auth Reply and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H012
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 Table "Authorization FSM State Transition Matrix" and 7.2.1.6.3 "Permanent Authorization Reject" paragraph 2.
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message. The IUT then received an Auth Reject message due to a permanent error condition. (The IUT is now in the Silent state).
Expected Behaviour	Check that: On receiving a Auth Invalid message, the IUT ignores the Auth Invalid and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H013
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 Table "Authorization FSM State Transition Matrix" and 7.2.1.6.3 "Permanent Authorization Reject" paragraph 2.
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message. The IUT then received an Auth Reject message due to a permanent error condition. (The IUT is now in the Silent state).
Expected Behaviour	Check that: On receiving an Auth Reject message, the IUT ignores the Auth Reject and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/INIT/BO-H014
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 Table "Authorization FSM State Transition Matrix" and 7.2.1.6.3 "Permanent Authorization Reject" paragraph 2.
PICS Item	
Initial Condition	Basic Capabilities Negotiation is completed. The IUT has transmitted a valid Auth Info message followed by a valid Auth Request message. The IUT then received an Auth Reject message due to a permanent error condition. (The IUT is now in the Silent state).
Expected Behaviour	Check that: On receiving a Perm Auth Reject message, the IUT ignores the Perm Auth Reject and remains in the same state.
Test strategy	
Notes	

5.3.15.1.2 Operational (OPN)

TP ID	TP/SS/PKM/AUTH1/OPN/BV-H000
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5 6-C Table "Values for privacy configuration setting for protocol testing" and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT has started Authorization and has just received the Auth Reply to enter the Authorized state.
Expected Behaviour	Check that: For reauthorization, the IUT transmits an Auth Request between (AK Lifetime - AK Grace Time) and AK Lifetime seconds after the IUT received the Auth Reply. (The IUT is now in Reauth Wait State).
Test strategy	
Notes	Protocol testing time values are different than field values in "Operational ranges for privacy configuration settings" Table.

TP ID	TP/SS/PKM/AUTH1/OPN/BV-H001
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5 4-D and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and in Reauth Wait State.
Expected Behaviour	Check that: On receiving a valid Auth Reply, the IUT goes to the Authorized state, adopts the new AK contained in the Auth Reply, and sets the Authorization Grace timer to go off "Authorization Grace Time" seconds prior to the supplied AK's scheduled expiration.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BV-H002
P802.16 Reference	[3] and [12] Clause 7.2.1.6.4 Table "Operational ranges for privacy configurations settings".
PICS Item	
Initial Condition	IUT is operational has transmitted a valid Auth Request message to reauthorize. It has then received a valid Auth Reply message with a AK Grace Time and AK Lifetime values different than the default values in Table "Operational ranges for privacy configurations settings". The IUT is now reauthorized.
Expected Behaviour	Check that: The IUT uses the new AK Grace Time and AK Lifetime values for the next reauthorization.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5, 8-C and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT is operational and Authorized.
Expected Behaviour	Check that: When a vendor-specified action occurs causing a Reauthorize event, the IUT transmits an Auth Request. (The IUT is now in Reauth Wait State).
Test strategy	
Notes	An SNMP set to reauthorize would be an example of a "vendor-specified" action.

TP ID	TP/SS/PKM/AUTH1/OPN/BV-H004
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5, 7-C and 7.2.1.6 Figure "Authorization state machine flow diagram"
PICS Item	
Initial Condition	IUT is operational and Authorized.
Expected Behaviour	Check that: On receiving an Auth Invalid message associated with a particular TEK, the IUT transmits an Auth Request. (The IUT is now in Reauth Wait State).
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BV-H005
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5 7-D and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT is Operational and in Reauth Wait state.
Expected Behaviour	Check that: On receiving an Auth Invalid for a particular TEK, the IUT remains in the Reauth Wait state.
Test strategy	
Notes	To test that IUT is in Reauth Wait state, wait for T_ReauthWait expiry and then check if IUT transmits a valid Auth Request for reauthorization.

TP ID	TP/SS/PKM/AUTH1/OPN/BV-H006
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5 2-D and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT is Operational and in Reauth Wait state.
Expected Behaviour	Check that: On receiving an Auth Reject, the IUT clears Auth Request retry timer and starts Auth Reject Wait timer. (The IUT is now in Auth Reject Wait State).
Test strategy	
Notes	To test that the IUT is in Auth Reject Wait State, wait for T_AuthRejectWait expiry and then check if IUT transmits a valid Auth Info followed by a valid Auth Request for authorization.

TP ID	TP/SS/PKM/AUTH1/OPN/BV-H007
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5 3-D, 7.2.1.6.3 "Permanent Authorization Reject" paragraph 2, and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT is Operational and in Reauth Wait state.
Expected Behaviour	Check that: On receiving a Perm Auth Reject, the IUT disables all forwarding of traffic and responds to management messages. (The IUT is in the Silent state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BV-H008
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5 5-E and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and in Auth Reject Wait State.
Expected Behaviour	Check that: On expiry of Auth Reject Wait Timer, the IUT restarts Authorization by sending a valid Auth Info followed by a valid Auth Request message.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/TI-H000
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5, 5-D and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT is operational and authorized. IUT has just transmitted a valid Auth Request message to re-authorize. (The IUT is now in Reauth Wait state).
Expected Behaviour	Check that: Not having received any Auth Reply message after a duration of Reauthorize Wait Timeout, the IUT re-transmits the Auth Request message to reauthorize. (The IUT remains in Reauth Wait State).
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/TI-H001
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5, 5-D and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT is operational and authorized.
Expected Behaviour	Check that: To reauthorize, the IUT repeats the cycle of sending a valid Auth Request message and waiting Reauthorize Wait Timeout duration until receiving an Auth Reply message.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/TI-H002
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.5 4-D Table "Auth Reply attributes" and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	IUT is operational has transmitted a valid Auth Request message to reauthorize. It has then received a valid Auth Reply message with Reauthorize Wait Timeout and Authorize Reject Wait Timeout values different than the default values in Table "Operational ranges for privacy configurations settings". The IUT is now reauthorized.
Expected Behaviour	Check that: The IUT uses the new values for Reauthorize Wait Timeout and Authorize Reject Wait Timeout.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BI-H000
P802.16 Reference	[3] and [12] Clause 11.9.10 Table "Error-code attribute code values".
PICS Item	
Initial Condition	The IUT is operational and Reauth Wait State.
Expected Behaviour	Check that: On receiving an Auth Reject message with an error-code value not shown in the Table "Error-code attribute code values", the IUT ignores the error-code value.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BO-H000
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM state transition matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and Authorized.
Expected Behaviour	Check that: On receiving an Auth Reply message, the IUT does nothing and remains in the Authorized state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BO-H001
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM state transition matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and Authorized.
Expected Behaviour	Check that: On receiving an Auth Reject message, the IUT does nothing and remains in the Authorized state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BO-H002
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM state transition matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and Authorized.
Expected Behaviour	Check that: On receiving a Perm Auth Reject message, the IUT does nothing and remains in the Authorized state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BO-H003
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM state transition matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and in Auth Reject Wait State.
Expected Behaviour	Check that: On receiving an Auth Reply, the IUT silently discards the Auth Reply and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BO-H004
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM state transition matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and in Auth Reject Wait State.
Expected Behaviour	Check that: On receiving an Auth Invalid, the IUT silently discards the Auth Invalid and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BO-H005
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM state transition matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and in Auth Reject Wait State.
Expected Behaviour	Check that: On receiving an Auth Reject, the IUT silently discards the Auth Reject and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BO-H006
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM state transition matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and in Auth Reject Wait State.
Expected Behaviour	Check that: On receiving a Perm Auth Reject, the IUT silently discards the Perm Auth Reject and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BO-H007
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM state transition matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and in Silent State.
Expected Behaviour	Check that: On receiving an Auth Reply, the IUT silently discards the Auth Reply, remains in the same state, continues to disable all forwarding of traffic and continues to respond to management messages.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BO-H008
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM state transition matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and in Silent State.
Expected Behaviour	Check that: On receiving an Auth Invalid, the IUT silently discards the Auth Invalid, remains in the same state, continues to disable all forwarding of traffic and continues to respond to management messages.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BO-H009
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM state transition matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and in Silent State.
Expected Behaviour	Check that: On receiving an Auth Reject, the IUT silently discards the Auth Reject, remains in the same state, continues to disable all forwarding of traffic and continues to respond to management messages.
Test strategy	
Notes	

TP ID	TP/SS/PKM/AUTH1/OPN/BO-H010
P802.16 Reference	[3] and [12] Clauses 7.2.1.6 paragraph 5, 7.2.1.6 Table "Authorization FSM state transition matrix", and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and in Silent State.
Expected Behaviour	Check that: On receiving a Perm Auth Reject, the IUT silently discards the Perm Auth Reject, remains in the same state, continues to disable all forwarding of traffic and continues to respond to management messages.
Test strategy	
Notes	

5.3.15.2 Encryption Key Transfer (TEK)

5.3.15.2.1 Initialization (INIT)

TP ID	TP/SS/PKM/TEK/INIT1/BV-H000
P802.16 Reference	[3] and [12] Clauses 7.2.1.7.5 2-A and 7.2.1.1.
PICS Item	
Initial Condition	The IUT is initializing. It has no static provisioned SAs.
Expected Behaviour	Check that: On becoming Authorized, the IUT transmits a Key Request for its Primary SA whose SAID is the IUT's Basic CID.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/BV-H001
P802.16 Reference	[3] and [12] Clause 7.2.1.1.
PICS Item	IUT is Initializing.
Initial Condition	
Expected Behaviour	Check that: On completing Authorization, the IUT establishes an exclusive Primary SA with the SAID equal to the IUT's Basic CID.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.2.1.7.5 2-A and 7.2.1.4.1.
PICS Item	
Initial Condition	The IUT is initializing. The Primary SAID was included in the Auth Reply.
Expected Behaviour	Check that: On becoming Authorized, the IUT transmits a Key Request for its Primary SA whose SAID is the IUT's Basic CID and a Key Request for each SA Descriptor that is included in the Auth Reply and that the IUT supports.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.2.1, and 7.2.1.7.5 8-B.
PICS Item	
Initial Condition	The IUT is Key Exchanging. During authorization, the IUT has transmitted 0x01 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the Auth Request message. The IUT has then transmitted a Key Request message. (The TEK is now in Op Wait state).
Expected Behaviour	Check that: On receiving a valid Key Reply message, the IUT decrypts the TEK in TEK-parameters subattributes of the Key Reply using the two-key 3-DES in the EDE mode. (The TEK is now in the Operational state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/BV-H004
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.2.2, and 7.2.1.7.5 8-B.
PICS Item	
Initial Condition	The IUT is Key Exchanging. During authorization, the IUT has transmitted 0x02 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the Auth Request message. The IUT has then transmitted a Key Request message. (The TEK is now in Op Wait state).
Expected Behaviour	Check that: On receiving a valid Key Reply message, the IUT decrypts the TEK in TEK-parameters subattributes of the Key Reply using the RSA method. (The TEK is now in the Operational state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/BV-H005
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.2.3, and 7.2.1.7.5 8-B.
PICS Item	
Initial Condition	The IUT is Key Exchanging. During authorization, the IUT has transmitted 0x03 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the Auth Request message. The IUT has then transmitted a Key Request message. (The TEK is now in Op Wait state).
Expected Behaviour	Check that: On receiving a valid Key Reply message, the IUT decrypts the TEK in TEK-parameters subattributes of the Key Reply using 128 AES in ECB mode. (The TEK is now in the Operational state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/BV-H006
P802.16 Reference	[3] and [12] Clause 7.2.1.5 paragraph 2.
PICS Item	
Initial Condition	IUT is Initializing, is Authorizing with the BS that has Static provisioned SAs. The IUT has transmitted an Auth Request containing the Primary SAID.
Expected Behaviour	Check that: On receiving on Auth Reply containing a static SA Descriptor that it does not support, the IUT does not initiate a TEK exchange for the unsupported static SA Descriptor.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/BV-H007
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 9-B.
PICS Item	
Initial Condition	The IUT is Initializing and conducting the TEK exchanges. The IUT has transmitted a valid Key Request for an SAID. (The IUT is in the Op Wait State).
Expected Behaviour	Check that: On receiving a valid Key Reject message, the IUT transmits no Key messages, stops the TEK FSM, and goes to the TEK FSM Start state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/BI-H000
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9 paragraph 5 "Code".
PICS Item	
Initial Condition	IUT is initializing, is authorized, and has transmitted PKM-REQ Key Request messages. (The IUT is now in Op Wait State).
Expected Behaviour	Check that: On receiving a PKM-RSP message with an invalid Code value, the IUT silently discards the PKM-RSP and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/BO-H000
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9 paragraph 5 "PKM Identifier" paragraph 6.
PICS Item	
Initial Condition	IUT is initializing, is authorized, and has transmitted a valid Key Request message. (The IUT is now in Op Wait State).
Expected Behaviour	Check that: On receiving a Key Reply message with an Identifier field not matching that of the Key Request, the IUT discards the Key Reply and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/BO-H001
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9 paragraph 5 "PKM Identifier" paragraph 6.
PICS Item	
Initial Condition	IUT is initializing, is authorized, and has transmitted a valid Key Request message. (The IUT is now in Op Wait State).
Expected Behaviour	Check that: On receiving a Key Reject message with an Identifier field not matching that of the Key Request, the IUT discards the Key Reply and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/TI-H000
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 6-B.
PICS Item	
Initial Condition	The IUT is Initializing and conducting the TEK exchanges. The IUT has transmitted a valid Key Request for an SAID and has started the Op Wait Timer. (The IUT is in the Op Wait State).
Expected Behaviour	Check that: On expiry of the Op Wait Timer without receiving a valid Key Reply or Key Reject for the SAID, the IUT retransmits the Key Request for the SAID and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/INIT/TI-H001
P802.16 Reference	[3] and [12] Clauses 7.2.1.7.5 6-B and 7.2.1.7 Figure "TEK state machine flow diagram".
PICS Item	
Initial Condition	The IUT is Initializing and conducting the TEK exchanges. The IUT has transmitted a valid Key Request for an SAID and has started the Op Wait Timer. (The IUT is in the Op Wait State).
Expected Behaviour	Check that: Each time the Op Wait Timer expires without receiving a valid Key Reply or Key Reject for the SAID, the IUT retransmits the Key Request for the SAID and restarts the Op Wait Timer until the IUT receives a valid Key Reply or Key Reject.
Test strategy	
Notes	

5.3.15.2.2 Operational (OPN)

TP ID	TP/SS/PKM/TEK1/OPN/BV-H000
P802.16 Reference	[3] and [12] Clauses 7.2.1.7.5 7-D and 7.2.1.7 "TEK state machine flow diagram".
PICS Item	
Initial Condition	IUT is operational and encrypting.
Expected Behaviour	Check that: To refresh keys, the IUT transmits a valid Key Request between (TEK Active Lifetime - TEK Grace Time) and TEK Active Lifetime seconds after receiving the latest Key Reply.
Test strategy	
Notes	Protocol testing timer values are used from Table "Values for privacy configuration setting for protocol testing".

TP ID	TP/SS/PKM/TEK1/OPN/BV-H001
P802.16 Reference	[3] and [12] Clauses 7.2.1.7.5 7-D Table "Operational ranges for privacy configuration settings" and 7.2.1.7 "TEK state machine flow diagram".
PICS Item	
Initial Condition	IUT is operational and encrypting. An authorization or reauthorization process has just occurred that has changed the value for TEK Grace Time.
Expected Behaviour	Check that: To refresh keys, the IUT transmits a valid Key Request between (TEK Active Lifetime - the new TEK Grace Time) and TEK Active Lifetime seconds after receiving the latest Key Reply.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9 paragraph 2 "Identifier".
PICS Item	
Initial Condition	IUT is operational and encrypting.
Expected Behaviour	Check that: To refresh its keys, the IUT sends a Key Request message whose Identifier is the PKM Identifier used in the last PKM transaction incremented by 1 (modulo 256).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.2.1, and 7.2.1.7.5 8-E.
PICS Item	
Initial Condition	During the last authorization/reauthorization, the IUT has transmitted 0x01 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the Auth Request message. The IUT has then transmitted a Key Request message. (The TEK is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a valid Key Reply message, the IUT decrypts the TEK in TEK-parameters subattributes of the Key Reply using the two-key 3-DES in the EDE mode. (The TEK is now in the Operational state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H004
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.2.2, and 7.2.1.7.5 8-E.
PICS Item	
Initial Condition	During the last authorization/reauthorization, the IUT has transmitted 0x02 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the Auth Request message. The IUT has then transmitted a Key Request message. (The TEK is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a valid Key Reply message, the IUT decrypts the TEK in TEK-parameters subattributes of the Key Reply using the RSA method. (The TEK is now in the Operational state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H005
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.2.3, and 7.2.1.7.5 8-E.
PICS Item	
Initial Condition	During the last authorization/reauthorization, the IUT has transmitted 0x03 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the Auth Request message. The IUT has then transmitted a Key Request message. (The TEK is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a valid Key Reply message, the IUT decrypts the TEK in TEK-parameters subattributes of the Key Reply using 128 AES in ECB mode. (The TEK is now in the Operational state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H006
P802.16 Reference	[3] and [12] Clauses 7.2.1.7.5 1-D and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and encrypting for an SAID. It has just sent an Auth Request to reauthorize. (The IUT is in Reauth Wait and TEK FSM Operational states).
Expected Behaviour	Check that: When the IUT's Authorization FSM terminates the TEK FSM for the given SAID, the IUT terminates encryption for the SAID. (The IUT is now in Authorized and TEK FSM start states. The old TEK FSM is deleted).
Test strategy	
Notes	Proposed to be removed from wave 2. This comment will be removed before approval and publication.

TP ID	TP/SS/PKM/TEK1/OPN/BV-H007
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 5-D.
PICS Item	
Initial Condition	The IUT is operational and encrypting. (The IUT is in the TEK FSM operational state).
Expected Behaviour	Check that: On receiving a TEK Invalid message, the IUT sends a valid Key Request and stops using the traffic encryption keys for the SAID indicated in the TEK Invalid. (The IUT is now in the Op Wait State).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H008
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 1-E.
PICS Item	
Initial Condition	The IUT is operational and encrypting for an SAID. It has sent a Key Request for key refresh. It has also sent an Auth Req to reauthorize. (The IUT is now in Reauth Wait and Rekey Wait states).
Expected Behaviour	Check that: When the IUT's Authorization FSM terminates the TEK FSM for the given SAID, the IUT goes to the Authorized and TEK FSM start states. The old TEK FSM is deleted.
Test strategy	
Notes	Not replying to the Key Request ensures that the IUT remains in the Rekey Wait state until it reauthorizes. Proposed to be removed from wave 2. This comment will be removed before approval and publication.

TP ID	TP/SS/PKM/TEK1/OPN/BV-H009
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.3 "Authorization Invalid", 7.2.1.7.5 3-E, and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and encrypting. The IUT has sent a valid Key Request to rekey. (The IUT is now in Authorized and Rekey Wait States).
Expected Behaviour	Check that: On receiving an Auth Invalid message with an Error Code = 5 (Message Authentication Failure), the IUT sends an Auth Request message. (The IUT is now in Reauth Wait and Rekey Reauth Wait States).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H010
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.3 "Authorization Invalid", 7.2.1.7.5 3-E, and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and encrypting. The IUT has sent a valid Key Request to rekey. (The IUT is now in Authorized and Rekey Wait States).
Expected Behaviour	Check that: On receiving a Key Reply that does not authenticate (Message Authentication Failure), the IUT sends an Auth Request message. (The IUT is now in Reauth Wait and Rekey Reauth Wait States).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H011
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.3 "Authorization Invalid", 7.2.1.7.5 3-E, and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and encrypting. The IUT has sent a valid Key Request to rekey. (The IUT is now in Authorized and Rekey Wait States).
Expected Behaviour	Check that: On receiving a Key Reject that does not authenticate (Message Authentication Failure), the IUT sends an Auth Request message. (The IUT is now in Reauth Wait and Rekey Reauth Wait States).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H012
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 5-E.
PICS Item	
Initial Condition	The IUT is operational and encrypting. It has just sent a Key Request to refresh its keys. (The IUT is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a TEK Invalid message, the IUT transmits a Key Request message and stops using the traffic encryption keys for the SAID indicated in the TEK Invalid message. (The IUT is now in Op Wait state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H013
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 9-E.
PICS Item	
Initial Condition	The IUT is operational and encrypting. The IUT has sent a Key Request message to refresh its keys. (The IUT is in the Rekey Wait state).
Expected Behaviour	Check that: On receiving a Key Reject message, the IUT stops using the key contained in the Key Reject message. (The TEK FSM is now in the start state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H014
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 1-F.
PICS Item	
Initial Condition	The IUT is operational and encrypting for an SAID. It has sent a Key Request for key refresh. It has also sent an Auth Req to reauthorize. (The IUT is now in Reauth Wait and Rekey Reauth Wait states).
Expected Behaviour	Check that: On receiving an Auth Reply that does not include the SA Descriptor for the SAID, the IUT goes to the Authorized and TEK FSM start states. The old TEK FSM is deleted.
Test strategy	
Notes	Not replying to the Key Request ensures that the IUT remains in the Rekey Wait state until it reauthorizes. Proposed to be removed from wave 2. This comment will be removed before approval and publication.

TP ID	TP/SS/PKM/TEK1/OPN/BV-H015
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.3 "Authorization Invalid", 7.2.1.7.5 4-F, and 7.2.1.6 Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and encrypting. It is in the Reauth Wait and Rekey Reauth Wait States.
Expected Behaviour	Check that: On receiving a valid Auth Reply, the IUT transmits a valid Key Request message. (The IUT is now in Authorized and Rekey Wait states).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H016
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 5-F.
PICS Item	
Initial Condition	The IUT is operational and encrypting. It has just sent a Key Request to refresh its keys. At the same time, the IUT is reauthorizing. (The IUT is in the Reauth Wait and Rekey Reauth Wait states).
Expected Behaviour	Check that: On receiving a TEK Invalid message, the IUT stops using the traffic encryption keys for the SAID indicated in the TEK Invalid message. (The IUT is now in the Reauth Wait and Op Reauth Wait states).
Test strategy	
Notes	The IUT can be induced to go in the Rekey Reauth Wait state by waiting for but never responding to a Key Request until reauthorization starts. This test is possible using the timer values in Table "Authorization FSM State Transition Matrix". Using other values may cause both TEKs' lifetime to expire prior to receiving the Auth Request for re-authorization.

TP ID	TP/SS/PKM/TEK1/OPN/BV-H017
P802.16 Reference	[3] and [12] Clause 7.2.1.7.51-B.
PICS Item	
Initial Condition	The IUT is refreshing its keys. The IUT is in the Op Wait state.
Expected Behaviour	Check that: When the IUT's Authorization FSM terminates the TEK FSM for the given SAID, the IUT terminates encryption for the SAID. (The IUT is now in Authorized and TEK FSM start states. The old TEK FSM is deleted).
Test strategy	
Notes	Proposed to be removed from wave 2. This comment will be removed before approval and publication.

TP ID	TP/SS/PKM/TEK1/OPN/BV-H018
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 3-B.
PICS Item	
Initial Condition	The IUT is encrypting and in the Key FSM Op Wait state.
Expected Behaviour	Check that: On receiving an Auth Invalid message, the IUT transmits an Auth Request message. (The IUT is now in the Reauth Wait and Op Reauth Wait states).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H019
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.2.1, and 7.2.1.7.5 8-B.
PICS Item	
Initial Condition	The IUT is refreshing its keys. During the last authorization/reauthorization, the IUT has transmitted 0x01 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the Auth Request message. The IUT is in the Op Wait state.
Expected Behaviour	Check that: On receiving a valid Key Reply message, the IUT decrypts the TEK in TEK-parameters subattributes of the Key Reply using the two-key 3-DES in the EDE mode. (The TEK is now in the Operational state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H020
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.2.2, and 7.2.1.7.5 8-B.
PICS Item	
Initial Condition	The IUT is refreshing its keys. During the last authorization/reauthorization, the IUT has transmitted 0x02 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the Auth Request message. The IUT is in the Op Wait state.
Expected Behaviour	Check that: On receiving a valid Key Reply message, the IUT decrypts the TEK in TEK-parameters subattributes of the Key Reply using the RSA method. (The TEK is now in the Operational state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H021
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.2.3, and 7.2.1.7.5 8-B.
PICS Item	
Initial Condition	The IUT is refreshing its keys. During the last authorization/reauthorization, the IUT has transmitted 0x03 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the Auth Request message. The IUT is in the Op Wait state.
Expected Behaviour	Check that: On receiving a valid Key Reply message, the IUT decrypts the TEK in TEK-parameters subattributes of the Key Reply using 128 AES in ECB mode. (The TEK is now in the Operational state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H022
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 9-B.
PICS Item	
Initial Condition	The IUT is refreshing its keys. The IUT is in the Op Wait state.
Expected Behaviour	Check that: On receiving a valid Key Reject message, the IUT stops using the key contained in the Key Reject message. (The TEK FSM is now in the Start state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H023
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 4-C.
PICS Item	
Initial Condition	The IUT is operational and encrypting. It is in the Reauth Wait and Op Reauth Wait states.
Expected Behaviour	Check that: On receiving an Auth Reply message, the IUT transmits a valid Key Request message. (The IUT is now in the Authorized and Op Wait states).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BV-H024
P802.16 Reference	[3] and [12] Clause 7.2.1.1 paragraph 6.
PICS Item	
Initial Condition	IUT is operational and encrypting.
Expected Behaviour	Check that: When the current keying material expires before a new set of keying material has been received, the IUT performs network entry as specified in clause [3] and [12] 6.3.9.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/TI-H000
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 6-E.
PICS Item	
Initial Condition	The IUT is encrypting. It has sent valid Key Request to rekey and started the Rekey Wait Timer. (The IUT is Rekey Wait state).
Expected Behaviour	Check that: On Rekey Wait Timer expiry without receiving a valid response to the Key Request, the IUT retransmits the Key Request and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/TI-H001
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 6-E.
PICS Item	
Initial Condition	The IUT is encrypting. It has sent valid Key Request to rekey and started the Rekey Wait Timer. (The IUT is Rekey Wait state).
Expected Behaviour	Check that: Each time the Rekey Wait Timer expiry without receiving a valid response to the Key Request, the IUT retransmits the Key Request and remains in the same state until the IUT receives a valid Key Reply, Key Reject, or TEK Invalid message.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/TI-H002
	Deleted.

TP ID	TP/SS/PKM/TEK1/OPN/TI-H003
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 6-B.
PICS Item	
Initial Condition	The IUT is operational and encrypting. It has just transmitted a Key Request message and started the Op Wait Timer. (The IUT is in the Rekey Wait state).
Expected Behaviour	Check that: Each time the Op Wait Timer expires without receiving a valid Key Reply or Key Reject message, the IUT retransmits the Key Request and remains in the same state until the IUT receives a valid Key Reply.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/TI-H004
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9 paragraph 7 "Identifier".
PICS Item	
Initial Condition	IUT is operational and encrypting.
Expected Behaviour	Check that: When retransmitting a Key Request messages, the IUT keeps the Identifier field's the same as that for first transmitted Key Request.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BI-H000
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9 paragraph 6.
PICS Item	
Initial Condition	IUT is operational and encrypting. The IUT has sent a Key Request to refresh its keys. (The IUT is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a Key Reply message with both known and unknown attributes, the IUT ignores the unknown attributes and refreshes the keys according to the known attributes if these attributes are complete.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BI-H001
P802.16 Reference	[3] and [12] Clause 6.3.2.3.9 paragraph 6.
PICS Item	
Initial Condition	IUT is operational and encrypting. The IUT has sent a Key Request to refresh its keys. (The IUT is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a Key Reject message with both known and unknown attributes, the IUT ignores the unknown attributes and processes the Key Reject according to the known attributes if these attributes are complete.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BI-H002
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9 paragraph 7 and 7.2.1.7.5.
PICS Item	
Initial Condition	IUT is operational and encrypting. The IUT has sent a Key Request to refresh its keys. (The IUT is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a Key Reply with missing required attributes, the IUT discards the Key Reply and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BI-H003
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9 paragraph 7 and 7.2.1.7.5.
PICS Item	
Initial Condition	IUT is operational and encrypting. The IUT has sent a Key Request to refresh its keys. (The IUT is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a Key Reject with missing required attributes, the IUT discards the Key Reject and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BI-H004
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9 "Attributes" and 7.2.1.7.5.
PICS Item	
Initial Condition	IUT is operational and encrypting. The IUT has sent a Key Request to refresh its keys. (The IUT is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a Key Reply message with randomly ordered attributes except for the HMAC which is the last attribute, the IUT decodes the attributes and refreshes the keys.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BI-H005
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9 "Attributes" and 7.2.1.7.5.
PICS Item	
Initial Condition	IUT is operational and encrypting. The IUT has sent a Key Request to refresh its keys. (The IUT is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a Key Reject message with randomly ordered attributes except for the HMAC which is the last attribute, the IUT decodes the attributes and stops using the keys indicated in the Key Reject.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BI-H006
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9 paragraph 5 "Code" and 7.2.1.7.5.
PICS Item	
Initial Condition	The IUT is operational and encrypting. The IUT has sent a Key Request message to refresh its keys. (The IUT is in the Rekey Wait state).
Expected Behaviour	Check that: On receiving a PKM-RSP MAC message with an invalid PKM packet type code, the IUT does nothing and remains in the same state.
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BO-H000
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9 paragraph 7 "Identifier" and 7.2.1.7.5.
PICS Item	
Initial Condition	IUT is operational and encrypting. The IUT has sent a Key Request to refresh its keys. (The IUT is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a Key Reply whose Identifier field does not match that of the Key Request message, the IUT does nothing and remains in the same state. (The IUT remains in the Rekey Wait state).
Test strategy	
Notes	

TP ID	TP/SS/PKM/TEK1/OPN/BO-H001
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9 paragraph 7 "Identifier" and 7.2.1.7.5.
PICS Item	
Initial Condition	IUT is operational and encrypting. The IUT has sent a Key Request to refresh its keys. (The IUT is now in Rekey Wait state).
Expected Behaviour	Check that: On receiving a Key Reject whose Identifier field does not match that of the Key Request message, the IUT does nothing and remains in the same state. (The IUT remains in the Rekey Wait state).
Test strategy	
Notes	

5.3.15.3 Security Association Management (SAM)

TP ID	TP/SS/PKM/SAM1/BV-H000
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.9.1 paragraph 1 and 7.3.1 paragraph 1.
PICS Item	
Initial Condition	The IUT is operating.
Expected Behaviour	Check that: On receiving a valid SA Add message, the IUT starts a new TEK state machine for each SA listed in the message by sending a Key Request message for each SA.
Test strategy	
Notes	

5.3.15.4 Encryption and Key Scheduling (EKS)

TP ID	TP/SS/PKM/EKS/BV-H000
P802.16 Reference	[3] and [12] Clauses 7.1.5 and 11.9.14 Table "Allowed cryptographic suites".
PICS Item	
Initial Condition	IUT has begun SS authorization.
Expected Behaviour	Check that: The IUT supports at least one of the Cryptographic Suites in Table "Allowed cryptographic suites".
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/BV-H001
P802.16 Reference	[3] and [12] Clause 7.1.4.
PICS Item	
Initial Condition	IUT is operational and adding a Dynamic Service Addition (DSA) for a data transport connections.
Expected Behaviour	Check that: The IUT maps all transport connections to an existing SA.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/BV-H002
P802.16 Reference	[3] and [12] Clause 7.1.4.
PICS Item	
Initial Condition	IUT is operational and adding a Dynamic Service (DSA) for each of several multicast data transport connections.
Expected Behaviour	Check that: The IUT maps the multicast transport connections to any Static or Dynamic SA.
Test strategy	
Notes	

5.3.15.4.1 Key Usage (KU)

TP ID	TP/SS/PKM/EKS/KU/BV-H000
P802.16 Reference	[3] and [12] Clause 7.2.1.3.1.
PICS Item	
Initial Condition	IUT is operational and authorized.
Expected Behaviour	Check that: The IUT Simultaneously supports two active AK's during reauthorization.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/KU/BV-H001
P802.16 Reference	[3] and [12] Clauses 7.4.2.2 and 7.5.4.3.
PICS Item	
Initial Condition	The IUT is operational. Two AKs are active for the IUT. Given that during a transaction the IUT must transmit one of the following messages: DSx-REQ, DSx-RSP, DSx-ACK, REG-REQ, and TFTP-CPLT.
Expected Behaviour	Check that: The IUT calculates the HMAC-Digest of the HMAC Tuple in the message with the HMAC_KEY_U associated with the newer of its two most recent AKs.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/KU/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.5.3 and 7.5.4.3.
PICS Item	
Initial Condition	PMP only. The IUT is authenticating the Key Request message with HMAC-Digest.
Expected Behaviour	Check that: The IUT uses a HMAC sequence number in the HMAC tuple that is equal to the AK sequence number from which the HMAC_KEY_U was derived.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/KU/BV-H003
P802.16 Reference	[3] and [12] Clause 7.4.2.2.
PICS Item	
Initial Condition	IUT is Operational.
Expected Behaviour	Check that: The IUT Uses the HMAC_KEY_U derived from the new of its two most recent AKs when calculating the HMAC-Digests attached to Key Request messages.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/KU/BV-H004
P802.16 Reference	[3] and [12] Clause 7.4.2.2.
PICS Item	
Initial Condition	IUT is operational. Two AKs are active. The IUT has transmitted a valid Key Request.
Expected Behaviour	Check that: On receiving a Key Reply message using the older AK sequence number, the IUT Authenticates the Key Reply message and decrypts the TEKs with the KEK using the older AK.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/KU/BV-H005
P802.16 Reference	[3] and [12] Clause 7.4.2.2.
PICS Item	
Initial Condition	IUT is operational. Two AKs are active. The IUT has transmitted a valid Key Request.
Expected Behaviour	Check that: On receiving a Key Reply message using the newer AK sequence number, the IUT Authenticates the Key Reply message and decrypts the TEKs with the KEK using the newer AK.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/KU/BV-H006
P802.16 Reference	[3] and [12] Clause 7.4.2.3 paragraph 2b.
PICS Item	
Initial Condition	The IUT is encrypting UL user data for an SAID. The IUT has sent a Key Request to refresh keys for the SAID.
Expected Behaviour	Check that: On receiving a valid Key Reply for the SAID, the IUT encrypts the user data using the newer of the two keys in the Key Reply.
Test strategy	
Notes	

5.3.15.4.2 Encryption (ENC)

TP ID	TP/SS/PKM/EKS/ENC/BV-H000
P802.16 Reference	[3] and [12] Clauses 7.5, 11.9.14 Table "Data encryption algorithm identifiers", and 11.9.17 Table "SA-Descriptor subattributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the SS has received an SA-Descriptor subattribute with Cryptographic suite identifier equal to 0x00 for a given SA.
Expected Behaviour	Check that: For the given SA, the IUT does not encrypt the MAC DATA PDU payloads.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H001
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.1.1, 11.9.14 Table "Data encryption algorithm identifiers", and 11.9.17 Table "SA-Descriptor subattributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has received an SA-Descriptor subattribute with Cryptographic suite identifier equal to 0x01 for CBC-Mode, 56-bit DES for a given SA.
Expected Behaviour	Check that: For the given SA, the IUT uses the CBC of the DES algorithm to encrypt the MAC DATA PDU payloads.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.1.2, 11.9.14 Table "Data encryption algorithm identifiers", and 11.9.17 Table "SA-Descriptor subattributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has received an SA-Descriptor subattribute with Cryptographic suite identifier equal to 0x02 CCM mode, 128 bit AES for a given SA.
Expected Behaviour	Check that: For the given SA, the IUT uses the AES, CCM mode to encrypt the MAC DATA PDU payloads.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H003
	Deleted.

TP ID	TP/SS/PKM/EKS/ENC/BV-H004
P802.16 Reference	[3] and [12] Clause 7.5.1.1 paragraph 2.
PICS Item	
Initial Condition	PMP_only. The IUT is operational. The IUT is encrypting uplink MAC DATA PDU payloads.
Expected Behaviour	Check that: The IUT initializes the CBC with the XOR the IV parameter transmitted in the TEK keying information and the Frame Number of the frame where the relevant UL-MAP was transmitted.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H005
P802.16 Reference	[3] and [12] Clauses 7.5 and 7.5.1.1 paragraph 3.
PICS Item	
Initial Condition	The IUT is encrypting uplink MAC DATA PDU payloads with DES in CBC mode. The final block of plaintext is of n bits where n is less than 64 bits.
Expected Behaviour	Check that: The IUT uses DES to encrypt the next-to-last cipher block text a second time using the ECB mode, XORs the most significant n bits of the result with the final n bits of the payload for the short final cipher block.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H006
P802.16 Reference	[3] and [12] Clauses 7.5 and 7.5.1.1 paragraph 3.
PICS Item	
Initial Condition	The IUT is encrypting uplink MAC DATA PDU payloads with DES in CBC mode. The entire plaintext is of n bits where n is less than 64 bits.
Expected Behaviour	Check that: The IUT uses DES to encrypt the IV, then XORs the most significant n bits of the cipher text with the n bits of the payload to generate the short cipher block.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H007
P802.16 Reference	[3] and [12] Clause 7.2.1.7, 7.2.1.7.5 8-E.
PICS Item	
Initial Condition	IUT is encrypting. The SAID for the Basic CID and several SAIDs for Static SAs are established. IUT has transmitted a one valid Key Request for each SAID to refresh keys.
Expected Behaviour	Check that: On receiving a valid Key Reply with 2 keys for each SAID, the IUT encrypts the MAC DATA PDU Payloads according to the refreshed SA keying material for each SAID.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H008
P802.16 Reference	[3] and [12] Clauses 7.4.2.3 and 7.3 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	IUT is operational and encrypting uplink MAC DATA PDUs.
Expected Behaviour	Check that: Given that one TEK is active, the IUT encrypts the uplink MAC DATA PDUs using the active TEK.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H009
P802.16 Reference	[3] and [12] Clauses 7.4.2.3 and 7.3 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	IUT is operational and encrypting uplink MAC DATA PDUs.
Expected Behaviour	Check that: Given that two TEKs are active, the IUT encrypts the uplink MAC DATA PDUs using the newer TEK.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H010
P802.16 Reference	[3] and [12] Clauses 11.9.4 and 7.4.2.3.
PICS Item	
Initial Condition	IUT is encrypting. IUT has transmitted a valid Key Request to refresh keys. The IUT has received a valid Key Reply with 2 keys. One of the key's TEK Parameters indicates a key lifetime of zero.
Expected Behaviour	Check that: On receiving a valid Key Reply with one of the key's TEK Parameters indicates a key lifetime of zero, the IUT encrypts the MAC DATA PDU Payload according to the TEK parameters whose key lifetime is not zero. Encryption of MAC DATA PDU Payloads continues throughout the transaction.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H011
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.3 "Authorization Invalid" and 3-E Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and encrypting. The IUT has sent a valid Key Request to rekey. (The IUT is now in Authorized and Rekey Wait States).
Expected Behaviour	Check that: On receiving an Auth Invalid message with an Error Code = 5 (Message Authentication Failure), the IUT transitions to the Reauth Wait state and continues to encrypt the MAC DATA PDU payloads throughout the transaction.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H012
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.3 "Authorization Complete" and 4-F Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and encrypting. It is in the Reauth Wait and Rekey Reauth Wait States.
Expected Behaviour	Check that: On receiving a valid Auth Reply, the IUT continues to encrypt the MAC DATA PDU payloads throughout the transaction.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H013
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 6-E.
PICS Item	
Initial Condition	The IUT is encrypting. It has sent valid Key Request to rekey and started the Rekey Wait Timer. (The IUT is Rekey Wait state).
Expected Behaviour	Check that: On Rekey Wait Timer expiry without receiving a valid response to the Key Request, the IUT continues to encrypt MAC DATA PDU Payloads throughout the transaction.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H014
P802.16 Reference	[3] and [12] Clauses 7.2.1.7.5 8-E and 7.2.1.7.
PICS Item	
Initial Condition	IUT is encrypting. Only one SAID (for the Basic CID) is established. IUT has transmitted a valid Key Request to refresh keys.
Expected Behaviour	Check that: On receiving a valid Key Reply with 2 keys, the IUT encrypts the MAC DATA PDU Payload according to the refreshed SA keying material. Encryption of MAC DATA PDU Payloads continues throughout the transaction.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H015
P802.16 Reference	[3] and [12] Clauses 7.2.1.7.5 1-C and 7.2.1.6.5 4-D.
PICS Item	
Initial Condition	The IUT is encrypting and in the Op Reauth Wait state.
Expected Behaviour	Check that: On receiving an Auth Reply that does not contain the SAID for the SA that was encrypting, the IUT terminates encryption for the missing SAID.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H016
P802.16 Reference	[3] and [12] Clauses 7.2.1.7.5 1-E and 7.2.1.6.3.
PICS Item	
Initial Condition	The IUT is operational and encrypting for an SAID. It has sent a Key Request for key refresh. It has also sent an Auth Req to reauthorize. (The IUT is now in Reauth Wait and Rekey Wait states).
Expected Behaviour	Check that: When the IUT's Authorization FSM terminates the TEK FSM by sending a [TEK] Stop event for the given SAID, the IUT terminates encryption for the SAID.
Test strategy	
Notes	

TP ID	TP/SS/PKM/EKS/ENC/BV-H017
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 1-F.
PICS Item	
Initial Condition	The IUT is operational and encrypting for an SAID. It has sent a Key Request for key refresh. It has also sent an Auth Req to reauthorize. (The IUT is now in Reauth Wait and Rekey Reauth Wait states).
Expected Behaviour	Check that: On receiving an Auth Reply that does not include the SA Descriptor for the SAID, the IUT terminates encryption for the missing SAID.
Test strategy	
Notes	

5.3.15.4.3 Decryption (DEC)

TP ID	TP/SS/PKM/EKS/DEC/BV-H000
P802.16 Reference	[3] and [12] Clauses 7.5, 11.9.14 Table "Data encryption algorithm identifiers", and 11.9.17 Table "SA-Descriptor subattributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the SS has received an SA-Descriptor subattribute with Cryptographic suite identifier equal to 0x00 for a given SA.
Expected Behaviour	Check that: For the given SA, the IUT does not decrypt the MAC DATA PDU payloads.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H001
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.1.1, 11.9.14 Table "Data encryption algorithm identifiers", and 11.9.17 Table "SA-Descriptor subattributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has received an SA-Descriptor subattribute with Cryptographic suite identifier equal to 0x01 for CBC-Mode, 56-bit DES for a given SA.
Expected Behaviour	Check that: For the given SA, the IUT uses the CBC of the DES algorithm to decrypt the MAC DATA PDU payloads.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H002
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.1.2, 11.9.14 Table "Data encryption algorithm identifiers", and 11.9.17 Table "SA-Descriptor subattributes".
PICS Item	
Initial Condition	The IUT is operational. During successful SS authorization and key exchange, the IUT has received an SA-Descriptor subattribute with Cryptographic suite identifier equal to 0x02 AES, CCM mode for a given SA.
Expected Behaviour	Check that: For the given SA, the IUT uses the AES, CCM mode to decrypt the MAC DATA PDU payloads.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H003
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.1.1, 11.9.8, and 11.9.9.
PICS Item	
Initial Condition	PMP_only. The IUT is operational. The IUT is decrypting downlink MAC DATA PDU payloads.
Expected Behaviour	Check that: The IUT Uses a CBC calculated by XOR-ing the CBC-IV transmitted in the TEK parameters subattributes.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H004
P802.16 Reference	[3] and [12] Clauses 7.5 and 7.5.1.1.
PICS Item	
Initial Condition	The IUT is operational. The IUT is decrypting downlink MAC DATA PDU payloads using DES. The final block of plaintext is of n bits where n is less than 64 bits.
Expected Behaviour	Check that: The IUT decrypts using DES the next-to-last cipher block text using the ECB mode, and XORs the most significant n bits with the short final cipher block in order to recover the short final cleartext block.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H005
P802.16 Reference	[3] and [12] Clauses 7.5 and 7.5.1.1.
PICS Item	
Initial Condition	The IUT is operational. The IUT is decrypting downlink MAC DATA PDU payloads. The entire plaintext is of n bits where n is less than 64 bits.
Expected Behaviour	Check that: The IUT correctly decrypts the entire plaintext.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H006
P802.16 Reference	[3] and [12] Clauses 7.2.1.7 and 7.2.1.7.5 8-E.
PICS Item	
Initial Condition	IUT is encrypting. The SAID for the Basic CID and several SAIDs for Static SAs are established. IUT has transmitted a one valid Key Request for each SAID to refresh keys.
Expected Behaviour	Check that: On receiving a valid Key Reply with 2 keys for each SAID, the IUT decrypts the MAC DATA PDU Payloads according to the refreshed SA keying material for each SAID.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H007
P802.16 Reference	[3] and [12] Clause 7.4.2.3. Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	IUT is operational and decrypting downlink MAC DATA PDUs.
Expected Behaviour	Check that: Given that one TEK is active, the IUT decrypts the downlink MAC DATA PDUs using the active TEK.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H008
P802.16 Reference	[3] and [12] Clause 7.4.2.3 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	IUT is operational and decrypting downlink MAC DATA PDUs. The downlink MAC DATA PDUs are encrypted using the older of the two active TEKs.
Expected Behaviour	Check that: The IUT decrypts the MAC DATA PDUs.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H009
P802.16 Reference	[3] and [12] Clause 7.4.2.3 Figure "TEK management in BS and SS".
PICS Item	
Initial Condition	IUT is operational and decrypting downlink MAC DATA PDUs. The downlink MAC DATA PDUs are encrypted using the newer of the two active TEKs.
Expected Behaviour	Check that: The IUT decrypts the MAC DATA PDUs.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H010
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.3 "Authorization Invalid" and 3-E Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and decrypting. The IUT has sent a valid Key Request to rekey. (The IUT is now in Authorized and Rekey Wait States).
Expected Behaviour	Check that: On receiving an Auth Invalid message with an Error Code = 5 (Message Authentication Failure), the IUT continues to decrypt the MAC DATA PDU payloads throughout the transaction.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H011
P802.16 Reference	[3] and [12] Clauses 7.2.1.6.2 "Authorization Reply" and 4-F Figure "Authorization state machine flow diagram".
PICS Item	
Initial Condition	The IUT is operational and encrypting. It is in the Reauth Wait and Rekey Reauth Wait States.
Expected Behaviour	Check that: On receiving a valid Auth Reply, the IUT continues to decrypt the MAC DATA PDU payloads throughout the transaction.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H012
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 6-E.
PICS Item	
Initial Condition	The IUT is encrypting. It has sent valid Key Request to rekey and started the Rekey Wait Timer. (The IUT is Rekey Wait state).
Expected Behaviour	Check that: On Rekey Wait Timer expiry without receiving a valid response to the Key Request, the IUT decrypts MAC DATA PDU Payloads throughout the transaction.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H013
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 8-E.
PICS Item	
Initial Condition	IUT is encrypting. Only one SAID (for the Basic CID) is established. IUT has transmitted a valid Key Request to refresh keys.
Expected Behaviour	Check that: On receiving a valid Key Reply with 2 keys, the IUT decrypts the MAC DATA PDU Payload according to the refreshed SA keying material. Decryption of MAC DATA PDU Payloads continues throughout the transaction.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H014
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 1-C.
PICS Item	
Initial Condition	The IUT is encrypting and in the Op Reauth Wait state.
Expected Behaviour	Check that: On receiving an Auth Reply that does not contain the SAID for the SA that was decrypting, the IUT terminates decryption for the missing SAID.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H015
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 1-E.
PICS Item	
Initial Condition	The IUT is operational and encrypting for an SAID. It has sent a Key Request for key refresh. It has also sent an Auth Req to reauthorize. (The IUT is now in Reauth Wait and Rekey Wait states).
Expected Behaviour	Check that: When the IUT's Authorization FSM terminates the TEK FSM for the given SAID, the IUT terminates decryption for the SAID.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BV-H016
P802.16 Reference	[3] and [12] Clause 7.2.1.7.5 1-F.
PICS Item	
Initial Condition	The IUT is operational and encrypting for an SAID. It has sent a Key Request for key refresh. It has also sent an Auth Req to reauthorize. (The IUT is now in Reauth Wait and Rekey Reauth Wait states).
Expected Behaviour	Check that: On receiving an Auth Reply that does not include the SA Descriptor for the SAID, the IUT terminates decryption for the missing SAID.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

TP ID	TP/SS/PKM/EKS/DEC/BI-H000
P802.16 Reference	[3] and [12] Clause 6.3.3.6.
PICS Item	
Initial Condition	IUT is operational.
Expected Behaviour	Check that: On receiving an unencrypted MAC DATA PDU mapped to an SA requiring encryption, the IUT discards the MAC PDU.
Test strategy	
Notes	Require a means to determine if the received DATA PDUs are decrypted correctly.

5.3.15.5 Certificates (CERT)

TP ID	TP/SS/PKM/CERT/BV-H000
P802.16 Reference	[3] and [12] Clause 7.6.1.1.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT's certificate has a validity period greater than its operational lifetime.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H001
P802.16 Reference	[3] and [12] Clause 7.6.1.1.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The validity period of the IUT's certificate begins with date of the certificate's generation.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H002
P802.16 Reference	[3] and [12] Clause 7.6.1.1.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT encodes validity periods as UTC time including seconds and zero values down to and including seconds.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H003
P802.16 Reference	[3] and [12] Clause 7.6.1.2.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT's certificate serial number is larger than another SS's serial number for the same manufacturer when the IUT was manufactured after the other. If the IUT was manufactured before the other SS, the IUT's number is smaller. The time of manufacture is taken from the field tbsCertificate.validity.notBefore.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H004
P802.16 Reference	[3] and [12] Clause 7.6.1.3.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification using the SHA-1 with RSA signature algorithm.
Expected Behaviour	Check that: The IUT sets the parameters component of the AlgorithmIdentifier type to the ASN.1 type NULL for tbsCertificate.signature and signatureAlgorithm.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H005
P802.16 Reference	[3] and [12] Clause 7.6.1.4.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT uses a 2-character PrintableString from ISO 3166 [10] for the countryName attribute in tbsCertificate.issuer and tbsCertificate.subject.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H006
P802.16 Reference	[3] and [12] Clause 7.6.1.4.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT encodes all other AttributeValues as either T.61/TeletexString or PrintableString character strings for the countryName attribute in tbsCertificate.issuer and tbsCertificate.subject. The IUT uses PrintableString encoding if the character string contains only characters from the PrintableString character set.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H007
P802.16 Reference	[3] and [12] Clause 7.6.1.4.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT assigns the following OIDs for the issuer and subject Names in PKM certificates: - id-at OBJECT IDENTIFIER ::= {joint-iso-ccitt(2) ds(5) 4}; - id-at-commonName OBJECT IDENTIFIER ::= {id-at 3}; - id-at-countryName OBJECT IDENTIFIER ::= {id-at 6}; - id-at-localityName OBJECT IDENTIFIER ::= {id-at 7}; - id-at-stateOrProviceName OBJECT IDENTIFIER ::= {id-at 8}; - id-at-organizationName OBJECT IDENTIFIER ::= {id-at 10}; - id-at-organizationalUnitName OBJECT IDENTIFIER ::= {{id-at 11}.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H008
P802.16 Reference	[3] and [12] Clause 7.6.1.4.1.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: If the certificate contains the organizationalUnitName representing the manufacturing location, then the IUT precedes that field with an organizationalUnitName field having the value "WirelessMAN".
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H009
P802.16 Reference	[3] and [12] Clause 7.6.1.8.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT inputs the ASN.1 DER encoded tbsCertificate into the RSA signature function and ASN.1 encodes the result as a bit string in the signatureValue field.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H010
P802.16 Reference	[3] and [12] Clause 7.6.1.6.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: IUT's Manufacturers and SS Certificates omit the issuerUniqueID and subjectUniqueID fields.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H011
P802.16 Reference	[3] and [12] Clause 7.6.1.4.1.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT has the following fields and values in the Manufacturer's Certificate: - countryName=<Country of Manufacturer>; - organizationName=<Company Name>; - organizationalUnitName=WirelessMAN (literal value); - commonName=<Company Name>.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H012
P802.16 Reference	[3] and [12] Clause 7.6.1.4.1.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT has no other attributes in the Manufacturer's Certificate than the following: - countryName; - stateOrProvinceName OPTIONAL; - localityName OPTIONAL; - organizationName; - organizationalUnitName (possibly two times, one OPTIONAL); - commonName.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H013
P802.16 Reference	[3] and [12] Clause 7.6.1.7.2.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT does not place critical extensions in the Manufacturer's Certificate other than the optional Basic Constraints extension.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H014
P802.16 Reference	[3] and [12] Clause 7.6.1.7.2.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: When the KeyUsage extension is present in the Manufacturer's Certificate, the IUT sets to one the keyCertSign bit and clears to zero all other bits.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H015
P802.16 Reference	[3] and [12] Clause 7.6.2.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: When a manufacturer issues SS certificates with multiple specific Manufacturer CA certificates: - the IUT's software includes all of the Manufacturer's Certificates; and - the IUT uses the Manufacturer's Certificate in Auth Info messages that identifies the issuer of the SS Certificate.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H016
P802.16 Reference	[3] and [12] Clause 7.6.1.4.2.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT's SS Certificate has the following fields and attributes with no other additional attributes: - countryName=<Country of Manufacturer>; - organizationName=<Company Name>; - organizationalUnitName=<manufacturing location>; - commonName=<Serial Number>; - commonName=<MAC Address>.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H017
P802.16 Reference	[3] and [12] Clause 7.6.1.7.1.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT does not place critical extensions in the SS Certificate.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H018
P802.16 Reference	[3] and [12] Clause 7.6.1.7.1.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: When the KeyUsage extension is present in the SS Certificate, the IUT sets to one the keyAgreement and keyEncipherment bits and clears to zero the keyCertSign, cRLSign, and all other bits.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H019
P802.16 Reference	[3] and [12] Clause 7.6.2.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT stores manufacturer-issued SS Certificates in SS permanent, write-once memory.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H019a
P802.16 Reference	[3] and [12] Clause 7.6.2.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: When the IUT has factory-installed RSA private/public key pairs, the IUT contains factory-installed SS Certificates as well.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H020
P802.16 Reference	[3] and [12] Clause 7.6.2
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: When relying on internal algorithms to generate an RSA key pair, the IUT supports a mechanism for installing a manufacturer-issued SS Certificate following key generation.
Test strategy	
Notes	

TP ID	TP/SS/PKM/CERT/BV-H021
P802.16 Reference	[3] and [12] Clause 7.6.2.
PICS Item	
Initial Condition	IUT uses X.509 Version 3 Certification.
Expected Behaviour	Check that: The IUT has embedded in its software the CA certificate of the Manufacturer CA that signed the SS Certificate.
Test strategy	
Notes	

5.3.16 Security version 2 (SEC)

5.3.16.1 SS/SEC/PKMv2/AUTH/NWE - Initial Network Entry

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H000
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H001
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H002
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H003 {2} **W2
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in initial network entry.
Expected Behaviour	Check that: During initial network entry when it sends a PKMv2 SA-TEK-Request message, the IUT includes, through the Security Negotiation Parameters attribute, the security capabilities that it included in the SBC-REQ message during the basic capabilities negotiation phase.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H004
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H005
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H006 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in initial network entry. The IUT has the valid PMK context and AK context for the Tester (as BS).
Expected Behaviour	Check that: During initial network entry and when the IUT receives a PKMv2 SA-TEK-Challenge message with an invalid CMAC-Digest, the IUT ignores the received message.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H007 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in initial network entry. The IUT has the valid PMK context and AK context for the Tester (as BS).
Expected Behaviour	Check that: During initial network entry and when the IUT receives a PKMv2 SA-TEK-Challenge message with an unrecognized AKID, the IUT ignores the received message.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H008 {1} **
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in initial network entry. The IUT has the valid PMK context and AK context for the Tester (as BS).
Expected Behaviour	Check that: During initial network entry and when the IUT receives a valid PKMv2 SA-TEK-Challenge message with the CMAC-Digest, if the IUT successfully verifies the CMAC-Digest included in the received message with the CMAC_KEY_D associated with the AK Key Sequence Number, then the IUT treats the PKMv2 SA-TEK-Challenge message as an implicit acknowledgement that the Tester (as BS) shares the same AK with the IUT. The IUT then sends a PKMv2 SA-TEK-Request message with a CMAC-Digest calculated with the CMAC_KEY_U which is derived from the AK.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H009 {2} **W2
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in initial network entry. The IUT has sent a PKMv2 SA-TEK-Request message to the Tester (as BS).
Expected Behaviour	Check that: During initial network entry, when timer SATEKTimer expires and no PKMv2 SA-TEK-Response is received from the TESTER (as BS), the IUT re-sends the PKMv2 SA-TEK-Request message.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H010 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in initial network entry. The IUT has sent a PKMv2 SA-TEK-Request message to the Tester (as BS).
Expected Behaviour	Check that: During initial network entry, after SATEKRequestMaxResends repetition of PKMv2 SA-TEK-Request sending and when timer SATEKTimer expires and no PKMv2 SA-TEK-Response is received from the TESTER (as BS), the IUT either initiates another full authentication or attempts to connect to another BS.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H011 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 6).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in initial network entry. The IUT has sent a PKMv2 SA-TEK-Request message.
Expected Behaviour	Check that: When the IUT receives a PKMv2 SA-TEK-Response message with an invalid CMAC-Digest, the IUT ignores the received message.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/NWE/BV-H012 {4}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 6).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in initial network entry. The IUT has sent a PKMv2 SA-TEK-Request message.
Expected Behaviour	Check that: When the IUT receives a PKMv2 SA-TEK-Response message with a valid CMAC-Digest, the IUT starts separate TEK state machines for each of the SAIDs identified in the received parameters (SA-Descriptor).
Test strategy	
Notes	

5.3.16.2 SS/SEC/PKMv2/AUTH/REA - Reauthorization

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H000
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H001
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H002
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H003 {2} **W2
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed initial network entry.
Expected Behaviour	Check that: For a reauthorization when it sends a PKMv2 SA-TEK-Request message, the IUT includes, through the Security Negotiation Parameters attribute, the security capabilities that it included in the SBC-REQ message during the basic capabilities negotiation phase.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H004
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H005
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H006 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in EAP-based re-authentication. The IUT has the new valid PMK context and AK context for the Tester (as BS).
Expected Behaviour	Check that: During reauthorization and when the IUT receives a PKMv2 SA-TEK-Challenge message with an invalid CMAC-Digest, the IUT ignores the received message.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H007 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT is in EAP-based re-authentication. The IUT has the new valid PMK context and AK context for the Tester (as BS).
Expected Behaviour	Check that: During reauthorization and when the IUT receives a PKMv2 SA-TEK-Challenge message with an unrecognized AKID, the IUT ignores the received message.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H008 {1} **
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed EAP-based re-authentication. The IUT has the new valid PMK context and AK context for the Tester (as BS).
Expected Behaviour	Check that: For a reauthorization, when the IUT receives a valid PKMv2 SA-TEK-Challenge message with the CMAC-Digest, if the IUT successfully verifies the CMAC-Digest included in the received message with the CMAC_KEY_D associated with the newer AK Key Sequence Number, then the IUT treats the PKMv2 SA-TEK-Challenge message as an implicit acknowledgement that the Tester (as BS) shares the same new AK with the IUT. The IUT then sends a PKMv2 SA-TEK-Request message with a CMAC-Digest calculated with the CMAC_KEY_U which is derived from the newer AK.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H009 {2} **W2
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed EAP-based re-authentication. The IUT has sent a PKMv2 SA-TEK-Request message.
Expected Behaviour	Check that: For a reauthorization when timer SATEKTimer expires and no PKMv2 SA-TEK-Response is received from the TESTER (as BS), the IUT re-sends the PKMv2 SA-TEK-Request message.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H010 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 3).
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed EAP-based re-authentication. The IUT has sent a PKMv2 SA-TEK-Request message.
Expected Behaviour	Check that: For a reauthorization after SATEKRequestMaxResends repetition of PKMv2 SA-TEK-Request sending and when timer SATEKTimer expires and no PKMv2 SA-TEK-Response is received from the TESTER (as BS), the IUT either initiates another full authentication or attempts to connect to another BS.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/REA/BV-H011 {3}
P802.16e Reference	[3] and [12] Clause 7.8.1 Numbering 6).
PICS Item	PIC_MOB1.
Initial Condition	IUT has completed EAP-based re-authentication. The IUT has sent a PKMv2 SA-TEK-Request message.
Expected Behaviour	Check that: When the IUT receives a PKMv2 SA-TEK-Response message with an invalid CMAC-Digest, the IUT ignores the received message.
Test strategy	
Notes	

5.3.16.2a SS/SEC/PKMv2/AUTH/HAN - Handover Process

TP ID	TP/SS/SEC/PKMv2/AUTH/HAN/BV-H000 {1} **
P802.16 Reference	[3] Clauses 6.3.22.2 and 11.6 [12] Clauses 6.3.21.2 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is performing handover. The IUT has sent a RNG-REQ message with a valid CMAC Tuple.
Expected Behaviour	Check that: On receipt of RNG-RSP including HO Process Optimization TLV Bit#1 and Bit #2 set to 1, the IUT skips PKM Authentication phase, TEK creation phase and SA-TEK 3-way handshake. All the TEKs received from the prior BS are reused.
Test strategy	HO Process Optimization TLV Bit#0, Bit #3, Bit #4, Bit #5, Bit #6, Bit #7, Bit #8, Bit #10 and Bit #12 set to 1. Bit #9, Bit#11 and Bit#13 set to 0. Bit#14 and Bit#15 are reserved bits.
Notes	In the case AES-CCM is supported for traffic encryption, the PNs used in the prior BS shall be kept and continuously used. The CMAC_KEY_COUNT TLV shall be included in the RNG-REQ message.

TP ID	TP/SS/SEC/PKMv2/AUTH/HAN/BV-H001 {1} **
P802.16 Reference	[3] Clauses 6.3.22.2 and 11.6 [12] Clauses 6.3.21.2 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is performing handover. The IUT has sent a RNG-REQ message with a valid CMAC Tuple.
Expected Behaviour	Check that: On receipt of RNG-RSP including HO Process Optimization TLV Bit#1 set to 1 and Bit#2 set to 0 and with SA-TEK-Update TLV, the IUT skips Authentication phase and SA-TEK 3-way handshake.
Test strategy	HO Process Optimization TLV Bit#0, Bit #3, Bit #4, Bit #5, Bit #6, Bit #7, Bit #8, Bit #10 and Bit #12 set to 1. Bit #9, Bit#11 and Bit#13 set to 0. Bit#14 and Bit#15 are reserved bits.
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/HAN/BV-H002 {3}
P802.16 Reference	[3] Clauses 6.3.24.7.1, and 6.3.24.9 [12] Clauses 6.3.23.7.1, and 6.3.23.9.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is performing handover. The IUT has sent a RNG-REQ message with a valid CMAC Tuple.
Expected Behaviour	Check that: On receipt of RNG-RSP with HMAC/CMAC tuple that can be verified successfully by the IUT and with HO Process Optimization TLV Bit#1 set to 1 and Bit#2 set to 0 with SA Challenge Tuple TLV, the IUT skips Authentication phase and performs SA-TEK 3-way handshake.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/HAN/BV-H003 {2} **W2
P802.16 Reference	[3] Clauses 6.3.24.7.1, and 6.3.24.9 [12] Clauses 6.3.23.7.1, and 6.3.23.9.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is performing handover.
Expected Behaviour	Check that: On receipt of RNG-RSP with HO Process Optimization TLV_Bit#1 and Bit#2 set to 0 and without a HMAC/CMAC tuple, the IUT performs Authentication phase and SA-TEK 3-way handshake.
Test strategy	HO Process Optimization TLV Bit #3, Bit #4, Bit #5, Bit#8 and Bit #10 set to 1. Bit#0, Bit#6, Bit#7, Bit#9, Bit#11, Bit#12 and Bit#13 set to 0. Bit#14 and Bit#15 are reserved bits (set to 0).
Notes	

5.3.16.2b SS/SEC/PKMv2/AUTH/IDM - Idle Mode

TP ID	TP/SS/SEC/PKMv2/AUTH/IDM/BV-H000 {1} **
P802.16 Reference	[3] Clauses 6.3.24.9 and 11.6 [12] Clauses 6.3.23.9 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is performing network re-entry from Idle Mode. The IUT has sent a RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, Ranging Purpose Indication TLV with Bit#0 set to 1, CMAC_KEY_COUNT TLV and CMAC tuple TLV.
Expected Behaviour	Check that: On receipt of RNG-RSP including HO Process Optimization TLV Bit#1 and Bit #2 set to 1, the IUT skips PKM Authentication phase, TEK creation phase and SA-TEK 3-way handshake. All the TEKs received from the prior BS are reused.
Test strategy	Network re-entry can be triggered by sending MOB_PAG-ADV with Action Code "Enter Network" and the IUT's MS MAC Address hash. HO Process Optimization TLV Bit#0, Bit #3, Bit #4, Bit #5, Bit #6, Bit #7, Bit #8, Bit #10 and Bit #12 set to 1. Bit #9, Bit#11 and Bit#13 set to 0. Bit#14 and Bit#15 are reserved bits.
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/IDM/BV-H001 {1} **
P802.16 Reference	[3] Clauses 6.3.24.7.1, 6.3.24.9 and 11.6 [12] Clauses 6.3.23.7.1, 6.3.23.9 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is performing network re-entry from Idle Mode. The IUT has sent a RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, Ranging Purpose Indication TLV with Bit#0 set to 1, CMAC_KEY_COUNT TLV and CMAC tuple TLV.
Expected Behaviour	Check that: On receipt of RNG-RSP including HO Process Optimization TLV Bit#1 set to 1 and Bit#2 set to 0 and with SA TEK-Update TLV, the IUT skips Authentication phase and skips SA-TEK 3-way handshake.
Test strategy	HO Process Optimization TLV Bit#0, Bit #3, Bit #4, Bit #5, Bit #6, Bit #7, Bit #8, Bit #10 and Bit #12 set to 1. Bit #9, Bit#11 and Bit#13 set to 0. Bit#14 and Bit#15 are reserved bits.
Notes	Network re-entry can be triggered by sending MOB_PAG-ADV with Action Code "Enter Network" and the IUT's MS MAC Address hash.

TP ID	TP/SS/SEC/PKMv2/AUTH/IDM/BV-H002 {3}
P802.16 Reference	[3] Clauses 6.3.24.7.1, 6.3.24.9, and 11.6 [12] Clauses 6.3.23.7.1, 6.3.23.9 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is performing network re-entry from Idle Mode. The IUT has sent a RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, Ranging Purpose Indication TLV with Bit#0 set to 1, CMAC_KEY_COUNT TLV and CMAC tuple TLV.
Expected Behaviour	Check that: On receipt of RNG-RSP with HMAC/CMAC tuple that can be verified successfully by the IUT and with HO Process Optimization TLV Bit#1 set to 1 and Bit#2 set to 0 with SA Challenge Tuple TLV, the IUT skips Authentication phase and performs SA-TEK 3-way handshake.
Test strategy	Network re-entry can be triggered by sending MOB_PAG-ADV with Action Code "Enter Network" and the IUT's MS MAC Address hash.
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/IDM/BV-H003 {2} **W2
P802.16 Reference	[3] Clauses 6.3.24.7.1, 6.3.24.9, and 11.6 [12] Clauses 6.3.23.7.1, 6.3.23.9 and 11.6.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is performing network re-entry from Idle Mode. The IUT has sent a RNG-REQ message with MS MAC Address TLV, Paging Controller ID TLV, and Ranging Purpose Indication TLV with Bit#0 set to 1.
Expected Behaviour	Check that: On receipt of RNG-RSP with HO Process Optimization TLV Bit#1 and Bit#2 set to 0 and without a HMAC/CMAC tuple, the IUT performs Authentication phase and SA-TEK 3-way handshake.
Test strategy	Network re-entry can be triggered by sending MOB_PAG-ADV with Action Code "Enter Network" and the IUT's MS MAC Address hash. HO Process Optimization TLV Bit #3, Bit #4, Bit #5, Bit#8 and Bit #10 set to 1. Bit#0, Bit#6, Bit#7, Bit#9, Bit#11, Bit#12 and Bit#13 set to 0. Bit#14 and Bit#15 are reserved bits (set to 0).
Notes	

5.3.16.3 SS/SEC/PKMv2/AUTH/TEK - Initial authorization TEK

TP ID	TP/SS/SEC/PKMV2/TEK/BV-H000 {4}
P802.16 Reference	[3] and [12] Clauses 7.5, 7.5.2.4, and 7.2.2.6.5 8-B.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is TEK key material exchanging. During SA-TEK 3-way handshake, the IUT has received 0x04 in the TEK encryption algorithm identifiers of the Cryptographic-Suite-List of the Security-Capabilities in the PKMv2 SA-TEK-Response message. The IUT has then transmitted a PKMv2 Key-Request message. (The TEK FSM is now in Op Wait state).
Expected Behaviour	Check that: On receiving a valid PKMv2 Key-Reply message, the IUT decrypts the each TEK in TEK-parameters sub attributes of the PKMv2 Key-Reply message using 128 AES Key Wrap algorithm. (The TEK is now in the Operational state).
Test strategy	
Notes	

5.3.16.4 SS/SEC/PKMv2/AUTH/EAP/FSM - EAP Auth FSM

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H000 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 1-A of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Stopped" (A) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "Start Auth" event from the EAP FSM, the IUT goes into "Not authenticated" (B) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H001
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H002
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H003
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H004 {1} **
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 2-B of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Not authenticated" (B) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "PKMv2 SA_TEK Challenge" message, the IUT sends PKMv2 SA-TEK-Request message, starts SATEK Timer, and goes into "SA-TEK-Response Wait" I state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H005 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 4-B of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Not authenticated" (B) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "EAP Success" event from the EAP FSM, the IUT obtains MSK, derives PMK Context and AK Context and remains in "Not authenticated" (B) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H006 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 15-B of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Not authenticated" (B) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "EAP fail" event from the EAP FSM, the IUT stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H007 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 16-B of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Not authenticated" (B) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving an "External stop" event, the IUT stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H008
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H009 {1} **
P802.16e Reference	Clause 7.2.25, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 2-C of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "SA-TEK-Response Wait" I state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "PKMv2 SA-TEK-Challenge" message, the IUT sends PKMv2 SA-TEK-Request, starts timer SATEK Timer, and remains in "SA-TEK-Response Wait" (C) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H010 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 3-C of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "SA-TEK-Response I Wait" (C) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "PKMv2 SA-TEK-Response" message, the IUT starts TEK FSM, starts Authorization grace timer, and goes into "Authenticated" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H011 {2} **W2
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 5-C of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "SA-TEK-Response Wait" (C) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "SATEK timeout" event, the IUT sends PKMv2 SA-TEK-Request message, starts SATEK Timer, and remains in "SA-TEK-Response Wait" (C) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H012 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 6-C of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "SA-TEK-Response Wait" (C) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "SATEK request max resend elapsed" event, the IUT stops Auth FSM, signals fail to top level FSM and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H013
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H014 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 15-C of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "SA-TEK-Response Wait" (C) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "External Stop" event, the IUT stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H015
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H016 {1} **
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 2-D of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Authenticated" (D) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "PKMv2 SA-TEK-Challenge" message, the IUT sends PKMv2 SA-TEK-Request, starts timer SATEK-Timer, and goes into "Reauth SA-TEK-Response Wait" (E) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H017 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 4-D of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Authenticated" (D) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving an "EAP Success" event from the EAP FSM, the IUT obtains new MSK, derives new PMK context and new AK context and remains in "Authenticated" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H018 {1} **
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 7-D of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Authenticated" (D) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "ReAuth Needed" event, the IUT sends a PKMv2 EAP-Start message, starts EAP-Start Timer and remains in "Authenticated" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H019 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 8-D of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Authenticated" (D) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "Start Re-entry" event, the IUT retrieves AK context for TBS, and goes into "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H020 {2} **W2
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 9-D of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Authenticated" (D) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving an "EAP_Start Timeout" event, the IUT sends PKMv2 EAP-Start message, starts EAP-Start timer and remains in "Authenticated" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H021 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 14-D of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Authenticated" (D) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "Auth Expired" event, the IUT stops TEK FSMs, stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H022 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 15-D of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Authenticated" (D) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "EAP Fail" event from the EAP FSM, the IUT stops TEK FSMs, stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H023 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 16-D of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Authenticated" (D) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "External Stop" event, the IUT stops TEK FSMs, stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H024
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H025 {1} **
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 2-E of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reauth SA-TEK-Response Wait" (E) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "PKMv2 SA-TEK-Challenge" message, the IUT sends PKMv2 SA-TEK-Request, starts SATEK Timer, and remains in "Reauth SA-TEK-Response Wait" (E) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H026 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 3-E of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reauth SA-TEK-Response Wait" (E) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving PKMv2 SA-TEK-Response message, the IUT starts Authorization grace timer, sets frame number included in a PKMv2 SA-TEK-Response message and goes into "Authenticated" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	New AK context should be used right after 3-way handshake has been completed. Old AK context may be used before the frame number included in PKMv2 SA-TEK-Response message. It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H027 {2} **W2
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 5-E of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reauth SA-TEK-Response Wait" (E) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "SATEK Timeout" event, the IUT sends PKMv2 SA-TEK-Request message, starts timer SATEK-Timer, and remains in "Reauth SA-TEK-Response Wait" (E) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H028 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 6-E of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reauth SA-TEK-Response Wait" (E) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "SATEK request max resend elapsed" event, the IUT stops TEK FSMs, stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H029 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 8-E of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reauth SA-TEK-Response Wait" (E) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "Start Reentry" event, the IUT removes the new AK context for the serving BS, retrieves AK contexts for TBS and goes into "Re-entry Auth wait" (F) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H030 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 14-E of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reauth SA-TEK-Response Wait" (E) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "Auth Expired" event, the IUT stops TEK FSMs, stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H031
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TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H032 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 15-E of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reauth SA-TEK-Response Wait" (E) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving an "External Stop" event, the IUT stops TEK FSMs, stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H033
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H034 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 13-F of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "Re-entry completed" event, the IUT sets chosen BS context as current and goes into "Authenticated" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H035 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 11-F of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "HO cancelled" event, the IUT continues using current BS context and goes into "Authenticated" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H036
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H037 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 13-F of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "Auth Expired" event, the IUT stops TEK FSMs, stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H038
	Deleted.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H039 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 15-F of clause 7.2.2.5.5.
PICS Item	
Initial Condition	IUT is in "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving an "External Stop" event, the IUT stops TEK FSMs, stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H040 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 1-F of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "Start Auth" event, the IUT stops TEK FSMs, stops all Timers, and goes into "Not Authenticated" (B) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H041 {3}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 10-F of clause 7.2.2.5.6.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "Handshake Started" event, the IUT sends a PKMv2 SA-TEK-Request message, starts SATEK Timer, and goes into "Reentry SA-TEK-Response Wait" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H042 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 11-F of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "HO Cancelled" event, the IUT removes the AK context for the target BS and goes into "Authenticated" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H043 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 12-F of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "TBS Changed" event, the IUT generates the AK context of new target BS and remains in "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H044 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 13-F of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "Reentry Completed" event, the IUT goes into "Authenticated" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H045 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 3-G of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry SA-TEK-Response Wait" (G) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "PKMv2 SA-TEK-Response" message, the IUT stops SATEK Timer, starts Authorization grace timer, and goes into "Authenticated" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H046 {3}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 5-G of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry SA-TEK-Response Wait" (G) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "SATEK Timeout" event, the IUT sends a PKMv2 SA-TEK-Request message, starts SATEK Timer, and remains in "Reentry SA-TEK-Response Wait" (G) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H047 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 6-G of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry SA-TEK-Response Wait" (G) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "SATEK request max resend elapsed" event, the IUT stops TEK FSMs, stops Auth FSM, disconnects from NW, and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H048 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 11-G of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry SA-TEK-Response Wait" (G) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "HO Cancelled" event, the IUT removes the AK context for the target BS and goes into "Authenticated" (D) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H049 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 12-G of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry SA-TEK-Response Wait" (G) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "TBS Changed" event, the IUT generates the AK context for the new target BS and goes into "Reentry Auth Wait" (F) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H050 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 14-G of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry SA-TEK-Response Wait" (G) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving a "Auth Expired" event, the IUT stops TEK FSMs, stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/AUTH/EAP/FSM/BV-H051 {4}
P802.16e Reference	Clause 7.2.2.5, Table PKMv2 "Authentication FSM state transition matrix" Figure PKMv2 "Authentication State Machine for single EAP" Case 16-G of clause 7.2.2.5.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Reentry SA-TEK-Response Wait" (G) state of the PKMv2 Authentication FSM.
Expected Behaviour	Check that: On receiving an "External Stop" event, the IUT stops TEK FSMs, stops Auth FSM, disconnects from NW and goes into "Stopped" (A) state of the PKMv2 Authentication FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

5.3.16.5 SS/SEC/PKMv2/TEK/FSM - TEK FSM

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H000 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 1-B of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Operational Wait" (B) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving a "Stop" event from the Authorization FSM, the IUT stops the Key Request retry timer and terminates the TEK FSM.
Test strategy	
Notes	It is preferable to limit the number of SAIDs in the SAID list to 1. It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H001 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 1-C of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Operational Reauthorize Wait" (C) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving a "Stop" event from the Authorization FSM, the IUT stops the Key Request retry timer and terminates the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H002 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 1-D of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Operational" (D) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving a "Stop" event from the Authorization FSM, the IUT stops the TEK refresh timer, and terminates the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H003 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 1-E of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Rekey Wait" state (E) of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving a "Stop" event from the Authorization FSM, the IUT stops the Key Request retry timer and terminates the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H004 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 1-F of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Rekey Reauthorize Wait" (F) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving a "Stop" event from the Authorization FSM, the IUT terminates the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H005 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 2-A of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "start" (A) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving an "Authorized" event from the Authorization FSM, the IUT transmits a PKM-REQ message containing a PKMv2 Key-Request message, starts Key Request retry timer and goes into Operational Wait (B) state of the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H006 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 3-B of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Operational Wait" (B) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving an "Authorization Pending" event from the Authorization FSM, the IUT stops the Key Request retry timer and goes into Operational Reauthorize Wait (C) state of the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H007 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 3-E of clause 7.2.2.6.5.
PICS Item	
Initial Condition	IUT is in "Rekey Wait" (E) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving an "Authorization Pending" event from the Authorization FSM, the IUT stops the Key Request retry timer and goes into Rekey Reauthorize Wait (F) state of the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H008 {3}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 4-C of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Operational Reauthorize Wait" (C)state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving an "Authorization Complete" event from the Authorization FSM, the IUT transmits a PKM-REQ message containing a PKMv2 Key-Request message; starts Key Request retry timer (set to Operational Wait Timeout) and goes into Operational Wait (B) state of the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H009 {3}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 4-F of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Rekey Reauthorize Wait" (F) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving an "Authorization Complete" event from the Authorization FSM, the IUT transmits a PKM-REQ message containing a PKMv2 Key-Request message; starts Key Request retry timer (set to Rekey Wait Timeout) and goes into Rekey Wait state of the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 TEK FSM. Especially, it is difficult to meet the initial condition.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H010 {3}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 5-D of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Operational" (D) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving a "TEK Invalid" event from the data packet decryption logic or by the receipt of a PKMv2 TEK-Invalid message from the Tester (as BS), the IUT sends a PKMv2 Key-Request message (without stop using current key) and goes into Operational Wait (B) state of the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H011
	Deleted.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H012
	Deleted.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H013
	Deleted.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H014
	Deleted.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H015
	Deleted.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H016 {2} **W2
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 6-B of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Operational Wait" (B) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On expiry of the Key Request retry timer, the IUT retransmits the PKM-REQ message containing a PKMv2 Key-Request message, restarts Key Request retry timer (set to Operational Wait Timeout) and remains in Operational Wait (B) state of the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H017 {2} **W2
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 6-E of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Rekey Wait" (E) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On expiry of the Key Request retry timer, the IUT retransmits the PKM-REQ message containing a PKMv2 Key-Request message, restarts Key Request retry timer (set to Rekey Wait Timeout) and remains in Rekey Wait (E) state of the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H018 {1} **
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 7-D of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Operational" (D) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On expiry of the TEK refresh timer, the IUT transmits a PKM-REQ message containing a PKMv2 Key-Request message, starts Key Request retry timer (set to Rekey Wait Timeout) and goes into Rekey Wait (E) state of the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H019
	Deleted.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H020 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 8-B of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Operational Wait" (B) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving a PKMv2 Key-Reply message from the Tester (as BS), the IUT stops the Key Request retry timer, incorporates SAID keying material into key table, starts the Key Refresh Timer and goes into Operational (D) state of the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H021 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 8-E of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Rekey Wait" (E) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving a PKMv2 Key-Reply message from the Tester (as BS), the IUT stops the Key Request retry timer, incorporates SAID keying material into key table, starts the Key Refresh Timer and goes into Operational (D) state of the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H022 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 9-B of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Operational Wait" (B) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving a PKMv2 Key-Reject message from the Tester (as BS), the IUT stops the Key Request retry timer and terminates the TEK FSM.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H023 {4}
P802.16e Reference	Clause 7.2.2.6, Table PKMv2 "TEK FSM state transition matrix" Figure PKMv2 "TEK state machine flow diagram" Case 9-E of clause 7.2.2.6.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is in "Rekey Wait" (E) state of the PKMv2 TEK FSM.
Expected Behaviour	Check that: On receiving a PKMv2 Key Reject message from the Tester (as BS), the IUT stops the Key Request retry timer, terminates the TEK FSM and removes SAID keying material from key table.
Test strategy	
Notes	It is not necessary to show the state transition and operation of timers and key contexts defined in PKMv2 Auth FSM.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H024
	Deleted.

TP ID	TP/SS/SEC/PKMv2/TEK/FSM/BV-H025
	Deleted.

5.3.17 Channel Descriptors and Maps (CDM)

5.3.17.1 Map and Frame Structure (MFS)

5.3.17.1.1 Initialization (INIT)

TP ID	TP/SS/CDM/MFS/INIT/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.9.1.
PICS Item	
Initial Condition	IUT is turned off. The IUT has not previously acquired a downlink channel.
Expected Behaviour	Check that: When switched on, the IUT scans the possible channels until it finds a valid downlink signal.
Test strategy	This TP is untestable without an Upper Tester. The TP is implicitly tested during the Initial Ranging and subsequent tests. If the IUT does not acquire a downlink channel, it cannot receive any PDUs from the TE.
Notes	

TP ID	TP/SS/CDM/MFS/INIT/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.9.1.
PICS Item	
Initial Condition	IUT is configured to start scanning a given channel. IUT is receiving a valid downlink signal on a channel other than the IUT's given configured channel.
Expected Behaviour	Check that: When turned on, the IUT acquires the valid downlink signal on the transmitted channel.
Test strategy	
Notes	Implicitly tested by observing subsequent IUT behaviour.

TP ID	TP/SS/CDM/MFS/INIT/BV-H002 {4}
P802.16 Reference	[3] and [12] Clauses 6.3.9.1 and 6.3.9.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is turned on and has begun scanning. The IUT has found a valid downlink channel.
Expected Behaviour	Check that: The IUT correctly decodes the DL-MAP.
Test strategy	This TP is untestable without an Upper Tester. It is implicitly tested during the Initial Ranging and subsequent tests. If the IUT does not decode a DL-MAP, it cannot receive any PDUs from the TE.
Notes	

TP ID	TP/SS/CDM/MFS/INIT/BV-H003a
P802.16 Reference	[3] and [12] Clauses 6.3.9 and 8.3.5.1 Table "OFDM Downlink Frame Prefix Format".
PICS Item	
Initial Condition	IUT is turned on, has begun scanning, and has found the IUT's configured BS ID on a channel.
Expected Behaviour	Check that: The IUT accepts each frame having the IUT's configured BS ID where the BS ID in the DLFP matches the BS_ID in the DL-MAP.
Test strategy	1) The TE is configured to use BS_ID #1 in the DLFP and BS_ID #2 in the DL-MAP. 2) Turn on the IUT. 3) The TE is turned on. 4) A preliminary pass verdict is assigned after T21 expiry if the IUT does not send a RNG-REQ in response to the DL-MAPs. 5) The TE is then configured to transmit DL-MAPS with BS_ID #1 as in the DLFP. 6) The final pass verdict is assigned if the IUT sends a RNG-REQ in response to the new DL-MAPs. 7) The TE is then configured to send DLFP and DL-MAP with BS_ID #2 while the IUT is still registered. 8) The final pass verdict is assigned if the IUT restarts scanning before lostUlMaptimeout or lostDlMapTimeout.
Notes	

TP ID	TP/SS/CDM/MFS/INIT/BV-H003b {4}
P802.16 Reference	[3] and [12] Clauses 6.3.9, 8.4.4.3, 8.4.4.4, and 8.4.4.5.
PICS Item	PIC_MOB1.
Initial Condition	IUT is turned on, has begun scanning, and has found the IUT's configured BS ID on a channel.
Expected Behaviour	Check that: The IUT accepts each frame with the DLFP in the FCH describing the DL sub channel allocation.
Test strategy	Check that IUT only uses the available uplink sub-channels for initial ranging.
Notes	

TP ID	TP/SS/CDM/MFS/INIT/BV-H004
P802.16 Reference	[3] and [12] Clauses 6.3.9 and 8.3.5.1 Table "OFDM Downlink Frame Prefix Format".
PICS Item	
Initial Condition	IUT has found the IUT's configured BS ID on a channel and is accepting each frame having the IUT's configured BS ID where the BS ID in the DLFP matches the BS_ID in the DL-MAP.
Expected Behaviour	Check that: On receiving frames where the BS ID in the DLFP does not match the BS ID in the DL-MAP for Lost DL-MAP Interval, the IUT scans for a new channel using its configured BS ID.
Test strategy	1) The TE is configured to use BS_ID #1 in the DLFP and BS_ID #1 in the DL-MAP. 2) Turn on the IUT. 3) The TE is turned on. 4) A preliminary pass verdict is assigned if the IUT sends a RNG-REQ in response to the DL-MAPs. 5) The TE is then configured to send DLFP and DL-MAP with BS_ID #2 while the IUT is still registered. 6) The final pass verdict is assigned if the IUT restarts scanning after Lost DL-MAP Interval.
Notes	

5.3.17.1.2 Operational (OPN)

TP ID	TP/SS/CDM/MFS/OPN/BV-H000 {4}
P802.16 Reference	[3] and [12] Clause 6.3.3.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is generating at least two MAC PDUs for management messages, user data, and bandwidth request.
Expected Behaviour	Check that: On receiving a UL-MAP allowing sufficient space to concatenate two or more MAC PDUs into the same uplink burst, the IUT concatenates the PDUs into the uplink burst.
Test strategy	
Notes	For OFDM: 1) Packing must be OFF for this test. 2) Depends on means to enforce the SS to generate MAC PDUs for management messages, user data, and bandwidth request.

TP ID	TP/SS/CDM/MFS/OPN/BV-H001
P802.16 Reference	[3] and [12] Clause 8.3.5.1 paragraph 5.
PICS Item	
Initial Condition	IUT is operating and receiving a DL service flow.
Expected Behaviour	Check that: On receiving multiple burst profiles in the same frame both at the negotiated MCS and more MCS per the DL-MAP, the IUT correctly decodes each of the MAC PDUs.
Test strategy	
Notes	Depends on the knowledge at which MCS (Modulation and Coding Scheme) the MS is capable to receive the data.

TP ID	TP/SS/CDM/MFS/OPN/BV-H001a
P802.16 Reference	[3] and [12] Clause 8.4.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and receiving a DL service flow.
Expected Behaviour	Check that: On receiving multiple burst profiles in the same frame both at the negotiated MCS and more MCS per the DL-MAP, the IUT correctly decodes each of the MAC PDUs.
Test strategy	
Notes	Depends on the knowledge at which MCS (Modulation and Coding Scheme) the MS is capable to receive the data.

TP ID	TP/SS/CDM/MFS/OPN/BV-H002 {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.3.7, 6.3.6.1 and 6.3.6.5.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational. No DS flow is established. No MAC management message protocol exchanges are in process.
Expected Behaviour	Check that: On receiving a UL-MAP for its Basic CID, the IUT transmits one of the following per the UL-MAP_IE in the UL-MAP: - either the value 0xFF in each unused byte of the UL bandwidth grant; or - formatting the unused space as a MAC PDU containing the Padding CID. The CI, EC, HT, and Type fields shall be set to zero. The length field shall be set to the number of unused bytes (including the size of the MAC header created for the padding MAC PDU) in the data burst The HCS shall be computed in the normal way; or - a Bandwidth Header Request with BR=0 on the IUT's Basic CID.
Test strategy	
Notes	

TP ID	TP/SS/CDM/MFS/OPN/TI-H000 {4}
P802.16 Reference	[3] and [12] Clause 6.3.9.2 Figure "Maintaining downlink synchronization".
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized.
Expected Behaviour	Check that: On not receiving DL-MAP during the Lost DL-MAP Interval, the IUT restarts synchronization by scanning for any DL channel.
Test strategy	Initiate the test with one active channel allowing the IUT to synchronize to that channel. Activate alternative channel, deactivate previous channel and check that the IUT performs initial ranging on the alternative channel.
Notes	Implicitly tested by subsequent behaviour.

TP ID	TP/SS/CDM/MFS/OPN/TI-H001 {4}
P802.16 Reference	[3] and [12] Clause 6.3.9.3 paragraph 2 Figure "Maintain uplink parameters".
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized and UL parameters are established.
Expected Behaviour	Check that: On not receiving UL-MAP for Lost UL-MAP Interval, the IUT scans for any DL channel.
Test strategy	Initiate the test with one active channel allowing the IUT to synchronize to that channel. Activate alternative channel, deactivate previous channel and check that the IUT performs initial ranging on the alternative channel.
Notes	Implicitly tested by subsequent behaviour.

5.3.17.1.3 Relevance (RLV)

TP ID	TP/SS/CDM/MFS/RLV/BV-H000 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.7.5.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has scanned and synchronized to the DL-MAPs.
Expected Behaviour	Check that: On receiving UL-MAPs with minimum MAP relevance (Allocation Start Time) granting bandwidth to the SS, the IUT correctly transmits MAC PDUs per the UL grant.
Test strategy	For OFDM: Unless otherwise noted, the grants for UL messages and the DCD and UCD messages necessary for operation are implicitly incorporated in the strategy. 1) The IUT has scanned and found a valid DL-MAP message with its configured BS ID. 2) The IUT then transmits a valid CDMA Initial ranging code in an Initial Ranging Region per the UL-MAP.
Notes	

TP ID	TP/SS/CDM/MFS/RLV/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.7.5.
PICS Item	
Initial Condition	The IUT has scanned and synchronized to the DL-MAPs.
Expected Behaviour	Check that: On receiving UL-MAPs with maximum relevance (Allocation Start Time) granting bandwidth to the SS, the IUT correctly transmits MAC PDUs per the UL grant.
Test strategy	Unless otherwise noted, the grants for UL messages and the DCD and UCD messages necessary for operation are implicitly incorporated in the strategy. 1) The IUT has scanned and found a valid DL-MAP message with its configured BS ID. 2) The IUT then transmits a valid RNG-REQ message in an Initial Ranging Interval with a CID=0. 3) The TE then transmits a RNG-RSP with the Basic and Primary CIDs. 4) The TE then transmits in a later frame an UL-MAP MAPs with maximum relevance for the Basic CID. 5) The pass verdict is assigned if the IUT transmits a valid Ranging Request per the UL-MAP for the Basic CID in the frame following the UL-MAP's frame.
Notes	

TP ID	TP/SS/CDM/MFS/RLV/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.7.5.
PICS Item	
Initial Condition	IUT is a Full FDD implementation. An UL service flow is established and IUT accepts data using minimum relevance.
Expected Behaviour	Check that: On receiving UL-MAPs that change the relevance from minimum to maximum, the IUT transmits the UL service flow data using maximum relevance.
Test strategy	
Notes	

TP ID	TP/SS/CDM/MFS/RLV/BV-H003
P802.16 Reference	[3] and [12] Clause 6.3.7.5.
PICS Item	
Initial Condition	IUT is a Half FDD implementation. An UL service flow is established and IUT accepts data using minimum relevance.
Expected Behaviour	Check that: On receiving UL-MAPs that change the relevance from minimum to maximum, the IUT transmits the UL service flow data using maximum relevance.
Test strategy	
Notes	

5.3.17.2 Channel Descriptors (CD)

TP ID	TP/SS/CDM/CD/BV-H000 {3}
P802.16 Reference	[3] and [12] Clauses 6.3.9.2, 6.3.2.3.1, and 11.4.2.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has just synchronized and received a valid DCD.
Expected Behaviour	Check that: The IUT responds to DL MAC PDUs received on the downlink PHY parameters and DL Burst Profiles contained in the DCD.
Test strategy	Check that: The IUT sends a valid ranging request as this indicates that the downlink PHY parameters have been correctly received.
Notes	

TP ID	TP/SS/CDM/CD/BV-H001
P802.16 Reference	[3] and [12] Clauses 6.3.9.3 and 6.3.2.3.3.
PICS Item	
Initial Condition	The IUT has just synchronized.
Expected Behaviour	Check that: When the IUT receives a valid UCD message, the IUT transmits MAC PDUs per the uplink PHY parameters and UL Burst Profiles in the UCD.
Test strategy	Check that: The IUT sends ranging requests within the allowed intervals provided in the UCD messages.
Notes	

TP ID	TP/SS/CDM/CD/BV-H001a {2} **W2
P802.16 Reference	[3] and [12] Clauses 6.3.9.3 and 6.3.2.3.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT has just synchronized.
Expected Behaviour	Check that: When the IUT receives a valid UCD message, the IUT transmits MAC PDUs per the uplink PHY parameters and UL Burst Profiles in the UCD.
Test strategy	TE provides UL allocations to the IUT with certain UIUC specified in the UCD message.
Notes	

TP ID	TP/SS/CDM/CD/BV-H002
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.1, 8.3.5.4, and 8.4.5.2.
PICS Item	
Initial Condition	The IUT is operating.
Expected Behaviour	Check that: On receiving a DCD changing the Frame Duration Code, the IUT resynchronizes to the BS.
Test strategy	
Notes	

TP ID	TP/SS/CDM/CD/BV-H003
P802.16 Reference	[3] and [12] Clause 6.3.7.6.1 paragraph 4.
PICS Item	
Initial Condition	The IUT is operating. IUT is not AAS-capable.
Expected Behaviour	Check that: The IUT ignores the AAS traffic indicated in DL-MAP and UL-MAP messages.
Test strategy	
Notes	

TP ID	TP/SS/CDM/CD/TI-H000 {3}
P802.16 Reference	[3] and [12] Clause 6.3.9.2, paragraph 1 Figure: "Maintaining downlink Synchronization".
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized and operating.
Expected Behaviour	Check that: On not receiving a valid DCD for greater than T1 duration, the IUT scans for the next valid DL channel.
Test strategy	The scanning is observable only if the scanning causes the MS to start the ranging process, i.e. a MS sends a RNG-REQ or Ranging CDMA code on the new channel.
Notes	

TP ID	TP/SS/CDM/CD/TI-H001 {4}
P802.16 Reference	[3] and [12] Clause 6.3.9.3, paragraph 5 Figure: "Maintain Uplink Parameters".
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized and operating.
Expected Behaviour	Check that: On not receiving a valid UCD for greater than T12 duration, the IUT does not use the uplink and scans for the next valid DL channel.
Test strategy	
Notes	

5.3.17.3 Channel Descriptor Change (CDC)

5.3.17.3.1 Uplink (UL)

TP ID	TP/SS/CDM/CDC/UL/BV-H000 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "UCD update".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmitting data using Configuration Change Count = i. The IUT receives a UCD changing the uplink channel descriptor with a Configuration Change Count = (i + 1 MOD 256).
Expected Behaviour	Check that: On receiving a UL-MAP with Configuration Change Count = i, the IUT continues to transmit data using the UCD settings corresponding to the Configuration Change Count = i.
Test strategy	
Notes	

TP ID	TP/SS/CDM/CDC/UL/BV-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "UCD update".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmitting data using Configuration Change Count = i. The IUT receives a UCD changing the uplink channel descriptor with a Configuration Change Count = (i + 1 MOD 256) followed by a UL-MAP with Configuration Change Count = i. The IUT then transmits data using the burst profiles corresponding to the Configuration Change Count = i. The IUT then receives another UCD with a Configuration Change Count = (i + 1 MOD 256).
Expected Behaviour	Check that: On receiving a UL-MAP with Configuration Change Count = i, the IUT continues to transmit data using the burst profile corresponding to the Configuration Change Count = i.
Test strategy	
Notes	

TP ID	TP/SS/CDM/CDC/UL/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "UCD update".
PICS Item	
Initial Condition	IUT is operating and transmitting data using Configuration Change Count = i. The IUT receives a UCD changing the uplink channel descriptor with a Configuration Change Count = (i + 1 MOD 256) followed by a UL-MAP with Configuration Change Count = i. The IUT then transmits data using the burst profiles defined in the UCD with Configuration Change Count = i. The IUT then receives another UCD with a Configuration Change Count = (i + 1 MOD 256).
Expected Behaviour	Check that: On receiving successive UL-MAPs each having Configuration Change Count = i, the IUT continues to transmit data using the burst profile corresponding to the Configuration Change Count = i.
Test strategy	
Notes	

TP ID	TP/SS/CDM/CDC/UL/BV-H003 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "UCD update".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and transmitting data using Configuration Change Count = i. The IUT receives a UCD changing the uplink channel descriptor with a Configuration Change Count = (i + 1 MOD 256) followed by a UL-MAP with Configuration Change Count = i. The IUT then transmits data using the burst profiles defined in the UCD with Configuration Change Count = i. The IUT then receives another UCD with a Configuration Change Count = (i + 1 MOD 256) followed by successive UL-MAPs each having Configuration Change Count = i. The IUT continues to transmit data using the burst profile corresponding to the Configuration Change Count = i.
Expected Behaviour	Check that: On receiving a UL-MAP with a Configuration Change Count = (i + 1 MOD 256), the IUT transmits the data using the new burst profile corresponding to the Configuration Change Count = (i + 1 MOD 256).
Test strategy	
Notes	

5.3.17.3.2 Downlink (DL)

TP ID	TP/SS/CDM/CDC/DL/BV-H000 {2} **W2
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "DCD update".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and receiving downlink data Configuration Change Count = i. The IUT receives a DCD message with Configuration Change Count = (i + 1 MOD 256).
Expected Behaviour	Check that: On receiving a DL-MAP with Configuration Change Count = i, the IUT continues to process the DL data using the DCD settings corresponding to Configuration Change Count = i.
Test strategy	
Notes	

TP ID	TP/SS/CDM/CDC/DL/BV-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "DCD update".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and receiving downlink data Configuration Change Count = i. The IUT receives a DCD message with Configuration Change Count = (i + 1 MOD 256) followed by DL-MAPs with Configuration Change Count = i. The IUT continues to process the DL data using DCD settings corresponding to Configuration Change Count = i. The IUT then receives another DCD message with Configuration Change Count = (i + 1 MOD 256).
Expected Behaviour	Check that: On receiving a DL-MAP with Configuration Change Count = i, the IUT continues to process the DL data using the burst profile defined in the DCD message corresponding to Configuration Change Count = i.
Test strategy	
Notes	

TP ID	TP/SS/CDM/CDC/DL/BV-H002 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.11 Table "DCD update".
PICS Item	PIC_MOB1.
Initial Condition	IUT is operating and receiving downlink data Configuration Change Count = i. The IUT receives a DCD message with Configuration Change Count = (i + 1 MOD 256) followed by DL-MAPs with Configuration Change Count = i. The IUT continues to process the DL data using burst profile corresponding to Configuration Change Count = i. The IUT then receives another DCD message with Configuration Change Count = (i + 1 MOD 256).
Expected Behaviour	Check that: On receiving a DL-MAP with Configuration Change Count = (i + 1 MOD 256), the IUT processes the DL data using the new burst profile corresponding to Configuration Change Count = (i + 1 MOD 256).
Test strategy	
Notes	

5.3.17.4 MAP IEs (MAP)

TP ID	TP/SS/CDM/MAP/BV-H000
	Deleted.

TP ID	TP/SS/CDM/MAP/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clause 8.4.5.3.2.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized.
Expected Behaviour	Check that: The IUT ignores an extended IE entry (DIUC=15) in a DL-MAP message with an extended DIUC value of which the IUT has no knowledge.
Test strategy	
Notes	

TP ID	TP/SS/CDM/MAP/BV-H002 {1} **W2
P802.16 Reference	[3] and [12] Clause 8.4.5.3.2.1.
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized.
Expected Behaviour	Check that: The IUT process information up to the expected length of a known extended IE entry (DUIC=15) in a DL-MAP message with an extended DIUC value. The IUT shall continue to decode next MAP_IE.
Test strategy	
Notes	

TP ID	TP/SS/CDM/MAP/BV-H003 {1} **W2
P802.16 Reference	[3] and [12] Clause 8.4.5.3.2.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized.
Expected Behaviour	Check that: The IUT ignores an extended-2 IE entry (DIUC=14) in a DL-MAP message with an extended-2 DIUC value of which the IUT has no knowledge.
Test strategy	
Notes	

TP ID	TP/SS/CDM/MAP/BV-H004 {1}**
P802.16 Reference	[3] and [12] Clause 8.4.5.3.2.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized.
Expected Behaviour	Check that: The IUT process information up to the known length of an extended-2 IE entry (DIUC=14) in a DL-MAP message with an extended-2 DIUC value. The IUT shall continue to decode next MAP_IE.
Test strategy	
Notes	

TP ID	TP/SS/CDM/MAP/BV-H005
	Deleted.

TP ID	TP/SS/CDM/MAP/BV-H006
P802.16 Reference	[3] and [12] Clause 8.4.5.3.19.
PICS Item	
Initial Condition	IUT is synchronized.
Expected Behaviour	Check that: for an mobility enabled IUT that receives a DL-MAP with a Skip_IE with mode 0 to allow the IUT to skip processing of subsequent IEs and it receives another Skip_IE with mode 0, it shall enable processing of subsequent IEs.
Test strategy	
Notes	

TP ID	TP/SS/CDM/MAP/BV-H007 {1}**
P802.16 Reference	[3] and [12] Clause 8.4.5.4.4.
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized and TE transmits UL Maps.
Expected Behaviour	Check that: When IUT receives a UL-MAP with extended-IE (UIUC=15) for which the IUT has no knowledge it ignores the entry.
Test strategy	
Notes	

TP ID	TP/SS/CDM/MAP/BV-H008 {1} **W2
P802.16 Reference	[3] and [12] Clause 8.4.5.4.4.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized and TE transmits UL Maps.
Expected Behaviour	Check that: When IUT receives a UL-MAP with extended IE (UIUC=15) with a length field longer than expected, the IUT shall process information up to the known length. The IUT shall continue to decode next MAP_IE.
Test strategy	
Notes	

TP ID	TP/SS/CDM/MAP/BV-H009 {1} **W2
P802.16 Reference	[3] and [12] Clause 8.4.5.4.4.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized and TE transmits UL Maps.
Expected Behaviour	Check that: When IUT receives a UL-MAP with extended-2 IE (UIUC=11) for which the IUT has no knowledge it ignores the entry.
Test strategy	
Notes	

TP ID	TP/SS/CDM/MAP/BV-H010 {1}**
P802.16 Reference	[3] and [12] Clause 8.4.5.4.4.2.
PICS Item	PIC_MOB1.
Initial Condition	IUT is synchronized and TE transmits UL Maps.
Expected Behaviour	Check that: When IUT receives a UL-MAP with extended-2 IE (UIUC=11) with a length field longer than expected, the IUT shall process information up to the known length. The IUT shall continue to decode next MAP_IE.
Test strategy	
Notes	

TP ID	TP/SS/CDM/MAP/BV-H011 {1} **W2
P802.16 Reference	[3] and [12] Clause 6.3.2.3.60.
PICS Item	PIC_MOB1.
Initial Condition	IUT is initialized. TE transmits SUB-DL-UL MAP messages preceded by compressed DL-MAP and compressed UL-MAP messages.
Expected Behaviour	Check that: The IUT correctly receives SUB-DL-UL MAP messages.
Test strategy	TE allocates DL or UL bursts to test MS correctly receives the SUB-DL-UL MAP messages and uses this allocations to receive or transmit data.
Notes	

5.3.18 Multicast and Broadcast Services (MBS)

TP ID	TP/SS/MBS/BV-H000 {3}
P802.16 Reference	[3] Clauses 6.3.23.2, 11.13.23 and 11.13.29 [12] Clauses 6.3.22.2, 11.13.22 and 11.13.27.
PICS Item	PIC_MOB2.
Initial Condition	The IUT has completed initialization and is now operational.
Expected Behaviour	Check that: To initiate a multi-BS-MBS service, the IUT sends a DSA-REQ message with at least the following TLVs: - MBS Service TLV parameter set to value 2 (Multi-BS-MBS); - QoS Parameter Set Type TLV.
Test strategy	
Notes	Requires a means to provoke the IUT to establish the service flow with a DSA-REQ.

TP ID	TP/SS/MBS/BV-H001 {1} **W2
P802.16 Reference	[3] Clauses 6.3.23.2, 11.13.23, and 11.13.29 [12] Clauses 6.3.22.2, 11.13.22 and 11.13.27.
PICS Item	PIC_MOB2.
Initial Condition	The IUT has completed initialization and is now operational.
Expected Behaviour	Check that: When the IUT receives a valid DSA-REQ with a MBS service TLV parameter set to value 2 (Multi-BS-MBS), Service Flow Identifier TLV, CID TLV (Multicast CID), Target SAID TLV (0xFFFF, (Null SAID)), MBS Zone Identifier Assignment TLV, QoS Parameter Set Type TLV to initiate a multi-BS-MBS service, the IUT transmits a DSA-RSP.
Test strategy	
Notes	

TP ID	TP/SS/MBS/BV-H002 {1} **W2
P802.16 Reference	[3] Clauses 6.3.23.2.1 and 11.13.29 [12] Clauses 6.3.22.2.1 and 11.13.27.
PICS Item	PIC_MOB2.
Initial Condition	The IUT has completed initialization. IUT has performed an MBS service flow creation procedure. The IUT receives a MOB_NBR-ADV with DCD_settings. Then the IUT completed a HO procedure to a target BS in the neighbour list of NBR-ADV. The target BS is in the same MBS Zone as the serving BS for the MBS service flow.
Expected Behaviour	Check that: The IUT uses the same Multicast CID and SAID which were used in the previous BS to receive a multicast or broadcast SDU.
Test strategy	
Notes	

TP ID	TP/SS/MBS/BV-H003 {1} **W2
P802.16 Reference	[3] Clauses 6.3.23.2.1 and 11.13.29 [12] Clauses 6.3.22.2.1 and 11.13.27.
PICS Item	PIC_MOB2.
Initial Condition	IUT has completed initialization and is operating. An MBS connection has been established. BS allocates MBS bursts and sends MBS bursts accordingly.
Expected Behaviour	Check that: IUT correctly decodes MBS_MAP_IE(), MBS_MAP message, MBS_DATA_IE, and MAC PDUs for MBS bursts.
Test strategy	
Notes	MBS_MAP_IE() can be omitted even if MBS_MAP message is present in the DL frame. Requires a means to observe reception of MAC PDUs.

5.3.19 Adaptive Antenna Support (AAS)

TP ID	TP/SS/AAS/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.7.6.4.
PICS Item	
Initial Condition	IUT is AAS-capable and beginning network entry.
Expected Behaviour	Check that: On being able to decode the DL-MAP and DCD messages, the IUT conducts network entry the same as the non-AAS case.
Test strategy	
Notes	

TP ID	TP/SS/AAS/BV-H001
P802.16 Reference	[3] and [12] Clause 6.3.7.6.4.
PICS Item	
Initial Condition	IUT is AAS-capable and beginning network entry.
Expected Behaviour	Check that: On not being able to decode the DL-MAP and DCD messages, the IUT conducts initial ranging on the AAS-alert-slots using all available contention slots.
Test strategy	
Notes	

TP ID	TP/SS/AAS/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.7.6.4.
PICS Item	
Initial Condition	IUT is AAS-capable and beginning network entry. Not being able to decode the DL-MAP and DCD messages, the IUT conducted initial ranging on the AAS-alert-slots using all available contention slots.
Expected Behaviour	Check that: On now being able to decode the DL-MAP and DCD messages, the IUT continues network entry the same as the non-AAS case.
Test strategy	
Notes	

TP ID	TP/SS/AAS/BV-H003
P802.16 Reference	[3] and [12] Clause 6.3.7.6.4 Clause 6.3.8.
PICS Item	
Initial Condition	IUT is AAS-capable and beginning network entry. Not being able to decode the DL-MAP and DCD messages, the IUT conducted initial ranging on the AAS-alert-slots using all available contention slots.
Expected Behaviour	Check that: On still not being able to decode the DL-MAP and DCD messages, the IUT uses the same exponential backoff algorithm for non-AAS stations to select the next frame for alerting its presence.
Test strategy	
Notes	

TP ID	TP/SS/AAS/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.7.6.6.
PICS Item	
Initial Condition	IUT is AAS-capable and requesting bandwidth for data transfer. The IUT is directed to use broadcast allocations for requesting bandwidth.
Expected Behaviour	Check that: When not receiving broadcast allocations for requesting bandwidth, the IUT transmits an AAS Broadcast Capability field in a RNG-REQ message indicating that it cannot receive broadcast messages.
Test strategy	
Notes	

TP ID	TP/SS/AAS/BV-H005
P802.16 Reference	[3] and [12] Clause 6.3.7.6.6.
PICS Item	
Initial Condition	IUT is AAS-capable and requesting bandwidth for data transfer. The IUT is directed to use broadcast allocations for requesting bandwidth.
Expected Behaviour	Check that: On receiving broadcast allocations for requesting bandwidth, the IUT transmits an AAS Broadcast Capability field in a RNG-REQ message indicating that it receives the broadcast messages.
Test strategy	
Notes	

TP ID	TP/SS/AAS/BV-H006
P802.16 Reference	[3] and [12] Clause 8.3.7.2.1 paragraph 1
PICS Item	
Initial Condition	IUT is AAS-capable and starting Initialization.
Expected Behaviour	Check that: On receiving a UL-MAP with an Initial Ranging IE (UIUC=1) marked with an AAS Initial Ranging CID, the IUT transmits an AAS_NW_ENTRY_REQ using the most robust mandatory coding method (BPSK-1/2).
Test strategy	
Notes	

5.2.20 Reset and Re-registration (RER)

TP ID	TP/SS/RER/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.2.3.22.
PICS Item	PIC_MS_RESET_BS_INI
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a valid RES-CMD on the Basic CID, the IUT resets itself, reinitializes, and repeats initial system access.
Test strategy	
Notes	"Valid" RES-CMD implies valid CMAC when CMAC is included in RES-CMD to comply with authorization policy and MAC mode negotiation.

TP ID	TP/SS/RER/BV-H001 {1}**
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26 Table "Action Codes and actions".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational on a channel and can access more than one data channel. The IUT has not sent any DREG-REQ message.
Expected Behaviour	Check that: On receiving a valid DREG-CMD with an Action Code set to 0x00, the IUT immediately terminates all services with the BS.
Test strategy	
Notes	"Valid" DREG-CMD implies valid CMAC when CMAC is included in DREG-CMD to comply with authorization policy and MAC mode negotiation.

TP ID	TP/SS/RER/BV-H002
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26 Table "Action Codes and actions".
PICS Item	
Initial Condition	The IUT is operational on a channel.
Expected Behaviour	Check that: On receiving a valid DREG-CMD containing an Action Code set to 0x01, the IUT listens on the current operational channel but does not transmit on any connection.
Test strategy	
Notes	

TP ID	TP/SS/RER/BV-H003
P802.16 Reference	[3] and [12] Clauses 6.3.2.3.22 and 6.3.2.3.26.
PICS Item	
Initial Condition	The IUT is listening on the current operational channel but does not transmit on any connection (as a result of receiving a DREG-CMD with its Action Code set to 0x01).
Expected Behaviour	Check that: On receiving a valid RES-CMD, the IUT resets itself, reinitializes, and repeats initial network entry.
Test strategy	
Notes	

TP ID	TP/SS/RER/BV-H004
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26 Table "Action Codes and actions".
PICS Item	
Initial Condition	The IUT is listening on the current operational channel but does not transmit on any connection (as a result of receiving a DREG-CMD with its Action Code set to 0x01).
Expected Behaviour	Check that: On receiving a valid DREG-CMD containing an Action Code set to 0x03), the IUT returns to normal operation and transmits on any of its active connections.
Test strategy	
Notes	

TP ID	TP/SS/RER/BV-H005
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26 Table "Action Codes and actions".
PICS Item	
Initial Condition	The IUT is operational on a channel.
Expected Behaviour	Check that: On receiving a valid DREG-CMD containing Action Code set to 0x02, the IUT listens on the current operational channel but only transmit on the Basic and Primary connections.
Test strategy	
Notes	

TP ID	TP/SS/RER/BV-H006
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26 Table "Action Codes and actions".
PICS Item	
Initial Condition	The IUT is listening on the current operational channel but is transmitting only on the Basic and Primary Management connections (as a result of receiving a DREG-CMD with its Action Code set to 0x02).
Expected Behaviour	Check that: On receiving a valid DREG-CMD containing an Action Code set to 0x03), the IUT returns to normal operation and transmits on any of its active connections.
Test strategy	
Notes	

TP ID	TP/SS/RER/BV-H007 {2} ** W2
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26 Table "Action Codes and actions".
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational on a channel and can access more than one data channel. IUT sends a valid DREG-REQ with deregistration code = 0x00 (MS De-Registration request for deregistration from BS and network).
Expected Behaviour	Check that: On receiving a valid DREG-CMD with an Action Code set to 0x04, the IUT immediately terminates all services.
Test strategy	
Notes	"Valid" DREG-REQ/CMD implies valid CMAC when CMAC is included in DREG-REQ/CMD to comply with authorization policy and MAC mode negotiation. The Action code = 0x04 (in response to De-Registration Request Code=0x00) does not mandate a specific operation after the termination of services with BS. If the SS sends the DREG-REQ with De-Registration_Request_Code=0x00 due to power down when it is not in idle mode, the SS will power down regardless of receiving DREG-CMD. The initial conditions may be difficult to trigger.

TP ID	TP/SS/RER/BV-H008
P802.16 Reference	[3] and [12] Clause 6.3.2.3.26 Table "Action Codes and actions".
PICS Item	
Initial Condition	The IUT is operational on a channel and can access more than one data channel, and have received a valid DREG-CMD with an Action Code set to 0x01, causing the IUT to stop transmission and only listen to the BS.
Expected Behaviour	Check that: On receiving a valid DREG-CMD with an Action Code set to 0x02, the IUT starts transmission on Basic, Primary Management and Secondary management Connections.
Test strategy	
Notes	

TP ID	TP/SS/RER/BI-H000
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS Item	PIC_MS_RESET_BS_INI
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a RES-CMD message with erroneously encoded parameters, the IUT silently discards the RES-CMD message.
Test strategy	
Notes	

TP ID	TP/SS/RER/BI-H001 {3}
P802.16 Reference	[3] and [12] Clause 6.3.2.3.
PICS Item	PIC_MOB1.
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a DREG-CMD message with erroneously encoded parameters (e.g. invalid CMAC), the IUT silently discards the DREG-CMD message.
Test strategy	
Notes	

5.3.21 Clock Comparison (CCC)

TP ID	TP/SS/CCC/BV-H000
P802.16 Reference	[3] and [12] Clause 6.3.2.3.25.
PICS Item	
Initial Condition	The IUT is operational and supports the CLK-CMP message.
Expected Behaviour	Check that: On receiving a valid CLK-CMP, the IUT reconstructs its network clock signals according to the contents of the CLK-CMP.
Test strategy	
Notes	

TP ID	TP/SS/CCC/BI-H000
P802.16 Reference	[3] and [12] Clause 6.3.2.3 paragraph 1, Clause 6.3.2.3.25.
PICS Item	
Initial Condition	The IUT is operational.
Expected Behaviour	Check that: On receiving a CLK-CMP message with erroneously encoded parameters, the IUT silently discards the CLK-CMP message.
Test strategy	
Notes	

Annex A (informative): Bibliography

IETF RFC 2131: "Dynamic Host Configuration Protocol".

IETF RFC 868: "Time Protocol".

IETF RFC 1123: "Requirements for Internet Hosts - Application and Support".

IETF RFC 2349: "TFTP Timeout Interval and Transfer Size Options".

History

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