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Re:	Call for Comments on Project 802.16/Conformance04
Abstract	This contribution describes the PICS Proforma specification for the OFDMA PHY which is currently missing from the PICS document (80216Conf04-04_04).
Purpose	Adoption into 80216Conf04-04_04 draft.
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PICS Proforma for OFDMA PHY Mode

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1 General

This contribution describes the PICS Proforma specification for the OFDMA PHY which is currently missing from the PICS document (80216Conf04-04_04).

2 References

[1] IEEE Std 802.16-2004, "Local and Metropolitan Area Networks – Part 16: Air Interface for Fixed Broadband Wireless Access Systems"

[2] 80216Conf04-04_04, "IEEE Standard for Conformance to IEEE 802.16 Part 4: Protocol Implementation Conformance Statement (PICS) Proforma for Frequencies below 11 GHz"

[3] DTS/BRAN-004T002-1V0.0.9 (2004-09): "Conformance testing for the Data Link Control Layer (DLC); Part 1: Protocol Implementation Conformance Statement (PICS) proforma"

Annex A

Protocol ICS for IEEE 802.16 WirelessMAN-OFDMA

[Add the following text]

A.5 Roles

Table A.1: Roles

Item	Role	Reference	Status	Support
1	**Subscriber Station (SS)**	[1]	o.1	
2	**Base Station (BS)**	[1]	o.1	

o.1: It is mandatory to support at least one of these items.

Comments:

A.6 PICS for SS - Subscriber station

This subclause contains the PICS proforma tables related to the Subscriber Station. They need to be completed for description of SS implementations only.
Prerequisite: A.1/1 -- Subscriber Station. This prerequisite applies throughout clause A.6.

A.6.1 Network topology

Table A.2: Network topology

Item	Role	Reference	Status	Support
1	**PMP topology (SS to BS traffic)**	[1]	m	

Comments:

A.6.2 SS capabilities of the PHYsical layer in PMP topology

Prerequisite: A.2/1 -- PMP topology. This prerequisite applies throughout clause A.6.2

Table A.3: Channelization for SS in PMP topology

Item	Name	Reference	Status	Support
1	1.25 MHz channel PHY	[1] 12.4	o.2	
2	3.5 MHz channel PHY	[1] 12.4	o.2	
3	7.0 MHz channel PHY	[1] 12.4	o.2	
4	8.75 MHz channel PHY	[1] 12.4	o.2	
5	14 MHz channel PHY	[1] 12.4	o.2	
6	17.5 MHz channel PHY	[1] 12.4	o.2	
7	28 MHz channel PHY	[1] 12.4	o.2	
8	10 MHz channel PHY	[1] 12.4	o.2	
9	20 MHz channel PHY	[1] 12.4	o.2	

o.2 It is mandatory to support at least one of these items.

Table A.4: Power classes for SS in PMP topology

Item	Name	Reference	Status	Support
1	$P_{TX,max}$ < 17 dBm	[1] 12.4.1	o.3	
2	17 dBm < $P_{TX,max}$ < 20 dBm	[1] 12.4.1	o.3	
3	20 dBm < $P_{TX,max}$ < 23 dBm	[1] 12.4.1	o.3	
4	23 dBm < $P_{TX,max}$ < 30 dBm	[1] 12.4.1	o.3	
5	$P_{TX,max}$ > 30 dBm	[1] 12.4.1	o.3	

o.3 It is mandatory to support at least one of these items.

Table A.5: Duplexing modes – PMP

Item	Name	Reference	Status	Support
1	TDD Time Division Duplexing	[1] 6.3.7.2	o.4	
2	Framed FDD Frequency Division Duplexing Full duplex	[1] 6.3.7.1	o.4	
3	Framed FDD Half Duplex	[1] 6.3.7.1	o.4	

o.4: It is mandatory to support at least one of these items.

Table A.6: Major PHY functions for SS in PMP

This table lists the optional functions that have a direct impact on the protocol or on the associated profiles.

Item	Name	Reference	Status	Support
1	AAS (Adaptive Antenna) Diversity MAP Scan	[1] 8.4.4.6	o	
2	AAS (Adaptive Antenna) Direct Signaling	[1] 8.4.4.7	o	
3	Optional FUSC	[1] 8.4.6.1.2.3	o	
4	Optional PUSC	[1] 8.4.6.2.5	o	
5	AMC	[1] 8.4.4.7.8	o	
6	H-ARQ	[1] 8.4.9.2.3.1	o	
7	Dynamic Frequency Support DFS	[1] 6.3.15	o	
8	Encoding	[1] 8.4.9.2	o	

A.6.3 SS capabilities of the MAC in PMP topology

Prerequisite: A.2/1 -- PMP topology. This prerequisite applies throughout clause A.6.3.

A.6.3.1 SS Convergence sublayer – SS in PMP

Table A.7: Convergence Sublayer protocol support

Item	Name	Reference	Status	Support
1	Packet convergence sublayer	[1] 5.2	m	
2	ATM convergence sublayer	[1] 5.2	o	

Table A.8: Packet Sublayer protocol support

Item	Name	Reference	Status	Support
1	Internet Protocol (IPv4)	[1] 5.2	m	
2	Internet Protocol (IPv6)	[1] 5.2	o	
3	Point-to-point protocol (PPP)	[1] 5.2	o	
4	IEEE 802.3 (Ethernet)	[1] 5.2	o	
5	IEEE 802.1 Q VLAN	[1] 5.2	o	

Table A.9: ATM Convergence Sublayer protocol support

Prerequisite:A.10/2 : SS supports ATM

Item	Name	Reference	Status	Support
1	ATM in VP switched mode	[1] 5.1	0.5	
2	ATM in VC switched mode	[1] 5.1	0.5	

o.5: It is mandatory to support at least one of these items.

Table A.10: CS functions in SS

Item	Name	Reference	Status	Support
1	Packet header suppression (PHS)	[1] 5.2.4	o	
2	Packet classification	[1] 5.2	o	

Table A.11: Major sending CS functions (SS in PMP)

Item	Name	Reference	Status	Support
1	Classification of PDUs into appropriate connection	[1] 5.2	m	
2	Suppression of payload header information (PHS function)	[1] 5.1.2.3 [1] 5.2.4	c11-01	
3	Delivery of resulting CS PDU to the MAC SAP associated with the service flow	[1] 5.2	m	

c11-01: IF A.10/1 - - if SS supports PHS protocol
THEN m - then mandatory
ELSE n/a

Table A.12: Major receiving CS functions (SS in PMP)

Item	Name	Reference	Status	Support
1	Receipt of the CS PDU	[1] 5.2	m	
2	Rebuilding of suppressed payload header information (PHS function)	[1] 5.1.2.3 [1] 5.2.4	c12-01	

c12-01: IF A.10/1 - - if SS supports PHS protocol
THEN m - then mandatory
ELSE n/a

Table A.13: Major Packet Payload Header Suppression capabilities

Item	Name	Reference	Status	Support
1	PHSV: Test validity of Header (before suppression)	[1] 5.2.4	c13-01	
2	PHSM: mask to allow selective suppression of header	[1] 5.2.4	c13-01	

c13-01: IF A.10/1 - - if SS supports PHS protocol
THEN m - then mandatory
ELSE n/a

Table A.14: Major packet classification

Item	Name	Reference	Status	Support
1	IP Classification of PDUs into appropriate connection	[1] 11.13.21.3.4	c14-01	
2	Ethernet classification of PDUs into appropriate connection	[1] 11.13.21.3.4	c14-02	
3	IEEE 802.1Q VLAN classification of PDUs into appropriate connection	[1] 11.13.21.3.4	c14-03	

c14-01: IF A.8/1 or A.8/2 - - if SS supports IP protocol
THEN m - then mandatory
ELSE n/a

c14-02: IF A.8/4 - - if SS supports Ethernet protocol
THEN m - then mandatory
ELSE n/a

c14-03: IF A.8/5 - - if SS supports 802.1Q protocol
THEN m - then mandatory
ELSE n/a

Table A.15: IP packet classification in the UL

Prerequisite: **A.8**/1 or **A.8**/2 -- IP support

Item	Name	Reference	Status	Support
1	Classification based on DSCP /IP TOS field	[1] 11.13.21.3.4.2	m	
2	Classification based on IP Protocol/Next Header field	[1] 11.13.21.3.4.3	m	
3	Classification based on IP masked Source Address	[1] 11.13.21.3.4.4	m	
4	Classification based on IP Destination Address	[1] 11.13.21.3.4.5	m	
5	Classification based on protocol source port range	[1] 11.13.21.3.4.6	m	
6	Classification based on protocol destination port range	[1] 11.13.21.3.4.7	m	

Table A.16: Ethernet packet classification in the UL

Prerequisite: **A.8**/4 -- Ethernet support

Item	Name	Reference	Status	Support
1	Classification based on Destination MAC Address	[1] 11.13.21.3.4.8	m	
2	Classification based on Source MAC Address	[1] 11.13.21.3.4.9	m	
3	Classification based on Ethertype/SAP	[1] 11.13.21.3.4.10	m	

Table A.17: 802.1Q packet classification in the UL

Prerequisite : **A.8**/5 -- 802.1Q support

Item	Name	Reference	Status	Support
1	Classification based on 802.1D user priority	[1] 11.13.21.3.4.11	m	
2	Classification based on 802.1Q VLAN ID	[1] 11.13.21.3.4.12	m	

A.6.3.2 SS MAC common part sublayer – PMP

Table A.18: Major MAC Common part functionalities for SS in PMP

Item	Name	Reference	Status	Support
1	Addressing and connections	[1] 6.3.1	m	
2	Construction of PDUs	[1] 6.3.3	m	
3	ARQ	[1] 6.3.4	o	
4	Uplink scheduling service	[1] 6.3.5	m	
5	Bandwidth allocation and request	[1] 6.3.6	m	
6	Duplexing modes	[1] 6.3.7	m	
7	Contention resolution	[1] 6.3.8	m	
8	Network entry and initialization	[1] 6.3.9	m	
9	Ranging	[1] 6.3.10	m	
10	OFDMA-based Ranging	[1] 6.3.10.3	m	
11	Ranging	[1] 6.3.10	m	
12	Update of UL and DL channel descriptors	[1] 6.3.11	m	
13	Quality of service	[1] 6.3.13	m	

Table A.19: Miscellaneous management functions for SS in PMP

Item	Name	Reference	Status	Support
1	Assignment of SSs to multicast groups (MCA_REQ messages from BS)	[1] 6.3.12	m	
2	Downlink Burst profile management initiated by SS (DBPC messages)	[1] 6.3.2.3.20 [1] 6.3.2.3.21	m	
3	SS reset initiated by BS (RES-CMD)	[1] 6.3.2.3.22	m	
4	SS network clock comparison initiated by BS (CLK-CMP)	[1] 6.3.2.3.25	m	
5	SS notifies BS of de-registration (DREG-REQ)	[1] 6.3.2.3.43	m	
6	SS forced by BS to change its channel access (DREG-CMD)	[1] 6.3.2.3.26	m	
7	SS receives quick answer from BS to its DSx-REQ (DSX-RVD)	[1] 6.3.2.3.27	m	
8	SS informs BS of reception of Config file (TFTP messages)	[1] 6.3.2.3.28 [1] 6.3.2.3.29	m	
9	SS answers to BS channel management report request (REP-REQ and REP-RSP)	[1] 6.3.2.3.33	c19-01	
10	SS applies the power change requested by the BS (FPC)	[1] 6.3.2.3.34	m	
11	SS answers the AAS feedback message request from the BS (AAS-FBCK messages)	[1] 6.3.2.3.40	c19-02	
12	SS inform the BS of preferred beam direction (AAS-BEAM select message)	[1] 6.3.2.3.41	c19-02	
13	SS answers the AAS beam message request from the BS (AAS-Beam messages)	[1] 6.3.2.3.42	c19-02	

c19-01 is mandatory if band below 11Ghz
which seems always true
ELSE n/a else not applicable

c19-02 IF A.6/1 - if SS supports AAS mode (adaptive antenna)
THEN m
ELSE n/a else not applicable

A.6.3.2.1 Addressing and connections

Table A.20: Addressing and Connections — PMP

Item	Capability	Reference	Status	Support
1	Globally Unique SS MAC Address	[1] 6.3.1	m	
2	Time urgent MAC Management messages on basic connection	[1] 6.3.1	m	
3	Delay tolerant MAC Management messages on primary management connection	[1] 6.3.1	m	
4	IP packets on the secondary management connection	[1] 6.3.1	m	

A.6.3.2.2 Construction and Transmission of MAC PDUs

A.6.3.2.2.1 Conventions

Table A.21: Transmission conventions

Item	Capability	Reference	Status	Support
1	Transmit messages most significant byte first	[1] 6.3.3.1	m	
2	Transmit bytes most significant bit first	[1] 6.3.3.1	m	

A.6.3.2.2.2 PDU Concatenation

Table A.22 : PDU concatenation

Item	Capability	Reference	Status	Support
1	Concatenate Multiple MAC PDUs into a single burst of the allocated length.	[1] 6.3.3.2	m	
2	Receive concatenated MAC PDUs and determine disposition via CID.	[1] 6.3.3.2	m	

A.6.3.2.2.3 SDU Fragmentation

Table A.23 : SDU Fragmentation

Item	Capability	Reference	Status	Support
1	Fragment a MAC SDU into multiple MAC PDUs applicable to Management messages on Primary management connection	[1] 6.3.3.3	m	
2	Correctly set the Fragmentation Control (FC) bits	[1] 6.3.3.3	m	
3	Perform fragmentation of Management messages on Primary management connection	[1] 6.3.2.3	m	
4	Do not perform fragmentation of PDUs on Basic, Broadcast and Initial Ranging connections	[1] 6.3.2.3	m	

A.6.3.2.2.4 SDU reassembly

Table A.24: SDU reassembly

Item	Capability	Reference	Status	Support
1	Receive and reassemble fragmented SDUs.	[1] 6.3.3.3	m	
2	Discard SDUs corrupted due to loss of fragment	[1] 6.3.3.3	m	

A.6.3.2.2.5 Packing

Table A.25: Packing

Item	Capability	Reference	Status	Support
1	Pack Fixed length non-ARQ SDUs in a MAC PDU	[1] 6.3.3.4.1.1	m	
2	Pack variable length non-ARQ SDUs in a MAC PDU	[1] 6.3.3.4.1.2	m	
3	Pack variable length ARQ-enabled SDUs or SDUs fragments in a MAC PDU	[1] 6.3.3.4.2	c2501	
4	Do not pack fixed length ARQ-enabled SDUs	[1] 6.3.3.4.2	c2501	
5	Do not perform packing of SDUs on Basic, Broadcast and Initial Ranging connections	[1] 6.3.2.3	m	
6	Do not perform packing of ARQ Feedback Payload	[1] 6.3.3.4.3	c2501	
7	Compute and add CRC	[1] 6.3.3.5	m	

c2501: IF A18/3 - - if SS supports ARQ procedure
THEN m - then mandatory
ELSE n/a

A.6.3.2.2.6 Unpacking

Table A.26: Unpacking

Item	Capability	Reference	Status	Support
1	Receive (unpack) fixed length SDUs	[1] 6.3.3.4.1.1	m	
2	Receive (unpack) variable length SDUs	[1] 6.3.3.4.1	m	
3	Check CRC	[1] 6.3.3.5	m	

A.6.3.2.3 ARQ

Table A.27 : ARQ

Item	Capability	Reference	Status	Support
1	SS supports ARQ applicable to a single unidirectional connection	[1] 6.3.4	c2701	
2	Pack several ARQ feedback information elements in a single ARQ feedback payload	[1] 6.3.4	c2701	
3	Insert a single ARQ feedback payload as first packet in a MAC PDU	[1] 6.3.4	c2701	

c2701: IF A.18/3 - - if SS supports ARQ procedure
THEN m - then mandatory
ELSE n/a

A.6.3.2.4 Uplink scheduling services

Table A.28: Uplink scheduling services

Item	Name	Reference	Status	Support
1	Unsolicited grant service (UGS)	[1] 6.3.5.2.1	m	
2	Real time polling service (rtPS)	[1] 6.3.5.2.2	m	
3	Non-Real time polling service (nrtPS)	[1] 6.3.5.2.3	m	
4	Best effort service (BE)	[1] 6.3.5.2.4	m	

A.6.3.2.5 Bandwidth allocation and request

Table A.29: Bandwidth allocation and request

Item	Name	Reference	Status	Support
1	SS requests aggregate bandwidth via Bandwidth Request Header	[1] 6.3.6.1	m	
2	SS requests incremental bandwidth via Bandwidth Request Header	[1] 6.3.6.1	m	
3	SS requests incremental bandwidth via piggyback request	[1] 6.3.6.1	m	
4	SS transmits Bandwidth request during Request IE grant	[1] 6.3.6.1	m	
5	SS transmits Bandwidth request during Data Grant IE grant	[1] 6.3.6.1	m	
6	SS responds to Unicast, Multicast or Broadcast polls	[1] 6.3.6.3.2 [1] 6.3.6.3.1	m	
7	SS uses Poll-me (PM) bit	[1] 6.3.6.3.3	m	
8	SS requests Bandwidth using CDMA Bandwidth Request code	[1] 6.3.6.5	m	

A.6.3.2.6 Duplexing modes or Support of PHY layers

Refer to table A.5, part of physical characteristics, for a description of the duplexing modes.

A.6.3.2.7 Contention resolution

Table A.30: Contention resolution

Item	Name	Reference	Status	Support
1	The SS supports truncated exponential backoff for initial ranging	[1] 6.3.8	m	
2	The SS supports truncated exponential backoff for bandwidth request contention	[1] 6.3.8	m	

A.6.3.2.8 Network entry and initialization

Table A.31: Network entry and initialization for SS in PMP

Item	Name	Reference	Status	Support
1	Obtain Downlink Parameters from DCD	[1] 6.3.9.2	m	
2	Obtain Uplink Parameters from UCD	[1] 6.3.9.3, 6.3.9.4	m	
3	Perform Initial Ranging	[1] 6.3.9.5, 6.3.9.6	m	
4	Inform BS of Basic Capabilities	[1] 6.3.9.7	m	
5	Perform SS Authorization	[1] 6.3.9.8, 7.2	m	
6	Perform registration	[1] 6.3.9.9	m	
7	Request for IP connectivity	[1] 6.3.9.10	m	
8	Establish Time of day	[1] 6.3.9.11	m	
9	Transfer operational parameters	[1] 6.3.9.12	m	

A.6.3.2.8.1 Obtain Downlink Parameters

Table 32: Obtain DL Parameters

Item	Capability	Reference	Status	Support
1	SS receives DL-MAP correctly	[1] 6.3.9.2	m	
2	SS receives DCD correctly	[1] 6.3.9.2	m	

A.6.3.2.8.2 Obtain Uplink Parameters

Table 33: Obtain UL Parameters

Item	Capability	Reference	Status	Support
1	SS receives UCD correctly	[1] 6.3.9.3, 6.3.9.4	m	

A.6.3.2.8.3 Initial Ranging

Table 34: Initial ranging

Item	Capability	Reference	Status	Support
1	SS receives UL-MAP	[1] 6.3.9.5	m	
2	SS calculates the maximum transmit signal strength	[1] 8.4.10.3	m	
3	SS sends Initial Ranging Code	[1] 8.4.7.1; 6.3.10.3	m	
4	SS sends again Initial Ranging Code if no response, with increased power	[1] 8.4.7.1; 6.3.10.3	m	
5	SS receives RNG-RSP, declared successful when it includes its MAC address	[1] 6.3.9.5	m	
6	SS establishes Basic and Primary Management connections	[1] 6.3.9.5	m	
7	SS performs timing and power adjustment	[1] 6.3.9.5	m	
8	SS performs final tuning using RNG-REQ and RNG-RSP mechanism	[1] 6.3.9.5	m	

A.6.3.2.8.4 Negotiate Basic Capabilities

Table 35: Negotiate basic capabilities

Item	Capability	Reference	Status	Support
1	SS sends SBC-REQ	[1] 6.3.9.7	M	
2	SS receives SBC-RSP	[1] 6.3.9.7	M	
3	SS resends SBC-REQ on timeout	[1] 6.3.9.7	M	

A.6.3.2.8.5 SS Authorization

See A.6.3.3 for SS Privacy Functions when authorizing against BS (PMP Topology).

A.6.3.2.8.6 Registration

Table 36: Registration

Item	Capability	Reference	Status	Support
1	SS sends REG-REQ to register with a BS	[1] 6.3.9.9	M	
2	SS receives REG-RSP which includes the Secondary management CID	[1] 6.3.9.9	M	
3	SS re-sends REG-REQ upon time out, until REG-RSP is received	[1] 6.3.9.9	M	
4	SS establishes Secondary Management Connection	[1] 6.3.9.9	M	

A.6.3.2.8.7 Establish IP connectivity

Table 37: Establish IP connectivity

Item	Capability	Reference	Status	Support
1	Are the DHCP mechanisms following the IETF RFC 2131 rules?	[1] 6.3.9.10	m	
2	SS sends DHCP discover on Secondary Management Connection	[1] 6.3.9.10	m	
3	SS receives DHCP offer on Secondary Management Connection	[1] 6.3.9.10	m	
4	SS sends DHCP request on Secondary Management Connection	[1] 6.3.9.10	m	
5	SS receives DHCP response on Secondary Management Connection	[1] 6.3.9.10	m	
6	SS sets up IP parameters from DHCP response	[1] 6.3.9.10	m	

A.6.3.2.8.8 Establish Time of day

Table 38: Establish time of day

Item	Capability	Reference	Status	Support
1	Are the protocols for time of day following the IETF RFC 868 rules?	[1] 6.3.9.11	m	
2	SS sends Time of Day request	[1] 6.3.9.11	m	
3	SS receives Time of Day response	[1] 6.3.9.11	m	
4	SS establishes Time of Day	[1] 6.3.9.11	m	

A.6.3.2.8.9 Transfer operational parameters

Table 39: Transfer operational parameters

Item	Capability	Reference	Status	Support
1	SS sends TFTP-CPLT on Secondary management connection, after successful configuration using DHCP protocol	[1] 6.3.9.12	m	
2	SS sends TFTP-CPLT on Primary management connection, for notification	[1] 6.3.9.12	m	
3	SS receives TFTP-RSP as response to TFTP-CPLT	[1] 6.3.9.12	m	
4	SS keeps sending TFTP-CPLT on timeout while waiting for TFTP-RSP	[1] 6.3.9.12	m	

A.6.3.2.9 Periodic Ranging

Table 40: Periodic ranging

Item	Capability	Reference	Status	Support
1	SS manages the downlink burst profile and initiates the change to more appropriate DL bursts	[1] 6.3.10.1	m	
2	SS performs uplink periodic ranging and adjusts transmission parameters	[1] 6.3.10.3	m	
3	SS controls periodicity for ranging, using timers	[1] 6.3.10.3	m	

A.6.3.2.10 Update of channel descriptors

Table 41: Update of channel descriptors by SS

Item	Capability	Reference	Status	Support
1	SS stores new uplink burst descriptors upon receiving UCD message with incremented Configuration change count (I+1 mod 256)	[1] 6.3.11	m	
2	SS transmits using new generation of burst descriptors defined in UCD after receiving UL-MAP with UCD Count matching the new Configuration Change Count (I+1 mod 256)	[1] 6.3.11	m	
3	SS stores new downlink burst descriptors upon receiving DCD message with incremented Configuration Change Count (I+1 mod 256)	[1] 6.3.11	m	
4	SS receives using new generation of burst descriptors after receiving DL-MAP with DCD Count matching the new Configuration Change Count (I+1 mod 256)	[1] 6.3.11	m	

A.6.3.2.11 Assigning SSs to multicast groups

Table 42: Assignment of SSs to multicast groups

Item	Capability	Reference	Status	Support
1	SS receives a request for joining or leaving a multicast polling group, using MCA-REQ	[1] 6.3.12	m	
2	SS supports participation in multicast polling group and adds multicast CID to transmission opportunities to join the group	[1] 6.3.12	m	
3	SS supports participation in multicast polling group and delete multicast CID to transmission opportunities to leave the group	[1] 6.3.12	m	
4	SS transmits MCA-RSP to acknowledge the action and indicate status (ok, reject,…)	[1] 6.3.12	m	

A.6.3.2.12 Quality of service – service flows

Table 43: Service flow operations

Item	Capability	Reference	Status	Support
1	SS receives DSA-REQ on preprovisioned service flows, to get encodings	[1] 6.3.13.7.1	m	
2	SS initiates (DSA-REQ) the creation of a Dynamic service flow	[1] 6.3.13.7.2	m	
3	SS answers (DSA-RSP) to the creation of a Dynamic service flow initiated by BS	[1] 6.3.13.7.2	m	
4	SS initiates (DSC-REQ) the modification of a Dynamic service flow	[1] 6.3.13.9.4	m	
5	SS answers (DSC-RSP) to the modification of a Dynamic service flow initiated by BS	[1] 6.3.13.9.4	m	
6	SS initiates (DSD-REQ) the release of a Dynamic service flow	[1] 6.3.13.9.5	m	
7	SS answers (DSD-RSP) to the release of a Dynamic service flow initiated by BS	[1] 6.3.13.9.5	m	

A.6.3.3 SS Privacy Functions – PMP

Table A.44: Major Privacy functions for SS in PMP

Item	Name	Reference	Status	Support
1	Does the SS perform Authorization and key exchange as per clause 7.2 [1]	[1] 6.3.9.8	m	
2	Does the SS provide a manufacturers' X.509 certificate to the BS during Authorization Information message?	[1] 6.3.9.8, 7.2.1	o.6	
3	Does the SS provide a third party X.509 certificate to the BS during Authorization Information message?	[1] 6.3.9.8, 7.2.1	o.6	
4	Does SS send Auth Request (PKM-REQ with *Code=4)*	[1] 6.3.9.8, 7.2.1	m	
5	Does the SS provide a manufacturers' X.509 certificate to the BS during Authorization Request?	[1] 6.3.9.8, 7.2.1	m	
6	Does the SS include details of the supported cryptographic suite identifiers as part of the Authorization Request?	[1] 6.3.9.8, 7.2.1	m	
7	Does the SS provide its' Basic CID as part of the Authorization Request?	[1] 6.3.9.8, 7.2.1	m	
8	Does SS support receipt of Auth Reply (PKM-RSP with *Code=5)*?	[1] 6.3.9.8, 7.2;	m	
9	Does the SS store the AK and derive KEK, HMAC_KEY_U and HMAC_KEY_D?	[1] 6.3.9.8, 7.2.1	m	
10	Does SS support establishment of Sas listed in Auth Reply?	[1] 6.3.9.8, 7.2;	m	
11	Does SS support resend of Auth Request on timeout (Auth Wait Timeout)?	[1] 6.3.9.8, 7.2.1, 7.2.4.4, 11.9.19.1	m	
12	Does the SS support two simultaneously active Aks?	[1] 6.3.9.8, 7.2.1	m	

o.6: It is mandatory to support at least one of these items.

Table A.45: PKM message encodings support

Item	Capability	Reference	Status	Support	Values Allowed	Values Supported
1	Display-string	[1] 11.9.1	o			
2	AUTH-Key	[1] 11.9.2	m			
3	TEK	[1] 11.9.3	m			
4	Key-Lifetime	[1] 11.9.4	m			
5	Key-Sequence-Number	[1] 11.9.5	m		AK:0-15 TEK:0-3	
6	HMAC-Digest	[1] 11.9.6	m			
7	SAID	[1] 11.9.7	m			
8	TEK-Parameters	[1] 11.9.8	m			
9	CBC-IV	[1] 11.9.9	m			
10	Error-Code	[1] 11.9.10	m		0-6	
11	CA-Certificate	[1] 11.9.11	m			
12	SS-Certificate	[1] 11.9.12	m			
13	Security-Capabilities	[1] 11.9.13	m			
14	Cryptographic-Suite	[1] 11.9.14	m		See next table	
15	Cryptographic-Suite-List	[1] 11.9.15	m			
16	Version	[1] 11.9.16	m		1	
17	SA-Descriptor	[1] 11.9.17	m			
18	SA-Type	[1] 11.9.18	m		0,1,2	
19	PKM Configuration Setting	[1] 11.9.19	m			

Table A.46: Cryptographic suites

Item	Capability	Reference	Status	Support	Value Allowed	Value Supported
1	No data encrypt, no data authent &3-DES 128	[1] 11.9.14	m		0x000001	
2	CBC-mode 56bit DES, no data authent &3-DES 128	[1] 11.9.14	m		0x010001	
3	No data encrypt, no data authent & RSA, 1024	[1] 11.9.14	m		0x000002	
4	CBC-mode 56bit DES, no data authent & RSA, 1024	[1] 11.9.14	m		0x010002	

A.7 PICS for BS – Base station

This clause contains the PICS proforma tables related to the Base Station. They need to be completed for description of BS implementations only.
Prerequisite: A.1/2 -- Base Station (BS). This prerequisite applies throughout clause A.7

A.7.1 Network topology

Supported topology is PMP.

A.7.2 BS capabilities of the PHYsical layer (PMP topology)

Table A.47: Channelization for BS

Item	Name	Reference	Status	Support
1	1.25 MHz channel PHY	[1] 12.4	o.7	
2	3.5 MHz channel PHY	[1] 12.4	o.7	
3	7.0 MHz channel PHY	[1] 12.4	o.7	
4	8.75 MHz channel PHY	[1] 12.4	o.7	
5	14 MHz channel PHY	[1] 12.4	o.7	
6	17.5 MHz channel PHY	[1] 12.4	o.7	
7	28 MHz channel PHY	[1] 12.4	o.7	
8	10 MHz channel PHY	[1] 12.4	o.7	
9	20 MHz channel PHY	[1] 12.4	o.7	

o.7 It is mandatory to support at least one of these items.

Table A.48: Power classes for BS

Item	Name	Reference	Status	Support
1	$P_{TX,max}$ < 17 dBm	[1] 12.4.1	o.8	
2	17 dBm < $P_{TX,max}$ < 20 dBm	[1] 12.4.1	o.8	
3	20 dBm < $P_{TX,max}$ < 23 dBm	[1] 12.4.1	o.8	
4	23 dBm < $P_{TX,max}$ < 30 dBm	[1] 12.4.1	o.8	
5	$P_{TX,max}$ > 30 dBm	[1] 12.4.1	o.8	

o.8 It is mandatory to support at least one of these items.

Table A.49: Duplexing modes

Item	Name	Reference	Status	Support
1	TDD Time Division Duplexing	[1] 6.3.7.2	o.9	
2	Framed FDD Frequency Division Duplexing Full duplex	[1] 6.3.7.1	o.9	
3	Framed FDD Half Duplex	[1] 6.3.7.1	X ??	

o.9: It is mandatory to support at least one of these items.

Table A.50: Major PHY functions for BS

Item	Name	Reference	Status	Support
1	AAS (Adaptive Antenna) Diversity MAP Scan	[1] 8.4.4.6	o	
2	AAS (Adaptive Antenna) Direct Signaling	[1] 8.4.4.7	o	
3	Optional FUSC	[1] 8.4.6.1.2.3	o	
4	Optional PUSC	[1] 8.4.6.2.5	o	
5	AMC	[1] 8.4.4.7.8	o	
6	H-ARQ	[1] 8.4.9.2.3.1	o	
7	Dynamic Frequency Support DFS	[1] 6.3.15	o	
8	Encoding	[1] 8.4.9.2	o	

A.7.3 BS capabilities of the MAC (PMP topology)

A.7.3.1 BS Convergence sublayer – PMP

Table A.51: Convergence Sublayer protocol support

Item	Name	Reference	Status	Support
1	Packet convergence sublayer	[1] 5.2	m	
2	ATM convergence sublayer	[1] 5.2	o	

Table A.52: Packet Sublayer protocol support

Item	Name	Reference	Status	Support
1	Internet Protocol (IPv4)	[1] 5.2	m	
2	Internet Protocol (IPv6)	[1] 5.2	o	
3	Point-to-point protocol (PPP)	[1] 5.2	o	
4	IEEE 802.3 (Ethernet)	[1] 5.2	o	
5	IEEE 802.1 Q VLAN	[1] 5.2	o	

Table A.53: ATM Convergence Sublayer protocol support

Prerequisite:A.51/2 : BS supports ATM

Item	Name	Reference	Status	Support
1	ATM in VP switched mode	[1] 5.1	0.10	
2	ATM in VC switched mode	[1] 5.1	0.10	

o.10: It is mandatory to support at least one of these items.

Table A.54: CS functions in BS

Item	Name	Reference	Status	Support
1	Packet header suppression (PHS)	[1] 5.2.4	o	
2	Packet classification	[1] 5.2	o	

Table A.55: Major sending CS functions of BS

Item	Name	Reference	Status	Support
1	Classification of PDUs into appropriate connection	[1] 5.2	m	
2	Suppression of payload header information (PHS function)	[1] 5.1.2.3 [1] 5.2.4	c55-01	
3	Delivery of resulting CS PDU to the MAC SAP associated with the service flow	[1] 5.2	m	

c55-01: IF A.54/2 - - if BS supports PHS protocol
THEN m - then mandatory
ELSE n/a

Table A.56: Major receiving CS functions of BS

Item	Name	Reference	Status	Support
1	Receipt of the CS PDU	[1] 5.2	m	
2	Rebuilding of suppressed payload header information (PHS function)	[1] 5.1.2.3 [1] 5.2.4	c56-01	

c56-01: IF A.54/2 - - if BS supports PHS protocol
THEN m - then mandatory
ELSE n/a

Table A.57: Major Packet Payload Header Suppression capabilities

Item	Name	Reference	Status	Support
1	PHSV: Test validity of Header (before suppression)	[1] 5.2.4	c57-01	
2	PHSM: mask to allow selective suppression of header	[1] 5.2.4	c57-01	

c57-01: IF A.54/2 - - if BS supports PHS protocol
THEN m - then mandatory
ELSE n/a

Table A.58: Major packet classification

Item	Name	Reference	Status	Support
1	IP Classification of PDUs into appropriate connection	[1] 11.13.21.3.4	c58-01	
2	Ethernet classification of PDUs into appropriate connection	[1] 11.13.21.3.4	c58-02	
3	IEEE 802.1Q VLAN classification of PDUs into appropriate connection	[1] 11.13.21.3.4	c58-03	

c58-01: IF A.52/1 or A.52/2 - - if BS supports IP protocol
THEN m - then mandatory
ELSE n/a

c58-02: IF A.52/4 - - if BS supports Ethernet protocol
THEN m - then mandatory
ELSE n/a

c58-03: IF A.52/5 - - if BS supports 802.1Q protocol
THEN m - then mandatory
ELSE n/a

Table A.59: IP packet classification in the UL

Prerequisite: **A.52/**1 or **A.52/**2 -- IP support

Item	Name	Reference	Status	Support
1	Classification based on DSCP /IP TOS field	[1] 11.13.21.3.4.2	m	
2	Classification based on IP Protocol/Next Header field	[1] 11.13.21.3.4.3	m	
3	Classification based on IP masked Source Address	[1] 11.13.21.3.4.4	m	
4	Classification based on IP Destination Address	[1] 11.13.21.3.4.5	m	
5	Classification based on protocol source port range	[1] 11.13.21.3.4.6	m	
6	Classification based on protocol destination port range	[1] 11.13.21.3.4.7	m	

Table A.60: Ethernet packet classification in the UL

Prerequisite: **A.52/**4 -- Ethernet support

Item	Name	Reference	Status	Support
1	Classification based on Destination MAC Address	[1] 11.13.21.3.4.8	m	
2	Classification based on Source MAC Address	[1] 11.13.21.3.4.9	m	
3	Classification based on Ethertype/SAP	[1] 11.13.21.3.4.10	m	

Table A.61: 802.1Q packet classification in the UL

Prerequisite : **A.52/**5 -- 802.1Q support

Item	Name	Reference	Status	Support
1	Classification based on 802.1D user priority	[1] 11.13.21.3.4.11	m	
2	Classification based on 802.1Q VLAN ID	[1] 11.13.21.3.4.12	m	

A.7.3.2 BS MAC common part sublayer – PMP

Table A.62: Major MAC Common part functionalities for BS

Item	Name	Reference	Status	Support
1	Addressing and connections	[1] 6.3.1	m	
2	Construction of PDUs	[1] 6.3.3	m	
3	ARQ	[1] 6.3.4	o	
4	Uplink scheduling service	[1] 6.3.5	m	
5	Bandwidth allocation and request	[1] 6.3.6	m	
6	Duplexing modes	[1] 6.3.7	m	
7	Contention resolution	[1] 6.3.8	m	
8	Network entry and initialization	[1] 6.3.9	m	
9	Ranging	[1] 6.3.10	m	
10	OFDMA-based Ranging	[1] 6.3.10.3	m	
11	Update of UL and DL channel descriptors	[1] 6.3.11	m	
12	Quality of service	[1] 6.3.13	m	

Table A.63: Miscellaneous management functions for BS

Item	Name	Reference	Status	Support
1	Assignment of SSs to multicast groups (MCA_REQ messages from BS)	[1] 6.3.12	m	
2	Change of Downlink Burst profile management (DBPC messages initiated by SS)	[1] 6.3.2.3.20 [1] 6.3.2.3.21	m	
3	BS initiates SS reset (RES-CMD)	[1] 6.3.2.3.22	m	
4	BS initiates SS network clock comparison (CLK-CMP)	[1] 6.3.2.3.25	m	
5	BS notified by SS of SS de-registration (DREG-REQ)	[1] 6.3.2.3.43	m	
6	BS forces SS to change its channel access (DREG-CMD)	[1] 6.3.2.3.26	m	
7	BS sends quick answer to DSx-REQ sent by SS (DSX-RVD)	[1] 6.3.2.3.27	m	
8	BS receives confirmation of reception of Config file (TFTP messages)	[1] 6.3.2.3.28 [1] 6.3.2.3.29	m	
9	BS sends channel management report request (REP-REQ)	[1] 6.3.2.3.33	c63-01	
10	BS requests the power change (FPC)	[1] 6.3.2.3.34	m	
11	BS sends AAS feedback message request (AAS-FBCK messages)	[1] 6.3.2.3.40	c63-02	
12	BS is informed of preferred beam direction (AAS-BEAM select message)	[1] 6.3.2.3.41	c63-02	
13	BS sends AAS beam message request (AAS-Beam messages)	[1] 6.3.2.3.42	c63-02	

c63-01 is mandatory if band below 11Ghz
which seems always true
ELSE n/a else not applicable

c63-02 IF A.50/1 - if BS supports AAS mode (adaptive antenna)
THEN m
ELSE n/a else not applicable

A.7.3.2.1 Addressing and connections

Table A.64: Addressing and Connections — PMP

Item	Capability	Reference	Status	Support
1	Globally Unique 48 bits MAC Address, making up three 16 bits CID	[1] 6.3.1	m	
2	Time urgent MAC Management messages on basic connection	[1] 6.3.1	m	
3	Delay tolerant MAC Management messages on primary management connection	[1] 6.3.1	m	
4	IP packets on the secondary management connection	[1] 6.3.1	m	

A.7.3.2.2 Construction and Transmission of MAC PDUs

A.7.3.2.2.1 Conventions

Table A.65: Transmission conventions

Item	Capability	Reference	Status	Support
1	Transmit messages most significant byte first	[1] 6.3.3.1	m	
2	Transmit bytes most significant bit first	[1] 6.3.3.1	m	

A.7.3.2.2.2 PDU Concatenation

Table A.66 : PDU concatenation

Item	Capability	Reference	Status	Support
1	Concatenate Multiple MAC PDUs into a single burst of the allocated length.	[1] 6.3.3.2	m	
2	Receive concatenated MAC PDUs and determine disposition via CID.	[1] 6.3.3.2	m	

A.7.3.2.2.3 SDU Fragmentation

Table A.67 : SDU Fragmentation

Item	Capability	Reference	Status	Support
1	Fragment a MAC SDU into multiple MAC PDUs applicable to Management messages on Primary management connection	[1] 6.3.3.3	m	
2	Correctly set the Fragmentation Control (FC) bits	[1] 6.3.3.3	m	
3	Perform fragmentation of Management messages on Primary management connection	[1] 6.3.2.3	m	
4	Do not perform fragmentation of PDUs on Basic, Broadcast and Initial Ranging connections	[1] 6.3.2.3	m	

A.7.3.2.2.4 SDU reassembly

Table A.68: SDU reassembly

Item	Capability	Reference	Status	Support
1	Receive and reassemble fragmented SDUs.	[1] 6.3.3.3	m	
2	Discard SDUs corrupted due to loss of fragment	[1] 6.3.3.3	m	

A.7.3.2.2.5 Packing

Table A.69: Packing

Item	Capability	Reference	Status	Support
1	Pack Fixed length non-ARQ SDUs in a MAC PDU	[1] 6.3.3.4.1.1	m	
2	Pack variable length non-ARQ SDUs in a MAC PDU	[1] 6.3.3.4.1.2	m	
3	Pack variable length ARQ-enabled SDUs or SDUs fragments in a MAC PDU	[1] 6.3.3.4.2	c6901	
4	Do not pack fixed length ARQ-enabled SDUs	[1] 6.3.3.4.2	c6901	
5	Do not perform packing of SDUs on Basic, Broadcast and Initial Ranging connections	[1] 6.3.2.3	m	
6	Do not perform packing of ARQ Feedback Payload	[1] 6.3.3.4.3	c6901	
7	Compute and add CRC	[1] 6.3.3.5	m	

c6901: IF A.62/3 - - if BS supports ARQ procedure
THEN m - then mandatory
ELSE n/a

A.7.3.2.2.6 Unpacking

Table A.70: Unpacking

Item	Capability	Reference	Status	Support
1	Receive (unpack) fixed length SDUs	[1] 6.3.3.4.1.1	m	
2	Receive (unpack) variable length SDUs	[1] 6.3.3.4.1	m	
3	Check CRC	[1] 6.3.3.5	m	

A.7.3.2.3 ARQ

Table A.71 : ARQ

Item	Capability	Reference	Status	Support
1	BS supports ARQ applicable to a single unidirectional connection	[1] 6.3.4	c7101	
2	Pack several ARQ feedback information elements in a single ARQ feedback payload	[1] 6.3.4.2	c7101	
3	Insert a single ARQ feedback payload as first packet in a MAC PDU	[1] 6.3.4.2	c7101	

c7101: IF A.62/3 - - if BS supports ARQ procedure
THEN m - then mandatory
ELSE n/a

A.7.3.2.4 Uplink scheduling services

Table A.72: Uplink scheduling services

Item	Name	Reference	Status	Support
1	Unsolicited grant service (UGS)	[1] 6.3.5.2.1	m	
2	Real time polling service (rtPS)	[1] 6.3.5.2.2	m	
3	Non-Real time polling service (nrtPS)	[1] 6.3.5.2.3	m	
4	Best effort service (BE)	[1] 6.3.5.2.4	m	

A.7.3.2.5 Bandwidth allocation and request

Table A.73: Bandwidth allocation and request

Item	Name	Reference	Status	Support
1	BS receives request for aggregate bandwidth via Bandwidth Request Header	[1] 6.3.6.1	m	
2	BS receives request for incremental bandwidth via Bandwidth Request Header	[1] 6.3.6.1	m	
3	BS receives request for incremental bandwidth via piggyback request	[1] 6.3.6.1	m	
4	BS receives Bandwidth request during Request IE grant	[1] 6.3.6.1	m	
5	BS receives Bandwidth request during Data Grant IE grant	[1] 6.3.6.1	m	
6	BS sends Unicast, Multicast or Broadcast polls	[1] 6.3.6.3.2 [1] 6.3.6.3.1	m	
7	BS detects polling requested by Poll-me (PM) bit	[1] 6.3.6.3.3	m	
8	BS receives Bandwidth through CDMA Bandwidth Request code	[1] 6.3.6.5	m	

A.7.3.2.6 Duplexing modes or Support of PHY layers

Refer to table A.49, part of physical characteristics, for a description of the duplexing modes.

A.7.3.2.7 Contention resolution

Table A.74: Contention resolution

Item	Name	Reference	Status	Support
1	The BS sets truncated exponential backoff for initial ranging	[1] 6.3.8	m	
2	The BS sets truncated exponential backoff for bandwidth request contention	[1] 6.3.8	m	

A.7.3.2.8 Network entry and initialization

Table A.75: Network entry and initialization for BS

Item	Name	Reference	Status	Support
1	Send Downlink Parameters via DCD periodic PDUs	[1] 6.3.9.2	m	
2	Send Uplink Parameters via UCD periodic PDUs	[1] 6.3.9.3, 6.3.9.4	m	
3	Allocate an Initial Ranging interval	[1] 6.3.9.5, 6.3.9.6	m	
4	Negotiate Basic Capabilities (SBC-RSP)	[1] 6.3.9.7	m	
5	Perform authorization and key exchange	[1] 6.3.9.8, 7.2	m	
6	Accept registration to allow SS in network	[1] 6.3.9.9	m	
7	Establish IP connectivity and forward IP address	[1] 6.3.9.10	m	
8	Establish Time of day	[1] 6.3.9.11	m	
9	Receives operational parameters from SS	[1] 6.3.9.12	m	

A.7.3.2.8.1 Obtain Downlink Parameters

Table 76: Obtain DL Parameters

Item	Capability	Reference	Status	Support
1	BS sends DL-MAP	[1] 6.3.9.2	m	
2	BS sends DCD	[1] 6.3.9.2	m	

A.7.3.2.8.2 Obtain Uplink Parameters

Table 77: Obtain UL Parameters

Item	Capability	Reference	Status	Support
1	BS sends UCD	[1] 6.3.9.3, 6.3.9.4	m	

A.7.3.2.8.3 Initial Ranging

Table 78: Initial ranging

Item	Capability	Reference	Status	Support
1	BS sends UL-MAP	[1] 6.3.9.5	m	
2	SS calculates the maximum transmit signal strength	[1] 8.4.10.3	m	
3	BS receives Initial Ranging Code	[1] 8.4.7.1; 6.3.10.3	m	
4	SS sends again Initial Ranging Code if no response, with increased power	[1] 8.4.7.1; 6.3.10.3	m	
5	BS sends RNG-RSP, declared successful when it includes its MAC address	[1] 6.3.9.5	m	
6	BS allocates Basic and Primary Management connections IDs	[1] 6.3.9.5	m	
7	SS performs timing and power adjustment	[1] 6.3.9.5	m	
8	BS performs final tuning using RNG-REQ and RNG-RSP mechanism	[1] 6.3.9.6	m	

A.7.3.2.8.4 Negotiate Basic Capabilities

Table 79: Negotiate basic capabilities

Item	Capability	Reference	Status	Support
1	BS receives SBC-REQ	[1] 6.3.9.7	m	
2	BS sends SBC-RSP	[1] 6.3.9.7	m	

A.7.3.2.8.5 SS Authorization

See A.7.3.3.

A.7.3.2.8.6 Registration

Table 80: Registration

Item	Capability	Reference	Status	Support
1	BS receives REG-REQ to register	[1] 6.3.9.9	m	
2	BS sends REG-RSP which includes: the Secondary management CID, the IP version	[1] 6.3.9.9	m	

A.7.3.2.8.7 Establish IP connectivity

Table 81: Establish IP connectivity

Item	Capability	Reference	Status	Support
1	Are the DHCP mechanisms following the IETF RFC 2131 rules?	[1] 6.3.9.10	m	
2	BS receives DHCP discover on Secondary Management Connection	[1] 6.3.9.10	m	
3	BS sends DHCP offer on Secondary Management Connection	[1] 6.3.9.10	m	
4	BS receives DHCP request on Secondary Management Connection	[1] 6.3.9.10	m	
5	BS sends DHCP response on Secondary Management Connection	[1] 6.3.9.10	m	

A.7.3.2.8.8 Establish Time of day

Table 82: Establish time of day

Item	Capability	Reference	Status	Support
1	Are the protocols for time of day following the IETF RFC 868 rules?	[1] 6.3.9.11	m	
2	BS receives Time of Day request	[1] 6.3.9.11	m	
3	BS processes the request and sends Time of Day response	[1] 6.3.9.11	m	

A.7.3.2.8.9 Transfer operational parameters

Table 83: Transfer operational parameters

Item	Capability	Reference	Status	Support
1	BS is informed of completion of successful configuration using DHCP protocol, when receiving TFTP-CPLT on Primary management connection, for notification	[1] 6.3.9.12	m	
2	BS sends TFTP-RSP as response to TFTP-CPLT	[1] 6.3.9.12	m	

A.7.3.2.9 Periodic Ranging

Table 84: Periodic ranging

Item	Capability	Reference	Status	Support
1	BS responds to the change to more appropriate DL bursts	[1] 6.3.10.1	m	
2	BS performs uplink periodic ranging and adjusts transmission parameters using RNG-RSP	[1] 6.3.10.2	m	

A.7.3.2.10 Update of UL and DL channel descriptors

Table 85: Update of channel descriptors

Item	Capability	Reference	Status	Support
1	BS sends UL channel descriptors at regular intervals using UCD message with identical Configuration change count	[1] 6.3.11	M	
2	BS sends new UL burst descriptors using UCD message with incremented Configuration change count (I+1 mod 256)	[1] 6.3.11	M	
3	BS sends DL channel descriptors at regular intervals using DCD message with identical Configuration change count	[1] 6.3.11	M	
4	BS sends new DL burst descriptors using DCD message with incremented Configuration change count (I+1 mod 256)	[1] 6.3.11	M	

A.7.3.2.11 BS assigns SSs to multicast groups

Table 86: Assignment of SSs to multicast groups

Item	Capability	Reference	Status	Support
1	BS adds or removes an SS to a multicast polling group, using MCA-REQ	[1] 6.3.12	M	
2	BS waits for MCA-RSP that acknowledge the action and indicate status (ok, reject,…)	[1] 6.3.12	M	

A.7.3.2.12 Quality of service – service flows

Table 87: Service flow operations

Item	Capability	Reference	Status	Support
1	BS issues DSA-REQ on preprovisioned service flows, to pass encodings	[1] 6.3.13.7.1	m	
2	BS initiates (DSA-REQ) the creation of a Dynamic service flow	[1] 6.3.13.7.2	m	
3	BS answers (DSA-RSP) to the creation of a Dynamic service flow initiated by SS	[1] 6.3.13.7.2	m	
4	BS initiates (DSC-REQ) the modification of a Dynamic service flow	[1] 6.3.13.9.4	m	
5	BS answers (DSC-RSP) to the modification of a Dynamic service flow initiated by SS	[1] 6.3.13.9.4	m	
6	BS initiates (DSD-REQ) the release of a Dynamic service flow	[1] 6.3.13.9.5	m	
7	BS answers (DSD-RSP) to the release of a Dynamic service flow initiated by SS	[1] 6.3.13.9.5	m	

A.7.3.3 BS Privacy Functionalities – PMP

Table A.88: Major Privacy functionalities for BS

Item	Name	Reference	Status	Support
1	Does the BS perform Authorization and key exchange as per clause 7.2 [1]	[1] 6.3.9.8	m	
2	Does the BS support Authorization Information messages?	[1] 6.3.9.8, 7.2.1	o	
3	Does the BS support receipt of Auth Request (PKM-REQ with *Code=4)*	[1] 6.3.9.8, 7.2.1	m	
4	Does the BS validate the manufacturers' X.509 certificate received from the SS during the Authorization Request?	[1] 6.3.9.8, 7.2.1	m	
5	Does the BS check the SS cryptographic suite identifiers against those supported by BS?	[1] 6.3.9.8, 7.2.1	m	
6	Does the BS verify that the SS provides its' Basic CID as part of the Authorization Request?	[1] 6.3.9.8, 7.2.1	m	
7	Does the BS support generation of Auth Reply (PKM-RSP with *Code=5)*?	[1] 6.3.9.8, 7.2.1	m	
8	Does the BS support two simultaneously active Aks?	[1] 6.3.9.8, 7.2.1	m	

Table A.89: PKM message encodings support

Item	Capability	Reference	Status	Support	Values Allowed	Values Supported
1	Display-string	[1] 11.9.1	o			
2	AUTH-Key	[1] 11.9.2	m			
3	TEK	[1] 11.9.3	m			
4	Key-Lifetime	[1] 11.9.4	m			
5	Key-Sequence-Number	[1] 11.9.5	m		AK:0-15 TEK:0-3	
6	HMAC-Digest	[1] 11.9.6	m			
7	SAID	[1] 11.9.7	m			
8	TEK-Parameters	[1] 11.9.8	m			
9	CBC-IV	[1] 11.9.9	m			
10	Error-Code	[1] 11.9.10	m		0-6	
11	CA-Certificate	[1] 11.9.11	m			
12	SS-Certificate	[1] 11.9.12	m			
13	Security-Capabilities	[1] 11.9.13	m			
14	Cryptographic-Suite	[1] 11.9.14	m		See next table	
15	Cryptographic-Suite-List	[1] 11.9.15	m			
16	Version	[1] 11.9.16	m		1	
17	SA-Descriptor	[1] 11.9.17	m			
18	SA-Type	[1] 11.9.18	m		0,1,2	
19	PKM Configuration Setting	[1] 11.9.19	m			

Table A.90: Cryptographic suites

Item	Capability	Reference	Status	Support	Value Allowed	Value Supported
1	No data encrypt, no data authent &3-DES 128	[1] 11.9.14	m		0x000001	
2	CBC-mode 56bit DES, no data authent &3-DES 128	[1] 11.9.14	m		0x010001	
3	No data encrypt, no data authent & RSA, 1024	[1] 11.9.14	m		0x000002	
4	CBC-mode 56bit DES, no data authent & RSA, 1024	[1] 11.9.14	m		0x010002	

A.8 List of PDUs and their directions

In the following PDU tables, status with **m** or **o** values are the only valid cases, according to the direction of the PDU. When not applicable to a given direction, status **not applicable** (**n/a**) is defined.

A.8.1 PDUs for PHY layer

A.8.1.1 PDUs for PHY layer in PMP topology

Prerequisite: A.2/1 -- PMP topology
To be defined

A.8.2 PDUs for MAC layer

A.8.2.1 PDUs for MAC layer in PMP topology

Prerequisite: A.2/1 -- PMP topology

A.8.2.1.1 PDUs for network entry and initialization in PMP

Table A.91: MAC PDUs for network entry and initialisation in PMP

Item	PDU	BS sending/SS receiving			SS sending / BS receiving		
		Reference	Status	Support	Reference	Status	Support
1	DL-MAP	[1] 6.3.9.2	m			n/a	
2	DCD	[1] 6.3.9.2	m			n/a	
3	UL-MAP	[1] 6.3.9.3	m			n/a	
4	UCD	[1] 6.3.9.3	m			n/a	
5	RNG-REQ		n/a		[1] 6.3.9.5	m	
6	RNG-RSP	[1] 6.3.9.5	m			n/a	
7	SBC-REQ		n/a		[1] 6.3.9.7	m	
8	SBC-RSP	[1] 6.3.9.7	m			n/a	
9	PKM-REQ	-	n/a		[1] 6.3.9.8	m	
10	PKM-RSP	[1] 6.3.9.8	m		-	n/a	
11	REG-REQ	-	n/a		[1] 6.3.9.9	m	
12	REG-RSP	[1] 6.3.9.9	m		-	n/a	
13	DHCP discover		n/a		[1] 6.3.9.10	m	
14	DHCP offer	[1] 6.3.9.10	m			n/a	
15	DHCP request		n/a		[1] 6.3.9.10	m	
16	DHCP response	[1] 6.3.9.10	m			n/a	
17	Time of day request		n/a		[1] 6.3.9.11	m	
18	Time of day response	[1] 6.3.9.11	m			n/a	

Note: DHCP and Time of day messages are not part of IEEE 802.16-2004 specs

A.8.2.1.2 PDUs for service flows in PMP

Table A.92: PDUs for service flows in PMP

Item	PDU	BS sending/SS receiving			SS sending / BS receiving		
		Reference	Status	Support	Reference	Status	Support
1	DSA-REQ (create)	[1] 6.3.2.3.10	m		[1] 6.3.2.3.10	m	
2	DSA-RSP	[1] 6.3.2.3.11	m		[1] 6.3.2.3.11	m	
3	DSA-ACK	[1] 6.3.2.3.12	m		[1] 6.3.2.3.12	m	
4	DSC-REQ (change)	[1] 6.3.2.3.13	m		[1] 6.3.2.3.13	m	
5	DSC-RSP	[1] 6.3.2.3.14	m		[1] 6.3.2.3.14	m	
6	DSC-ACK	[1] 6.3.2.3.15	m		[1] 6.3.2.3.15	m	
7	DSD-REQ (delete)	[1] 6.3.2.3.16	m		[1] 6.3.2.3.16	m	
8	DSD-RSP	[1] 6.3.2.3.17	m		[1] 6.3.2.3.17	m	

A.8.2.1.3 PDUs for ARQ in PMP

Table A.93: PDUs for ARQ in PMP

Prerequisite: A18/3 - SS supports ARQ procedure
Or
Prerequisite: A62/3 - BS supports ARQ procedure

Item	PDU	BS sending/SS receiving			SS sending / BS receiving		
		Reference	Status	Support	Reference	Status	Support
1	ARQ-feedback	[1] 6.3.4	m		[1] 6.3.4	m	
2	ARQ-discard	[1] 6.3.4	m		[1] 6.3.4	m	
3	ARQ-reset	[1] 6.3.4	m		[1] 6.3.4	m	
4	ARQ-ACK		n/a		[1] 6.3.4	m	

A.8.2.1.4 PDUs for miscellaneous capabilities in PMP

Table A.94: MAC PDUs for miscellaneous capabilities in PMP

Item	PDU	BS sending/SS receiving			SS sending / BS receiving		
		Reference	Status	Support	Reference	Status	Support
1	MCA-REQ	[1] 6.3.12	M			n/a	
2	MCA-RSP		n/a		[1] 6.3.12	m	
3	DBPC-REQ		n/a		[1] 6.3.2.3.20	m	
4	DBPC-RSP	[1] 6.3.2.3.20	M			n/a	
5	RES-CMD	[1] 6.3.2.3.22	M			n/a	
6	CLK-CMP	[1] 6.3.2.3.25	O			n/a	
7	DREG-REQ		n/a		[1] 6.3.2.3.43	m	
8	DREG-CMD	[1] 6.3.2.3.26	M			n/a	
9	DSX-RVD	[1] 6.3.2.3.27	M			n/a	
10	TFTP-CPLT		n/a		[1] 6.3.2.3.28	m	
11	TFTP-RSP	[1] 6.3.2.3.29	M			n/a	
12	REP-REQ	[1] 6.3.2.3.33	M			n/a	
13	REP-RSP		n/a		[1] 6.3.2.3.33	m	
14	FPC	[1] 6.3.2.3.34	M			n/a	
15	AAS-FBCK-REQ	[1] 6.3.2.3.40	c94-01			n/a	
16	AAS-FBCK–RSP	[1] 6.3.2.3.40	c94-01			n/a	
17	AAS-BEAM-select		n/a		[1] 6.3.2.3.41	c94-01	
18	AAS-BEAM-REQ	[1] 6.3.2.3.42	c94-01			n/a	
19	AAS-BEAM–RSP	[1] 6.3.2.3.42	c94-01			n/a	

c94-01 IF A6/1 - if SS supports AAS mode (adaptive antenna)
and
IF A5/2 or A5/3 - if SS operates in FDD mode
THEN m - then mandatory
ELSE o - else optional in TDD mode
or
IF A.50/1 - if BS supports AAS mode
and
IF A49/2 or A49/3 - if BS operates in FDD mode
THEN m - then mandatory
ELSE o - else optional in TDD mode

else n/a else not applicable if no AAS support

A.8.2.1.5 PDUs for privacy in PMP

Table A.95: MAC Privacy PDUs in PMP

Item	PDU	BS sending/SS receiving			SS sending / BS receiving		
		Reference	Status	Support	Reference	Status	Support
1	PKM-RSP SA Add (Code 3)	[1] 6.3.2.3.9	m		-	n/a	
2	PKM-REQ Auth Request (Code 4)	-	n/a		[1] 6.3.2.3.9	m	
3	PKM-RSP Auth Reply (Code 5)	[1] 6.3.2.3.9	m		-	n/a	
4	PKM-RSP Auth Reject (Code 6)	[1] 6.3.2.3.9	m		-	n/a	
5	PKM-REQ Key Request (Code 7)	-	n/a		[1] 6.3.2.3.9	m	
6	PKM-RSP Key Reply (Code 8)	[1] 6.3.2.3.9	m		-	n/a	
7	PKM-RSP Key Reject (Code 9)	[1] 6.3.2.3.9	m		-	n/a	
8	PKM-RSP Auth Invalid (Code 10)	[1] 6.3.2.3.9	m		-	n/a	
9	PKM-RSP TEK Invalid (Code 11)	[1] 6.3.2.3.9	m		-	n/a	
10	PKM-REQ Authent Info (Code 12)	-	n/a		[1] 6.3.2.3.9	m	

A.9 PDU fields

A.9.1 Fields of PDUs for PHY layer

To be defined

A.9.2 Fields of PDUs for MAC layer

A.9.2.1 PDUs fields for MAC in PMP topology

A.9.2.1.1 DL-MAP

Table A.96: PDU: DL-MAP

Item	Parameter	Reference	Status	Support
1	Management Message type=2	[1] 6.3.2.3.2	m	
2	PHY Synchronization field	[1] 6.3.2.3.2	m	
3	DCD count	[1] 6.3.2.3.2	m	
4	Base station ID	[1] 6.3.2.3.2	m	
5	DL_MAP Information Element(s)	[1] 6.3.2.3.2	m	

Comments :

A.9.2.1.2 DCD

Table A.97 : PDU : DCD

Item	Parameter	Reference	Status	Support
1	Management Message type=1	[1] 6.3.2.3.1	m	
2	Downlink channel ID	[1] 6.3.2.3.1	m	
3	Configuration Change count	[1] 6.3.2.3.1	m	
4	TLV Encoded information see next DCD TLV table	[1] 6.3.2.3.1	m	
5	Downlink burst profile(s) see next DCD DL burst profile table	[1] 6.3.2.3.1	m	

Comments:

Table A.98: DCD TLV

Item	Parameter	Reference	Status	Support
1	Downlink Burst profile	[1] 11.4.1 (table 358)	m	
2	BS EIRP	[1] 11.4.1 (table 358)	m	
3	TTG	[1] 11.4.1 (table 358)	m	
4	RTG	[1] 11.4.1 (table 358)	m	
5	$EIRxP_{IR,max}$	[1] 11.4.1 (table 358)	m	

Comments:

Table 99: DCD DL Burst Profile

Item	Capability	Reference	Status	Support
1	FEC Code Type	[1] 11.4.1 (table 363)	M	
2	DIUC Mandatory exit Threshold	[1] 11.4.1 (table 363)	M	
3	DIUC Mandatory entry Threshold	[1] 11.4.1 (table 363)	M	

A.9.2.1.3 UCD

Table A.100: PDU: UCD

Item	Parameter	Reference	Status	Support
1	Management Message type=0	[1] 6.3.2.3.3	m	
2	Uplink channel ID	[1] 6.3.2.3.3	m	
3	Configuration Change count	[1] 6.3.2.3.3	m	
4	Minislot size	[1] 6.3.2.3.3	m	
5	Ranging backoff start	[1] 6.3.2.3.3	m	
6	Ranging backoff End	[1] 6.3.2.3.3	m	
7	Request backoff start	[1] 6.3.2.3.3	m	
8	Request backoff End	[1] 6.3.2.3.3	m	
9	TLV Encoded information see next UCD TLV table	[1] 6.3.2.3.3	m	
10	Uplink burst profile(s) see next UCD UL burst profile table	[1] 6.3.2.3.3	m	

Comments:

Table A.101: UCD TLV

Item	Parameter	Reference	Status	Support
1	Frequency	[1] 11.3.1 (table 349)	m	
2	Contention-based Reservation Timeout	[1] 11.3.1 (table 349)	m	
3	Initial ranging codes	[1] 11.3.1 (table 353)	m	
4	Periodic ranging codes	[1] 11.3.1 (table 353)	m	
5	Bandwidth request codes	[1] 11.3.1 (table 353)	m	
6	Periodic ranging backoff start	[1] 11.3.1 (table 353)	m	
7	Periodic ranging backoff end	[1] 11.3.1 (table 353)	m	
8	Start of ranging codes group	[1] 11.3.1 (table 353)	m	
9	Permutation base	[1] 11.3.1 (table 353)	m	
10	UL allocated subchannels bitmap	[1] 11.3.1 (table 353)	m	
11	Optimal permutation UL allocated subchannels bitmap	[1] 11.3.1 (table 353)	c101-01	
12	Band AMC allocation threshold	[1] 11.3.1 (table 353)	c101-02	
13	Band AMC release threshold	[1] 11.3.1 (table 353)	c101-02	
14	Band AMC allocation timer	[1] 11.3.1 (table 353)	c101-02	
15	Band AMC release timer	[1] 11.3.1 (table 353)	c101-02	
16	Band status reporting MAX period	[1] 11.3.1 (table 353)	o	
17	Band AMC retry timer	[1] 11.3.1 (table 353)	c101-02	
18	Safety channel allocation threshold	[1] 11.3.1 (table 353)	o	
19	Safety channel release threshold	[1] 11.3.1 (table 353)	o	
20	Safety channel allocation timer	[1] 11.3.1 (table 353)	o	
21	Safety channel release timer	[1] 11.3.1 (table 353)	o	
22	Bin status reporting MAX period	[1] 11.3.1 (table 353)	o	
23	Safety channel retry timer	[1] 11.3.1 (table 353)	o	
24	H-ARQ ACK delay for UL burst	[1] 11.3.1 (table 353)	c101-03	
25	CQICH Band AMC transition delay	[1] 11.3.1 (table 353)	c101-02	

Comments:
c101-01:IF A.50/4 - if BS supports Optional PUSC
THEN m - then mandatory
ELSE n/a

c101-02:IF A.50/5 - if BS supports AMC
THEN m - then mandatory
ELSE n/a

c101-03:IF A.50/6 - if BS supports H-ARQ
THEN m - then mandatory
ELSE n/a

Table 102: UCD UL Burst Profile

Item	Capability	Reference	Status	Support
1	FEC Code Type	[1] 11.3.1 (table 356)	M	
2	Ranging data ratio	[1] 11.3.1 (table 356)	M	
3	Normalized C/N override	[1] 11.3.1 (table 356)	o	

A.9.2.1.4 UL-MAP

Table A.103: PDU: UL-MAP

Item	Parameter	Reference	Status	Support
1	Management Message type=3	[1] 6.3.2.3.4	m	
2	Uplink channel ID	[1] 6.3.2.3.4	m	
3	UCD count	[1] 6.3.2.3.4	m	
4	Allocation start time	[1] 6.3.2.3.4	m	
5	UL_MAP Information Element(s)	[1] 6.3.2.3.4	m	

Comments:

A.9.2.1.5 RNG-REQ and RNG-RSP

Table A.104: PDU: RNG-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=4	[1] 6.3.2.3.5	m	
2	Downlink channel ID	[1] 6.3.2.3.5	m	
3	TLV Encoded information see next RNG-REQ TLV table	[1] 6.3.2.3.5	m	

Comments:

Table A.105: RNG-REQ TLV

Item	Parameter	Reference	Status	Support
1	Requested Downlink Burst profile	[1] 6.3.2.3.5	m	
2	SS MAC address	[1] 6.3.2.3.5	m	
3	Ranging anomalies	[1] 6.3.2.3.5	m	
4	MAC version	[1] 6.3.2.3.5	m	
5	AAS broadcast capability	[1] 6.3.2.3.5	c105-01	

Comments :

c105-01 IF A6/1 - if SS supports AAS mode (adaptive antenna)
or
IF A.50/1 - if BS supports AAS mode
Then o
Else n/a if no AAS

Table A.106 : PDU : RNG-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=5	[1] 6.3.2.3.6	m	
2	Uplink channel ID	[1] 6.3.2.3.6	m	
3	TLV Encoded information see next RNG-RSP TLV table	[1] 6.3.2.3.6	m	

Comments:

Table A.107: RNG-RSP TLV

Item	Parameter	Reference	Status	Support
1	Timing Adjust Information	[1] 6.3.2.3.6; 11.6	m	
2	Power Adjust Information	[1] 6.3.2.3.6; 11.6	m	
3	Ranging Status	[1] 6.3.2.3.6; 11.6	m	
4	DL Frequency Override	[1] 6.3.2.3.6; 11.6	m	
5	UL Channel ID Override	[1] 6.3.2.3.6; 11.6	m	
6	DL Operational Burst Profile	[1] 6.3.2.3.6; 11.6	m	
7	Basic CID	[1] 6.3.2.3.6; 11.6	m	
8	Primary Management CID	[1] 6.3.2.3.6; 11.6	m	
9	SS MAC Address	[1] 6.3.2.3.6; 11.6	m	
10	Frequency Adjust Information	[1] 6.3.2.3.6; 11.6	m	
11	AAS broadcast permission	[1] 6.3.2.3.6; 11.6	c107-01	
12	Frame Number	[1] 6.3.2.3.6; 11.6	m	
13	Initial ranging opportunity Number	[1] 6.3.2.3.6; 11.6	m	
14	ranging code attributes	[1] 6.3.2.3.6; 11.6	m	

c107-01 IF A6/1 - if SS supports AAS mode (adaptive antenna)
or
IF A.50/1 - if BS supports AAS mode
Then m
Else n/a if no AAS

6.2.2.3.47 A.9.2.1.6 SBC-REQ and SBC-RSP

Table A.108: PDU: SBC-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=26	[1] 6.3.2.3.23	m	
2	TLV Encoded information see next SBC-REQ TLV table	[1] 6.3.2.3.23	m	

Comments:

Table A.109: SBC-REQ TLV

Item	Parameter	Reference	Status	Support
1	Basic CID	[1] 6.3.2.3.23	m	
2	Physical Parameters supported	[1] 6.3.2.3.23	m	
3	Bandwidth Allocation Support	[1] 6.3.2.3.23	m	

Comments :

Table A.110 : PDU : SBC-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=27	[1] 6.3.2.3.24	m	
2	TLV Encoded information see next SBC-RSP TLV table	[1] 6.3.2.3.24	m	

Comments:

Table A.111: SBC-RSP TLV

Item	Parameter	Reference	Status	Support
1	CID	[1] 6.3.2.3.24	m	
2	Physical Parameters supported	[1] 6.3.2.3.24	m	
3	Bandwidth Allocation Support	[1] 6.3.2.3.24	m	

Comments :

A.9.2.1.7 DHCP messages

Comments on Establish IP connectivity PDUs: **DHCP discover, DHCP offer, DHCP request** and **DHCP response** are defined by IETF RFC2131.

A.9.2.1.8 Time of day messages

Comments on Establish Time of day PDUs: **Time of day request** and **Time of day response** are defined by IETF RFC868.

A.9.2.1.9 ARQ messages

Table A.112: PDU: ARQ feedback message

Prerequisite: A18/3 - SS supports ARQ procedure
Or
Prerequisite: A62/3 - BS supports ARQ procedure

Item	Parameter	Reference	Status	Support
1	Management Message type=33	[1] 6.3.2.3.30	m	
2	ARQ feedback payload: one or several ARQ feedback IE(s) see next ARQ feedback IE table	[1] 6.3.2.3.30	m	

Comments:

Table A.113: ARQ Feedback Information Elements

Prerequisite: A18/3 - SS supports ARQ procedure
Or
Prerequisite: A62/3 - BS supports ARQ procedure

Item	Parameter	Reference	Status	Support
1	CID	[1] 6.3.4.2	m	
2	last	[1] 6.3.4.2	m	
3	ACK type	[1] 6.3.4.2	m	
4	BSN	[1] 6.3.4.2	m	
5	Number of ACK maps	[1] 6.3.4.2	m	
6	ACK MAP(s)	[1] 6.3.4.2	m	

Comments:

Table A.114: PDU: ARQ Discard message

Prerequisite: A18/3 - SS supports ARQ procedure
Or
Prerequisite: A62/3 - BS supports ARQ procedure

Item	Parameter	Reference	Status	Support
1	Management Message type=34	[1] 6.3.2.3.31	m	
2	Connection ID	[1] 6.3.2.3.31	m	
3	Fragmentation Sequence Number	[1] 6.3.2.3.31	m	

Comments :

Table A.115 : PDU : ARQ Reset message

Prerequisite: A18/3 - SS supports ARQ procedure
Or
Prerequisite: A62/3 - BS supports ARQ procedure

Item	Parameter	Reference	Status	Support
1	Management Message type=35	[1] 6.3.2.3.32	m	
2	Connection ID	[1] 6.3.2.3.32	m	
3	Type	[1] 6.3.2.3.32	m	

Comments:

Table A.116 : PDU : ARQ ACK message

Prerequisite: A18/3 - SS supports ARQ procedure
Or
Prerequisite: A62/3 - BS supports ARQ procedure

Item	Parameter	Reference	Status	Support
1	ACK type	[1] 6.3.2.3.41	m	
2	BSN	[1] 6.3.2.3.41	m	
3	Number of ACK maps	[1] 6.3.2.3.41	m	
4	ACK maps	[1] 6.3.2.3.41	m	

Comments:

A.9.2.1.10 MCA-REQ and MCA-RSP

Table A.117: PDU: MCA-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=21	[1] 6.3.2.3.18	m	
2	Transaction ID	[1] 6.3.2.3.18	m	
3	TLV encoded information	[1] 6.3.2.3.18	m	

Comments:

Table A.118: MCA-REQ TLV

Item	Parameter	Reference	Status	Support
1	CID	[1] 6.3.2.3.18	m	
2	Transaction ID	[1] 6.3.2.3.18	m	
3	Multicast CID	[1] 6.3.2.3.18	m	
4	Assignment	[1] 6.3.2.3.18	m	

Comments :

Table A.119 : PDU : MCA-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=22	[1] 6.3.2.3.19	m	
2	Transaction ID	[1] 6.3.2.3.19	m	
3	Confirmation Code	[1] 6.3.2.3.19	m	

Comments:

6.2.2.3.47 A.9.2.1.11 DBPC-REQ and DBPC-RSP

Table A.120: PDU: DBPC-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=23	[1] 6.3.2.3.20	m	
2	DL configuration change count	[1] 6.3.2.3.20	m	
3	DIUC	[1] 6.3.2.3.20	m	

Comments:

Table A.121: PDU: DBPC-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=24	[1] 6.3.2.3.21	m	
2	DL configuration change count	[1] 6.3.2.3.21	m	
3	DIUC	[1] 6.3.2.3.21	m	

Comments:

A.9.2.1.12 RES-CMD

Table A.122: PDU: RES-CMD

Item	Parameter	Reference	Status	Support
1	Management Message type=25	[1] 6.3.2.3.22	m	
2	TLV encoded information	[1] 6.3.2.3.22	m	

Comments:

Table A.123: RES-CMD TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.22	m	

Comments:

A.9.2.1.13 CLK-CMP

Table A.124: PDU: CLK-CMP

Item	Parameter	Reference	Status	Support
1	Management Message type=28	[1] 6.3.2.3.25	m	
2	Clock count	[1] 6.3.2.3.25	m	
3	Clock Id	[1] 6.3.2.3.25	m	
4	Sequence number	[1] 6.3.2.3.25	m	
5	Clock comparison value	[1] 6.3.2.3.25	m	

Comments:

A.9.2.1.14 DREG-REQ and DREG-CMD

Table A.125: PDU: DREG-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=49	[1] 6.3.2.3.43	m	
2	De-registration request code	[1] 6.3.2.3.43	m	
3	TLV encoded information	[1] 6.3.2.3.43	m	

Comments:

Table A.126: DREG-REQ TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.43	m	

Comments :

Table A.127: PDU: DREG-CMD

Item	Parameter	Reference	Status	Support
1	Management Message type=29	[1] 6.3.2.3.26	m	
2	action code	[1] 6.3.2.3.26	m	
3	TLV encoded information	[1] 6.3.2.3.26	m	

Comments:

Table A.128: DREG-CMD TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.26	m	

Comments :

A.9.2.1.15 DSX-RVD

Table A.129 : PDU : DSX-RVD

Item	Parameter	Reference	Status	Support
1	Management Message type=30	[1] 6.3.2.3.27	m	
2	Transaction ID	[1] 6.3.2.3.27	m	
3	Confirmation Code	[1] 6.3.2.3.27	m	

Comments:

A.9.2.1.16 TFTP-CPLT and TFTP-RSP

Table A.130: PDU: TFTP-CPLT

Item	Parameter	Reference	Status	Support
1	Management Message type=31	[1] 6.3.2.3.28	m	
2	TLV encoded information	[1] 6.3.2.3.28	m	

Comments:

Table A.131: TFTP-CPLT TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.28	m	

Table A.132: PDU: TFTP-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=32	[1] 6.3.2.3.29	m	

Comments:

A.9.2.1.17 REP-REQ and REP-RSP

Table A.133: PDU: REP-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=36	[1] 6.3.2.3.33	m	
2	Report request TLVs	[1] 6.3.2.3.33	m	

Comments:

Table A.134: REP-REQ TLV for report request

Item	Parameter	Reference	Status	Support
1	Report type	[1] 11.11	m	
2	Channel number	[1] 11.11	m	

Table A.135: PDU: REP-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=37	[1] 6.3.2.3.33	m	
2	Report response TLVs	[1] 6.3.2.3.33	m	

Comments:

Table A.136: REP-RSP TLV for report

Item	Parameter	Reference	Status	Support
1	Channel number	[1] 11.12	m	
2	Start frame	[1] 11.12	m	
3	duration	[1] 11.12	m	
4	Basic report	[1] 11.12	m	
5	CINR report	[1] 11.12	m	
6	RSSI report	[1] 11.12	m	

A.9.2.1.18 AAS-FBCK-REQ and AAS-FBCK-RSP

Prerequisite: - A6/1 - SS supports AAS mode (adaptive antenna
Or
Prerequisite: A.50/1 - BS supports AAS mode

Table A.137: PDU: AAS-FBCK-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=44	[1] 6.3.2.3.40	m	
2	Frame number	[1] 6.3.2.3.40	m	
3	Number of frames	[1] 6.3.2.3.40	m	
4	Measurement data type	[1] 6.3.2.3.40	m	
5	Feedback request counter	[1] 6.3.2.3.40	m	
6	Frequency measurement resolution	[1] 6.3.2.3.40	m	

Comments :

Table A.138 : PDU : AAS-FBCK-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=45	[1] 6.3.2.3.40	m	
2	Feedback request number	[1] 6.3.2.3.40	m	
3	Real (Frequency value)	[1] 6.3.2.3.40	m	
4	Imaginary (Frequency value)	[1] 6.3.2.3.40	m	

Comments: set of Real and Imaginary Frequency values for each frequency defined

A.9.2.1.19 AAS-BEAM messages

Prerequisite: - A6/1 - SS supports AAS mode (adaptive antenna
Or
Prerequisite: A.50/1 - BS supports AAS mode

Table A.139: PDU: AAS-Beam-Select

Item	Parameter	Reference	Status	Support
1	Management Message type=46	[1] 6.3.2.3.41	m	
2	AAS beam direction index	[1] 6.3.2.3.41	m	

Comments :

Table A.140 : PDU : AAS-BEAM-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=47	[1] 6.3.2.3.42	m	
2	Frame number	[1] 6.3.2.3.42	m	
3	Feedback request number	[1] 6.3.2.3.42	m	
4	Measurement report type	[1] 6.3.2.3.42	m	
5	Resolution parameter	[1] 6.3.2.3.42	m	
6	Beam bit mask	[1] 6.3.2.3.42	m	

Table A.141 : PDU : AAS-BEAM-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=48	[1] 6.3.2.3.43	m	
2	Frame number	[1] 6.3.2.3.43	m	
3	Feedback request number	[1] 6.3.2.3.43	m	
4	Measurement report type	[1] 6.3.2.3.43	m	
5	Resolution parameter	[1] 6.3.2.3.43	m	
6	Beam bit mask	[1] 6.3.2.3.43	m	
7	AAS_BEAM_REP_IE	[1] 6.3.2.3.43	m	
8	RSSI mean value	[1] 6.3.2.3.43	m	
9	CINR mean value	[1] 6.3.2.3.43	m	

A.9.2.1.19 FPC

Table A.142: PDU: FPC

Item	Parameter	Reference	Status	Support
1	Management Message type=38	[1] 6.3.2.3.34	m	
2	Number of stations	[1] 6.3.2.3.34	m	
3	Basic CID	[1] 6.3.2.3.34	m	
4	Power adjust	[1] 6.3.2.3.34	m	

Comments: set of Basic CID and Power adjust values for each station defined

A.9.2.1.20 REG-REQ and REG-RSP

Table A.143: PDU: Registration Request (REG-REQ)

Item	Parameter	Reference	Status	Support
1	Management Message type=6	[1] 6.3.2.3.8	m	
2	TLV Encoded Information	[1] 6.3.2.3.8	m	

Comments:
Prerequisite: A.2/1 -- PMP topology
Prerequisite: A.143/2 -- REG-REQ TLV

Table A.144: PDU: REG-REQ TLV (PMP)

Item	Parameter	Reference	Status	Support
1	IP version	[1] 11.7.4	m	
2	Vendor ID Encoding	[1] 11.1.5	o	
3	Vendor specific information	[1] 11.1.6	o	
4	SS Capabilities Encodings	[1] 11.7.8	o	
5	Convergence Sublayer Capabilities	[1] 11.7.7	o	
6	ARQ parameters	[1] 11.7.1	o	

Comments:

Table A.145: SS Capabilities encoding and values

Item	SS Capability	Reference	Status	Support	Value	
					Allowed range	Supported
1	ARQ support	[1] 11.7.8.1	M		0-1	
2	DSx flow control	[1] 11.7.8.2	M		0-255	
3	MAC CRC support	[1] 11.7.8.3	M		0-1	
4	MCA flow control	[1] 11.7.8.4	M		0-255	
5	Multicast polling group	[1] 11.7.8.5	M		0-255	
6	PKM flow control	[1] 11.7.8.6	M		0-255	
7	Authorization policy support	[1] 11.7.8.7	M		Bit 0	
8	Supported security associations	[1] 11.7.8.8	M		0-1	

Prerequisite: A.91/11 -- REG-RSP

Table A.146: PDU: Registration Response (REG-RSP)

Item	Parameter	Reference	Status	Support
1	Management Message type=7	[1] 6.3.2.3.8	m	
2	Response	[1] 6.3.2.3.8	m	
3	TLV Encoded Information see next table REG-RSP TLV	[1] 6.3.2.3.8	m	

Comments:

Table A.147: PDU: REG-RSP TLV (PMP)

Item	Parameter	Reference	Status	Support
1	CID	[1] 6.3.2.3.8	m	
2	Response (value 0 or 1)	[1] 6.3.2.3.8	m	
3	Secondary Management CID	[1] 11.7.5	m	
4	HMAC Tuple	[1] 11.1.2	m	
5	SS Capabilities	[1] 11.7.8	m	
6	IP version	[1] 11.7.4	m	
7	Vendor ID Encoding	[1] 11.1.5	o	
8	Vendor-specific information	[1] 11.1.6	m	
9	ARQ parameters	[1] 11.7.1	m	
10	IP management mode	[1] 11.7.3	m	
11	SS management support	[1] 6.3.2.3.8	m	

A.9.2.1.21 PKM-REQ and PKM-RSP Messages

Prerequisite: A.2/1 -- PMP topology
Prerequisite: A.91/8 -- PKM-REQ

Table A.148: PDU: PKM Request (PKM-REQ)

Item	Parameter	Reference	Status	Support
1	Management Message type=9	[1] 6.3.2.3.9	m	
2	Code	[1] 6.3.2.3.9	m	
3	PKM Identifier	[1] 6.3.2.3.9	m	
4	TLV Encoded Attributes	[1] 6.3.2.3.9	m	

Comments :
Prerequisite : A.91/9 -- PKM-RSP

Table A.149 : PDU : PKM Reply (PKM-RSP)

Item	Parameter	Reference	Status	Support
1	Management Message type=10	[1] 6.3.2.3.9	m	
2	Code	[1] 6.3.2.3.9	m	
3	PKM Identifier	[1] 6.3.2.3.9	m	
4	TLV Encoded Attributes	[1] 6.3.2.3.9	m	

Comments :

Table A.150 : PDU : TLV Attributes (SA Add)

Prerequisite : A.95/1 -- SA Add (Code 3)

Item	Parameter	Reference	Status	Support
1	Key Sequence Number	[1] 6.3.2.3.9.1	m	
2	SA Descriptors	[1] 6.3.2.3.9.1	m	
3	HMAC digest	[1] 6.3.2.3.9.1	m	

Comments :
Prerequisite : A.148/4 -- PKM-REQ TLV
Prerequisite: A.95/2 -- Auth Request (Code 4)

Table A.151: PDU: TLV Attributes (Auth Request)

Item	Parameter	Reference	Status	Support
1	SS-Certificate	[1] 6.3.2.3.9.2	m	
2	Security Capabilities	[1] 6.3.2.3.9.2	m	
3	SAID	[1] 6.3.2.3.9.2	m	

Comments :
Prerequisite : A.149/4 -- PKM-RSP TLV
Prerequisite: A.95/3 -- Auth Reply (Code 5)

Table A.152: PDU: TLV Attributes (Auth Reply)

Item	Parameter	Reference	Status	Support
1	AUTH-Key	[1] 6.3.2.3.9.3	m	
2	Key-Lifetime	[1] 6.3.2.3.9.3	m	
3	Key-Sequence-Number	[1] 6.3.2.3.9.3	m	
4	SA Descriptor	[1] 6.3.2.3.9.3	m	
5	PKM configuration	[1] 6.3.2.3.9.3	m	

Comments :
Prerequisite : A.149/4 -- PKM-RSP TLV
Prerequisite: A.95/4 -- Auth Reject (Code 6)

Table A.153: PDU: TLV Attributes (Auth Reject)

Item	Parameter	Reference	Status	Support
1	Error code	[1] 6.3.2.3.9.4	m	
2	Display-String	[1] 6.3.2.3.9.4	o	

Comments:
Prerequisite: A.148/4 -- PKM-REQ TLV
Prerequisite: A.95/5 -- Key Request (Code 7)

Table A.154: PDU: TLV Attributes (Key Request)

Item	Parameter	Reference	Status	Support
1	Key-Sequence-Number	[1] 6.3.2.3.9.5	m	
2	HMAC-Digest	[1] 6.3.2.3.9.5	m	
3	SAID	[1] 6.3.2.3.9.5	m	

Comments :
Prerequisite : A.149/4 -- PKM-RSP TLV
Prerequisite: A.95/6 -- Key Reply (Code 8)

Table A.155: PDU: TLV Attributes (Key Reply)

Item	Parameter	Reference	Status	Support
1	Key-Sequence-number	[1] 6.3.2.3.9.6	m	
2	HMAC-Digest	[1] 6.3.2.3.9.6	m	
3	SAID	[1] 6.3.2.3.9.6	m	
4	TEK-Parameters	[1] 6.3.2.3.9.6	m	

Comments :
Prerequisite : A.149/4 -- PKM-RSP TLV
Prerequisite: A.95/7 -- Key Reject (Code 9)

Table A.156: PDU: TLV Attributes (Key Reject)

Item	Parameter	Reference	Status	Support
1	Key-Sequence-number	[1] 6.3.2.3.9.7	m	
2	HMAC-Digest	[1] 6.3.2.3.9.7	m	
3	SAID	[1] 6.3.2.3.9.7	m	
4	Error-code	[1] 6.3.2.3.9.7	m	

Comments :
Prerequisite : A.149/4 -- PKM-RSP TLV
Prerequisite: A.95/8 -- Auth Invalid (Code 10)

Table A.157: PDU: TLV Attributes (Auth Invalid)

Item	Parameter	Reference	Status	Support
1	Error-code	[1] 6.3.2.3.9.8	m	
2	Display-String	[1] 6.3.2.3.9.8	m	

Comments :
Prerequisite : A.149/4 -- PKM-RSP TLV
Prerequisite: A.95/9 -- TEK Invalid (Code 11)

Table A.158: PDU: TLV Attributes (TEK Invalid)

Item	Parameter	Reference	Status	Support
1	Key-Sequence-number	[1] 6.3.2.3.9.9	m	
2	HMAC-Digest	[1] 6.3.2.3.9.9	m	
3	SAID	[1] 6.3.2.3.9.9	m	
4	Error-code	[1] 6.3.2.3.9.9	m	
5	Display-String	[1] 6.3.2.3.9.9	o	

Comments :
Prerequisite : A.148/4 -- PKM-REQ TLV
Prerequisite: A.95/10 -- Authent Info

Table A.159: PDU: TLV Attributes (Authentication Information)

Item	Parameter	Reference	Status	Support
1	CA-Certificate	[1] 6.3.2.3.9.10	m	

Comments:

A.9.2.1.22 DSA-REQ, DSA-RSP and DSA-ACK messages

Table A.160: PDU: DSA-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=11	[1] 6.3.2.3.10	m	
2	Transaction ID	[1] 6.3.2.3.10	m	
3	TLV Encoded Information see next table: DSA-REQ TLV	[1] 6.3.2.3.10	m	

Comments :

Table A.161 : DSA-REQ parameter families

Item	Parameter	Reference	Status	Support
1	Service flow parameters see table A.162	[1] 6.3.2.3.10 [1] 11.13	m	
2	Convergence sublayer parameter encodings	[1] 6.3.2.3.10 [1] 11.13.21	m	
3	HMAC tuple	[1] 6.3.2.3.10	m	

Comments :

Table A.162 : DSA-REQ TLV for Service flow parameters

Item	Parameter	Reference	Status	Support
1	Service flow identifier - SFID	[1] 11.13.1	m	
2	CID	[1] 11.13.2	m	
3	Service class name	[1] 11.13.3	m	
4	Service flow error parameter set	[1] 11.13.4	n/a	
5	QOS parameter set type	[1] 11.13.5	m	
6	Traffic priority	[1] 11.13.6	m	
7	Maximum sustained traffic rate	[1] 11.13.7	m	
8	Maximum traffic burst	[1] 11.13.8	m	
9	Minimum reserved traffic rate	[1] 11.13.9	m	
10	Minimum tolerable traffic rate	[1] 11.13.10	m	
11	Vendor specific QOS parameters	[1] 11.13.11	m	
12	Service flow scheduling type	[1] 11.13.12	m	
13	Request/transmission policy	[1] 11.13.13	m	
14	Tolerated jitter	[1] 11.13.14	m	
15	Maximum latency	[1] 11.13.15	m	
16	Fixed length versus variable length SDU indicator	[1] 11.13.16	m	
17	SDU size	[1] 11.13.17	m	
18	Target SAID	[1] 11.13.18	m	
19	ARQ enable	[1] 11.13.19	c162-01	
20	ARQ_WINDOW_SIZE	[1] 11.13.19	c162-01	
21	ARQ_TX_delay	[1] 11.13.19	c162-01	
22	ARQ_RX_delay	[1] 11.13.19	c162-01	
23	ARQ_BLOCK_LIFETIME	[1] 11.13.19	c162-01	
24	ARQ_SYNC_LOSS	[1] 11.13.19	c162-01	
25	ARQ_DELIVER_IN_ORDER	[1] 11.13.19	c162-01	
26	ARQ_PURGE_TIMEOUT	[1] 11.13.19	c162-01	
27	ARQ_BLOCK_SIZE	[1] 11.13.19	c162-01	
28	Maximum fragment length	[1] 11.13.20	m	
29	CS specification	[1] 11.13.21	m	

Comments : **n/a** status means here : not used in DSA-REQ

c162-01:IF A18/3 - - if SS supports ARQ procedure
or
IF A62/3 - - if BS supports ARQ procedure
THEN m - then mandatory
ELSE n/a

Table A.163 : DSA-REQ TLV for Packet Convergence sublayer : packet classification rule parameter

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.10	m	

Comments :

Table A.164 : PDU : DSA-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=12	[1] 6.3.2.3.11	m	
2	Transaction ID	[1] 6.3.2.3.11	m	
3	Confirmation code	[1] 6.3.2.3.11	m	
4	TLV Encoded Information see next table: DSA-RSP TLV	[1] 6.3.2.3.11	m	

Comments :

Table A.165 : DSA-RSP parameter families

Item	Parameter	Reference	Status	Support
1	Service flow parameters see table A.162	[1] 6.3.2.3.11 [1] 11.13	m	
2	Convergence sublayer parameter encodings	[1] 6.3.2.3.11 [1] 11.13.21	m	

Comments :

Table A.166 : DSA-RSP TLV for Service flow parameters

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.11	m	

Comments:

Table A.167: PDU: DSA-ACK

Item	Parameter	Reference	Status	Support
1	Management Message type=13	[1] 6.3.2.3.12	m	
2	Transaction ID	[1] 6.3.2.3.12	m	
3	Confirmation code	[1] 6.3.2.3.12	m	
4	TLV Encoded Information see next table: DSA-ACK TLV	[1] 6.3.2.3.12	m	

Comments:

Table A.168: DSA-ACK parameter families

Item	Parameter	Reference	Status	Support
1	Service flow error set	[1] 6.3.2.3.12 [1] 11.13.4	m	

Comments :

Table A.169: DSA-ACK TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.12		

Comments :

6.2.2.3.47 A.9.2.1.23 DSC-REQ, DSC-RSP and DSC-ACK messages

Table A.170: PDU: DSC-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=14	[1] 6.3.2.3.13	m	
2	Transaction ID	[1] 6.3.2.3.13	m	
3	TLV Encoded Information see next table: DSC-REQ TLV	[1] 6.3.2.3.13	m	

Comments:

Table A.171 : DSC-REQ parameter families

Item	Parameter	Reference	Status	Support
1	Service flow parameters	[1] 6.3.2.3.13 [1] 11.13	m	

Comments :

Table A.172: DSC-REQ TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.13	m	

Comments :

Table A.173 : PDU : DSC-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=15	[1] 6.3.2.3.14	m	
2	Transaction ID	[1] 6.3.2.3.14	m	
3	Confirmation code	[1] 6.3.2.3.14	m	
4	TLV Encoded Information see next table: DSC-RSP TLV	[1] 6.3.2.3.14	m	

Comments:

Table A.174 : DSC-RSP parameter families

Item	Parameter	Reference	Status	Support
1	Service flow parameters	[1] 6.3.2.3.14 [1] 11.13	m	
2	Convergence sublayer parameter encodings	[1] 6.3.2.3.14 [1] 11.13.21	m	

Comments :

Table A.175: DSC-RSP TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.14	m	

Comments :

Table A.176: PDU: DSC-ACK

Item	Parameter	Reference	Status	Support
1	Management Message type=16	[1] 6.3.2.3.15	m	
2	Transaction ID	[1] 6.3.2.3.15	m	
3	Confirmation code	[1] 6.3.2.3.15	m	
4	TLV Encoded Information see next table: DSC-ACK TLV	[1] 6.3.2.3.15	m	

Comments:

Table A.177 : DSC-ACK parameter families

Item	Parameter	Reference	Status	Support
1	Service flow error set	[1] 6.3.2.3.15 [1] 11.13.4	m	

Comments :

Table A.178: DSC-ACK TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.15	m	

Comments:

A.9.2.1.24 DSD-REQ and DSD-RSP messages

Table A.179: PDU: DSD-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=17	[1] 6.3.2.3.16	m	
2	Transaction ID	[1] 6.3.2.3.16	m	
3	Service flow ID	[1] 6.3.2.3.16	m	
4	TLV Encoded Information see next table: DSD-REQ TLV	[1] 6.3.2.3.16	m	

Comments:

Table A.180: DSD-REQ TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.16	m	

Comments :

Table A.181 : PDU : DSD-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=18	[1] 6.3.2.3.17	m	
2	Transaction ID	[1] 6.3.2.3.17	m	
3	Confirmation code	[1] 6.3.2.3.17	m	
4	Service flow ID	[1] 6.3.2.3.17	m	
5	TLV Encoded Information see next table: DSD-RSP TLV	[1] 6.3.2.3.17	m	

Comments:

Table A.182: DSD-RSP TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[1] 6.3.2.3.17	m	

Comments:

A.10 Parameters and timers

Table A.183: SS Timers MAC layer - PMP

Item	Timer name MAC layer	Reference	Status	Support	Value	
					Allowed range	Supported
2	T1	[1] 10.1	m		< 5 DCD interval	
3	T2	[1] 10.1	m		< 5 ranging interval	
4	T3	[1] 10.1	m		< 200 ms	
5	T4	[1] 10.1	m		30-35 s	
6	T6	[1] 10.1	m		< 3 s	
7	T7	[1] 10.1	m		< 1 s	
8	T8	[1] 10.1	m		< 300 ms	
9	T10	[1] 10.1	m		< 3 s	
10	T12	[1] 10.1	m		< 5 UCD interval	
11	T14	[1] 10.1	m		< 200 ms	
12	T16	[1] 10.1	m		> 10 ms	
13	T18	[1] 10.1	m		< 300 ms or T9	
14	T19	[1] 10.1	m		?	
15	T20	[1] 10.1	m		> 2 ms	
16	T21	[1] 10.1	m		< 10 s	
17	T22	[1] 10.1	c183-01		< 500 ms	
18	T27	[1] 10.1	m		10ms-200ms	

c183-01:IF A18/3 - - if SS supports ARQ procedure
THEN m - then mandatory
ELSE n/a

Table A.184: Privacy (PKM) Related Timers

Item	Timer name	Reference	Status	Support	Value	
					Allowed range	Supported
1	AK Lifetime (PKM)	[1] 10.2	m		c184-01	
2	TEK Lifetime (PKM)	[1] 10.2	m		c184-02	
3	Authorize Wait Timeout (PKM)	[1] 10.2	m		2-30s	
4	Reauthorize Wait Timeout (PKM)	[1] 10.2	m		2-30s	
5	Authorization Grace Time (PKM)	[1] 10.2	m		c184-03	
6	Operational Wait Timeout (PKM)	[1] 10.2	m		1-10s	
7	Rekey Wait Timeout (PKM)	[1] 10.2	m		1-10s	
8	TEK Grace Time (PKM)	[1] 10.2	m		c184-04	
9	Authorize Reject Wait Timeout (PKM)	[1] 10.2	m		10-600s	

c184-01: IF (test mode) THEN 5 mn ELSE 1 day..70 days
c184-02: IF (test mode) THEN 3 mn ELSE 30 mn..7 days
c184-03: IF (test mode) THEN 60s ELSE 5mn..35 days
c184-04: IF (test mode) THEN 60s ELSE 5 mn..3.5 days

Comments: The TEK Grace Time shall be less than half the TEK Lifetime

Table A.185: BS Timers MAC layer - PMP

Item	Timer name MAC layer	Reference	Status	Support	Value	
					Allowed range	Supported
10	T5	[1] 10.1	m		< 2 s	
11	T7	[1] 10.1	m		< 1 s	
12	T8	[1] 10.1	m		< 300 ms	
13	T9	[1] 10.1	m		> 300 ms	
14	T10	[1] 10.1	m		< 3 s	
15	T13	[1] 10.1	m		> 15 mn	
16	T15	[1] 10.1	m		> 20 ms	
17	T17	[1] 10.1	m		> 5 mn	
18	T22	[1] 10.1	c185-01		< 500 ms	

c185-01: IF A62/3 - - if BS supports ARQ procedure
THEN m - then mandatory
ELSE n/a