

# ETSI TS 102 545-1 V1.1.1 (2007-09)

---

*Technical Specification*

**Broadband Radio Access Networks (BRAN);  
HiperMAN;  
Conformance Testing for WiMAX/HiperMAN 1.3.1;  
Part 1: Protocol Implementation Conformance  
Statement (PICS) proforma**

---



---

Reference

DTS/BRAN-004T008-1

---

Keywords

ATS, broadband, DLC, FWA, HiperMAN, MAC,  
point-to-multipoint, radio, testing

**ETSI**

650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° 7803/88

---

**Important notice**

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

[http://portal.etsi.org/chaicor/ETSI\\_support.asp](http://portal.etsi.org/chaicor/ETSI_support.asp)

---

**Copyright Notification**

No part may be reproduced except as authorized by written permission.  
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2007.

© WIMAX Forum 2007.

All rights reserved.

**DECT**<sup>TM</sup>, **PLUGTESTS**<sup>TM</sup> and **UMTS**<sup>TM</sup> are Trade Marks of ETSI registered for the benefit of its Members.  
**TIPHON**<sup>TM</sup> and the **TIPHON logo** are Trade Marks currently being registered by ETSI for the benefit of its Members.  
**3GPP**<sup>TM</sup> is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

# Contents

|  |           |
|--|-----------|
| Intellectual Property Rights .....   | 7         |
| Foreword.....  | 7         |
| 1 Scope .....  | 8         |
| 2 References .....   | 8         |
| 3 Definitions, symbols and abbreviations .....                                       | 9         |
| 3.1 Definitions .....  | 9         |
| 3.2 Symbols.....   | 9         |
| 3.3 Abbreviations .....  | 9         |
| 4 Conformance to this PICS Proforma Specification.....                               | 10        |
| <b>Annex A (normative): Protocol ICS (PICS) for HiperMAN/WiMAX- TWG profile.....</b> | <b>11</b> |
| A.1 Guidance for completing PICS Proforma.....                                       | 11        |
| A.1.1 Purposes and Structure .....   | 11        |
| A.1.2 Abbreviations and Conventions .....  | 11        |
| A.1.3 Instructions for completing the PICS Proforma .....                            | 13        |
| A.2 Identification of the implementation .....                                       | 13        |
| A.2.1 Date of statement.....   | 13        |
| A.2.2 Implementation Under Test (IUT) identification .....                           | 13        |
| A.2.3 System Under Test (SUT) identification .....                                   | 14        |
| A.2.4 Product supplier.....  | 14        |
| A.2.5 Client (if different from product supplier).....                               | 14        |
| A.2.6 PICS contact person .....  | 14        |
| A.3 Identification of the standard.....  | 15        |
| A.4 Global statement of conformance.....   | 15        |
| A.5 System profiles.....   | 15        |
| A.5.1 WirelessMAN-OFDMA 802.16e .....  | 16        |
| A.5.1.1 Mobile Station .....   | 17        |
| A.5.1.1.1 PHY functions.....   | 17        |
| A.5.1.1.1.1 m Factor.....  | 17        |
| A.5.1.1.1.2 Cyclic Prefix.....   | 17        |
| A.5.1.1.1.3 Frame Duration.....  | 18        |
| A.5.1.1.1.4 UL and DL Subframe Size .....  | 18        |
| A.5.1.1.1.5 Subcarrier Allocation Mode .....   | 19        |
| A.5.1.1.1.6 UL Channel Sounding .....  | 19        |
| A.5.1.1.1.7 Ranging and Band Width Request.....                                      | 19        |
| A.5.1.1.1.8 Fast Feedback.....   | 20        |
| A.5.1.1.1.9 Channel Coding.....  | 20        |
| A.5.1.1.1.10 HARQ.....   | 21        |
| A.5.1.1.1.11 Control Mechanism .....   | 22        |
| A.5.1.1.1.12 Power Control.....  | 23        |
| A.5.1.1.1.13 Channel Quality Measurements.....                                       | 23        |
| A.5.1.1.1.14 Modulation .....  | 23        |
| A.5.1.1.1.15 MAP Support.....  | 25        |
| A.5.1.1.1.16 Multiple Input Multiple Output (MIMO) .....                             | 25        |
| A.5.1.1.1.17 MS Minimum Performance Requirements .....                               | 26        |
| A.5.1.1.1.18 Minimum Transmit Requirements.....                                      | 31        |
| A.5.1.1.1.19 Receive Requirements Table .....  | 32        |
| A.5.1.2 MS MAC functions .....   | 32        |
| A.5.1.1.2.1 Packet Convergence Sublayer .....  | 32        |
| A.5.1.1.2.2 MAC common part sub layer .....  | 33        |
| A.5.1.2 Base Station .....   | 46        |

|              |   |     |
|--------------|---|-----|
| A.5.1.2.1    | PHY functions.....  | 46  |
| A.5.1.2.1.1  | Sampling Factor.....  | 46  |
| A.5.1.2.1.2  | Cyclic Prefix.....  | 46  |
| A.5.1.2.1.3  | Frame Duration.....   | 46  |
| A.5.1.2.1.4  | TTG/RTG.....  | 46  |
| A.5.1.2.1.5  | UL and DL Subframe Size.....                                      | 47  |
| A.5.1.2.1.6  | Subcarrier Allocation Mode.....                                   | 48  |
| A.5.1.2.1.7  | UL Channel Sounding.....  | 48  |
| A.5.1.2.1.8  | Ranging and Band Width Request.....                               | 48  |
| A.5.1.2.1.9  | Fast Feedback.....  | 49  |
| A.5.1.2.1.10 | Channel Coding.....   | 49  |
| A.5.1.2.1.11 | HARQ.....   | 50  |
| A.5.1.2.1.12 | Control Mechanism.....  | 50  |
| A.5.1.2.1.13 | Power Control.....  | 51  |
| A.5.1.2.1.14 | Channel Quality Measurements.....                                 | 51  |
| A.5.1.2.1.15 | Modulation.....   | 51  |
| A.5.1.2.1.16 | MAP Support.....  | 53  |
| A.5.1.2.1.17 | Multiple Input Multiple Output (MIMO).....                        | 53  |
| A.5.1.2.1.18 | BS Performance Requirements.....                                  | 54  |
| A.5.1.2.1.19 | Minimum Transmit Requirements.....                                | 57  |
| A.5.1.2.1.20 | Receive Requirements.....   | 57  |
| A.5.1.2.1.21 | BS Synchronization.....   | 58  |
| A.5.1.2.2    | BS MAC functions.....   | 58  |
| A.5.1.2.2.1  | Packet Convergence Sublayer.....                                  | 58  |
| A.5.1.2.2.2  | MAC common part sub layer.....                                    | 59  |
| A.6          | List of PDUs, MAP IEs, sub-headers, and extended sub-headers..... | 72  |
| A.6.1        | PDUs for MAC layer.....   | 72  |
| A.6.1.1      | PDUs for network entry and initialization.....                    | 72  |
| A.6.1.2      | PDUs for service flows.....                                       | 73  |
| A.6.1.3      | PDUs for ARQ.....   | 74  |
| A.6.1.4      | PDUs for miscellaneous capabilities.....                          | 75  |
| A.6.1.5      | PDUs for security.....  | 75  |
| A.6.1.6      | PDUs for Sleep Mode.....  | 76  |
| A.6.1.7      | PDUs for Handover.....  | 77  |
| A.6.1.8      | PDUs for Idle mode.....   | 78  |
| A.6.1.9      | PDUs for Feedback.....  | 78  |
| A.6.1.10     | PDUs and MAP IEs for Power Control.....                           | 79  |
| A.6.1.11     | PDUs for band AMC.....  | 81  |
| A.6.2        | MAP IEs.....  | 82  |
| A.7          | PDU fields.....   | 85  |
| A.7.1        | Fields of PDUs for MAC layer.....                                 | 85  |
| A.7.1.1      | DL-MAP.....   | 85  |
| A.7.1.2      | DCD.....  | 86  |
| A.7.1.3      | UCD.....  | 87  |
| A.7.1.4      | UL-MAP.....   | 89  |
| A.7.1.5      | RNG-REQ and RNG-RSP.....  | 90  |
| A.7.1.6      | SBC-REQ and SBC-RSP.....  | 92  |
| A.7.1.7      | ARQ messages.....   | 93  |
| A.7.1.8      | RES-CMD.....  | 94  |
| A.7.1.9      | CLK-CMP.....  | 94  |
| A.7.1.10     | DREG-REQ and DREG-CMD.....  | 94  |
| A.7.1.11     | DSX-RVD.....  | 95  |
| A.7.1.12     | REP-REQ and REP-RSP.....  | 95  |
| A.7.1.13     | FPC.....  | 96  |
| A.7.1.14     | REG-REQ and REG-RSP.....  | 96  |
| A.7.1.15     | PKM-REQ and PKM-RSP Messages.....                                 | 98  |
| A.7.1.16     | DSA-REQ, DSA-RSP and DSA-ACK messages.....                        | 100 |
| A.7.1.17     | DSC-REQ, DSC-RSP and DSC-ACK messages.....                        | 102 |
| A.7.1.18     | DSD-REQ and DSD-RSP messages.....                                 | 104 |
| A.7.1.19     | TLVs for Handover, Sleep and Idle Mode.....                       | 104 |

|          |                                  |     |
|----------|----------------------------------|-----|
| A.7.1.20 | MOB_NBR-ADV .....                | 106 |
| A.7.1.21 | MOB_SCN-REQ .....                | 107 |
| A.7.1.22 | MOB_SCN-RSP .....                | 107 |
| A.7.1.23 | MOB_SCN-REP .....                | 108 |
| A.7.1.24 | MOB_BSHO-REQ .....               | 108 |
| A.7.1.25 | MOB_BSHO-RSP .....               | 109 |
| A.7.1.26 | MOB_MSHO-REQ .....               | 109 |
| A.7.1.27 | MOB_HO-IND .....                 | 109 |
| A.7.1.28 | PDU's fields for Idle Mode ..... | 110 |
| A.7.1.29 | Feedback .....                   | 110 |

## **Annex B (normative): Protocol ICS (PICS) for HiperMAN/WiMAX- ETWG profile .....111**

|             |  |     |
|-------------|--|-----|
| B.1         | Guidance for completing PICS Proforma.....           | 111 |
| B.1.1       | Purposes and Structure .....                         | 111 |
| B.1.2       | Abbreviations and Conventions .....                  | 111 |
| B.1.3       | Instructions for completing the PICS Proforma .....  | 113 |
| B.2         | Identification of the implementation .....           | 113 |
| B.2.1       | Date of statement.....                               | 113 |
| B.2.2       | Implementation Under Test (IUT) identification ..... | 113 |
| B.2.3       | System Under Test (SUT) identification .....         | 114 |
| B.2.4       | Product supplier.....                                | 114 |
| B.2.5       | Client (if different from product supplier).....     | 114 |
| B.2.6       | PICS contact person .....                            | 114 |
| B.3         | Identification of the standard.....                  | 115 |
| B.4         | Global statement of conformance.....                 | 115 |
| B.5         | System profiles .....                                | 115 |
| B.5.1       | WirelessMAN-SC .....                                 | 116 |
| B.5.2       | WirelessMAN-SCa.....                                 | 116 |
| B.5.3       | WirelessMAN-OFDM and WirelessHUMAN-OFDM .....        | 116 |
| B.5.3.1     | MS in PMP topology .....                             | 117 |
| B.5.3.1.1   | PHY functions.....                                   | 117 |
| B.5.3.1.2   | Convergence sub layer .....                          | 125 |
| B.5.3.1.3   | MAC common part sub layer .....                      | 127 |
| B.5.3.1.4   | Construction and Transmission of MAC PDUs .....      | 128 |
| B.5.3.1.5   | MAC procedures for Mobility Management.....          | 134 |
| B.5.3.1.5.1 | Data delivery services.....                          | 134 |
| B.5.3.1.5.2 | Sleep Mode.....                                      | 135 |
| B.5.3.1.5.3 | Neighbor advertisement.....                          | 135 |
| B.5.3.1.5.4 | Handover .....                                       | 136 |
| B.5.3.1.5.5 | Idle Mode .....                                      | 137 |
| B.5.3.1.6   | Security .....                                       | 138 |
| B.5.3.2     | MS in MESH topology .....                            | 140 |
| B.5.3.3     | BS in PMP topology .....                             | 141 |
| B.5.3.3.1   | PHY functions.....                                   | 141 |
| B.5.3.3.2   | Convergence sub layer .....                          | 147 |
| B.5.3.3.3   | MAC common part sub layer .....                      | 148 |
| B.5.3.3.4   | Construction and Transmission of MAC PDUs .....      | 149 |
| B.5.3.3.5   | MAC procedures for Mobility Management.....          | 155 |
| B.5.3.3.5.1 | Data delivery services.....                          | 155 |
| B.5.3.3.5.2 | Sleep Mode.....                                      | 155 |
| B.5.3.3.5.3 | Network advertisement.....                           | 156 |
| B.5.3.3.5.4 | Handover .....                                       | 156 |
| B.5.3.3.5.5 | Idle Mode .....                                      | 158 |
| B.5.3.3.6   | Security .....                                       | 159 |
| B.5.3.4     | BS in MESH topology .....                            | 161 |
| B.5.4       | WirelessMAN-OFDMA and WirelessHUMAN-OFDMA.....       | 161 |
| B.6         | List of PDUs and their directions .....              | 162 |
| B.6.1       | Void.....  | 162 |

|            |  |     |
|------------|--|-----|
| B.6.2      | PDU for MAC layer.....                               | 162 |
| B.6.2.1    | PDU for MAC layer in PMP topology.....               | 162 |
| B.6.2.1.1  | PDU for network entry and initialization in PMP..... | 162 |
| B.6.2.1.2  | PDU for service flows in PMP.....                    | 163 |
| B.6.2.1.3  | PDU for ARQ in PMP.....                              | 164 |
| B.6.2.1.4  | PDU for miscellaneous capabilities in PMP.....       | 164 |
| B.6.2.1.5  | PDU for privacy in PMP.....                          | 165 |
| B.6.2.1.6  | PDU for Mobility in PMP.....                         | 166 |
| B.6.2.2    | PDU for MAC layer in MESH topology.....              | 166 |
| B.7        | PDU fields.....                                      | 167 |
| B.7.1      | Fields of PDUs for MAC layer.....                    | 167 |
| B.7.1.1    | PDUs fields for MAC in PMP topology.....             | 167 |
| B.7.1.1.1  | DL-MAP.....  | 167 |
| B.7.1.1.2  | DCD.....   | 168 |
| B.7.1.1.3  | UCD.....   | 169 |
| B.7.1.1.4  | UL-MAP.....  | 169 |
| B.7.1.1.5  | RNG-REQ and RNG-RSP.....                             | 170 |
| B.7.1.1.6  | SBC-REQ and SBC-RSP.....                             | 171 |
| B.7.1.1.7  | DHCP messages.....                                   | 172 |
| B.7.1.1.8  | Time of day messages.....                            | 172 |
| B.7.1.1.9  | ARQ messages.....                                    | 172 |
| B.7.1.1.10 | MCA-REQ and MCA-RSP.....                             | 173 |
| B.7.1.1.11 | DBPC-REQ and DBPC-RSP.....                           | 174 |
| B.7.1.1.12 | RES-CMD.....   | 174 |
| B.7.1.1.13 | CLK-CMP.....   | 174 |
| B.7.1.1.14 | DREG-REQ and DREG-CMD.....                           | 175 |
| B.7.1.1.15 | DSX-RVD.....   | 175 |
| B.7.1.1.16 | TFTP-CPLT and TFTP-RSP.....                          | 175 |
| B.7.1.1.17 | REP-REQ and REP-RSP.....                             | 176 |
| B.7.1.1.18 | AAS-FBCK-REQ and AAS-FBCK-RSP.....                   | 176 |
| B.7.1.1.19 | AAS-BEAM messages.....                               | 177 |
| B.7.1.1.20 | FPC.....   | 177 |
| B.7.1.1.21 | REG-REQ and REG-RSP.....                             | 178 |
| B.7.1.1.22 | PKM-REQ and PKM-RSP Messages.....                    | 179 |
| B.7.1.1.23 | DSA-REQ, DSA-RSP and DSA-ACK messages.....           | 181 |
| B.7.1.1.24 | DSC-REQ, DSC-RSP and DSC-ACK messages.....           | 185 |
| B.7.1.1.25 | DSD-REQ and DSD-RSP messages.....                    | 188 |
| B.7.1.2    | Additional fields of MAC PDUs in MESH topology.....  | 188 |
| B.8        | Parameters and timers.....                           | 189 |
| History    | .....  | 191 |

---

## Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://webapp.etsi.org/IPR/home.asp>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

---

## Foreword

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

The present document specifies the Protocol Implementation Conformance Statement (PICS) for High PERFORMANCE Radio Metropolitan Area Network (HiperMAN) and WiMAX, which operates on frequencies between 2 GHz and 11 GHz.

The present document has been developed on the basis of preceding versions of HiperMAN and WiMAX PICS and makes the previous versions obsolete.

The present document is part 1 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 specifies the Protocol Implementation Conformance Statement (PICS) for HiperMAN/WiMAX per ISO/IEC 9646-7 [9], ITU-T Recommendation X.296 [10] and EG 201 058 [11] for conformance of HiperMAN1.3.1/WiMAX compliant systems.

---

## 2 References

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

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

- [1] ETSI TS 102 177: "Broadband Radio Access Networks (BRAN); HiperMAN; Physical (PHY) layer".
- [2] ETSI TS 102 178: "Broadband Radio Access Networks (BRAN); HiperMAN; Data Link Control (DLC) layer".
- [3] ETSI TS 102 210: "Broadband Radio Access Networks (BRAN); HiperMAN; System profiles".
- [4] IEEE 802.16-2004: "IEEE Standard for Local and Metropolitan Area Networks - Part 16: Air Interface for Fixed Broadband Wireless Access Systems".
- [5] IEEE 802.16e-2005 and IEEE 802.16-2004/Cor 1-2005: "Standard for Local and metropolitan area networks - Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems. Amendment 2: Physical and Medium Access Control Layers for Combined Fixed and Mobile Operation in Licensed Bands and Corrigendum1".
- [6] ETWG Profile: "Evolutionary WiMAX OFDM System Profile- WiMAX Forum".
- [7] WiMAX Forum<sup>TM</sup> Mobile System Profile v1.0.0, "WiMAX Forum<sup>TM</sup>, Technical Working Group, April 2006".
- [8] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".
- [9] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".
- [10] ITU-T Recommendation X.296: "OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications - Implementation conformance statements".
- [11] ETSI EG 201 058: "Methods for Testing and Specification (MTS); Implementation Conformance Statement (ICS) proforma style guide".
- [12] 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".



- [13] IEEE 802.1Q: "IEEE Standards for Local and metropolitan area networks - Virtual Bridged Local Area Networks".
- [14] ITU-T Recommendation X.690: "Information technology - ASN.1 encoding rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)".
- [15] IETF RFC 2131: "Dynamic Host Configuration Protocol".
- [16] IETF RFC 868: "Time Protocol".
- [17] IEEE 802.2 (ISO/IEC 8802-2:1998): "IEEE Standard for Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific Requirements - Part 2: Logical Link Control".
- [18] IEEE 802.1D: "IEEE standard for local and metropolitan area networks--Media access control (MAC) Bridges (Incorporates IEEE 802.1t-2001 and IEEE 802.1w)". .
- [19] IETF RFC 3344: "IP Mobility Support for IPv4".

## 3 Definitions, symbols and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in ISO/IEC 9646-1 [8], TS 102 177 [1], TS 102 178 [2], ISO/IEC 9646-7 [9] and IEEE 802.16-2004 [4] with Corrigendum and Amendment as provided by IEEE 802.16e-2005 [5] apply.

### 3.2 Symbols

For the purposes of the present document, the following symbols apply:

|              |   |
|--------------|---|
| $BW$         | Nominal channel bandwidth (MHz)                       |
| $m$          | CID range divider                                     |
| $P_{TX,max}$ | Maximum mean transmit power at the antenna port (dBm) |
| $T_b$        | Useful OFDM symbol time (s)                           |
| $T_F$        | Frame duration (ms)                                   |
| $T_g$        | OFDM symbol guard time or CP time (s)                 |
| $T_s$        | OFDM symbol time (s)                                  |

### 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TS 102 177 [1], TS 102 178 [2], ISO/IEC 9646-1 [8] and the following apply:

|      |   |
|------|---|
| BS   | Base Station                                  |
| IUT  | Implementation Under Test                     |
| MS   | Mobile Station                                |
| PICS | Protocol Implementation Conformance Statement |
| SUT  | System Under Test                             |

---

## 4 Conformance to this PICS Proforma Specification

If it claims to conform to the present document, the actual PICS proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma given in annex A, and shall preserve the numbering, naming, and ordering of the proforma items.

A PICS which conforms to the present document shall be a conforming PICS proforma completed in accordance with the guidance for completion given in clause A.1.

---

## Annex A (normative): Protocol ICS (PICS) for HiperMAN/WiMAX- TWG profile

Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the PICS proforma in this annex so that it can be used for its intended purposes and may further publish the completed PICS.

---

### A.1 Guidance for completing PICS Proforma

#### A.1.1 Purposes and Structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in defined in references [1], [2] (which mandates requirements defined in [4] and [5]) may provide information about the implementation in a standardized manner. The PICS proforma does not cover every possible compliant WiMAX implementation, but only those implementations that are compliant with the system profiles as defined in [7].

The PICS proforma is subdivided into clauses for the following categories of information:

- guidance for completing the PICS proforma;
- identification and implementation;
- identification of the standard;
- global statement of conformance;
- roles;
- Mobile Station (MS);
- Base Station (BS);
- List of MAC PDUs;
- PDU Fields.

#### A.1.2 Abbreviations and Conventions

##### **Item column**

- The Item column contains a number which identifies the item in the table.

##### **Capability column**

- The capability column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "Is <capability> supported by the implementation?".

##### **Reference column**

- The reference column indicates the clause of [1], [2], [4], [5] and [7] from which the requirement for the capability is derived.

### Status column

- The following notations, defined in [8], are used in the status column:

|                |  |
|----------------|--|
| <b>m</b>       | Explicitly shown as mandatory in the standard. It is required to implement.  |
| <b>o</b>       | Explicitly mentioned as optional in the standard or is not explicitly mentioned but has capability negotiations. It may or may not be implemented.   |
| <b>oi</b>      | Qualified option- for mutually exclusive or selectable options from a set. One or more of the options from the set shall be supported.   |
| <b>IO-NNNN</b> | Inter-operable Options: Item belongs to NNNN group of features for which it is requested to provide testing procedure and distinct labelling of BS equipment. More specifically: <ul style="list-style-type: none"> <li>▪ The item is not required to get general "WiMAX certified" label; and</li> <li>▪ Is required to get distinct "WiMAX certified with NNNN capability" label.</li> </ul> |

The following Inter-operable Options are defined and used in the present document:

- IO-MIMO: Group of Inter-operable Option features related to Multiple Input Multiple Output (MIMO) operation.
- IO-BF: Group of Inter-operable Option features related to Beam Forming (BF) operation.
- IO-MBS: Group of Inter-operable Option features related to Multicast and Broadcast Services (MBS) operation.
- IO-ETHx (x = 1, 2, 3): Groups of features on three Inter-operable options related to Ethernet CS IO-ETH1, IO-ETH2, IO-ETH3.

### Support column

- The support column shall be filled in by the supplier of the implementation. The following common notations, defined in [8] are used for the support column.

|               |   |
|---------------|---|
| Y or y        | Supported by implementation.  |
| N or n        | Not supported by implementation.  |
| N/A, n/a or - | No answer required (allowed only if the status is n/a either directly or after the evaluation of a conditional status). |

### Values allowed column

- The values allowed column is only used when necessary in a table. It contains the type, the list, the range, or the length of values allowed. The following notations are used.

|   |   |
|---|---|
| Range of values:<br>Example:                              | <min value>..<max value><br>5..20   |
| List of values:<br>Example 1:<br>Example 2:<br>Example 3: | <value1>, <value2>, ..., <valueN><br>2, 4, 6, 8, 9<br>1101b, 1011b, 1111b<br>0x0A, 0x34, 0x2F |
| List of named values:<br>Example:                         | <name1>(<val1>), <name2>(<val2>), ..., <nameN>(<valN>)<br>reject(1), accept(2)                |
| Length:<br>Example:                                       | Size (<min size>..<max size>)<br>Size (1..8)  |

### Values supported column

- The values supported column is only present when the values allowed column is present. It shall be filled in by the supplier of the implementation. In this column, the value or the ranges of values supported by the implementation shall be indicated.

### Reference to items

- For each possible item answer in the support column within the PICS proforma a unique reference exists which may be used, for example, in conditional expressions. It is defined as the table identifier, followed by the "/" character, followed by the item number in the table. If there is more than one support column in a table, the columns are discriminated by letters (a, b, etc.).

|            |   |
|------------|---|
| Example 1: | Table A.5/4 is the reference to the answer of item 4 in table A.5.  |
| Example 2: | Table A.6/3b is the reference to the second answer (i.e., in the second support column) of item 3 in table A.6. |

### Prerequisite Line

- A prerequisite line takes the form: Prerequisite: <predicate>.
- A prerequisite line after a clause or table title indicates that the entire clause or the entire table is not required to be completed if the predicate is FALSE.

Support of specific MAC PDUs or fields does not automatically mean support of the corresponding functionality. It means only that BS(MS) is capable of transmitting or receiving / parsing the message of specific format.

## A.1.3 Instructions for completing the PICS Proforma

The supplier of the implementation shall complete the PICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered, in the support or values supported column boxes provided, using the notation described in clause A.1.2.

However, tables related to Mobile Station shall only be completed for Mobile Station (MS) implementations, and tables related to Base Station shall only be filled in for Base Station implementations.

If necessary, the supplier may provide additional comments in space at the bottom of the tables or separately.

---

## A.2 Identification of the implementation

Identification of the Implementation Under Test (IUT) and the system in which it resides (the System Under Test (SUT)) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the PICS should be named as the contact person.

### A.2.1 Date of statement

|  |  |
|--|--|
| <b>Date of statement (MM/DD/YYYY):</b> |  |
|--|--|

### A.2.2 Implementation Under Test (IUT) identification

|                     |  |
|---------------------|--|
| <b>IUT name:</b>    |  |
| <b>IUT version:</b> |  |

### A.2.3 System Under Test (SUT) identification

|                                |  |
|--------------------------------|--|
| <b>SUT name:</b>               |  |
| <b>Hardware configuration:</b> |  |
| <b>Operating system:</b>       |  |

### A.2.4 Product supplier

|                                |  |
|--------------------------------|--|
| <b>Name:</b>                   |  |
| <b>Address:</b>                |  |
| <b>Telephone Nr.:</b>          |  |
| <b>Fax Nr:</b>                 |  |
| <b>E-mail address:</b>         |  |
| <b>Additional information:</b> |  |

### A.2.5 Client (if different from product supplier)

|                                |  |
|--------------------------------|--|
| <b>Name:</b>                   |  |
| <b>Address:</b>                |  |
| <b>Telephone Nr.:</b>          |  |
| <b>Fax Nr:</b>                 |  |
| <b>E-mail address:</b>         |  |
| <b>Additional information:</b> |  |

### A.2.6 PICS contact person

(A person to contact if there are any queries concerning the content of the PICS.)

|                                |  |
|--------------------------------|--|
| <b>Name:</b>                   |  |
| <b>Address:</b>                |  |
| <b>Telephone Nr.:</b>          |  |
| <b>Fax Nr:</b>                 |  |
| <b>E-mail address:</b>         |  |
| <b>Additional information:</b> |  |

## A.3 Identification of the standard

This PICS proforma applies to the ETSI HiperMAN/WiMAX standard consisting of the following normative references:

- HiperMAN/WiMAX Physical Layer: [1] which normatively references [4] and [5];
- HiperMAN/WiMAX Data Logical Control Layer: [2] which normatively references [4] and [5].

## A.4 Global statement of conformance

|   |  |
|---|--|
| <b>Are all mandatory capabilities implemented? (Yes/No)</b> |  |
|---|--|

NOTE: Answering "No" to this question indicates non-conformance to the HiperMAN/WiMAX standard. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conforming, on pages attached to the PICS proforma.

## A.5 System profiles

**Table A.1: System profiles**

| Item      | Role                               | Reference | Status | Support |
|-----------|------------------------------------|-----------|--------|---------|
| 1         | WiMAX Forum™ Mobile System Profile | [7]       | m      |         |
| Comments: |                                    |           |        |         |

**Table A.2: Roles**

| Item      | Role                | Reference | Status | Support |
|-----------|---------------------|-----------|--------|---------|
| 1         | Mobile Station (MS) |           | oi.3   |         |
| 2         | Base Station (BS)   |           | oi.3   |         |
| Comments: |                     |           |        |         |

## A.5.1 WirelessMAN-OFDMA 802.16e

**Table A.3: Band Class Group**

| WirelessMAN-OFDMA 802.16e |  |           |        |         |
|---------------------------|--|-----------|--------|---------|
| Item                      | Capability   | Reference | Status | Support |
| 1                         | Prof1.A_2,3 - 8,75 MHz channel PHY (2,3 - 2,4 GHz)                     | [7]       | oi.4   |         |
| 2                         | Prof1.B_2,3 - 5 AND 10 MHz channel PHY (2,3 - 2,4 GHz)                 | [7]       | oi.4   |         |
| 3                         | Prof2.A_2.305 - 3,5 MHz channel PHY (2.305 - 2.320, 2.345 - 2.360 GHz) | [7]       | oi.4   |         |
| 4                         | Prof2.B_2.305 - 5 MHz channel PHY (2.305 - 2.320, 2.345 - 2.360 GHz)   | [7]       | oi.4   |         |
| 5                         | Prof2.C_2.305 -10 MHz channel PHY (2.305 - 2.320, 2.345 - 2.360 GHz)   | [7]       | oi.4   |         |
| 6                         | Prof3.A_2.496 - 5 AND 10 MHz channel PHY (2.496 - 2.69GHz)             | [7]       | oi.4   |         |
| 7                         | Prof4.A_3,3 - 5 MHz channel PHY (3,3 - 3,4 GHz)                        | [7]       | oi.4   |         |
| 8                         | Prof4.B_3,3 - 7 MHz channel PHY (3,3 - 3,4 GHz)                        | [7]       | oi.4   |         |
| 9                         | Prof4.C_3,3 - 10 MHz channel PHY (3,3 - 3,4 GHz)                       | [7]       | oi.4   |         |
| 10                        | Prof5.A_3,4 - 5 MHz channel PHY (3,4 - 3,8 GHz)                        | [7]       | oi.4   |         |
|                           | Prof5L.A_3,4 - 5 MHz channel PHY (3,4 - 3,6 GHz)                       |           | oi.4   |         |
|                           | Prof5H.A_3,4 - 5 MHz channel PHY (3,6 - 3,8 GHz)                       |           | oi.4   |         |
| 11                        | Prof5.B_3,4 - 7 MHz channel PHY (3,4 - 3,8 GHz)                        | [7]       | oi.4   |         |
|                           | Prof5L.B_3,4 - 7MHz channel PHY (3,4 - 3,6 GHz)                        |           | oi.4   |         |
|                           | Prof5H.B_3,4 - 7 MHz channel PHY (3,6 - 3,8 GHz)                       |           | oi.4   |         |
| 12                        | Prof5.C_3,4 - 10 MHz channel PHY (3,4 - 3,8 GHz)                       | [7]       | oi.4   |         |
|                           | Prof5L.C_3,4 - 10 MHz channel PHY (3,4 - 3,6 GHz)                      |           | oi.4   |         |
|                           | Prof5H.C_3,4 - 10 MHz channel PHY (3,6 - 3,8 GHz)                      |           | oi.4   |         |

Comments: With regards to Items 2 and 6, the BS shall support 5 MHz or 10 MHz or both bandwidth sizes.

**Table A.4: Power classes**

| WirelessMAN-OFDMA 802.16e |                                |                               |           |        |         |
|---------------------------|--------------------------------|-------------------------------|-----------|--------|---------|
| Item                      | Capability                     |                               | Reference | Status | Support |
|                           | Transmit Power (dBm) for 16QAM | Transmit Power (dBm) for QPSK |           |        |         |
| 1                         | $18 \leq P_{Tx,max} < 21$      | $20 \leq P_{Tx,max} < 23$     | [7]       | oi.5   |         |
| 2                         | $21 \leq P_{Tx,max} < 25$      | $23 \leq P_{Tx,max} < 27$     | [7]       | oi.5   |         |
| 3                         | $25 \leq P_{Tx,max} < 30$      | $27 \leq P_{Tx,max} < 30$     | [7]       | oi.5   |         |
| 4                         | $30 \leq P_{Tx,max}$           | $30 \leq P_{Tx,max}$          | [7]       | oi.5   |         |

Comments: The Power Classes listed in this table is developed to cover the complete target range of power levels while different interpretation of applicable modulation levels is addressed through a dual range requirement for QPSK and 16QAM per Power Class.

**Table A.5: Duplexing modes**

| WirelessMAN-OFDMA 802.16e |                             |             |        |         |
|---------------------------|-----------------------------|-------------|--------|---------|
| Item                      | Capability                  | Reference   | Status | Support |
| 1                         | TDD Time Division Duplexing | 6.3.7.2 [7] | m      |         |

Comments:

In table A.7, RF channels are calculated using the following formula:

$$RFChannel_n = F_{start} + n \cdot \Delta F_c, \forall n \in N_{range}$$

Where:

$F_{start}$  is the start frequency for the specific band;

$\Delta F_c$  is the center frequency step;

$N_{range}$  is the range values for the n parameter



Table A.6: RF Profiles

| Mobile Station (MS) |                    |                  |                             |                          |                   |        |         |
|---------------------|--------------------|------------------|-----------------------------|--------------------------|-------------------|--------|---------|
| Item                | RF Profile Name    | Channel BW (MHz) | Center Frequency Step (KHz) | Fstart (MHz)             | Nrange            | Status | Support |
| 1                   | Prof1.A_2.3        | 8,75             | 250                         | 2 304,5                  | (0, ..., 364)     | oi.7   |         |
| 2                   | Prof1.B_2.3-5      | 5                | 250                         | 2 302,5                  | (0, ..., 380)     | oi.7   |         |
|                     | Prof1.B_2.3-10     | 10               |                             | 2 305                    | (0, ..., 360)     |        |         |
| 3                   | Prof2.A_2.305      | 3,5              | 250                         | 2 306,75 and<br>2 346,75 | (0, ..., 46)      | oi.7   |         |
| 4                   | Prof2.B_2.305      | 5                | 250                         | 2 307,5 and<br>2 347,5   | (0, ..., 40)      | oi.7   |         |
| 5                   | Prof2.C_2.305      | 10               | 250                         | 2 310 and<br>2 350       | (0, ..., 20)      | oi.7   |         |
| 6                   | Prof3.A_2.496 - 5  | 5                | 250                         | 2 498,5                  | (0, ..., 756)     | oi.7   |         |
|                     | Prof3.A_2.496 - 10 | 10               |                             | 2 501                    | (0, ..., 736)     |        |         |
| 7                   | Prof4.A_3.3        | 5                | 250                         | 3 302,5                  | (0, ..., 380)     | oi.7   |         |
| 8                   | Prof4.B_3.3        | 7                | 250                         | 3 303,5                  | (0, ..., 372)     | oi.7   |         |
| 9                   | Prof4.C_3.3        | 10               | 250                         | 3 305                    | (0, ..., 360)     | oi.7   |         |
| 10                  | Prof5.A_3.4        | 5                | 250                         | 3 402,5                  | (0, ..., 1 580)   | oi.7   |         |
|                     | Prof5L.A_3.4       |                  |                             |                          | (0, ..., 780)     | oi.7   |         |
|                     | Prof5H.A_3.4       |                  |                             |                          | (800, ..., 1 580) | oi.7   |         |
| 11                  | Prof5.B_3.4        | 7                | 250                         | 3 403,5                  | (0, ..., 1 572)   | oi.7   |         |
|                     | Prof5L.B_3.4       |                  |                             |                          | (0, ..., 772)     | oi.7   |         |
|                     | Prof5H.B_3.4       |                  |                             |                          | (800, ..., 1 572) | oi.7   |         |
| 12                  | Prof5.C_3.4        | 10               | 250                         | 3 405                    | (0, ..., 1 560)   | oi.7   |         |
|                     | Prof5L.C_3.4       |                  |                             |                          | (0, ..., 860)     | oi.7   |         |
|                     | Prof5H.C_3.4       |                  |                             |                          | (800, ..., 1 560) | oi.7   |         |

Comments: Comprehensive RF raster of this table is only for interoperability purposes and not a basis for any performance testing on RF channel scanning and synchronization to network. RF preferred sets are needed to be developed to be considered as basis for scanning time performance requirements.

### A.5.1.1 Mobile Station

#### A.5.1.1.1 PHY functions

##### A.5.1.1.1.1 m Factor

Table A.7: Sampling Factor for MS

| Mobile Station (MS) |            |             |        |         |
|---------------------|------------|-------------|--------|---------|
| Item                | Capability | Reference   | Status | Support |
| 1                   | 8/7        | [5] 8.4.2.3 | m      |         |
| 2                   | 28/25      | [5] 8.4.2.3 | m      |         |

Comments: Item 1 is used for A.4-1, 3, 8 and 11 and Item 2 is used for A.5-2, 4, 5, 6, 7, 9, 10 and 12.

##### A.5.1.1.1.2 Cyclic Prefix

Table A.8: Cyclic Prefix for MS

| Mobile Station (MS) |            |                  |        |         |
|---------------------|------------|------------------|--------|---------|
| Item                | Capability | Reference        | Status | Support |
| 1                   | 1/8        | [5] 8.4.2.3, [7] | m      |         |

Comments:

## A.5.1.1.1.3 Frame Duration

Table A.9: Frame duration codes for MS

| Mobile Station (MS) |            |                  |        |         |
|---------------------|------------|------------------|--------|---------|
| Item                | Capability | Reference        | Status | Support |
| 1                   | 5 msec     | [5] 8.4.5.2, [7] | m      |         |
| Comments:           |            |                  |        |         |

## A.5.1.1.1.4 UL and DL Subframe Size

Table A.10: Number of OFDM Symbols in DL and UL

| Mobile Station (MS)   |   |          |              |        |         |
|---|---|----------|--------------|--------|---------|
| Item  | Capability  | Value    | Reference    | Status | Support |
| 1   | Number of OFDM Symbols in DL and UL for 5 MHz BW    | (35, 12) | 8.4.4.2, [7] | oi.11  |         |
|   |   | (34, 13) |              |        |         |
|   |   | (33, 14) |              |        |         |
|   |   | (32, 15) |              |        |         |
|   |   | (31, 16) |              |        |         |
|   |   | (30, 17) |              |        |         |
|   |   | (29, 18) |              |        |         |
|   |   | (28, 19) |              |        |         |
|   |   | (27, 20) |              |        |         |
|   |   | (26, 21) |              |        |         |
| 2   | Number of OFDM Symbols in DL and UL for 10 MHz BW   | (35, 12) | 8.4.4.2, [7] | oi.11  |         |
|   |   | (34, 13) |              |        |         |
|   |   | (33, 14) |              |        |         |
|   |   | (32, 15) |              |        |         |
|   |   | (31, 16) |              |        |         |
|   |   | (30, 17) |              |        |         |
|   |   | (29, 18) |              |        |         |
|   |   | (28, 19) |              |        |         |
|   |   | (27, 20) |              |        |         |
|   |   | (26, 21) |              |        |         |
| 3   | Number of OFDM Symbols in DL and UL for 8,75 MHz BW | (30, 12) | 8.4.4.2, [7] | oi.11  |         |
|   |   | (29, 13) |              |        |         |
|   |   | (28, 14) |              |        |         |
|   |   | (27, 15) |              |        |         |
|   |   | (26, 16) |              |        |         |
|   |   | (25, 17) |              |        |         |
| 4   | Number of OFDM Symbols in DL and UL for 3,5 MHz BW  | (24, 09) | 8.4.4.2, [7] | oi.11  |         |
|   |   | (23, 10) |              |        |         |
|   |   | (22, 11) |              |        |         |
|   |   | (21, 12) |              |        |         |
|   |   | (20, 13) |              |        |         |
|   |   | (19, 14) |              |        |         |
|   |   | (18, 15) |              |        |         |
| 5   | Number of OFDM Symbols in DL and UL for 7 MHz BW    | (24, 09) | 8.4.4.2, [7] | oi.11  |         |
|   |   | (23, 10) |              |        |         |
|   |   | (22, 11) |              |        |         |
|   |   | (21, 12) |              |        |         |
|   |   | (20, 13) |              |        |         |
|   |   | (19, 14) |              |        |         |
| (18, 15)  |   |          |              |        |         |
| Comments: First value in the pairs is number of symbols in DL subframe and the second value is the number of symbols in UL subframe. If the MS supports one or more oi.11 item, then it shall support all DL/UL number of symbols combinations listed associated with each channel bandwidth. |   |          |              |        |         |

## A.5.1.1.1.5 Subcarrier Allocation Mode

Table A.11: DL subcarrier allocation for MS

| Mobile Station (MS) |                                 |                                |        |         |
|---------------------|---------------------------------|--------------------------------|--------|---------|
| Item                | Capability                      | Reference                      | Status | Support |
| 1                   | PUSC                            | 8.4.6.1.2.1, [6]               | m      |         |
| 2                   | PUSC with all subchannels       | 8.4.6.1.2.1, [6]               | m      |         |
| 3                   | PUSC with dedicated pilots      | 8.4.6.1.2.1,<br>8.4.5.3.4, [6] | m      |         |
| 4                   | FUSC                            | 8.4.6.1.2.2, [6]               | m      |         |
| 5                   | AMC 2 x 3                       | 8.4.6.3, [6]                   | m      |         |
| 6                   | AMC 2 x 3 with dedicated pilots | 8.4.6.3,<br>8.4.5.3.4, [6]     | m      |         |
| Comments:           |                                 |                                |        |         |

Table A.12: UL subcarrier allocation for MS

| Mobile Station (MS) |                                  |                |        |         |
|---------------------|----------------------------------|----------------|--------|---------|
| Item                | Capability                       | Reference      | Status | Support |
| 1                   | PUSC                             | 8.4.6.2.1, [6] | m      |         |
| 2                   | PUSC without subchannel rotation | [6]            | m      |         |
| 3                   | AMC 2 x 3                        | 8.4.6.3, [6]   | m      |         |
| Comments:           |                                  |                |        |         |

## A.5.1.1.1.6 UL Channel Sounding

Table A.13: UL Sounding 1 for MS

| Mobile Station (MS) |  |                                |        |         |
|---------------------|--|--------------------------------|--------|---------|
| Item                | Capability   | Reference                      | Status | Support |
| 1                   | Type A with Cyclic shift- support for P values other than 9 and 18 | 8.4.6.2.7.1 [5]                | m      |         |
| 2                   | Type A with Cyclic shift- Support P values of 9 and 18             | 8.4.6.2.7.1 [5]                | m      |         |
| 3                   | Type A with Decimation   | 8.4.6.2.7.1 [5]                | m      |         |
| 4                   | Power Assignment Method: Equal Power (0b00)                        | 8.4.6.2.7.1<br>8.4.6.2.7.2 [5] | m      |         |
| Comments:           |  |                                |        |         |

Table A.14: UL Sounding 2 for MS

| Mobile Station (MS) |  |                                  |        |         |
|---------------------|--|----------------------------------|--------|---------|
| Item                | Capability                                       | Reference                        | Status | Support |
| 1                   | Sounding response time capability                | 8.4.6.2.7.1,<br>11.8.3.7.14, [6] | m      |         |
| 2                   | Max number of simultaneous sounding instructions | 8.4.6.2.7.1,<br>11.8.3.7.14, [6] | m      |         |
| Comments:           |  |                                  |        |         |

## A.5.1.1.1.7 Ranging and Band Width Request

Table A.15: Initial ranging for MS

| Mobile Station (MS) |   |             |        |         |
|---------------------|---|-------------|--------|---------|
| Item                | Capability                                  | Reference   | Status | Support |
| 1                   | Initial Ranging in PUSC zone with 2 symbols | 8.4.7.1 [5] | m      |         |
| Comments:           |   |             |        |         |

**Table A.16: HO ranging for MS**

| Mobile Station (MS) |  |             |        |         |
|---------------------|--|-------------|--------|---------|
| Item                | Capability                             | Reference   | Status | Support |
| 1                   | HO Ranging in PUSC zone with 2 symbols | 8.4.7.1 [5] | m      |         |
| Comments:           |  |             |        |         |

**Table A.17: Periodic Ranging for MS**

| Mobile Station (MS) |  |             |        |         |
|---------------------|--|-------------|--------|---------|
| Item                | Capability                                   | Reference   | Status | Support |
| 1                   | Periodic Ranging in PUSC zone with 1 symbols | 8.4.7.2 [5] | m      |         |
| Comments:           |  |             |        |         |

**Table A.18: BW Request for MS**

| Mobile Station (MS)  |  |             |        |         |
|--|--|-------------|--------|---------|
| Item   | Capability                             | Reference   | Status | Support |
| 1  | BW Request in PUSC zone with 1 symbols | 8.4.7.2 [5] | m      |         |
| Comments: This table is only related to BW request based on Ranging. |  |             |        |         |

## A.5.1.1.1.8 Fast Feedback

**Table A.19: Fast-Feedback/CQI Channel Encoding for MS**

| Mobile Station (MS) |            |                  |        |         |
|---------------------|------------|------------------|--------|---------|
| Item                | Capability | Reference        | Status | Support |
| 1                   | 6 bits     | [4] 8.4.5.4.10.5 | m      |         |
| Comments:           |            |                  |        |         |

**Table A.20: Fast-Feedback/CQI Channel Allocation Method for MS**

| Mobile Station (MS) |  |                |        |         |
|---------------------|--|----------------|--------|---------|
| Item                | Capability   | Reference      | Status | Support |
| 1                   | Fast feedback channel allocation using CQICH Allocation IE | [5] 8.4.5.4.12 | m      |         |
| Comments:           |  |                |        |         |

## A.5.1.1.1.9 Channel Coding

**Table A.21: Repetition for MS**

| Mobile Station (MS)   |            |             |        |         |
|---|------------|-------------|--------|---------|
| Item  | Capability | Reference   | Status | Support |
| 1   | Repetition | 8.4.9.5 [5] | m      |         |
| Comments: Item 1 is only applicable to A.35-1, A.36-1, A.37-1 and A.38-1. |            |             |        |         |

**Table A.22: Randomization for MS**

| Mobile Station (MS) |               |             |        |         |
|---------------------|---------------|-------------|--------|---------|
| Item                | Capability    | Reference   | Status | Support |
| 1                   | Randomization | 8.4.9.1 [5] | m      |         |
| Comments:           |               |             |        |         |

**Table A.23: Convolutional Code for MS**

| Mobile Station (MS)  |             |               |        |         |
|--|-------------|---------------|--------|---------|
| Item   | Capability  | Reference     | Status | Support |
| 1  | Tail Biting | 8.4.9.2.1 [5] | m      |         |
| Comments: Convolutional Code shall be only applicable for FCH. |             |               |        |         |

**Table A.24: Convolutional Turbo Code for MS**

| Mobile Station (MS) |            |   |        |         |
|---------------------|------------|---|--------|---------|
| Item                | Capability | Reference                                 | Status | Support |
| 1                   | CTC        | 8.4.9.2.3<br>excluding<br>8.4.9.2.3.5 [5] | m      |         |
| Comments:           |            |   |        |         |

**Table A.25: Interleaving for MS**

| Mobile Station (MS) |              |             |        |         |
|---------------------|--------------|-------------|--------|---------|
| Item                | Capability   | Reference   | Status | Support |
| 1                   | Interleaving | 8.4.9.3 [5] | m      |         |
| Comments:           |              |             |        |         |

## A.5.1.1.1.10 HARQ

**Table A.26: HARQ Chase Combining for MS**

| Mobile Station (MS) |  |  |        |         |
|---------------------|--|--|--------|---------|
| Item                | Capability   | Reference  | Status | Support |
| 1                   | Chase with CTC   | 8.4.15.1 [5]   | m      |         |
| 2                   | H-ARQ Category 1- NO DL aggregation (Wave 1 obly)<br>- Minimum HARQ buffer size or DL= 4 096 (K=12)<br>- Minimum HARQ buffer size for UL = 16 384 (K=20)<br>- Aggregation flag for DL = OFF<br>- Aggregation flag for UL = OFF<br>- Number of DL HARQ channels = 4<br>- Number of UL HARQ channels = 4<br>- Max Burst in DL Subframe with HARQ =2<br>- Max Burst in UL Subframe with HARQ =2 | 11.8.3.7.19,<br>11.8.3.7.19.2,<br>8.4.4.2,<br>8.4.15.1.3,<br>11.8.3.7.12 [5] | oi.27  |         |
| 3                   | H-ARQ Category 1- NO DL aggregation<br>- Minimum HARQ buffer size or DL = 16 384 (K=20)<br>- Minimum HARQ buffer size for UL = 16 384 (K=20)<br>- Aggregation flag for DL = OFF<br>- Aggregation flag for UL = OFF<br>- Number of DL HARQ channels = 4<br>- Number of UL HARQ channels = 4<br>- Max Burst in DL Subframe with HARQ =2<br>- Max Burst in UL Subframe with HARQ =2             | 11.8.3.7.19 and<br>11.8.3.7.19.2 [5]   | oi.27  |         |
| 4                   | H-ARQ Category 1- DL aggregation ON<br>- Minimum HARQ buffer size or DL = 16 384 (K=20)<br>- Minimum HARQ buffer size for UL = 16 384 (K=20)<br>- Aggregation flag for DL = ON<br>- Aggregation flag for UL = OFF<br>- Number of DL HARQ channels = 4<br>- Number of UL HARQ channels = 4<br>- Max Burst in DL Subframe with HARQ =2<br>- Max Burst in UL Subframe with HARQ =2              | 11.8.3.7.19 and<br>11.8.3.7.19.2   | oi.27  |         |

| Mobile Station (MS)  |  |                                      |        |         |
|--|--|--------------------------------------|--------|---------|
| Item   | Capability   | Reference                            | Status | Support |
| 5  | H-ARQ Category 2<br>- Minimum HARQ buffer size or DL = 8 192 (K=16)<br>- Minimum HARQ buffer size for UL = 16 384 (K=20)<br>- Aggregation flag for DL = ON<br>- Aggregation flag for UL = ON<br>- Number of DL HARQ channels = 16<br>- Number of UL HARQ channels = 8<br>- Max Burst in DL Subframe with HARQ =5<br>- Max Burst in UL Subframe with HARQ =2  | 11.8.3.7.19 and<br>11.8.3.7.19.2 [5] | oi.27  |         |
| 6  | H-ARQ Category 3<br>- Minimum HARQ buffer size or DL = 16 384 (K=20)<br>- Minimum HARQ buffer size for UL = 16 384 (K=20)<br>- Aggregation flag for DL = ON<br>- Aggregation flag for UL = ON<br>- Number of DL HARQ channels = 16<br>- Number of UL HARQ channels = 8<br>- Max Burst in DL Subframe with HARQ =5<br>- Max Burst in UL Subframe with HARQ =2 | 11.8.3.7.19 and<br>11.8.3.7.19.2 [5] | oi.27  |         |
| 7  | H-ARQ Category 4<br>- Minimum HARQ buffer size or DL = 23 170 (K=22)<br>- Minimum HARQ buffer size for UL = 16 384 (K=20)<br>- Aggregation flag for DL = ON<br>- Aggregation flag for UL = ON<br>- Number of DL HARQ channels = 16<br>- Number of UL HARQ channels = 8<br>- Max Burst in DL Subframe with HARQ =5<br>- Max Burst in UL Subframe with HARQ =2 | 11.8.3.7.19 and<br>11.8.3.7.19.2 [5] | oi.27  |         |
| 8  | SN for HARQ reordering   | 11.13.36 [5]                         | m      |         |
| <p>Comments: Note that the HARQ buffer size shall be interpreted as softbits buffer size, i.e. relating to coded data bits and not un-coded. This means the buffer size refers to both the systematic and parity bits transmitted over the air. It is left to vendor's implementation to determine the amount of memory space for each bit of transmitted information. The buffer size is related to buffer size parameter K according to the following Equation.</p> $\text{Buffer size} = \text{floor} [512 \times 2^{(K/4)}]$ <p>On Items 2 and 3, a waiver is applicable to total DL buffer size of 16 384 for all 4 channels, equivalent to DL buffer size of 4 096 (K=12) per channel, for CAT 1 in Wave 1.<br/>Relative to items 2-6, the term "burst" refers to "sub-burst".<br/>Item 2 is a waiver applicable to Wave 1 only.</p> |  |                                      |        |         |

Table A.27: ACK Channel for MS

| Mobile Station (MS) |                                 |                |        |         |
|---------------------|---------------------------------|----------------|--------|---------|
| Item                | Capability                      | Reference      | Status | Support |
| 1                   | ACK channel                     | 8.4.5.4.13 [5] | m      |         |
| 2                   | HARQ ACK delay for DL burst = 1 | 11.3.1 [5]     | m      |         |
| Comments:           |                                 |                |        |         |

## A.5.1.1.1.11 Control Mechanism

Table A.28: MS Synchronization

| Mobile Station (MS) |   |                |        |         |
|---------------------|---|----------------|--------|---------|
| Item                | Capability  | Reference      | Status | Support |
| 1                   | MS UL symbol timing accuracy within $\pm (T_b/32)/4$                              | 8.4.10.1.2 [5] | m      |         |
| 2                   | MS to BS frequency synchronization tolerance $\leq 2\%$ of the subcarrier spacing | 8.4.14.1 [5]   | m      |         |
| Comments:           |   |                |        |         |

## A.5.1.1.1.12 Power Control

Table A.29: Closed-loop Power Control for MS

| Mobile Station (MS) |                           |                                |        |         |
|---------------------|---------------------------|--------------------------------|--------|---------|
| Item                | Capability                | Reference                      | Status | Support |
| 1                   | Closed loop power control | 8.4.10.3 and<br>8.4.10.3.1 [5] | m      |         |
| Comments:           |                           |                                |        |         |

Table A.30: Open-loop Power Control for MS

| Mobile Station (MS) |                         |                |        |         |
|---------------------|-------------------------|----------------|--------|---------|
| Item                | Capability              | Reference      | Status | Support |
| 1                   | Open loop power control | 8.4.10.3.2 [5] | m      |         |
| Comments:           |                         |                |        |         |

## A.5.1.1.1.13 Channel Quality Measurements

Table A.31: CINR Measurement for MS

| Mobile Station (MS) |  |  |        |         |
|---------------------|--|--|--------|---------|
| Item                | Capability   | Reference  | Status | Support |
| 1                   | Physical CINR measurement from the preamble for frequency reuse==1 (feedback type=0b00 and report type=0 and CINR preamble report type=0)        | 6.3.18,<br>8.4.5.4.12,<br>8.4.11.3 and<br>11.8.3.7.9 [5] | m      |         |
| 2                   | Physical CINR measurement from the preamble for frequency reuse==3 (feedback type=0b00 and report type=0 and CINR preamble report type=1)        | 6.3.18,<br>8.4.5.4.12,<br>8.4.11.3 and<br>11.8.3.7.9 [5] | m      |         |
| 3                   | Physical CINR measurement for a permutation zone from pilot subcarriers (feedback type=0b00 and report type=1 and CINR zone measurement type=0)  | 6.3.18,<br>8.4.5.4.12,<br>8.4.11.3 and<br>11.8.3.7.9 [5] | m      |         |
| 4                   | Effective CINR measurement for a permutation zone from pilot subcarriers (feedback type=0b01 and report type=1 and CINR zone measurement type=0) | 6.3.18,<br>8.4.5.4.12,<br>8.4.11.3 and<br>11.8.3.7.9 [5] | m      |         |
| 5                   | Major group indication (applicable to PUSC zone only)  | 8.4.5.4.12 [5]   | m      |         |
| 6                   | MIMO permutation feedback cycle (applicable to MIMO only)  | 8.4.5.4.12 [5]   | m      |         |
| Comments:           |  |  |        |         |

Table A.32: RSSI Measurement for MS

| Mobile Station (MS) |                  |                                |        |         |
|---------------------|------------------|--------------------------------|--------|---------|
| Item                | Capability       | Reference                      | Status | Support |
| 1                   | RSSI Measurement | 8.4.11.2 and<br>6.3.2.3.50 [5] | m      |         |
| Comments:           |                  |                                |        |         |

## A.5.1.1.1.14 Modulation

Table A.33: PRBS for MS

| Mobile Station (MS) |            |               |        |         |
|---------------------|------------|---------------|--------|---------|
| Item                | Capability | Reference     | Status | Support |
| 1                   | PRBS       | 8.4.9.4.1 [5] | m      |         |
| Comments:           |            |               |        |         |

**Table A.34: Downlink MCS for MS, Convolutional Coding**

| Mobile Station (MS) |               |            |        |         |
|---------------------|---------------|------------|--------|---------|
| Item                |               | Reference  | Status | Support |
| 1                   | QPSK (CC) 1/2 | 11.4.2 [5] | m      |         |
| Comments:           |               |            |        |         |

**Table A.35: Downlink MCS for MS, Convolutional Turbo Code**

| Mobile Station (MS) |                  |            |        |         |
|---------------------|------------------|------------|--------|---------|
| Item                |                  | Reference  | Status | Support |
| 1                   | QPSK (CTC) 1/2   | 11.4.2 [5] | m      |         |
| 2                   | QPSK (CTC) 3/4   | 11.4.2 [5] | m      |         |
| 3                   | 16-QAM (CTC) 1/2 | 11.4.2 [5] | m      |         |
| 4                   | 16-QAM (CTC) 3/4 | 11.4.2 [5] | m      |         |
| 5                   | 64-QAM (CTC) 1/2 | 11.4.2 [5] | m      |         |
| 6                   | 64-QAM (CTC) 2/3 | 11.4.2 [5] | m      |         |
| 7                   | 64-QAM (CTC) 3/4 | 11.4.2 [5] | m      |         |
| 8                   | 64-QAM (CTC) 5/6 | 11.4.2 [5] | m      |         |
| Comments:           |                  |            |        |         |

**Table A.36: Uplink MCS for MS, Convolutional Turbo Code**

| Mobile Station (MS) |                  |              |        |         |
|---------------------|------------------|--------------|--------|---------|
| Item                |                  | Reference    | Status | Support |
| 1                   | QPSK (CTC) 1/2   | 11.3.1.1 [5] | m      |         |
| 2                   | QPSK (CTC) 3/4   | 11.3.1.1 [5] | m      |         |
| 3                   | 16-QAM (CTC) 1/2 | 11.3.1.1 [5] | m      |         |
| 4                   | 16-QAM (CTC) 3/4 | 11.3.1.1 [5] | m      |         |
| Comments:           |                  |              |        |         |

**Table A.37: Pilot Modulation for MS**

| Mobile Station (MS) |   |               |        |         |
|---------------------|---|---------------|--------|---------|
| Item                | Capability  | Reference     | Status | Support |
| 1                   | Modulation of pilots in uplink data burst for PUSC permutations     | 8.4.9.4.3 [5] | m      |         |
| 2                   | Modulation of pilots in uplink data burst for AMC permutation       | 8.4.9.4.3 [5] | m      |         |
| 3                   | Modulation of pilot in uplink Collaborative SM for PUSC permutation |               | m      |         |
| Comments:           |   |               |        |         |

**Table A.38: Ranging Modulation for MS**

| Mobile Station (MS) |                                |                             |        |         |
|---------------------|--------------------------------|-----------------------------|--------|---------|
| Item                | Capability                     | Reference                   | Status | Support |
| 1                   | Modulation of the ranging code | 8.4.9.4.3.2,<br>8.4.7.3 [5] | m      |         |
| Comments:           |                                |                             |        |         |



## A.5.1.1.1.15 MAP Support

Table A.39: MAP for MS

| Mobile Station (MS) |                             |                |        |         |
|---------------------|-----------------------------|----------------|--------|---------|
| Item                | Capability                  | Reference      | Status | Support |
| 1                   | Normal DL-MAP               | 6.3.2.3.2 [5]  | m      |         |
| 2                   | Normal UL-MAP               | 6.3.2.3.4 [5]  | m      |         |
| 3                   | Compressed DL-MAP           | 8.4.5.6.1 [5]  | m      |         |
| 4                   | Compressed UL-MAP           | 8.4.5.6.2 [5]  | m      |         |
| 5                   | Sub-DL-UL-MAP in first zone | 6.3.2.3.60 [5] | m      |         |
| 6                   | MBS MAP message             | 6.3.2.3.57 [5] | m      |         |
| Comments:           |                             |                |        |         |

Table A.40: MAP Features for MS

| Mobile Station (MS) |  |                |        |         |
|---------------------|--|----------------|--------|---------|
| Item                | Capability                                       | Reference      | Status | Support |
| 1                   | CID in DL-MAP IE in DL-MAP or Compressed DL-MAP  | 8.4.5.3.7 [5]  | m      |         |
| 2                   | RCID IE in DL-MAP IE in SUB-DL-UL-MAP            | 8.4.5.3 [5]    | m      |         |
| 3                   | UL allocation start IE                           | 8.4.5.4.15 [5] | m      |         |
| 4                   | Space-Time Coding (STC)/Zone switch IE           | 8.4.5.3.4, [5] | m      |         |
| 5                   | HARQ and Sub-MAP pointer IE in compressed DL map | 8.4.5.3.10 [5] | m      |         |
| 6                   | UL Zone Switch IE                                | 8.4.5.4.7 [5]  | m      |         |
| Comments:           |  |                |        |         |

## A.5.1.1.1.16 Multiple Input Multiple Output (MIMO)

Table A.41: Supported Features for DL PUSC MIMO for MS

| Mobile Station (MS) |  |                                |        |         |
|---------------------|--|--------------------------------|--------|---------|
| Item                | Capability                             | Reference                      | Status | Support |
| 1                   | 2-antenna, matrix A                    | 8.4.8.1.2.1.1<br>8.4.8.1.4 [5] | m      |         |
| 2                   | 2-antenna, matrix B, vertical encoding | 8.4.8.1.4 [5]                  | m      |         |
| Comments:           |  |                                |        |         |

Table A.42: Supported Features for UL PUSC MIMO for MS

| Mobile Station (MS) |  |               |        |         |
|---------------------|--|---------------|--------|---------|
| Item                | Capability   | Reference     | Status | Support |
| 1                   | Collaborative SM for two MS with single transmit antenna | 8.4.8.1.5 [5] | m      |         |
| 2                   | Capable of generating pilot pattern A or B               | 8.4.8.1.5[5]  | m      |         |
| Comments:           |  |               |        |         |

Table A.43: MIMO Feedback for MS

| Mobile Station (MS) |   |  |        |         |
|---------------------|---|--|--------|---------|
| Item                | Capability  | Reference  | Status | Support |
| 1                   | Fast DL measurement feedback with more than one Rx antennas | 8.4.5.4.10.6<br>8.4.5.4.10.1<br>8.4.5.4.10.5 [5] | m      |         |
| 2                   | Mode selection feedback with 6 bits                         | 8.4.5.4.10.8 [5]                                 | m      |         |
| Comments:           |   |  |        |         |

**Table A.44: HARQ DL support for MIMO for MS**

| Mobile Station (MS) |                         |                |        |         |
|---------------------|-------------------------|----------------|--------|---------|
| Item                | Capability              | Reference      | Status | Support |
| 1                   | MIMO DL Chase Combining | 8.4.5.3.21 [5] | m      |         |
| Comments:           |                         |                |        |         |

**Table A.45: HARQ UL support for MIMO for MS**

| Mobile Station (MS) |                         |                |        |         |
|---------------------|-------------------------|----------------|--------|---------|
| Item                | Capability              | Reference      | Status | Support |
| 1                   | MIMO UL Chase Combining | 8.4.5.4.24 [5] | m      |         |
| Comments:           |                         |                |        |         |

## A.5.1.1.1.17 MS Minimum Performance Requirements

**Table A.46: MS Minimum performance**

| Mobile Station (MS) |  |                           |        |         |
|---------------------|--|---------------------------|--------|---------|
| Item                | Capability   | Reference                 | Status | Support |
| 1                   | SSTTG $\leq 50 \mu\text{sec}$                          | 8.4.4.2 [5]               | m      |         |
| 2                   | SSRTG $\leq 50 \mu\text{sec}$                          | 8.4.4.2 [5]               | m      |         |
| 3                   | Maximum concurrent bursts in a downlink sub-frame = 10 | 8.4.4.2,<br>11.7.8.13 [5] | m      |         |
| 4                   | Maximum bursts in a downlink sub-frame = 16            | 8.4.4.2 [5]               | m      |         |
| Comments:           |  |                           |        |         |

**Table A.47: Max Number of Zones in DL and UL Subframes**

| Mobile Station (MS)  |                                 |             |        |         |
|--|---------------------------------|-------------|--------|---------|
| Item   | Capability                      | Reference   | Status | Support |
| 1  | Maximum numbers of zones UL = 3 |             | m      |         |
| 2  | Maximum numbers of zones DL = 5 | 8.4.4.2 [5] | m      |         |
| Comments: The numbers are the same as the number of UL/DL Zone Switch IEs plus 1. In the cases that Uplink subframe starts with Zone Switch IE, the number of uplink zones is the same as the number of Zone Switch IEs. |                                 |             |        |         |

**Table A.48: Measurement Processes and CQI Channels**

| Mobile Station (MS) |  |             |        |         |
|---------------------|--|-------------|--------|---------|
| Item                | Capability   | Reference   | Status | Support |
| 1                   | Maximum numbers of CQI Channels transmitted by an MS per frame = 2 |             |        |         |
| 2                   | Maximum number of concurrent CINR measurement processes = 2        | 8.4.4.2 [5] |        |         |
| Comments:           |  |             |        |         |

**Table A.49: Max MS Sensitivity Level for Convolutional Encoding 3.5 MHz Bandwidth, DL PUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|---|-------------------|-----------|--------|---------|
| QPSK-1/2  | -90,8             | [5]       | m      |         |
| NOTE: This table is applicable to A.4-3 only.   |                   |           |        |         |
| Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. Only applicable for FCH. FCH has repetition factor of 4, means sensitivity improves ~6 dB. RCT test is recommended. |                   |           |        |         |

**Table A.50: Max MS Sensitivity Level for Convolutional Encoding 5 MHz Bandwidth, DL PUSC**

| BW (MHz) | Sensitivity (dBm) | Reference | Status | Support |
|----------|-------------------|-----------|--------|---------|
| QPSK-1/2 | -89,4             | [5]       | m      |         |

NOTE: This table is applicable to A.4-2, A.4-4, A.4-6, A.4-7 and A.4-10 only.

Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. Only applicable for FCH. FCH has repetition factor of 4, means sensitivity improves ~6 dB. RCT test is recommended.

**Table A.51: Max MS Sensitivity Level for Convolutional Encoding 7 MHz Bandwidth, DL PUSC**

| BW (MHz) | Sensitivity (dBm) | Reference | Status | Support |
|----------|-------------------|-----------|--------|---------|
| QPSK-1/2 | -87,8             | [5]       | m      |         |

NOTE: This table is applicable to A.4-8 and A.4-11 only.

Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. Only applicable for FCH. FCH has repetition factor of 4, means sensitivity improves ~6 dB. RCT test is recommended.

**Table A.52: Max MS Sensitivity Level for Convolutional Encoding 8,75 MHz Bandwidth, DL PUSC**

| BW (MHz) | Sensitivity (dBm) | Reference | Status | Support |
|----------|-------------------|-----------|--------|---------|
| QPSK-1/2 | -86,9             | [5]       | m      |         |

NOTE: This table is applicable to A.4-1 only.

Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. Only applicable for FCH. FCH has repetition factor of 4, means sensitivity improves ~6 dB. RCT test is recommended.

**Table A.53: Max MS Sensitivity Level for Convolutional Encoding 10 MHz Bandwidth, DL PUSC**

| BW (MHz) | Sensitivity (dBm) | Reference | Status | Support |
|----------|-------------------|-----------|--------|---------|
| QPSK-1/2 | -86,4             | [5]       | m      |         |

NOTE: This table is applicable to A.4-2, A.4-5, A.4-6, A.4-9, A.4-12 only.

Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. Only applicable for FCH. FCH has repetition factor of 4, means sensitivity improves ~6 dB. RCT test is recommended.

**Table A.54: Max MS Sensitivity Level for Convolutional Turbo Code 3,5 MHz Bandwidth, DL PUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -92,9             | [5]       | m      |         |
| QPSK-3/4  | -89,5             | [5]       | m      |         |
| 16QAM-1/2 | -87,2             | [5]       | m      |         |
| 16QAM-3/4 | -83,1             | [5]       | m      |         |
| 64QAM-1/2 | -82,0             | [5]       | m      |         |
| 64QAM-2/3 | -78,9             | [5]       | m      |         |
| 64QAM-3/4 | -77,8             | [5]       | m      |         |
| 64QAM-5/6 | -75,9             | [5]       | m      |         |

Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.55: Max MS Sensitivity Level for Convolutional Turbo Code 3,5 MHz Bandwidth, DL FUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -92,9             | [5]       | m      |         |
| QPSK-3/4  | -89,5             | [5]       | m      |         |
| 16QAM-1/2 | -87,2             | [5]       | m      |         |
| 16QAM-3/4 | -83,1             | [5]       | m      |         |
| 64QAM-1/2 | -82,0             | [5]       | m      |         |
| 64QAM-2/3 | -78,9             | [5]       | m      |         |
| 64QAM-3/4 | -77,8             | [5]       | m      |         |
| 64QAM-5/6 | -75,9             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.56: Max MS Sensitivity Level for Convolutional Turbo Code 3,5 MHz Bandwidth, DL AMC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -92,8             | [5]       | m      |         |
| QPSK-3/4  | -89,4             | [5]       | m      |         |
| 16QAM-1/2 | -87,1             | [5]       | m      |         |
| 16QAM-3/4 | -83,0             | [5]       | m      |         |
| 64QAM-1/2 | -81,9             | [5]       | m      |         |
| 64QAM-2/3 | -78,8             | [5]       | m      |         |
| 64QAM-3/4 | -77,7             | [5]       | m      |         |
| 64QAM-5/6 | -75,8             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.57: Max MS Sensitivity Level for Convolutional Turbo Code 5 MHz Bandwidth, DL PUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -91,5             | [5]       | m      |         |
| QPSK-3/4  | -88,1             | [5]       | m      |         |
| 16QAM-1/2 | -85,8             | [5]       | m      |         |
| 16QAM-3/4 | -81,7             | [5]       | m      |         |
| 64QAM-1/2 | -80,6             | [5]       | m      |         |
| 64QAM-2/3 | -77,5             | [5]       | m      |         |
| 64QAM-3/4 | -76,4             | [5]       | m      |         |
| 64QAM-5/6 | -74,5             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.58: Max MS Sensitivity Level for Convolutional Turbo Code 5 MHz Bandwidth, DL FUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -91,4             | [5]       | m      |         |
| QPSK-3/4  | -88,0             | [5]       | m      |         |
| 16QAM-1/2 | -85,7             | [5]       | m      |         |
| 16QAM-3/4 | -81,6             | [5]       | m      |         |
| 64QAM-1/2 | -80,5             | [5]       | m      |         |
| 64QAM-2/3 | -77,4             | [5]       | m      |         |
| 64QAM-3/4 | -76,3             | [5]       | m      |         |
| 64QAM-5/6 | -74,4             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.59: Max MS Sensitivity Level for Convolutional Turbo Code 5 MHz Bandwidth, DL AMC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -91,3             | [5]       | m      |         |
| QPSK-3/4  | -87,9             | [5]       | m      |         |
| 16QAM-1/2 | -85,6             | [5]       | m      |         |
| 16QAM-3/4 | -81,5             | [5]       | m      |         |
| 64QAM-1/2 | -80,4             | [5]       | m      |         |
| 64QAM-2/3 | -77,3             | [5]       | m      |         |
| 64QAM-3/4 | -76,2             | [5]       | m      |         |
| 64QAM-5/6 | -74,3             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.60: Max MS Sensitivity Level for Convolutional Turbo Code 7 MHz Bandwidth, DL PUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -89,9             | [5]       | m      |         |
| QPSK-3/4  | -86,5             | [5]       | m      |         |
| 16QAM-1/2 | -84,2             | [5]       | m      |         |
| 16QAM-3/4 | -80,1             | [5]       | m      |         |
| 64QAM-1/2 | -79,0             | [5]       | m      |         |
| 64QAM-2/3 | -75,9             | [5]       | m      |         |
| 64QAM-3/4 | -74,8             | [5]       | m      |         |
| 64QAM-5/6 | -72,9             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.61: Max MS Sensitivity Level for Convolutional Turbo Code 7 MHz Bandwidth, DL FUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -89,9             | [5]       | m      |         |
| QPSK-3/4  | -86,5             | [5]       | m      |         |
| 16QAM-1/2 | -84,2             | [5]       | m      |         |
| 16QAM-3/4 | -80,1             | [5]       | m      |         |
| 64QAM-1/2 | -79,0             | [5]       | m      |         |
| 64QAM-2/3 | -75,9             | [5]       | m      |         |
| 64QAM-3/4 | -74,8             | [5]       | m      |         |
| 64QAM-5/6 | -72,9             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.62: Max MS Sensitivity Level for Convolutional Turbo Code 7 MHz Bandwidth, DL AMC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -89,8             | [5]       | m      |         |
| QPSK-3/4  | -86,4             | [5]       | m      |         |
| 16QAM-1/2 | -84,1             | [5]       | m      |         |
| 16QAM-3/4 | -80,0             | [5]       | m      |         |
| 64QAM-1/2 | -78,9             | [5]       | m      |         |
| 64QAM-2/3 | -75,8             | [5]       | m      |         |
| 64QAM-3/4 | -74,7             | [5]       | m      |         |
| 64QAM-5/6 | -72,8             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.63: Max MS Sensitivity Level for Convolutional Turbo Code 8,75 MHz Bandwidth, DL PUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -89,0             | [5]       | m      |         |
| QPSK-3/4  | -85,6             | [5]       | m      |         |
| 16QAM-1/2 | -83,3             | [5]       | m      |         |
| 16QAM-3/4 | -79,2             | [5]       | m      |         |
| 64QAM-1/2 | -78,1             | [5]       | m      |         |
| 64QAM-2/3 | -75,0             | [5]       | m      |         |
| 64QAM-3/4 | -73,9             | [5]       | m      |         |
| 64QAM-5/6 | -72,0             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.64: Max MS Sensitivity Level for Convolutional Turbo Code 8.75 MHz Bandwidth, DL FUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -88,9             | [5]       | m      |         |
| QPSK-3/4  | -85,5             | [5]       | m      |         |
| 16QAM-1/2 | -83,2             | [5]       | m      |         |
| 16QAM-3/4 | -79,1             | [5]       | m      |         |
| 64QAM-1/2 | -78,0             | [5]       | m      |         |
| 64QAM-2/3 | -74,9             | [5]       | m      |         |
| 64QAM-3/4 | -73,8             | [5]       | m      |         |
| 64QAM-5/6 | -71,9             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.65: Max MS Sensitivity Level for Convolutional Turbo Code 8.75 MHz Bandwidth, DL AMC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -88,8             | [5]       | m      |         |
| QPSK-3/4  | -85,4             | [5]       | m      |         |
| 16QAM-1/2 | -83,1             | [5]       | m      |         |
| 16QAM-3/4 | -79,0             | [5]       | m      |         |
| 64QAM-1/2 | -77,9             | [5]       | m      |         |
| 64QAM-2/3 | -74,8             | [5]       | m      |         |
| 64QAM-3/4 | -73,7             | [5]       | m      |         |
| 64QAM-5/6 | -71,8             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.66: Max MS Sensitivity Level for Convolutional Turbo Code 10 MHz Bandwidth, DL PUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -88,5             | [5]       |        |         |
| QPSK-3/4  | -85,1             | [5]       | m      |         |
| 16QAM-1/2 | -82,8             | [5]       | m      |         |
| 16QAM-3/4 | -78,7             | [5]       | m      |         |
| 64QAM-1/2 | -77,6             | [5]       | m      |         |
| 64QAM-2/3 | -74,5             | [5]       | m      |         |
| 64QAM-3/4 | -73,4             | [5]       | m      |         |
| 64QAM-5/6 | -71,5             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.67: Max MS Sensitivity Level for Convolutional Turbo Code 10 MHz Bandwidth, DL FUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -88,4             | [5]       | m      |         |
| QPSK-3/4  | -85,0             | [5]       | m      |         |
| 16QAM-1/2 | -82,7             | [5]       | m      |         |
| 16QAM-3/4 | -78,6             | [5]       | m      |         |
| 64QAM-1/2 | -77,5             | [5]       | m      |         |
| 64QAM-2/3 | -74,4             | [5]       | m      |         |
| 64QAM-3/4 | -73,3             | [5]       | m      |         |
| 64QAM-5/6 | -71,4             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.68: Max MS Sensitivity Level for Convolutional Turbo Code 10 MHz Bandwidth, DL AMC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -88,3             | [5]       | m      |         |
| QPSK-3/4  | -84,9             | [5]       | m      |         |
| 16QAM-1/2 | -82,6             | [5]       | m      |         |
| 16QAM-3/4 | -78,5             | [5]       | m      |         |
| 64QAM-1/2 | -77,4             | [5]       | m      |         |
| 64QAM-2/3 | -74,3             | [5]       | m      |         |
| 64QAM-3/4 | -73,2             | [5]       | m      |         |
| 64QAM-5/6 | -71,3             | [5]       | m      |         |

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

#### A.5.1.1.1.18 Minimum Transmit Requirements

**Table A.69: Transmit requirements for MS**

| Mobile Station (MS) |  |           |        |         |
|---------------------|--|-----------|--------|---------|
| Item                | Capability   | Reference | Status | Support |
| 1                   | Tx dynamic Range = 45 dB   | 8.4.12.1  | m      |         |
| 2                   | Tx power level min adjustment step = 1 dB  | 8.4.12.1  | m      |         |
| 3                   | Tx power level min relative step accuracy = $\pm 0,5$ dB   | 8.4.12.1  | m      |         |
| 4                   | Spectral flatness according to the following:<br>$\leq \pm 2$ dB for spectral lines from<br>$-N_{used}/4$ to $-1$ and $+1$ to $N_{used}/4$<br>Within $\pm 2/-4$ dB for spectral lines from<br>$-N_{used}/2$ to $-N_{used}/4$ and $+N_{used}/4$ to $N_{used}/2$ | 8.4.12.2  | m      |         |
| 5                   | Power difference between adjacent subcarriers $\leq 0.1$ dB  | 8.4.12.2  | m      |         |
| 6                   | Tx relative constellation error according to the following:<br>QPSK-1/2 $\leq -15,0$ dB<br>QPSK-3/4 $\leq -18,0$ dB<br>16QAM-1/2 $\leq -20,5$ dB<br>16QAM-3/4 $\leq -24,0$ dB  | 8.4.12.3  | m      |         |

Comments:

## A.5.1.1.1.19 Receive Requirements Table

Table A.70: MS Receiver Requirements

| Mobile Station (MS) |  |            |        |         |
|---------------------|--|------------|--------|---------|
| Item                | Capability   | Reference  | Status | Support |
| 1                   | MS Rx max input level on-channel reception tolerance = -30 dBm   | 8.4.13.3.1 |        |         |
| 2                   | MS Rx max input level on-channel damage tolerance = 0 dBm  | 8.4.13.4.1 |        |         |
| 3                   | Min adjacent channel rejection at BER=10 <sup>-6</sup> for 3 dB degradation C/I according to the following:<br>16QAM-3/4 11 dB<br>64QAM-2/3 (if 64-QAM supported) 4 dB   | 8.4.13.2   | m      |         |
| 4                   | Min alternate channel rejection at BER=10 <sup>-6</sup> for 3 dB degradation C/I according to the following:<br>16QAM-3/4 30 dB<br>64QAM-2/3 (if 64-QAM supported) 23 dB | 8.4.13.2   | m      |         |
| Comments:           |  |            |        |         |

## A.5.1.1.2 MS MAC functions

Table A.71: Convergence Sub layer protocol support

| Mobile Station (MS) |                              |           |        |         |
|---------------------|------------------------------|-----------|--------|---------|
| Item                | Capability                   | Reference | Status | Support |
| 1                   | Packet convergence sub layer | [4] 5.2   | m      |         |
| Comments:           |                              |           |        |         |

## A.5.1.1.2.1 Packet Convergence Sublayer

Table A.72: Packet Convergence Sub layer support

| Mobile Station (MS)   |                                     |           |        |         |
|---|-------------------------------------|-----------|--------|---------|
| Item  | Capability                          | Reference | Status | Support |
| 1   | Internet Protocol (IPv4)            | [4] 5.2.6 | m      |         |
| 2   | Internet Protocol (IPv6)            | [4] 5.2.6 | m      |         |
| 3   | IEEE 802.3 [12] (Ethernet)          | [4] 5.2.4 | o      |         |
| 4   | Packet, IPv4 over 802.3/Ethernet    |           | o      |         |
| 5   | Packet, IPv6 over 802.3/Ethernet    |           | o      |         |
| 6   | IPv4 with Header Compression (ROHC) | [8] 5.2.7 | m      |         |
| 7   | IPv6 with Header compression (ROHC) | [8] 5.2.7 | m      |         |
| Comments: Items 3, 4 and 5 are not required for WiMAX certified label, only optionally certified. |                                     |           |        |         |

Table A.73: Major packet classification

| Mobile Station (MS)  |                         |                  |        |         |
|--|-------------------------|------------------|--------|---------|
| Item   | Capability              | Reference        | Status | Support |
| 1  | IP Classification       | [4] 11.13.19.3.4 | m      |         |
| 2  | Ethernet classification | [4] 11.13.19.3.4 | o      |         |
| Comments: Item 2 is not required for WiMAX certified label, only optionally certified. It's conditioned by Eth-CS. |                         |                  |        |         |



**Table A.74: IP packet classification in the UL**

| Mobile Station (MS) |   |                                 |        |         |
|---------------------|---|---------------------------------|--------|---------|
| Item                | Capability  | Reference                       | Status | Support |
| 1                   | Classification based on DSCP /IP TOS field              | [4] 5.2.2 and<br>11.13.19.3.4.2 | m      |         |
| 2                   | Classification based on IP Protocol/Next Header field   | [4] 5.2.2 and<br>11.13.19.3.4.3 | m      |         |
| 3                   | Classification based on IP masked Source Address        | [4] 5.2.2 and<br>11.13.19.3.4.4 | m      |         |
| 4                   | Classification based on IP Destination Address          | [4] 5.2.2 and<br>11.13.19.3.4.5 | m      |         |
| 5                   | Classification based on protocol source port range      | [4] 5.2.2 and<br>11.13.19.3.4.6 | m      |         |
| 6                   | Classification based on protocol destination port range | [4] 5.2.2 and<br>11.13.19.3.4.7 | m      |         |

Comments:

**Table A.75: PHS**

| Mobile Station (MS) |            |                             |        |         |
|---------------------|------------|-----------------------------|--------|---------|
| Item                | Capability | Reference                   | Status | Support |
| 1                   | PHS        | 5.2.3<br>5.2.3.1<br>5.2.3.2 | m      |         |

Comments:

## A.5.1.1.2.2 MAC common part sub layer

**Table A.76: MAC Common part sublayer functionalities**

| Mobile Station (MS) |   |            |        |         |
|---------------------|---|------------|--------|---------|
| Item                | Capability                              | Reference  | Status | Support |
| 1                   | Addressing and connections              | [4] 6.3.1  | m      |         |
| 2                   | Construction of PDUs                    | [4] 6.3.3  | m      |         |
| 3                   | ARQ                                     | [4] 6.3.4  | m      |         |
| 4                   | Uplink scheduling service               | [4] 6.3.5  | m      |         |
| 5                   | Bandwidth allocation and request        | [4] 6.3.6  | m      |         |
| 6                   | Contention resolution                   | [4] 6.3.8  | m      |         |
| 7                   | Network entry and initialization        | [4] 6.3.9  | m      |         |
| 8                   | Ranging                                 | [4] 6.3.10 | m      |         |
| 9                   | Update of UL and DL channel descriptors | [4] 6.3.11 | m      |         |
| 10                  | Quality of service                      | [4] 6.3.14 | m      |         |

Comments:

**Table A.77: Miscellaneous management functions**

| Mobile Station (MS) |   |                |        |         |
|---------------------|---|----------------|--------|---------|
| Item                | Capability  | Reference      | Status | Support |
| 1                   | MS reset initiated by BS (RES-CMD)  | [4] 6.3.2.3.22 | o      |         |
| 2                   | MS network clock comparison initiated by BS (CLK-CMP)                     | [4] 6.3.2.3.25 | o      |         |
| 3                   | MS notifies BS of de-registration (DREG-REQ)                              | [4] 6.3.2.3.43 | m      |         |
| 4                   | Deregistration (DREG-CMD)   | [4] 6.3.2.3.26 | m      |         |
| 5                   | MS receives quick answer from BS to its DSx-REQ (DSX-RVD)                 | [4] 6.3.2.3.27 | m      |         |
| 6                   | MS answers to BS channel measurement report request (REP-REQ and REP-RSP) | [4] 6.3.2.3.33 | m      |         |
| 7                   | MS applies the power change requested by the BS (FPC)                     | [4] 6.3.2.3.34 | m      |         |

Comments:

## A.5.1.1.2.2.1 Addressing and Connections

**Table A.78: Addressing and Connections**

| Mobile Station (MS) |  |           |        |         |
|---------------------|--|-----------|--------|---------|
| Item                | Capability   | Reference | Status | Support |
| 1                   | Globally Unique MS MAC Address   | [4] 6.3.1 | m      |         |
| 2                   | MAC Management messages only applicable on connection types as specified in [4] Table 14 | [4]       | m      |         |
| 3                   | User data only on transport connections  | [4]       | m      |         |
| Comments:           |  |           |        |         |

## A.5.1.1.2.2.2 Construction and Transmission of MAC PDUs

**Table A.79: Transmission conventions**

| Mobile Station (MS) |  |             |        |         |
|---------------------|--|-------------|--------|---------|
| Item                | Capability   | Reference   | Status | Support |
| 1                   | Fields of MAC messages are transmitted in the same order as they appear in the corresponding tables in the standard  | [4] 6.3.3.1 | m      |         |
| 2                   | Fields of MAC messages and fields of TLVs, which are specified in the standard as binary numbers (including CRC and HCS) are transmitted as a sequence of their binary digits, starting from MSB. Bit masks (for example, in ARQ) are considered numerical fields. For signed numbers MSB is allocated for the sign. Length field in the "definite form" of ITU-T Recommendation X.690 [14] is also considered a numerical field | [4] 6.3.3.1 | m      |         |
| 3                   | Fields specified as SDUs or SDU fragments (for example, MAC PDU payloads) are transmitted in the same order of bytes as received from upper layers   | [4] 6.3.3.1 | m      |         |
| 4                   | Fields specified as strings are transmitted in the order of symbols in the string. In cases c and d, bits within a byte are transmitted in the order MSB first   | [4] 6.3.3.1 | m      |         |
| 5                   | TLV value that is defined (in the standard) as a list of numerical values (e.g. section 11.13.19.3.4.2) will be transmitted in the same order as the numerical values appear in the table  | [4] 6.3.3.1 | m      |         |
| Comments:           |  |             |        |         |

**Table A.80: Subheader and Extended Subheader support**

| Mobile Station (MS) |  |                       |        |         |
|---------------------|--|-----------------------|--------|---------|
| Item                | Capability                                       | Reference             | Status | Support |
| 1                   | Extended subheader support                       | 6.3.2.2.7 and 11.7.25 | m      |         |
| 2                   | Capability of sending Grant management Subheader | 6.3.2.2.2             | m      |         |
| Comments:           |  |                       |        |         |

**Table A.81: PDU concatenation**

| Mobile Station (MS) |   |             |        |         |
|---------------------|---|-------------|--------|---------|
| Item                | Capability  | Reference   | Status | Support |
| 1                   | Concatenate Multiple MAC PDUs into a single burst of the allocated length | [4] 6.3.3.2 | m      |         |
| 2                   | Receive concatenated MAC PDUs and determine disposition via CID           | [4] 6.3.3.2 | m      |         |
| 3                   | Padding of any unused space with stuff byte value in the UL Burst         | [4] 6.3.3.7 | m      |         |
| Comments:           |   |             |        |         |

**Table A.82: SDU Fragmentation**

| Mobile Station (MS) |  |                        |        |         |
|---------------------|--|------------------------|--------|---------|
| Item                | Capability   | Reference              | Status | Support |
| 1                   | Fragment a MAC SDU into multiple MAC PDUs applicable to traffic connections and Management messages on Primary management connection | [4] 6.3.3.3            | m      |         |
| 2                   | Add Fragmentation Sub header to the SDU fragment including setting FC according to the Fragmentation rules table                     | [4] 6.3.3.3            | m      |         |
| 3                   | Do not perform fragmentation of PDUs on "Broadcast management" connections   | [4] 6.3.2.3            | m      |         |
| 4                   | Increment the FSN modulo 2048 for non-ARQ connections  | [4] and [5]<br>6.3.3.3 | m      |         |
| 5                   | Increment the BSN modulo 2048 for ARQ connection   | [4] 6.3.2.3            | m      |         |
| 6                   | Do not perform fragmentation of PDUs on Basic and Initial Ranging connections  | [4] 6.3.2.3            | m      |         |

Comments:

**Table A.83: SDU reassembly**

| Mobile Station (MS) |  |             |        |         |
|---------------------|--|-------------|--------|---------|
| Item                | Capability                                     | Reference   | Status | Support |
| 1                   | Receive and reassemble fragmented SDUs         | [4] 6.3.2.3 | m      |         |
| 2                   | Discard SDUs corrupted due to loss of fragment | [4] 6.3.2.3 | m      |         |

Comments:

**Table A.84: Packing**

| Mobile Station (MS) |  |             |        |         |
|---------------------|--|-------------|--------|---------|
| Item                | Capability   | Reference   | Status | Support |
| 1                   | Pack variable length SDUs in a single MAC PDU on non-ARQ connections                       | [4] 6.3.2.3 | m      |         |
| 2                   | Unpack variable length SDUs on non-ARQ connections   | [4] 6.3.2.3 | m      |         |
| 3                   | Pack variable length SDUs or SDUs fragments in a single MAC PDU on ARQ-enabled connections | [4] 6.3.2.3 | m      |         |
| 4                   | Unpack variable length SDUs or SDUs fragments on ARQ-enabled connections                   | [4] 6.3.2.3 | m      |         |
| 5                   | Do not perform packing of SDUs on Basic, Broadcast and Initial Ranging connections         | [4] 6.3.2.3 | m      |         |
| 6                   | Perform packing of ARQ Feedback Payload  | [4] 6.3.2.3 | m      |         |
| 7                   | Extracting ARQ Feedback IEs from received ARQ Feedback Payload                             | [4] 6.3.2.3 | m      |         |

Comments:

**Table A.85: MAC CRC**

| Mobile Station (MS) |  |             |        |         |
|---------------------|--|-------------|--------|---------|
| Item                | Capability   | Reference   | Status | Support |
| 1                   | Compute and add CRC, and set CI bit based on connection properties | [4] 6.3.2.3 | m      |         |
| 2                   | Check CRC based on CI bit  | [4] 6.3.2.3 | m      |         |

Comments: For Basic, Primary, Broadcast, Fragmentable Broadcast connections CRC should be used always. For ARQ connections CRC should be used always. CRC can be enabled/disabled on SFID basis.

**Table A.86: MAC PDU Formats**

| Mobile Station (MS) |            |           |        |         |
|---------------------|------------|-----------|--------|---------|
| Item                | Capability | Reference | Status | Support |
| Comments:           |            |           |        |         |

## A.5.1.1.2.2.3 ARQ

Table A.87: ARQ

| Mobile Station (MS) |   |                     |        |         |
|---------------------|---|---------------------|--------|---------|
| Item                | Capability  | Reference           | Status | Support |
| 1                   | Pack several ARQ feedback information elements in a single ARQ feedback payload | [4] 6.3.2.3         | m      |         |
| 2                   | Insert a single ARQ feedback payload as first payload in a MAC PDU              | [4] 6.3.2.3         | m      |         |
| 3                   | ARQ ACK type 1 - Cumulative ACK entry   | 11.7.24 and 6.3.4.2 | m      |         |
| 4                   | ARQ ACK type 2 - Cumulative with Selective ACK entry                            | 11.7.24 and 6.3.4.2 | m      |         |
| 5                   | ARQ ACK type 3 - Cumulative ACK with Block Sequence ACK                         | 11.7.24 and 6.3.4.2 | m      |         |
| Comments:           |   |                     |        |         |

## A.5.1.1.2.2.4 Data Delivery Services for Mobile Network

Table A.88: Data Delivery Services for Mobile Network

| Prerequisite: Mobile Station (MS) |   |                |        |         |
|-----------------------------------|---|----------------|--------|---------|
| Item                              | Capability  | Reference      | Status | Support |
| 1                                 | Unsolicited Grant service (UGS)                   | [5] 6.3.20.1.1 | m      |         |
| 2                                 | Real-Time Variable Rate (RT-VR) Service           | [5] 6.3.20.1.2 | m      |         |
| 3                                 | Non-Real-Time Variable Rate (NRT-VR) Service      | [5] 6.3.20.1.3 | m      |         |
| 4                                 | Best Effort (BE) Service                          | [5] 6.3.20.1.4 | m      |         |
| 5                                 | Extended Real-Time Variable Rate (ERT-VR) Service | [5] 6.3.20.1.5 | m      |         |
| Comments:                         |   |                |        |         |

## A.5.1.1.2.2.5 Request-Grant Mechanism

Table A.89: Request-Grant Mechanism

| Prerequisite: Mobile Station (MS) |  |                   |        |         |
|-----------------------------------|--|-------------------|--------|---------|
| Item                              | Capability   | Reference         | Status | Support |
| 1                                 | Incremental bandwidth request using BW request header          | [4] 6.3.6.1       | m      |         |
| 2                                 | Aggregate bandwidth request using BW request header            | [4] 6.3.6.1       | m      |         |
| 3                                 | Bandwidth request using Grant Management Subheader             | [4] 6.3.2.2.2     | m      |         |
| 4                                 | Request-Grant mechanism combined with UL Tx power report       | [5] 6.3.2.1.2.1.2 | m      |         |
| 5                                 | CQICH allocation request using CQICH allocation request header | [5] 6.3.2.1.2.1.4 | m      |         |
| 6                                 | Contention-based CDMA bandwidth requests                       | [4] 6.3.6.5       | m      |         |
| Comments:                         |  |                   |        |         |

## A.5.1.1.2.2.6 Network entry and initialization

Table A.90: Network entry and initialization

| Item      | Capability   | Reference            | Status | Support |
|-----------|--|----------------------|--------|---------|
| 1         | MS performs scanning and synchronization to the downlink | [4] 6.3.9.1          | m      |         |
| 2         | MS obtains downlink parameters                           | [4] 6.3.9.2          | m      |         |
| 3         | MS obtains uplink parameters                             | [4] 6.3.9.3, 6.3.9.4 | m      |         |
| 4         | MS performs Initial Ranging                              | [4]                  | m      |         |
| 5         | MS negotiates basic capabilities                         | [4] 6.3.9.7          | m      |         |
| 6         | MS performs authorization                                | [4] 6.3.9.8, 7.2     | m      |         |
| 7         | MS performs registration                                 | [4] 6.3.9.9          | m      |         |
| Comments: |  |                      |        |         |

**Table A.91: Obtain DL parameters**

| Mobile Station (MS) |                              |             |        |         |
|---------------------|------------------------------|-------------|--------|---------|
| Item                | Capability                   | Reference   | Status | Support |
| 1                   | MS receives DLFP correctly   | [4] 8.4.4.3 | m      |         |
| 2                   | MS receives DL-MAP correctly | [4] 6.3.9.2 | m      |         |
| 3                   | MS receives DCD correctly    | [4] 6.3.9.2 | m      |         |
| Comments:           |                              |             |        |         |

**Table A.92: Obtain UL parameters**

| Mobile Station (MS) |                              |                         |        |         |
|---------------------|------------------------------|-------------------------|--------|---------|
| Item                | Capability                   | Reference               | Status | Support |
| 1                   | MS receives UCD correctly    | [4] 6.3.9.3 and 6.3.9.4 | m      |         |
| 1                   | MS receives UL-MAP correctly |                         | m      |         |
| Comments:           |                              |                         |        |         |

**Table A.93: Initial ranging**

| Mobile Station (MS)  |  |                          |        |         |
|--|--|--------------------------|--------|---------|
| Item   | Capability   | Reference                | Status | Support |
| 1  | MS receives UL-MAP containing initial ranging opportunity  | 6.3.10.3.1               | m      |         |
| 2  | MS sends initial ranging code  | 6.3.10.3.1,<br>8.4.7.1   | m      |         |
| 3  | MS sends an initial ranging code again after random backoff, if the BS does not respond  | 6.3.10.3.1,<br>8.4.7.1   | m      |         |
| 4  | MS receives RNG-RSP  | 6.3.10.3.1               | m      |         |
| 5  | MS performs network entry and initialization on DL Frequency Override channel, if instructed in RNG-RSP                                | 6.3.10.3.1               | m      |         |
| 6  | MS continues the ranging process using initial ranging codes in the periodic ranging region, if receiving RNG-RSP with continue status | 6.3.10.3.1               | m      |         |
| 7  | MS receives CDMA allocation IE after receiving RNG-RSP with success status   | 6.3.10.3.1               | m      |         |
| 8  | SS receives CDMA allocation IE without receiving RNG-RSP with success status   | 6.3.9.5.1,<br>6.3.10.3.1 | m      |         |
| 9  | MS sends RNG-REQ in UL slots allocated by CDMA allocation IE   | 6.3.10.3.1,<br>8.4.5.4.3 | m      |         |
| 10   | MS establishes Basic and Primary Management connections  | 6.3.10.3.1               | m      |         |
| 11   | MS performs timing, power and frequency adjustment   | 6.3.10.3.1               | m      |         |
| Comments: IEEE 802.16e-2005 [5] needs correction in figures 85-87 to allow for the case MS receives CDMA Allocation_IE without having received RNG-RSP with success status which case is allowed by the text of section 6.3.9.5.1. |  |                          |        |         |

**Table A.94: MS basic capability negotiation**

| Mobile Station (MS) |                               |             |        |         |
|---------------------|-------------------------------|-------------|--------|---------|
| Item                | Capability                    | Reference   | Status | Support |
| 1                   | MS sends SBC-REQ              | [4] 6.3.9.7 | m      |         |
| 2                   | MS receives SBC-RSP           | [4] 6.3.9.7 | m      |         |
| 3                   | MS resends SBC-REQ on timeout | [4] 6.3.9.7 | m      |         |
| Comments:           |                               |             |        |         |

**Table A.95: MS registration**

| Mobile Station (MS) |   |             |        |         |
|---------------------|---|-------------|--------|---------|
| Item                | Capability                              | Reference   | Status | Support |
| 1                   | MS sends REG-REQ to register with a BS. | [4] 6.3.9.9 | m      |         |
| 2                   | MS receives REG-RSP.                    | [4] 6.3.9.9 | m      |         |
| 3                   | MS re-sends REG-REQ upon time out       | [4] 6.3.9.9 | m      |         |
| Comments:           |   |             |        |         |

**Table A.96: Periodic ranging**

| Mobile Station (MS) |  |                        |        |         |
|---------------------|--|------------------------|--------|---------|
| Item                | Capability   | Reference              | Status | Support |
| 1                   | MS sends periodic ranging codes after T4 expires.  | 6.3.10.3.2 and 8.4.7.2 | m      |         |
| 2                   | MS sends a periodic ranging code again after random backoff, if the BS does not respond    | 6.3.10.3.2 and 8.4.7.2 | m      |         |
| 3                   | MS adjusts PHY parameters in response to RNG-RSP including the case of unsolicited RNG-RSP | 6.3.10.3.2 and 8.4.7.2 | m      |         |
| Comments:           |  |                        |        |         |

## A.5.1.1.2.2.8 Update of channel descriptors

**Table A.97: Update of channel descriptors**

| Mobile Station (MS) |   |           |        |         |
|---------------------|---|-----------|--------|---------|
| Item                | Capability  | Reference | Status | Support |
| 1                   | MS stores new uplink burst descriptors upon receiving UCD message with incremented Configuration change count (I+1 mod 256)   | 6.3.11    | m      |         |
| 2                   | MS 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) | 6.3.11    | m      |         |
| 3                   | MS stores new downlink burst descriptors upon receiving DCD message with incremented Configuration Change Count (I+1 mod 256)   | 6.3.11    | m      |         |
| 4                   | MS receives using new generation of burst descriptors after receiving DL-MAP with DCD Count matching the new Configuration Change Count (I+1 mod 256)                 | 6.3.11    | m      |         |
| 5                   | MS Supports two simultaneous sets of burst descriptors  | 6.3.11    | m      |         |
| Comments:           |   |           |        |         |

## A.5.1.1.2.2.9 QoS

**Table A.98: Service flow operations**

| Mobile Station (MS) |  |              |        |         |
|---------------------|--|--------------|--------|---------|
| Item                | Capability                                   | Reference    | Status | Support |
| 1                   | Dynamic service flow creation - BS-initiated | 6.3.14.7.1.2 | m      |         |
| 2                   | Dynamic service flow creation -MS-initiated  | 6.3.14.7.1.1 | m      |         |
| 3                   | Dynamic service flow change - BS-initiated   | 6.3.14.9.4.2 | m      |         |
| 4                   | Dynamic service flow change -MS-initiated    | 6.3.14.9.4.1 | m      |         |
| 5                   | Dynamic service flow deletion -BS-initiated  | 6.3.14.9.5.2 | m      |         |
| 6                   | Dynamic service flow deletion- MS-initiated  | 6.3.14.9.5.1 | m      |         |
| Comments:           |  |              |        |         |

## A.5.1.1.2.2.10 Sleep Mode

Table A.99: Sleep Mode

| Mobile Station (MS) |  |  |        |         |
|---------------------|--|--|--------|---------|
| Item                | Capability   | Reference  | Status | Support |
| 1                   | Sleep Mode Implementation in MS  | 6.3.21   | m      |         |
| 2                   | Power Saving Class type 1 support  | 6.3.21.2   | m      |         |
| 3                   | Support of Traffic Indication Message for Power Saving Class type 1      | 6.3.21.2   | m      |         |
| 4                   | Indicating DL traffic by SLPID bit map in TRF-IND                        | 6.3.21.1 and 6.3.2.3.46                                    | m      |         |
| 5                   | Indicating DL traffic by SLPID in TRF-IND                                | 6.3.21.1<br>6.3.2.3.46                                     | m      |         |
| 6                   | Support of SLPID_Update TLV in TRF-IND                                   | 11.16.1  | m      |         |
| 7                   | Traffic triggered waking flag  | 6.3.2.3.44 and 45,<br>6.3.21.2                             | m      |         |
| 8                   | Activation of Power Saving Class by unsolicited SLP-RSP message from BS  | 6.3.2.3.45<br>6.3.21.1                                     | m      |         |
| 9                   | DL sleep control extended subheader                                      | 6.3.2.2.7.2<br>11.7.25                                     | m      |         |
| 10                  | Bandwidth request and uplink sleep control header                        | 6.3.2.1.2.1.6<br>11.7.25                                   | m      |         |
| 11                  | Support of periodic ranging in sleep mode                                | 6.3.21.5<br>11.16.2  | m      |         |
| 12                  | Sleep mode multicast CID support at MS                                   | 6.3.2.3.46<br>10.4   | m      |         |
| 13                  | MS Support of triggered action indicated by Enabled-Action-Triggered TLV | 6.3.2.3.6, 6.3.2.3.44 and 45, 6.3.21.1, 11.5, 11.6, 11.7.3 | m      |         |
| Comments:           |  |  |        |         |

## A.5.1.1.2.2.11 Handover

Table A.100: Neighbor Advertisement

| Mobile Station (MS) |   |                                 |        |         |
|---------------------|---|---------------------------------|--------|---------|
| Item                | Capability  | Reference                       | Status | Support |
| 1                   | Neighbor Advertisement  | 6.3.2.3.47                      | m      |         |
| 2                   | Support BS index at the MS (Use BS index instead of BSID) in Scan/HO related messages, as numbered in MOB_NBR-ADV | 6.3.2.3.48 to 51,<br>6.3.2.3.53 | m      |         |
| Comments:           |   |                                 |        |         |

Table A.101: Scanning

| Mobile Station (MS) |  |                                  |        |         |
|---------------------|--|----------------------------------|--------|---------|
| Item                | Capability   | Reference                        | Status | Support |
| 1                   | Scanning for cell selection (HO)                     | 6.3.2.3.48 and 49                | m      |         |
| 2                   | MS Requests Scanning Interval Allocations from BS    | 6.3.2.3.48 and 49<br>6.3.21.1.2  | m      |         |
| 3                   | Unsolicited Scanning Interval Allocation by BS       | 6.3.2.3.48 and 49,<br>6.3.21.1.2 | m      |         |
| 4                   | Event Triggered Scanning based on serving BS metrics | 6.3.21.1.2                       | m      |         |
| 5                   | MS autonomous neighbor cell scanning                 | 8.4.13.1.3                       | m      |         |
| Comments:           |  |                                  |        |         |

**Table A.102: Scan Reporting Type Support**

| Mobile Station (MS) |  |                       |        |         |
|---------------------|--|-----------------------|--------|---------|
| Item                | Capability   | Reference             | Status | Support |
| 1                   | Periodic reporting based on Report Period as indicated in MOB_SCN-RSP message                      | 6.3.2.3.49 and 11.4.1 | m      |         |
| 2                   | Event triggered reporting based on metric conditions (The action includes support for MOB_SCN-REP) | 6.3.2.3.49 and 11.4.1 | m      |         |

Comments:

**Table A.103: HO/Scan/Report Trigger Metrics**

| Mobile Station (MS) |                     |                       |        |         |
|---------------------|---------------------|-----------------------|--------|---------|
| Item                | Capability          | Reference             | Status | Support |
| 1                   | Mean BS CINR        | 6.3.2.3.53 and 11.8.7 | m      |         |
| 2                   | Mean BS RSSI        | 6.3.2.3.53 and 11.8.7 | m      |         |
| 3                   | Relative Rx Delay   | 6.3.2.3.53 and 11.8.7 | m      |         |
| 4                   | BS Round Trip Delay | 6.3.2.3.53 and 11.8.7 | m      |         |

Comments:

**Table A.104: MAC Layer HO Procedures**

| Mobile Station (MS) |   |                           |        |         |
|---------------------|---|---------------------------|--------|---------|
| Item                | Capability  | Reference                 | Status | Support |
| 1                   | General HO Support  | 6.3.21.2 and 6.3.2.3.55   | m      |         |
| 2                   | HO initiated by MS support at MS side   | 6.3.22.2 and 6.3.22.2.2   | m      |         |
| 3                   | HO initiated by BS support at MS side   | 6.3.22.2 and 6.3.22.2.2   | m      |         |
| 4                   | HO Indication   | 6.3.21.2.5                | m      |         |
| 5                   | Cancellation of HO  | 6.3.21.2.3                | m      |         |
| 6                   | Metric Triggered HO Requests  | 11.1.7 (table 348g)       | m      |         |
| 7                   | Resource Retention Support  | 6.3.2.3.52 and 6.3.2.3.54 | m      |         |
| 8                   | CDMA HO Ranging   | 6.3.10.3.3                | m      |         |
| 9                   | HO_ID support   | 6.3.2.3.52 and 6.3.2.3.54 | m      |         |
| 10                  | Support negotiating of "HO authorization policy" during HO (i.e. between BSs) | 6.3.2.3.52 and 6.3.2.3.54 | m      |         |

Comments:



Table A.105: HO Optimization

| Mobile Station (MS) |  |                                      |        |         |
|---------------------|--|--------------------------------------|--------|---------|
| Item                | Capability   | Reference                            | Status | Support |
| 1                   | HO Optimization Support  | 6.3.2.3.6,<br>6.3.21.2.7 and<br>11.6 | m      |         |
| 2                   | Support Omission of SBC-REQ management messages  | 6.3.2.3.6,<br>6.3.21.2.7 and<br>11.6 | m      |         |
| 3                   | Support Omission of PKM Authentication phase except TEK Phase  | 6.3.2.3.6,<br>6.3.21.2.7 and<br>11.6 | m      |         |
| 4                   | Support Omission of PKM TEK creation phase during re-entry processing  | 6.3.2.3.6,<br>6.3.21.2.7 and<br>11.6 | m      |         |
| 5                   | Support "Full State Sharing"- No exchange of network re-entry messages after ranging before resuming normal operations                   | 6.3.2.3.6,<br>6.3.21.2.7 and<br>11.6 | m      |         |
| 6                   | Unsolicited SBC-RSP management message with updated capabilities information   | 6.3.2.3.6,<br>6.3.21.2.7 and<br>11.6 | m      |         |
| 7                   | Support SBC- RSP TLVs as part of RNG-RSP message   | 11.6                                 | m      |         |
| 8                   | Support Omission of REG-REQ during NW re-entry   | 6.3.2.3.6,<br>6.3.21.2.7 and<br>11.6 | m      |         |
| 9                   | Unsolicited REG-RSP with updated capabilities information  | 6.3.2.3.6,<br>6.3.21.2.7 and<br>11.6 | m      |         |
| 10                  | Support REG-RSP TLV as part of RNG-RSP message   | 11.6                                 | m      |         |
| 11                  | Support of ARQ continuation using SN report header after NW re-entry   | 6.3.2.3.6,<br>6.3.21.2.7 and<br>11.6 | m      |         |
| 12                  | Support continuation of non-ARQ connection using SDU SN extended sub-header before handover and using SN report header after NW re-entry | 6.3.22.2.8                           | m      |         |
| 13                  | Support sending Bandwidth Request header with zero BR as a notification of MS's successful re-entry registration                         | 6.3.21.2.7 and<br>11.6               | m      |         |
| 14                  | Support receiving IP address refresh bit   | 11.6                                 | m      |         |
| 15                  | Capability of sending SN Report header after requested by SN request extended subheader  | 6.3.2.2.7.7                          | o      |         |
| Comments:           |  |                                      |        |         |

Table A.106: CID and SAID Update

| Mobile Station (MS) |  |                  |        |         |
|---------------------|--|------------------|--------|---------|
| Item                | Capability                             | Reference        | Status | Support |
| 1                   | CID update in MS by RNG-RSP            | 11.7.9           | m      |         |
| 2                   | CID update in MS by REG-RSP            | 11.7.9           | m      |         |
| 3                   | Compressed CID update in MS by RNG-RSP | 11.7.9.1         | m      |         |
| 4                   | Compressed CID update in MS by REG-RSP | 11.7.9.1         | m      |         |
| 5                   | SAID update in MS by RNG-RSP           | 11.7.17 and 11.6 | m      |         |
| 6                   | SAID update in MS by SA-TEK_RSP        | 11.7.20          | m      |         |
| Comments:           |  |                  |        |         |

## A.5.1.1.2.2.12 Idle Mode

**Table A.107: Idle Mode**

| Mobile Station (MS) |   |               |        |         |
|---------------------|---|---------------|--------|---------|
| Item                | Capability  | Reference     | Status | Support |
| 1                   | General Idle Mode functionality   | 6.3.24        | m      |         |
| 2                   | Idle mode initiation by DREG-REQ message from MS  | 6.3.24.1      | m      |         |
| 3                   | Support for Idle Mode initiation by unsolicited DREG-CMD from BS  | 6.3.24.1      | m      |         |
| 4                   | MS retention of service and operational information during Idle Mode initiated by DREG-CMD  | 6.3. 24.1     | m      |         |
| 5                   | Request from MS to BS to retain service and operational information by DREG-REQ message   | 6.3. 24.1     | m      |         |
| 6                   | MS capability of receiving Broadcast Control Pointer IE   | 6.3. 24.5     | m      |         |
| 7                   | MS Capability of using dedicated ranging region and ranging code allocation for location update or network entry of MS in Idle Mode | 6.3. 24.7.1   | m      |         |
| 8                   | Paging Group Update at MS   | 6.3. 24.8.1.1 | m      |         |
| 9                   | Timer Location Update at MS   | 6.3. 24.8.1.2 | m      |         |
| 10                  | Power Down Location Update at MS  | 6.3. 24.8.1.3 | m      |         |
| 11                  | Secure Location Update  | 6.3. 24.8.2.1 | m      |         |
| 12                  | Un-secure Location Update   | 6.3. 24.8.2.2 | m      |         |
| 13                  | Paging Preference   | 11.13.30      | m      |         |
| 14                  | Idle mode multicast CID support at MS   | 10.4          | m      |         |
| Comments:           |   |               |        |         |

## A.5.1.1.2.2.12a Expedited Re-entry from Idle Mode

**Table A.108: -a Expedited Re-entry from Idle Mode**

| Mobile Station (MS) |  |           |        |         |
|---------------------|--|-----------|--------|---------|
| Item                | Capability   | Reference | Status | Support |
| 1                   | Expedited network re-entry from Idle Mode support  | 6.3.23.9  | m      |         |
| 2                   | Support Omission of SBC-REQ management messages  | 11.6      | m      |         |
| 3                   | Support Omission of PKM Authentication phase except TEK phase  | 11.6      | m      |         |
| 4                   | Support Omission of PKM TEK creation phase during re-entry processing  | 11.6      | m      |         |
| 5                   | Support "Full State Sharing" - No exchange of network re-entry messages after ranging before resuming normal operations  | 11.6      | m      |         |
| 6                   | Unsolicited SBC-RSP management message with updated capabilities information   | 11.6      | m      |         |
| 7                   | Support SBC-RSP TLVs as part of RNG-RSP message  | 11.6      | m      |         |
| 8                   | Support Omission of REG-REQ during NW re-entry   | 11.6      | m      |         |
| 9                   | Unsolicited REG-RSP with updated capabilities information  | 11.6      | m      |         |
| 10                  | Support REG-RSP TLV as part of RNG-RSP message   | 11.6      | m      |         |
| 11                  | MS send Bandwidth Request header with zero BR as a notification of MS's successful re-entry registration.  | 11.6      | m      |         |
| 12                  | MS trigger a higher layer protocol required to refresh its traffic IP address (e.g. DHCP Discover - RFC 2131 [15]) or Mobile IPv4 re-registration (RFC 3344 [19]). | 11.6      | m      |         |
| Comments:           |  |           |        |         |

## A. 5.1.1.2.2.13 Feedback Mechanism

**Table A.109: Feedback Mechanism**

| Mobile Station (MS) |  |               |        |         |
|---------------------|--|---------------|--------|---------|
| Item                | Capability                               | Reference     | Status | Support |
| 1                   | Feedback Header                          | 6.3.2.1.2.2.1 | m      |         |
| 2                   | Bandwidth request and UL Tx Power Report | 6.3.2.1.2.1.2 | m      |         |
| 3                   | SN report header                         | 6.3.2.1.2.1.7 | m      |         |
| Comments:           |  |               |        |         |

## A. 5.1.1.2.2.14 Multicast Traffic Connection

**Table A.110: Multicast Traffic Connection**

| Mobile Station (MS) |                              |           |        |         |
|---------------------|------------------------------|-----------|--------|---------|
| Item                | Capability                   | Reference | Status | Support |
| 1                   | Multicast traffic connection | 6.3.13    | m      |         |
| Comments:           |                              |           |        |         |

## A. 5.1.1.2.2.15 Security Sublayer

**Table A.111: Security functions**

| Mobile Station (MS) |   |                       |        |         |
|---------------------|---|-----------------------|--------|---------|
| Item                | Capability  | Reference             | Status | Support |
| 1                   | MS supports two simultaneous active TEKs                          | 6.3.9.8 and 7.2.1     | m      |         |
| 2                   | MS supports SAID update using RNG-REQ/RNG-RSP                     | 11.6                  | m      |         |
| 3                   | MS supports SAID update using SA-TEK-REQ/SA-TEK-RSP               | 11.7.20               | m      |         |
| 4                   | MS sends PKMv2 EAP-Start  | 7.2.2.2               | m      |         |
| 5                   | MS exchanges PKMv2 EAP-Transfer                                   | 7.2.2.2               | m      |         |
| 6                   | MS derives AK   | 7.2.2.2               | m      |         |
| 7                   | MS derives KEK  | 7.2.2.2               | m      |         |
| 8                   | MS derives message authentication keys                            | 7.2.2.2               | m      |         |
| 9                   | MS receives PKMv2 SA-TEK-Challenge                                | 7.2.2.2               | m      |         |
| 10                  | MS checks whether AKID is valid or not                            | 7.2.2.2               | m      |         |
| 11                  | MS sends PKMv2 SA-TEK-Request                                     | 7.2.2.2               | m      |         |
| 12                  | MS receives PKMv2 SA-TEK-Response                                 | 7.2.2.2               | m      |         |
| 13                  | MS establishes SAs included in PKMv2 SA-TEK-Response              | 7.2.2.2               | m      |         |
| 14                  | MS re-sends PKMv2 SA-TEK-Request when SATEKTimer timeout          | 7.2.2.2               | m      |         |
| 15                  | MS sends PKMv2 Key-Request  | 7.2.2.2               | m      |         |
| 16                  | MS receives PKMv2 Key-Reply                                       | 7.2.2.2               | m      |         |
| 17                  | MS re-sends PKMv2 Key-Request when Operational Wait timer timeout | 7.2.2.2               | m      |         |
| 18                  | MS supports Dot16KDF algorithm                                    | 7.2.2.2 and 7.5.4.6.1 | m      |         |
| Comments:           |   |                       |        |         |

**Table A.112: PKM message encodings support**

| Mobile Station (MS) |                                 |           |        |         |
|---------------------|---------------------------------|-----------|--------|---------|
| Item                | Capability                      | Reference | Status | Support |
| 1                   | (one or more) SA_TEK_Update     | 11.7.21   | m      |         |
| 2                   | Security negotiation parameters | 11.8.4    | m      |         |
| 3                   | Display-String                  | 11.9.1    | o      |         |
| 4                   | Key lifetime                    | 11.9.4    | m      |         |
| 5                   | Key sequence number             | 11.9.5    | m      |         |
| 6                   | SAID                            | 11.9.7    | m      |         |
| 7                   | TEK-Parameters                  | 11.9.8    | m      |         |
| 8                   | Error-code                      | 11.9.10   | m      |         |
| 9                   | Security capabilities           | 11.9.13   | m      |         |
| 10                  | SA descriptor(s)                | 11.9.17   | m      |         |
| 11                  | Nonce                           | 11.9.20   | m      |         |
| 12                  | MS_random                       | 11.9.21   | m      |         |
| 13                  | BS_random                       | 11.9.22   | m      |         |
| 14                  | CMAC Digest                     | 11.9.27   | m      |         |
| 15                  | AKID                            | 11.9.32   | m      |         |
| 16                  | EAP payload                     | 11.9.33   | m      |         |
| 17                  | PKMv2 configuration settings    | 11.9.36   | m      |         |
| 18                  | Frame Number                    | 11.9.37   | m      |         |
| Comments:           |                                 |           |        |         |

**Table A.113: Authorization Policy Support**

| Mobile Station (MS) |  |           |        |         |
|---------------------|--|-----------|--------|---------|
| Item                | Capability   | Reference | Status | Support |
| 1                   | 802.16 Authorization policy support (This is about the capability of negotiating authorization policy) | 11.7.8.7  | m      |         |
| Comments:           |  |           |        |         |

**Table A.114: PKM Version Support**

| Mobile Station (MS) |               |           |        |         |
|---------------------|---------------|-----------|--------|---------|
| Item                | Capability    | Reference | Status | Support |
| 1                   | PKMv2 Support | 11.8.4.1  | m      |         |
| Comments:           |               |           |        |         |

**Table A.115: PKMv2 Authorization Policy Support-Initial Network Entry**

| Mobile Station (MS) |                         |                                 |        |         |
|---------------------|-------------------------|---------------------------------|--------|---------|
| Item                | Capability              | Reference                       | Status | Support |
| 1                   | No Authorization        | 11.8.4.2                        | m      |         |
| 2                   | EAP-based authorization | 11.8.4.2, 7.1.3.2 and 7.2.2.2.2 | m      |         |
| Comments:           |                         |                                 |        |         |

**Table A.116: PKMv2 Authorization Policy Support-Network Re-entry**

| Mobile Station (MS) |                         |                                 |        |         |
|---------------------|-------------------------|---------------------------------|--------|---------|
| Item                | Capability              | Reference                       | Status | Support |
| 1                   | No Authorization        | 11.8.4.2                        | m      |         |
| 2                   | EAP-based authorization | 11.8.4.2, 7.1.3.2 and 7.2.2.2.2 | m      |         |
| Comments:           |                         |                                 |        |         |

**Table A.117: Supported Cryptographic Suites**

| Mobile Station (MS)   |   |           |        |         |
|---|---|-----------|--------|---------|
| Item  | Capability  | Reference | Status | Support |
| 1   | No data encryption, no data authentication and 3-DES, 128     | 11.9.14   | m      |         |
| 2   | CCM-Mode 128-bit AES, CCM-Mode, AES Key Wrap with 128-bit key | 11.9.14   | m      |         |
| Comments: For Item 1 This cryptographic suite means that no encryption and no TEK exchange. |   |           |        |         |

**Table A.118: Message Authentication Code Mode**

| Mobile Station (MS) |                           |           |        |         |
|---------------------|---------------------------|-----------|--------|---------|
| Item                | Capability                | Reference | Status | Support |
| 1                   | No message authentication | 11.8.4.3  | m      |         |
| 2                   | CMAC                      | 11.8.4.3  | m      |         |
| Comments:           |                           |           |        |         |

**Table A.119: Security Association**

| Mobile Station (MS) |                       |                   |        |         |
|---------------------|-----------------------|-------------------|--------|---------|
| Item                | Capability            | Reference         | Status | Support |
| 1                   | Support of Static SA  | 7.2.1.1 and 7.3.2 | m      |         |
| 2                   | Support of Dynamic SA | 7.2.1.1           | m      |         |
| 3                   | Support of Primary SA | 7.2.1.1           | m      |         |
| Comments:           |                       |                   |        |         |

**Table A.120: SA Service Type**

| Mobile Station (MS) |            |           |        |         |
|---------------------|------------|-----------|--------|---------|
| Item                | Capability | Reference | Status | Support |
| 1                   | Unicast    | 11.9.35   | m      |         |
| Comments:           |            |           |        |         |

**Table A.121: EAP Authentication Methods**

| Mobile Station (MS) |                               |                       |        |         |
|---------------------|-------------------------------|-----------------------|--------|---------|
| Item                | Capability                    | Reference             | Status | Support |
| 1                   | Adopt recommendation from NWG | 7.1.3.2 and 7.2.2.2.2 |        |         |
| Comments:           |                               |                       |        |         |

A.5.1.1.2.2.16 MBS

**Table A.122: MBS**

| Mobile Station (MS) |  |            |        |         |
|---------------------|--|------------|--------|---------|
| Item                | Capability                             | Reference  | Status | Support |
| 1                   | Multi-BS-MBS                           | 6.3.13     | m      |         |
| 2                   | Support for MBS_MAP-IE                 | 6.3.13.2.3 | m      |         |
| 3                   | MS initiated MBS request using DSA-REQ | 11.13.20   | m      |         |
| 4                   | BS initiated MBS request using DSA-REQ | 11.13.20   | m      |         |
| Comments:           |  |            |        |         |

A.5.1.1.2.2.17 MS's Network Entry issued by BS restart

**Table A.123: MS's Network Entry issued by BS restart**

| Mobile Station (MS) |   |                  |        |         |
|---------------------|---|------------------|--------|---------|
| Item                | Capability  | Reference        | Status | Support |
| 1                   | MS's Network Entry triggered by BS restart counter change | 6.3.9.11, 11.4.1 | m      |         |
| Comments:           |   |                  |        |         |

A.5.1.1.2.2.18 MAC support for H-ARQ

**Table A.124: MAC support for H-ARQ**

| Mobile Station (MS)  |   |                     |        |         |
|--|---|---------------------|--------|---------|
| Item   | Capability  | Reference           | Status | Support |
| 1  | HARQ Support  | 6.3.17              | m      |         |
| 2  | HARQ Buffer Negotiation Capability                          | 11.8.3.7.19         | m      |         |
| 3  | HARQ Channel mapping  | 6.3.17,<br>11.13.32 | m      |         |
| 4  | Capability of DL HARQ channels Number negotiation           | 11.8.3.7.2          | m      |         |
| 5  | Capability of UL HARQ channels Number negotiation           | 11.8.3.7.3          | m      |         |
| 6  | Capability of HARQ ACK delay negotiation in DL transmission | 11.4.1              | m      |         |
| 7  | Capability of HARQ ACK delay negotiation in UL transmission | 11.3.1              | m      |         |
| 8  | PDU SN extended subheader for HARQ reordering               | 11.13.33            | m      |         |
| Comments: All items below are conditional dependently on HARQ support. HARQ Channel mapping is determined by BS. |   |                     |        |         |

## A.5.1.2 Base Station

### A.5.1.2.1 PHY functions

#### A.5.1.2.1.1 Sampling Factor

**Table A.125: Sampling Factor for BS**

| Base Station (BS) |            |             |        |         |
|-------------------|------------|-------------|--------|---------|
| Item              | Capability | Reference   | Status | Support |
| 1                 | 8/7        | [4] 8.4.2.3 | m      |         |
| 2                 | 28/25      | [4] 8.4.2.3 | m      |         |

Comments: Item 1 is used for A.4-1, 3, 8 and 11 and Item 2 is used for A.5-2, 4, 5, 6, 7, 9, 10 and 12.

#### A.5.1.2.1.2 Cyclic Prefix

**Table A.126: Cyclic Prefix for BS**

| Base Station (BS) |            |                  |        |         |
|-------------------|------------|------------------|--------|---------|
| Item              | Capability | Reference        | Status | Support |
| 1                 | 1/8        | [4] 8.4.2.3, [7] | m      |         |

Comments:

#### A.5.1.2.1.3 Frame Duration

**Table A.127: Frame duration codes for BS**

| Base Station (BS) |            |              |        |         |
|-------------------|------------|--------------|--------|---------|
| Item              | Capability | Reference    | Status | Support |
| 1                 | 5 msec     | 8.4.5.2, [7] | m      |         |

Comments:

#### A.5.1.2.1.4 TTG/RTG

**Table A.128: Minimum TTG performance for BS**

| Base Station (BS) |                     |           |        |         |
|-------------------|---------------------|-----------|--------|---------|
| Item              | Capability          | Reference | Status | Support |
| 1                 | 188 PS for 3,5 MHz  | 8.4.4.2   | oi.129 |         |
| 2                 | 148 PS for 5 MHz    | 8.4.4.2   | oi.129 |         |
| 3                 | 376 PS for 7 MHz    | 8.4.4.2   | oi.129 |         |
| 4                 | 218 PS for 8,75 MHz | 8.4.4.2   | oi.129 |         |
| 5                 | 296 PS for 10 MHz   | 8.4.4.2   | oi.129 |         |

Comments:

**Table A.129: Minimum RTG performance for BS**

| Base Station (BS) |                      |           |        |         |
|-------------------|----------------------|-----------|--------|---------|
| Item              | Capability           | Reference | Status | Support |
| 1                 | 60 PS for 3,5 MHz    | 8.4.4.2   | oi.130 |         |
| 2                 | 84 PS for 5 MHz      | 8.4.4.2   | oi.130 |         |
| 3                 | 120 PS for 7 MHz     | 8.4.4.2   | oi.130 |         |
| 4                 | 186 PS for 8,75 MHz, | 8.4.4.2   | oi.130 |         |
| 5                 | 168 PS for 10 MHz    | 8.4.4.2   | oi.130 |         |

Comments:

## A.5.1.2.1.5 UL and DL Subframe Size

Table A.130: Number of OFDM Symbols in DL and UL

| Base Station (BS)  |   |          |              |        |         |
|--|---|----------|--------------|--------|---------|
| Item   | Capability  | Value    | Reference    | Status | Support |
| 1  | Number of OFDM Symbols in DL and UL for 5 MHz BW    | (35, 12) | 8.4.4.2, [6] | oi.131 |         |
|  |   | (34, 13) |              |        |         |
|  |   | (33, 14) |              |        |         |
|  |   | (32, 15) |              |        |         |
|  |   | (31, 16) |              |        |         |
|  |   | (30, 17) |              |        |         |
|  |   | (29, 18) |              |        |         |
|  |   | (28, 19) |              |        |         |
|  |   | (27, 20) |              |        |         |
|  |   | (26, 21) |              |        |         |
| 2  | Number of OFDM Symbols in DL and UL for 10 MHz BW   | (35, 12) | 8.4.4.2, [6] | oi.131 |         |
|  |   | (34, 13) |              |        |         |
|  |   | (33, 14) |              |        |         |
|  |   | (32, 15) |              |        |         |
|  |   | (31, 16) |              |        |         |
|  |   | (30, 17) |              |        |         |
|  |   | (29, 18) |              |        |         |
|  |   | (28, 19) |              |        |         |
|  |   | (27, 20) |              |        |         |
|  |   | (26, 21) |              |        |         |
| 3  | Number of OFDM Symbols in DL and UL for 8,75 MHz BW | (30, 12) | 8.4.4.2, [6] | oi.131 |         |
|  |   | (29, 13) |              |        |         |
|  |   | (28, 14) |              |        |         |
|  |   | (27, 15) |              |        |         |
|  |   | (26, 16) |              |        |         |
|  |   | (25, 17) |              |        |         |
|  |   | (24, 18) |              |        |         |
| 4  | Number of OFDM Symbols in DL and UL for 3,5 MHz BW  | (24, 09) | 8.4.4.2, [6] | oi.131 |         |
|  |   | (23, 10) |              |        |         |
|  |   | (22, 11) |              |        |         |
|  |   | (21, 12) |              |        |         |
|  |   | (20, 13) |              |        |         |
|  |   | (19, 14) |              |        |         |
|  |   | (18, 15) |              |        |         |
| 5  | Number of OFDM Symbols in DL and UL for 7 MHz BW    | (24, 09) | 8.4.4.2, [6] | oi.131 |         |
|  |   | (23, 10) |              |        |         |
|  |   | (22, 11) |              |        |         |
|  |   | (21, 12) |              |        |         |
|  |   | (20, 13) |              |        |         |
|  |   | (19, 14) |              |        |         |
|  |   | (18, 15) |              |        |         |
| Comments: First value in the pairs is number of symbols in DL subframe and the second value is the number of symbols in UL subframe. |   |          |              |        |         |

## A.5.1.2.1.6 Subcarrier Allocation Mode

Table A.131: DL subcarrier allocation for BS

| Base Station (BS) |                                 |                                |        |         |
|-------------------|---------------------------------|--------------------------------|--------|---------|
| Item              | Capability                      | Reference                      | Status | Support |
| 1                 | PUSC                            | 8.4.6.1.2.1, [6]               | m      |         |
| 2                 | PUSC with all subchannels       | 8.4.6.1.2.1, [6]               | m      |         |
| 3                 | PUSC with dedicated pilots      | 8.4.6.1.2.1,<br>8.4.5.3.4, [6] | IO-BF  |         |
| 4                 | FUSC                            | 8.4.6.1.2.2, [6]               | m      |         |
| 5                 | AMC 2 x 3                       | 8.4.6.3, [6]                   | m      |         |
| 6                 | AMC 2 x 3 with dedicated pilots | 8.4.6.3,<br>8.4.5.3.4, [6]     | IO-BF  |         |
| Comments:         |                                 |                                |        |         |

Table A.132: UL subcarrier allocation for BS

| Base Station (BS) |                                  |                |        |         |
|-------------------|----------------------------------|----------------|--------|---------|
| Item              | Capability                       | Reference      | Status | Support |
| 1                 | PUSC                             | 8.4.6.2.1, [6] | m      |         |
| 2                 | PUSC without subchannel rotation | [6]            | IO-BF  |         |
| 3                 | AMC 2 x 3                        | 8.4.6.3, [6]   | m      |         |
| Comments:         |                                  |                |        |         |

## A.5.1.2.1.7 UL Channel Sounding

Table A.133: UL Sounding 1 for BS

| Base Station (BS) |  |                             |        |         |
|-------------------|--|-----------------------------|--------|---------|
| Item              | Capability   | Reference                   | Status | Support |
| 1                 | Type A with Cyclic shift- support for P values other than 9 and 18 | 8.4.6.2.7.1                 | IO-BF  |         |
| 2                 | Type A with Cyclic shift- Support P values of 9 and 18             | 8.4.6.2.7.1                 | IO-BF  |         |
| 3                 | Type A with Decimation   | 8.4.6.2.7.1                 | IO-BF  |         |
| 4                 | Power Assignment Method: Equal Power (0b00)                        | 8.4.6.2.7.1,<br>8.4.6.2.7.2 | IO-BF  |         |
| Comments:         |  |                             |        |         |

Table A.134: UL Sounding 2 for BS

| Base Station (BS) |  |                                  |        |         |
|-------------------|--|----------------------------------|--------|---------|
| Item              | Capability   | Reference                        | Status | Support |
| 1                 | Sounding response time capability = Next Frame       | 8.4.6.2.7.1,<br>11.8.3.7.14, [6] | IO-BF  |         |
| 2                 | max number of simultaneous sounding instructions = 2 | 8.4.6.2.7.1,<br>11.8.3.7.14, [6] | IO-BF  |         |
| Comments:         |  |                                  |        |         |

## A.5.1.2.1.8 Ranging and Band Width Request

Table A.135: Initial ranging for BS

| Base Station (BS) |   |           |        |         |
|-------------------|---|-----------|--------|---------|
| Item              | Capability                                  | Reference | Status | Support |
| 1                 | Initial Ranging in PUSC zone with 2 symbols | 8.4.7.1   | m      |         |
| Comments:         |   |           |        |         |



**Table A.136: HO ranging for BS**

| Base Station (BS) |  |           |        |         |
|-------------------|--|-----------|--------|---------|
| Item              | Capability                             | Reference | Status | Support |
| 1                 | HO Ranging in PUSC zone with 2 symbols | 8.4.7.1   | m      |         |
| Comments:         |  |           |        |         |

**Table A.137: Periodic Ranging for BS**

| Base Station (BS) |  |           |        |         |
|-------------------|--|-----------|--------|---------|
| Item              | Capability                                   | Reference | Status | Support |
| 1                 | Periodic Ranging in PUSC zone with 1 symbols | 8.4.7.2   | m      |         |
| Comments:         |  |           |        |         |

**Table A.138: BW Request for BS**

| Base Station (BS) |  |           |        |         |
|-------------------|--|-----------|--------|---------|
| Item              | Capability                             | Reference | Status | Support |
| 1                 | BW Request in PUSC zone with 1 symbols | 8.4.7.2   | m      |         |
| Comments:         |  |           |        |         |

## A.5.1.2.1.9 Fast Feedback

**Table A.139: Fast-Feedback/CQI Channel Encoding for BS**

| Base Station (BS) |            |                  |        |         |
|-------------------|------------|------------------|--------|---------|
| Item              | Capability | Reference        | Status | Support |
| 1                 | 6 bits     | [4] 8.4.5.4.10.5 | m      |         |
| Comments:         |            |                  |        |         |

**Table A.140: Fast-Feedback/CQI Channel Allocation Method for BS**

| Base Station (BS) |  |                |        |         |
|-------------------|--|----------------|--------|---------|
| Item              | Capability   | Reference      | Status | Support |
| 1                 | Fast feedback channel allocation using CQICH Allocation IE | [5] 8.4.5.4.12 | m      |         |
| 2                 | Fast feedback channel allocation using HARQ DL MAP- IE     | [5] 8.4.5.3.21 | m      |         |
| Comments:         |  |                |        |         |

## A.5.1.2.1.10 Channel Coding

**Table A.141: Repetition for BS**

| Base Station (BS)   |            |           |        |         |
|---|------------|-----------|--------|---------|
| Item  | Capability | Reference | Status | Support |
| 1   | Repetition | 8.4.9.5   | m      |         |
| Comments: Item 1 is only applicable to A.35-1, A.36-1, A.37-1 and A.38-1. |            |           |        |         |

**Table A.142: Randomization for BS**

| Base Station (BS) |               |           |        |         |
|-------------------|---------------|-----------|--------|---------|
| Item              | Capability    | Reference | Status | Support |
| 1                 | Randomization | 8.4.9.1   | m      |         |
| Comments:         |               |           |        |         |

**Table A.143: Convolutional Code for BS**

| Base Station (BS)  |             |           |        |         |
|--|-------------|-----------|--------|---------|
| Item   | Capability  | Reference | Status | Support |
| 1  | Tail Biting | 8.4.9.2.1 | m      |         |
| Comments: Convolutional Code shall be only applicable for FCH. |             |           |        |         |

**Table A.144: Convolutional Turbo Code for BS**

| Base Station (BS) |            |                                 |        |         |
|-------------------|------------|---------------------------------|--------|---------|
| Item              | Capability | Reference                       | Status | Support |
| 1                 | CTC        | 8.4.9.2.3 excluding 8.4.9.2.3.5 | m      |         |
| Comments:         |            |                                 |        |         |

**Table A.145: Interleaving for BS**

| Base Station (BS) |              |           |        |         |
|-------------------|--------------|-----------|--------|---------|
| Item              | Capability   | Reference | Status | Support |
| 1                 | Interleaving | 8.4.9.3   | m      |         |
| Comments:         |              |           |        |         |

## A.5.1.2.1.11 HARQ

**Table A.146: HARQ Chase Combining for BS**

| Base Station (BS) |                |           |        |         |
|-------------------|----------------|-----------|--------|---------|
| Item              | Capability     | Reference | Status | Support |
| 1                 | Chase with CTC | 8.4.15.1  | m      |         |
| Comments:         |                |           |        |         |

**Table A.147: ACK Channel for BS**

| Base Station (BS) |             |            |        |         |
|-------------------|-------------|------------|--------|---------|
| Item              | Capability  | Reference  | Status | Support |
| 1                 | ACK channel | 8.4.5.4.13 | m      |         |
| Comments:         |             |            |        |         |

## A.5.1.2.1.12 Control Mechanism

**Table A.148: Synchronization for BS**

| Base Station (BS) |  |                           |        |         |
|-------------------|--|---------------------------|--------|---------|
| Item              | Capability                                     | Reference                 | Status | Support |
| 1                 | BS Synchronization in time /slot               | 8.4.10.1.1,<br>6.3.2.3.47 | m      |         |
| 2                 | BS Synchronization in frequency                | 8.4.10.1.1                | m      |         |
| 3                 | BS to Neighbor BS Synchronization in frequency | 6.3.2.3.47                | m      |         |
| Comments:         |  |                           |        |         |

## A.5.1.2.1.13 Power Control

Table A.149: Closed-loop Power Control for BS

| Base Station (BS) |                           |                         |        |         |
|-------------------|---------------------------|-------------------------|--------|---------|
| Item              | Capability                | Reference               | Status | Support |
| 1                 | Closed loop power control | 8.4.10.3 and 8.4.10.3.1 | m      |         |
| Comments:         |                           |                         |        |         |

Table A.150: Open-loop Power Control for BS

| Base Station (BS) |   |                                |        |         |
|-------------------|---|--------------------------------|--------|---------|
| Item              | Capability  | Reference                      | Status | Support |
| 1                 | Open loop power control   | 8.4.10.3.2                     | m      |         |
| 2                 | Passive Uplink open loop power control  | 8.4.10.3.2                     | m      |         |
| 3                 | UL Tx power and Headroom transmission condition using bandwidth request and UL Tx Power Report header | 8.4.10.3.2.1 and 6.3.2.1.2.1.2 | m      |         |
| Comments:         |   |                                |        |         |

## A.5.1.2.1.14 Channel Quality Measurements

Table A.151: CINR Measurement for BS

| Base Station (BS) |  |   |         |         |
|-------------------|--|---|---------|---------|
| Item              | Capability   | Reference                                   | Status  | Support |
| 1                 | Physical CINR measurement from the preamble for frequency reuse==1 (feedback type=0b00 and report type=0 and CINR preamble report type=0)        | 6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9 | m       |         |
| 2                 | Physical CINR measurement from the preamble for frequency reuse==3 (feedback type=0b00 and report type=0 and CINR preamble report type=1)        | 6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9 | m       |         |
| 3                 | Physical CINR measurement for a permutation zone from pilot subcarriers (feedback type=0b00 and report type=1 and CINR zone measurement type=0)  | 6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9 | m       |         |
| 4                 | Effective CINR measurement for a permutation zone from pilot subcarriers (feedback type=0b01 and report type=1 and CINR zone measurement type=0) | 6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9 | m       |         |
| 5                 | Major group indication (applicable to PUSC zone only)  | 8.4.5.4.12                                  | IO-BF   |         |
| 6                 | MIMO permutation feedback cycle (applicable to MIMO only)  | 8.4.5.4.12                                  | IO-MIMO |         |
| Comments:         |  |   |         |         |

## A.5.1.2.1.15 Modulation

Table A.152: PRBS for BS

| Base Station (BS) |            |           |        |         |
|-------------------|------------|-----------|--------|---------|
| Item              | Capability | Reference | Status | Support |
| 1                 | PRBS       | 8.4.9.4.1 | m      |         |
| Comments:         |            |           |        |         |

**Table A.153: Downlink MCS for BS, Convolutional Coding**

| Mobile Station (MS) |               |           |        |         |
|---------------------|---------------|-----------|--------|---------|
| Item                |               | Reference | Status | Support |
| 1                   | QPSK (CC) 1/2 | 11.4.2    | m      |         |
| Comments:           |               |           |        |         |

**Table A.154: Downlink MCS for BS, Convolutional Turbo Code**

| Mobile Station (MS) |                  |           |        |         |
|---------------------|------------------|-----------|--------|---------|
| Item                |                  | Reference | Status | Support |
| 1                   | QPSK (CTC) 1/2   | 11.4.2    | m      |         |
| 2                   | QPSK (CTC) 3/4   | 11.4.2    | m      |         |
| 3                   | 16-QAM (CTC) 1/2 | 11.4.2    | m      |         |
| 4                   | 16-QAM (CTC) 3/4 | 11.4.2    | m      |         |
| 5                   | 64-QAM (CTC) 1/2 | 11.4.2    | m      |         |
| 6                   | 64-QAM (CTC) 2/3 | 11.4.2    | m      |         |
| 7                   | 64-QAM (CTC) 3/4 | 11.4.2    | m      |         |
| 6                   | 64-QAM (CTC) 5/6 | 11.4.2    | m      |         |
| Comments:           |                  |           |        |         |

**Table A.155: Uplink MCS for BS, Convolutional Turbo Code**

| Mobile Station (MS) |                  |           |        |         |
|---------------------|------------------|-----------|--------|---------|
| Item                |                  | Reference | Status | Support |
| 1                   | QPSK (CTC) 1/2   | 11.3.1.1  | m      |         |
| 2                   | QPSK (CTC) 3/4   | 11.3.1.1  | m      |         |
| 3                   | 16-QAM (CTC) 1/2 | 11.3.1.1  | m      |         |
| 4                   | 16-QAM (CTC) 3/4 | 11.3.1.1  | m      |         |
| Comments:           |                  |           |        |         |

**Table A.156: Pilot modulation for BS**

| Base Station (BS) |   |           |                   |         |
|-------------------|---|-----------|-------------------|---------|
| Item              | Capability  | Reference | Status            | Support |
| 1                 | Modulation of all pilots in downlink for FUSC permutations  | 8.4.9.4.3 | m                 |         |
| 2                 | Modulation of pilots in downlink belonging to the segment for PUSC permutations                                 | 8.4.9.4.3 | m                 |         |
| 3                 | Modulation of pilots in downlink in allocated AMC bins for AMC allocations                                      | 8.4.9.4.3 | m                 |         |
| 4                 | Pilot modulation for PUSC with dedicated pilot  | 8.4.9.4.3 | IO-BF             |         |
| 5                 | Pilot modulation for MIMO PUSC  |           | IO-MIMO           |         |
| 6                 | Pilot modulation for MIMO PUSC with dedicated pilot   |           | IO-BF and IO-MIMO |         |
| 7                 | Pilot modulation for AMC 2x3 with dedicated pilot (BS shall not modulate pilots for gap allocations in DIUC=13) |           | IO-BF             |         |
| Comments:         |   |           |                   |         |

**Table A.157: Preamble modulation for BS**

| Base Station (BS) |   |             |        |         |
|-------------------|---|-------------|--------|---------|
| Item              | Capability                                | Reference   | Status | Support |
| 1                 | Modulation of pilots in downlink preamble | 8.4.9.4.3.1 | m      |         |
| Comments:         |   |             |        |         |

Table A.158: FCH for BS

| Base Station (BS) |                          |           |        |         |
|-------------------|--------------------------|-----------|--------|---------|
| Item              | Capability               | Reference | Status | Support |
| 1                 | Used sub-channel bitmap  | 8.4.4.3   | m      |         |
| 2                 | DL MAP coding indication | 8.4.4.3   | m      |         |
| 3                 | DL MAP repetition coding | 8.4.4.3   |        |         |
| Comments:         |                          |           |        |         |

Table A.159: Coding of the DL-MAP for BS

| Base Station (BS) |                                     |           |        |         |
|-------------------|-------------------------------------|-----------|--------|---------|
| Item              | Capability                          | Reference | Status | Support |
| 1                 | 0b010 - CTC encoding used on DL-MAP | 8.4.4.3   | m      |         |
| Comments:         |                                     |           |        |         |

## A.5.1.2.1.16 MAP Support

Table A.160: Normal MAP for BS

| Base Station (BS) |                             |            |        |         |
|-------------------|-----------------------------|------------|--------|---------|
| Item              | Capability                  | Reference  | Status | Support |
| 1                 | Normal DL-MAP.              | 6.3.2.3.2  | m      |         |
| 2                 | Normal UL-MAP               | 6.3.2.3.4  | m      |         |
| 3                 | Compressed DL-MAP           | 8.4.5.6.1  | m      |         |
| 4                 | Compressed UL-MAP           | 8.4.5.6.2  | m      |         |
| 5                 | Sub-DL-UL-MAP in first zone | 6.3.2.3.60 | m      |         |
| 6                 | MBS MAP message             | 6.3.2.3.57 | IO-MBS |         |
| Comments:         |                             |            |        |         |

Table A.161: MAP Features for BS

| Base Station (BS) |  |            |        |         |
|-------------------|--|------------|--------|---------|
| Item              | Capability                                       | Reference  | Status | Support |
| 1                 | CID in DL-MAP IE in DL-MAP or Compressed DL-MAP  | 8.4.5.3.7  | m      |         |
| 2                 | RCID IE in DL-MAP IE in SUB-DL-UL-MAP            | 8.4.5.3    | m      |         |
| 3                 | UL allocation start IE                           | 8.4.5.4.15 | m      |         |
| 4                 | Space-Time Coding (STC)/Zone switch IE           | 8.4.5.3.4, | m      |         |
| 5                 | HARQ and Sub-MAP pointer IE in compressed DL map | 8.4.5.3.10 | m      |         |
| 6                 | UL Zone Switch IE                                | 8.4.5.4.7  | m      |         |
| Comments:         |  |            |        |         |

## A.5.1.2.1.17 Multiple Input Multiple Output (MIMO)

Table A.162: Supported Features for DL PUSC MIMO for BS

| Base Station (BS) |  |                            |         |         |
|-------------------|--|----------------------------|---------|---------|
| Item              | Capability                             | Reference                  | Status  | Support |
| 1                 | 2-antenna, matrix A                    | 8.4.8.1.2.1.1<br>8.4.8.1.4 | IO-MIMO |         |
| 2                 | 2-antenna, matrix B, vertical encoding | 8.4.8.1.4                  | IO-MIMO |         |
| Comments:         |  |                            |         |         |

**Table A.163: Supported Features for UL PUSC MIMO for BS**

| Base Station (BS) |  |           |         |         |
|-------------------|--|-----------|---------|---------|
| Item              | Capability   | Reference | Status  | Support |
| 1                 | Collaborative SM for two MS with single transmit antenna | 8.4.8.1.5 | IO-MIMO |         |
| 2                 | Capable of processing pilot pattern A and B              | 8.4.8.1.5 | IO-MIMO |         |
| Comments:         |  |           |         |         |

**Table A.164: MIMO Feedback for BS**

| Base Station (BS) |   |  |         |         |
|-------------------|---|--|---------|---------|
| Item              | Capability  | Reference                                    | Status  | Support |
| 1                 | Fast DL measurement feedback with more than one Rx antennas | 8.4.5.4.10.6<br>8.4.5.4.10.1<br>8.4.5.4.10.5 | IO-MIMO |         |
| 2                 | Mode selection feedback with 6 bits                         | 8.4.5.4.10.8                                 | IO-MIMO |         |
| Comments:         |   |  |         |         |

**Table A.165: HARQ DL support for MIMO for BS**

| Base Station (BS) |                         |            |         |         |
|-------------------|-------------------------|------------|---------|---------|
| Item              | Capability              | Reference  | Status  | Support |
| 1                 | MIMO DL Chase Combining | 8.4.5.3.21 | IO-MIMO |         |
| Comments:         |                         |            |         |         |

**Table A.166: HARQ UL support for MIMO for BS**

| Base Station (BS) |                         |            |         |         |
|-------------------|-------------------------|------------|---------|---------|
| Item              | Capability              | Reference  | Status  | Support |
| 1                 | MIMO UL Chase Combining | 8.4.5.4.24 | IO-MIMO |         |
| Comments:         |                         |            |         |         |

## A.5.1.2.1.18 BS Performance Requirements

**Table A.167: Max BS Sensitivity Level for Convolutional Turbo Coding for 3,5 MHz Bandwidth, UL PUSC**

| BW (MHz)   | Sensitivity (dBm) | Reference | Status | Support |
|--|-------------------|-----------|--------|---------|
| QPSK-1/2   | -93,1             |           | m      |         |
| QPSK-3/4   | -89,7             |           | m      |         |
| 16QAM-1/2  | -87,4             |           | m      |         |
| 16QAM-3/4  | -83,3             |           | m      |         |
| NOTE: This table is applicable to A.4-3 only.  |                   |           |        |         |
| Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. |                   |           |        |         |

**Table A.168: Max BS Sensitivity Level for Convolutional Turbo Coding for 3,5 MHz Bandwidth, UL AMC**

| BW (MHz)   | Sensitivity (dBm) | Reference | Status | Support |
|--|-------------------|-----------|--------|---------|
| QPSK-1/2   | -92,8             |           | m      |         |
| QPSK-3/4   | -89,4             |           | m      |         |
| 16QAM-1/2  | -87,1             |           | m      |         |
| 16QAM-3/4  | -83,0             |           | m      |         |
| NOTE: This table is applicable to A.4-3 only.  |                   |           |        |         |
| Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. |                   |           |        |         |

**Table A.169: Max BS Sensitivity Level for Convolutional Turbo Code  
for 5 MHz Bandwidth, UL PUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -91,6             |           | m      |         |
| QPSK-3/4  | -88,2             |           | m      |         |
| 16QAM-1/2 | -85,9             |           | m      |         |
| 16QAM-3/4 | -81,8             |           | m      |         |

NOTE: This table is applicable to A.4-2, A.4-4, A.4-6, A.4-7 and A.4-10 only.  
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers.  
Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.170: Max BS Sensitivity Level for Convolutional Turbo Code  
for 5 MHz Bandwidth, UL AMC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -91,3             |           | m      |         |
| QPSK-3/4  | -87,9             |           | m      |         |
| 16QAM-1/2 | -85,6             |           | m      |         |
| 16QAM-3/4 | -81,5             |           | m      |         |

NOTE: This table is applicable to A.4-2, A.4-4, A.4-6, A.4-7 and A.4-10 only.  
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers.  
Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.171: Max BS Sensitivity Level for Convolutional Turbo Code  
for 7 MHz Bandwidth, UL PUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -89,9             |           | m      |         |
| QPSK-3/4  | -86,5             |           | m      |         |
| 16QAM-1/2 | -84,2             |           | m      |         |
| 16QAM-3/4 | -80,1             |           | m      |         |

NOTE: This table is applicable to A.4-8 and A.4-11 only.  
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers.  
Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.172: Max BS Sensitivity Level for Convolutional Turbo Code  
for 7 MHz Bandwidth, UL AMC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -89,8             |           | m      |         |
| QPSK-3/4  | -86,4             |           | m      |         |
| 16QAM-1/2 | -84,1             |           | m      |         |
| 16QAM-3/4 | -80,0             |           | m      |         |

NOTE: This table is applicable to A.4-8 and A.4-11 only.  
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers.  
Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.173: Max BS Sensitivity Level for Convolutional Turbo Code  
for 8.75 MHz Bandwidth, UL PUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -89,0             |           | m      |         |
| QPSK-3/4  | -85,6             |           | m      |         |
| 16QAM-1/2 | -83,3             |           | m      |         |
| 16QAM-3/4 | -79,2             |           | m      |         |

NOTE: This table is applicable to A.4-1 only.  
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers.  
Sensitivity numbers are calculated based on assumption of repetition factor R = 1.

**Table A.174: Max BS Sensitivity Level for Convolutional Turbo Code  
for 8,75 MHz Bandwidth, UL AMC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -88,8             |           | m      |         |
| QPSK-3/4  | -85,4             |           | m      |         |
| 16QAM-1/2 | -83,1             |           | m      |         |
| 16QAM-3/4 | -79,0             |           | m      |         |

NOTE: This table is applicable to A.4-1 only.

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor  $R = 1$ .

**Table A.175: Max BS Sensitivity Level for Convolutional Turbo Code  
for 10 MHz Bandwidth, UL PUSC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -88,5             |           | m      |         |
| QPSK-3/4  | -85,1             |           | m      |         |
| 16QAM-1/2 | -82,8             |           | m      |         |
| 16QAM-3/4 | -78,7             |           | m      |         |

NOTE: This table is applicable to A.4-2, A.4-5, A.4-6, A.4-9, A.4-12 only.

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor  $R = 1$ .

**Table A.176: Max BS Sensitivity Level for Convolutional Turbo Code  
for 10 MHz Bandwidth, UL AMC**

| BW (MHz)  | Sensitivity (dBm) | Reference | Status | Support |
|-----------|-------------------|-----------|--------|---------|
| QPSK-1/2  | -88,3             |           | m      |         |
| QPSK-3/4  | -84,9             |           | m      |         |
| 16QAM-1/2 | -82,6             |           | m      |         |
| 16QAM-3/4 | -78,5             |           | m      |         |

NOTE: This table is applicable to A.4-2, A.4-5, A.4-6, A.4-9, A.4-12 only.

Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 88 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor  $R = 1$ .



## A.5.1.2.1.19 Minimum Transmit Requirements

Table A.177: Transmit requirements for BS

| Base Station (BS) |   |           |        |         |
|-------------------|---|-----------|--------|---------|
| Item              | Capability  | Reference | Status | Support |
| 1                 | Tx dynamic Range = 10 dB  | 8.4.12.1  | m      |         |
| 2                 | Spectral flatness according to the following:<br>$\leq \pm 2$ dB for spectral lines from<br>- $N_{used}/4$ to 1 and +1 to $N_{used}/4$<br>Within $\pm 2/4$ dB for spectral lines from<br>- $N_{used}/2$ to $N_{used}/4$ and $+N_{used}/4$ to $N_{used}/2$   | 8.4.12.2  | m      |         |
| 3                 | Per sub-carrier flatness $\leq 0,1$ dB  | 8.4.12.2  | m      |         |
| 4                 | Power difference between adjacent subcarriers according to the following:<br>Tx downlink radio frame shall be time-aligned with the 1pps timing pulse within 1 usec   | 8.4.12.3  | m      |         |
| 5                 | Tx relative constellation error according to the following:<br>QPSK-1/2 $\leq -15,0$ dB<br>QPSK-3/4 $\leq -18,0$ dB<br>16QAM-1/2 $\leq -20,5$ dB<br>16QAM-3/4 $\leq -24,0$ dB<br>64QAM-1/2 (if 64-QAM supported) $\leq -26,0$ dB<br>64QAM-2/3 (if 64-QAM supported) $\leq -26,0$ dB<br>64QAM-3/4 (if 64-QAM supported) $\leq -28,0$ dB<br>$\leq -30,0$ dB | 8.4.12.3  | m      |         |
| Comments:         |   |           |        |         |

## A.5.1.2.1.20 Receive Requirements

Table A.178: BS Receiver Requirements

| Mobile Station (MS) |   |            |        |         |
|---------------------|---|------------|--------|---------|
| Item                | Capability  | Reference  | Status | Support |
| 1                   | BS Rx Max input level on-channel reception tolerance = -45 dBm  | 8.4.13.3.2 |        |         |
| 2                   | BS Rx Max input level on-channel damage tolerance = -10 dBm   | 8.4.13.4.2 |        |         |
| 3                   | Min adjacent channel rejection at BER= $10^{-6}$ for 3 dB degradation C/I according to the following:<br>16QAM-3/4 11 dB  | 8.4.13.2   |        |         |
| 4                   | Min alternate channel rejection at BER= $10^{-6}$ for 3 dB degradation C/I according to the following:<br>16QAM-3/4 30 dB | 8.4.13.2   |        |         |
| Comments:           |   |            |        |         |

## A.5.1.2.1.21 BS Synchronization

Table A.179: BS Synchronization

| Mobile Station (MS) |  |            |        |         |
|---------------------|--|------------|--------|---------|
| Item                | Capability   | Reference  | Status | Support |
| 1                   | BS reference frequency accuracy within $\pm 2 \cdot 10^{-6}$                                   | 8.4.14.1   | m      |         |
| 2                   | BS to BS frequency synchronization accuracy for Hand Over $\leq 1\%$ of the subcarrier spacing | 6.3.2.3.47 | m      |         |
| Comments:           |  |            |        |         |

## A.5.1.2.2 BS MAC functions

Table A.180: Convergence Sub layer protocol support

| Mobile Station (MS) |                              |           |        |         |
|---------------------|------------------------------|-----------|--------|---------|
| Item                | Capability                   | Reference | Status | Support |
| 1                   | Packet convergence sub layer | [4] 5.2   | m      |         |
| Comments:           |                              |           |        |         |

## A.5.1.2.2.1 Packet Convergence Sublayer

Table A.181: Packet Convergence Sub layer support

| Mobile Station (MS)   |                                     |           |         |         |
|---|-------------------------------------|-----------|---------|---------|
| Item  | Capability                          | Reference | Status  | Support |
| 1   | Internet Protocol (IPv4)            | [4] 5.2.6 | m       |         |
| 2   | Internet Protocol (IPv6)            | [4] 5.2.6 | m       |         |
| 3   | IEEE 802.3 [12] (Ethernet)          | [4] 5.2.4 | IO-ETH1 |         |
| 4   | IPv4 over 802.3 Ethernet            | [4] 5.2.4 | IO-ETH2 |         |
| 5   | IPv6 over 802.3 Ethernet            | [4] 5.2.4 | IO-ETH3 |         |
| 6   | IPv4 with Header Compression (ROHC) | [8] 5.2.7 | m       |         |
| 7   | IPv6 with Header compression (ROHC) | [8] 5.2.7 | m       |         |
| Comments: Item 3, 4, and 5 are not required for WiMAX certified label, only optionally certified. |                                     |           |         |         |

Table A.182: Major packet classification

| Base Station (BS) |                         |                  |                                     |         |
|-------------------|-------------------------|------------------|-------------------------------------|---------|
| Item              | Capability              | Reference        | Status                              | Support |
| 1                 | IP Classification       | [4] 11.13.19.3.4 | m                                   |         |
| 2                 | Ethernet classification | [4] 11.13.19.3.4 | IO-ETH1 OR<br>IO-ETH2 OR<br>IO-ETH3 |         |
| Comments:         |                         |                  |                                     |         |

Table A.183: IP packet classification in the UL

| Item      | Capability  | Reference                 | Status | Support |
|-----------|---|---------------------------|--------|---------|
|           | Classification based on DSCP /IP TOS field              | [4] 5.2.2, 11.13.19.3.4.2 | m      |         |
| 3         | Classification based on IP Protocol/Next Header field   | [4] 5.2.2, 11.13.19.3.4.3 | m      |         |
| 4         | Classification based on IP masked Source Address        | [4]                       | m      |         |
| 5         | Classification based on IP Destination Address          | [4] 5.2.2, 11.13.19.3.4.5 | m      |         |
| 6         | Classification based on protocol source port range      | [4]                       | m      |         |
| 7         | Classification based on protocol destination port range | [4] 5.2.2, 11.13.19.3.4.7 | m      |         |
| Comments: |   |                           |        |         |

Table A.184: PHS

| Item      | Capability | Reference                   | Status | Support |
|-----------|------------|-----------------------------|--------|---------|
| 1         | PHS        | 5.2.3<br>5.2.3.1<br>5.2.3.2 | m      |         |
| Comments: |            |                             |        |         |

## A.5.1.2.2.2 MAC common part sub layer

Table A.185: MAC Common part sublayer functionalities

| Base Station (BS) |   |            |        |         |
|-------------------|---|------------|--------|---------|
| Item              | Capability                              | Reference  | Status | Support |
| 1                 | Addressing and connections              | [4] 6.3.1  | m      |         |
| 2                 | Construction of PDUs                    | [4] 6.3.3  | m      |         |
| 3                 | ARQ                                     | [4] 6.3.4  | m      |         |
| 4                 | Uplink scheduling service               | [4] 6.3.5  | m      |         |
| 5                 | Bandwidth allocation and request        | [4] 6.3.6  | m      |         |
| 6                 | Contention resolution                   | [4] 6.3.8  | m      |         |
| 7                 | Network entry and initialization        | [4] 6.3.9  | m      |         |
| 8                 | Ranging                                 | [4] 6.3.10 | m      |         |
| 9                 | Update of UL and DL channel descriptors | [4] 6.3.11 | m      |         |
| 10                | Quality of service                      | [4] 6.3.14 | m      |         |
| Comments:         |   |            |        |         |

Table A.186: Miscellaneous management functions

| Base Station (BS) |   |                |        |         |
|-------------------|---|----------------|--------|---------|
| Item              | Capability  | Reference      | Status | Support |
| 1                 | MS reset initiated by BS (RES-CMD)                      | [4] 6.3.2.3.22 | o      |         |
| 2                 | MS network clock comparison initiated by BS (CLK-CMP)   | [4] 6.3.2.3.25 | o      |         |
| 3                 | MS notifies BS of de-registration (DREG-REQ)            | [4] 6.3.2.3.43 | m      |         |
| 4                 | MS forced by BS to change its channel access (DREG-CMD) | [4] 6.3.2.3.26 | m      |         |
| 5                 | BS transmits DSX-RVD                                    | [4] 6.3.2.3.27 | m      |         |
| 6                 | BS transmits REP-REQ message and receives REP-RSP       | [4] 6.3.2.3.33 | m      |         |
| 7                 | BS transmits FPC  | [4] 6.3.2.3.34 | o      |         |
| Comments:         |   |                |        |         |

## A.5.1.2.2.2.1 Addressing and Connections

Table A.187: Addressing and Connections

| Base Station (BS) |   |           |        |         |
|-------------------|---|-----------|--------|---------|
| Item              | Capability  | Reference | Status | Support |
| 1                 | Globally Unique 48 bits MAC Address, making up three 16 bits CID        | [4] 6.3.1 | m      |         |
| 2                 | Time urgent MAC Management messages on basic connection                 | [4] 6.3.1 | m      |         |
| 3                 | Delay tolerant MAC Management messages on primary management connection | [4] 6.3.1 | m      |         |
| Comments:         |   |           |        |         |

## A.5.1.2.2.2 Construction and Transmission of MAC PDUs

**Table A.188: Transmission conventions**

| Base Station (BS) |   |             |        |         |
|-------------------|---|-------------|--------|---------|
| Item              | Capability  | Reference   | Status | Support |
| 1                 | Fields of MAC messages are transmitted in the same order as they appear in the corresponding tables in the standard.  | [4] 6.3.3.1 | m      |         |
| 2                 | Fields of MAC messages and fields of TLVs, which are specified in the standard as binary numbers (including CRC and HCS) are transmitted as a sequence of their binary digits, starting from MSB. Bit masks (for example, in ARQ) are considered numerical fields. For signed numbers MSB is allocated for the sign. Length field in the "definite form" of ITU-T Recommendation X.690 [14] is also considered a numerical field. | [4] 6.3.3.1 | m      |         |
| 3                 | Fields specified as SDUs or SDU fragments (for example, MAC PDU payloads) are transmitted in the same order of bytes as received from upper layers.   | [4] 6.3.3.1 | m      |         |
| 4                 | Fields specified as strings are transmitted in the order of symbols in the string. In cases c and d, bits within a byte are transmitted in the order MSB first.   | [4] 6.3.3.1 | m      |         |
| Comments:         |   |             |        |         |

**Table A.189: Subheader and Extended Subheader support**

| Base Station (BS) |  |           |        |         |
|-------------------|--|-----------|--------|---------|
| Item              | Capability   | Reference | Status | Support |
| 1                 | Extended subheader support                         | 6.3.2.2.7 | m      |         |
| 2                 | Capability of receiving Grant management Subheader | 6.3.2.2.2 | m      |         |
| Comments:         |  |           |        |         |

**Table A.190: PDU concatenation**

| Base Station (BS) |   |             |        |         |
|-------------------|---|-------------|--------|---------|
| Item              | Capability  | Reference   | Status | Support |
| 1                 | Concatenate Multiple MAC PDUs into a single burst of the allocated length | [4] 6.3.3.2 | m      |         |
| 2                 | Receive concatenated MAC PDUs and determine disposition via CID           | [4] 6.3.3.2 | m      |         |
| 3                 | Padding of any unused space with stuff byte value in the DL Burst         | [4] 6.3.3.7 | m      |         |
| Comments:         |   |             |        |         |

**Table A.191: SDU Fragmentation**

| Base Station (BS)  |  |                     |        |         |
|--|--|---------------------|--------|---------|
| Item   | Capability   | Reference           | Status | Support |
| 1  | Fragment a MAC SDU into multiple MAC PDUs applicable to traffic connections and Management messages on Primary management connection | [4] 6.3.3.3         | m      |         |
| 2  | Add Fragmentation Sub header to the SDU fragment including setting FC according to the Fragmentation rules table                     | [4] 6.3.3.3         | m      |         |
| 3  | Do not perform fragmentation of PDUs on "Broadcast management" connections   | [4] 6.3.2.3         | m      |         |
| 4  | Perform fragmentation of PDUs on 'Fragmentable Broadcast management connection   | [4]                 | m      |         |
| 5  | Increment the FSN modulo 2048 for non-ARQ connections  | [4] and [5] 6.3.3.3 | m      |         |
| 6  | Increment the BSN modulo 2048 for ARQ connection   | [4] 6.3.3.4.2       | m      |         |
| 7  | Do not perform fragmentation of PDUs on Basic and Initial Ranging connections  | [4] 6.3.2.3         | m      |         |
| Comments: DCD and UCD message shall be transmitted using "Fragmentable Broadcast management connection". |  |                     |        |         |

**Table A.192: SDU reassembly**

| Base Station (BS) |  |             |        |         |
|-------------------|--|-------------|--------|---------|
| Item              | Capability   | Reference   | Status | Support |
| 1                 | Receive and reassemble fragmented SDUs                                       | [4] 6.3.3.3 | m      |         |
| 2                 | In case of no-ARQ connection, discard SDUs corrupted due to loss of fragment | [4]         | m      |         |
| Comments:         |  |             |        |         |

**Table A.193: Packing**

| Base Station (BS) |  |                     |        |         |
|-------------------|--|---------------------|--------|---------|
| Item              | Capability   | Reference           | Status | Support |
| 1                 | Pack variable length SDUs in a single MAC PDU on non-ARQ connections                       | [4] 6.3.3.4.1.2     | m      |         |
| 2                 | Unpack variable length SDUs on non-ARQ connections   | [4] 6.3.3.4.1.2     | m      |         |
| 3                 | Pack variable length SDUs or SDUs fragments in a single MAC PDU on ARQ-enabled connections | [4] 6.3.3.4.2 5.1.2 | m      |         |
| 4                 | Unpack variable length SDUs or SDUs fragments on ARQ-enabled connections                   | [4] 6.3.3.4.2 5.1.2 | m      |         |
| 5                 | Do not perform packing of SDUs on Basic, Broadcast and Initial Ranging connections         | [4] 6.3.2.3         | m      |         |
| 6                 | Perform packing of ARQ Feedback Payload  | [4] 6.3.3.4.3       | m      |         |
| 7                 | Extracting ARQ Feedback IEs from received ARQ Feedback Payload.                            | [4] 6.3.3.4.3       | m      |         |
| Comments:         |  |                     |        |         |

**Table A.194: CRC**

| Base Station (BS) |  |             |        |         |
|-------------------|--|-------------|--------|---------|
| Item              | Capability   | Reference   | Status | Support |
| 1                 | Compute and add CRC, and set CI bit based on connection properties | [4]         | m      |         |
| 2                 | Check CRC based on CI bit  | [4] 6.3.3.5 | m      |         |
| Comments:         |  |             |        |         |

A.5.1.2.2.2.3 ARQ

**Table A.195: ARQ**

| Base Station (BS) |   |                 |        |         |
|-------------------|---|-----------------|--------|---------|
| Item              | Capability  | Reference       | Status | Support |
| 1                 | Pack several ARQ feedback information elements in a single ARQ feedback payload | [4] 6.3.4 5.1.3 | m      |         |
| 2                 | Insert a single ARQ feedback payload as first payload in a MAC PDU              | [4] 6.3.4 5.1.3 | m      |         |
| Comments:         |   |                 |        |         |

## A.5.1.2.2.2.4 Data Delivery Services for Base Network

**Table A.196: Data Delivery Services for Base Network**

| Base Station (BS) |   |            |        |         |
|-------------------|---|------------|--------|---------|
| Item              | Capability  | Reference  | Status | Support |
| 1                 | Unsolicited Grant service (UGS)                   | 6.3.20.1.1 | m      |         |
| 2                 | Real-Time Variable Rate (RT-VR) Service           | 6.3.20.1.2 | m      |         |
| 3                 | Non-Real-Time Variable Rate (NRT-VR) Service      | 6.3.20.1.3 | m      |         |
| 4                 | Best Effort (BE) Service                          | 6.3.20.1.4 | m      |         |
| 5                 | Extended Real-Time Variable Rate (ERT-VR) service | 6.3.20.1.5 | m      |         |
| Comments:         |   |            |        |         |

## A.5.1.2.2.2.5 Request-Grant Mechanism

**Table A.197: Request-Grant mechanism**

| Base Station (BS) |  |               |        |         |
|-------------------|--|---------------|--------|---------|
| Item              | Capability   | Reference     | Status | Support |
| 1                 | Incremental bandwidth request using BW request header          | 6.3.6.1       | m      |         |
| 2                 | Aggregate bandwidth request using BW request header            | 6.3.6.1       | m      |         |
| 3                 | Bandwidth request using Grant Management Subheader             | 6.3.2.2.2     | m      |         |
| 4                 | Request-Grant mechanism combined with UL Tx power report       | 6.3.2.1.2.1.2 | m      |         |
| 5                 | CQICH allocation request using CQICH allocation request header | 6.3.2.1.2.1.4 | m      |         |
| 6                 | Contention-based CDMA bandwidth requests                       | 6.3.6.5       | m      |         |
| Comments:         |  |               |        |         |

## A.5.1.2.2.2.6 Network entry and initialization

**Table A.198: Network entry and initialization**

| Base Station (BS) |   |                  |        |         |
|-------------------|---|------------------|--------|---------|
| Item              | Capability  | Reference        | Status | Support |
| 1                 | BS sends downlink parameters using periodic broadcast of the DCD message    | 6.3.9.2          | m      |         |
| 2                 | BS sends uplink parameters using periodic broadcast of the UCD message      | 6.3.9.3, 6.3.9.4 | m      |         |
| 3                 | BS allocates an initial ranging opportunity                                 | 6.3.9.5, 6.3.9.6 | m      |         |
| 4                 | BS commands MS to adjust power, timing and frequency during initial ranging | 6.3.9.6          | m      |         |
| 5                 | BS negotiates basic capabilities  | 6.3.9.7          | m      |         |
| 6                 | BS performs authorization and key exchange                                  | 6.3.9.8, 7.2     | m      |         |
| 7                 | BS accepts registration request from MS to allow SS in network              | 6.3.9.9          | m      |         |
| Comments:         |   |                  |        |         |

**Table A.199: DL parameter transmission**

| Base Station (BS) |                           |             |        |         |
|-------------------|---------------------------|-------------|--------|---------|
| Item              | Capability                | Reference   | Status | Support |
| 1                 | BS sends DLFP correctly   | [4] 8.4.4.3 | m      |         |
| 2                 | BS sends DL-MAP correctly | [4] 6.3.9.2 | m      |         |
| 3                 | BS sends DCD correctly    | [4] 6.3.9.2 | m      |         |
| Comments:         |                           |             |        |         |

**Table A.200: UL parameter transmission**

| Base Station (BS) |                           |                      |        |         |
|-------------------|---------------------------|----------------------|--------|---------|
| Item              | Capability                | Reference            | Status | Support |
| 1                 | BS sends UCD correctly    | [4] 6.3.9.3, 6.3.9.4 | m      |         |
| 2                 | BS sends UL-MAP correctly |                      | m      |         |

Comments:

**Table A.201: Initial ranging**

| Base Station (BS) |  |                          |        |         |
|-------------------|--|--------------------------|--------|---------|
| Item              | Capability   | Reference                | Status | Support |
| 1                 | BS sends UL-MAP containing initial ranging opportunity   | 6.3.10.3.1               | m      |         |
| 2                 | BS receives initial ranging code from MS   | 6.3.10.3.1,<br>8.4.7.1   | m      |         |
| 3                 | BS sends RNG-RSP with time and power corrections in response to initial ranging code from MS, including an accepted CDMA code and related information that help the MS identify destination of RNG-RSP | 6.3.10.3.1               | m      |         |
| 4                 | BS receives initial ranging code transmitted in periodic ranging region after responding with RNG-RSP including status continue  | 6.3.10.3.1,<br>8.4.7.1   | m      |         |
| 5                 | BS sends CDMA allocation IE after sending RNG-RSP including status success so the MS can transmit RNG-REQ  | 6.3.10.3.1,<br>8.4.5.4.3 | m      |         |
| 6                 | BS receives RNG-REQ transmitted in UL slots allocated by CDMA allocation IE  | 6.3.10.3.1,<br>8.4.5.4.3 | m      |         |
| 7                 | BS assigns Basic and Primary Management CIDs in response to the first RNG-REQ message transmitted in UL slots allocated by CDMA allocation IE  | 6.3.10.3.1               | m      |         |

Comments: BS shall include an accepted CDMA code and related information for identifying SS that will use UL slots allocated by CDMA allocation IE.

**Table A.202: BS basic capability negotiation**

| Base Station (BS) |                     |             |        |         |
|-------------------|---------------------|-------------|--------|---------|
| Item              | Capability          | Reference   | Status | Support |
| 1                 | BS receives SBC-REQ | [4] 6.3.9.7 | m      |         |
| 2                 | BS sends SBC-RSP    | [4] 6.3.9.7 | m      |         |

Comments:

**Table A.203: Registration**

| Base Station (BS) |                     |             |        |         |
|-------------------|---------------------|-------------|--------|---------|
| Item              | Capability          | Reference   | Status | Support |
| 1                 | BS receives REG-REQ | [4] 6.3.9.9 | m      |         |
| 2                 | BS sends REG-RSP.   | [4] 6.3.9.9 | m      |         |

Comments:

**Table A.204: Periodic ranging**

| Base Station (BS) |   |            |        |         |
|-------------------|---|------------|--------|---------|
| Item              | Capability  | Reference  | Status | Support |
| 1                 | BS receives periodic ranging code   | 6.3.10.3.2 | m      |         |
| 2                 | BS sends RNG-RSP unsolicited or in response to a periodic ranging code with time and/or power and/or frequency corrections or none of above, including an accepted CDMA code and related information that help the MS identify the destination of RNG-RSP | 6.3.10.3.2 | m      |         |

Comments:

## A.5.1.2.2.2.7 Update of channel descriptors

**Table A.205: Update of channel descriptors by BS**

| Base Station (BS) |  |           |        |         |
|-------------------|--|-----------|--------|---------|
| Item              | Capability   | Reference | Status | Support |
| 1                 | Simultaneous support of two channel descriptors  | 6.3.11    | m      |         |
| 2                 | BS sends UL channel descriptors at regular intervals using UCD message with identical Configuration change count   | 6.3.11    | m      |         |
| 3                 | BS sends new UL channel descriptors using UCD message with incremented Configuration change count (I+1 mod 256)  | 6.3.11    | m      |         |
| 4                 | BS sends DL channel descriptors at regular intervals using DCD message with identical Configuration change count   | 6.3.11    | m      |         |
| 5                 | BS sends new DL channel descriptors using DCD message with incremented Configuration change count (I+1 mod 256)  | 6.3.11    | m      |         |
| 6                 | Receive with the new uplink parameters starting from the first PS that is covered by the UL-MAP with UCD Count matching the new Configuration Change Count | 6.3.11    | m      |         |
| 7                 | Transmit with the new downlink parameters starting from the frame with the first DL-MAP with a DCD Count matching the new Configuration Change Count       | 6.3.11    | m      |         |

Comments: For item 1, two channel descriptors are the current active set and the new pending set, during the transition period between a DCD or UCD configuration change and when the new configuration becomes active.

## A.5.1.2.2.2.8 QoS

**Table A.206: Service flow operations**

| Base Station (BS) |  |              |        |         |
|-------------------|--|--------------|--------|---------|
| Item              | Capability                                   | Reference    | Status | Support |
| 1                 | Dynamic service flow creation - BS-initiated | 6.3.14.7.1.2 | m      |         |
| 2                 | Dynamic service flow creation - MS-initiated | 6.3.14.7.1.1 | m      |         |
| 3                 | Dynamic service flow change - BS-initiated   | 6.3.14.9.4.2 | m      |         |
| 4                 | Dynamic service flow change - MS-initiated   | 6.3.14.9.4.1 | m      |         |
| 5                 | Dynamic service flow deletion - BS-initiated | 6.3.14.9.5.2 | m      |         |
| 6                 | Dynamic service flow deletion - MS-initiated | 6.3.14.9.5.1 | m      |         |

Comments:



## A.5.1.2.2.2.9 Sleep Mode

Table A.207: Sleep Mode

| Mobile Station (MS) and Perform SS Authorization. |  |   |        |         |
|---|--|---|--------|---------|
| Item  | Capability   | Reference   | Status | Support |
| 1   | Sleep Mode Implementation in BS  | 6.3.21  | m      |         |
| 2   | Power Saving Class type 1 support  | 6.3.21.2  | m      |         |
| 3   | Support of Traffic Indication Message for Power Saving Class type 1      | 6.3.21.2  | m      |         |
| 4   | Indicating DL traffic by SLPID bit map in TRF-IND                        | 6.3.21.1<br>6.3.2.3.46  | m      |         |
| 5   | Indicating DL traffic by SLPID in TRF-IND                                | 6.3.21.1<br>6.3.2.3.46  | m      |         |
| 6   | Support of SLPID_Update TLV in TRF-IND                                   | 6.3.20.1  | m      |         |
| 7   | Traffic triggered waking flag  | 6.3.2.3.44-45,<br>6.3.21.2  | m      |         |
| 8   | Activation of Power Saving Class by unsolicited SLP-RSP message from BS  | 6.3.2.3.45<br>6.3.21.1  | m      |         |
| 9   | DL sleep control extended subheader                                      | 6.3.2.2.7.2<br>11.7.25  | m      |         |
| 10  | Bandwidth request and uplink sleep control header                        | 6.3.2.1.2.1.6<br>11.7.25  | m      |         |
| 11  | Support of periodic ranging in sleep mode                                | 6.3.21.5<br>11.16.2   | m      |         |
| 12  | Sleep mode multicast CID support at BS                                   | 10.4<br>6.3.2.3.46  | m      |         |
| 13  | BS Support of triggered action indicated by Enabled-Action-Triggered TLV | 6.3.2.3.6,<br>6.3.2.3.44-45,<br>6.3.21.1, 11.5,<br>11.6, 11.7.3,<br>11.5, 11.6,<br>11.7.3 | m      |         |
| Comments:   |  |   |        |         |

## A.5.1.2.2.2.10 Handover

Table A.208: Neighbor Advertisement

| Base Station (BS) |   |                                 |        |         |
|-------------------|---|---------------------------------|--------|---------|
| Item              | Capability  | Reference                       | Status | Support |
| 1                 | Neighbor Advertisement  | 6.3.2.3.47                      | m      |         |
| 2                 | Support BS index at the BS (Use BS index instead of BSID) in Scan/HO related messages, as numbered in MOB_NBR-ADV | 6.3.2.3.48 to 51,<br>6.3.2.3.53 | m      |         |
| Comments:         |   |                                 |        |         |

Table A.209: Scanning

| Base Station (BS) |  |                                  |        |         |
|-------------------|--|----------------------------------|--------|---------|
| Item              | Capability   | Reference                        | Status | Support |
| 1                 | Scanning for cell selection (HO)                                   | 6.3.2.3.48 and 49                | m      |         |
| 2                 | BS allocates Scanning Interval in response to MS request           | 6.3.2.3.48 and 49<br>6.3.21.1.2  | m      |         |
| 3                 | Unsolicited Scanning Interval Allocation by BS                     | 6.3.2.3.48 and 49,<br>6.3.21.1.2 | m      |         |
| 4                 | BS commands MS to perform scanning triggered by serving BS metrics | 6.3.21.1.2                       | m      |         |
| Comments:         |  |                                  |        |         |

**Table A.210: Scan Reporting Type Support**

| Base Station (BS) |   |                       |        |         |
|-------------------|---|-----------------------|--------|---------|
| Item              | Capability  | Reference             | Status | Support |
| 1                 | Periodic reporting based on Report Period as indicated in MOB_SCN-RSP message | 6.3.2.3.49,<br>11.4.1 | m      |         |
| 2                 | BS commands MS to perform reporting triggered by metric conditions            | 6.3.2.3.49,<br>11.4.1 | m      |         |

Comments:

**Table A.211: HO/Scan/Report Trigger Metrics**

| Base Station (BS) |                     |                    |        |         |
|-------------------|---------------------|--------------------|--------|---------|
| Item              | Capability          | Reference          | Status | Support |
| 1                 | Mean BS CINR        | 6.3.2.3.53, 11.8.7 | m      |         |
| 2                 | Mean BS RSSI        | 6.3.2.3.53, 11.8.7 | m      |         |
| 3                 | BS Round Trip Delay | 6.3.2.3.53, 11.8.7 | m      |         |

Comments:

**Table A.212: MAC Layer HO Procedures**

| Base Station (BS) |   |                           |        |         |
|-------------------|---|---------------------------|--------|---------|
| Item              | Capability  | Reference                 | Status | Support |
| 1                 | General HO Support  | 6.3.21.2,<br>6.3.2.3.55   | m      |         |
| 2                 | HO initiated by BS support at BS side   |                           | m      |         |
| 3                 | HO initiated by MS support at BS side   |                           | m      |         |
| 4                 | HO Indication   | 6.3.21.2.5                | m      |         |
| 5                 | Cancellation of HO  | 6.3.21.2.3                | m      |         |
| 6                 | Metric Triggered HO Requests  | 11.1.7<br>(table 348g)    | m      |         |
| 7                 | Resource Retention Support  | 6.3.2.3.52,<br>6.3.2.3.54 | m      |         |
| 8                 | CDMA HO Ranging   | 6.3.10.3.3                | m      |         |
| 9                 | HO_ID support   | 6.3.2.3.52,<br>6.3.2.3.54 | m      |         |
| 10                | Support negotiating of "HO authorization policy" during HO (i.e. between BSs) | 6.3.2.3.52,<br>6.3.2.3.54 | m      |         |

Comments:

Table A.213: HO Optimization

| Base Station (BS) |  |                                   |        |         |
|-------------------|--|-----------------------------------|--------|---------|
| Item              | Capability   | Reference                         | Status | Support |
| 1                 | HO Optimization Support  | 6.3.2.3.6,<br>6.3.21.2.7, 11.6    | m      |         |
| 2                 | Support Omission of SBC-REQ management messages  | 6.3.2.3.6,<br>6.3.21.2.7, 11.6    | m      |         |
| 3                 | Support Omission of PKM Authentication phase except TEK Phase  | 6.3.2.3.6,<br>6.3.21.2.7, 11.6    | m      |         |
| 4                 | Support Omission of PKM TEK creation phase during re-entry processing  | 6.3.2.3.6,<br>6.3.21.2.7, 11.6    | m      |         |
| 5                 | Support "Full State Sharing"- No exchange of network re-entry messages after ranging before resuming normal operations                   | 6.3.2.3.6,<br>6.3.21.2.7, 11.6    | m      |         |
| 6                 | Unsolicited SBC-RSP management message with updated capabilities information   | 6.3.2.3.6,<br>6.3.21.2.7, 11.6    | m      |         |
| 7                 | Support SBC- RSP TLVs as part of RNG-RSP message   | 11.6                              | m      |         |
| 8                 | Support Omission of REG-REQ during NW re-entry   | 6.3.2.3.6,<br>6.3.21.2.7, 11.6    | m      |         |
| 9                 | Unsolicited REG-RSP with updated capabilities information  | 6.3.2.3.6,<br>6.3.21.2.7,<br>11.6 | m      |         |
| 10                | Support REG-RSP TLV as part of RNG-RSP message   | 11.6                              | m      |         |
| 11                | Support of ARQ continuation using SN report header after NW re-entry   | 6.3.2.3.6,<br>6.3.21.2.7, 11.6    | m      |         |
| 12                | Support continuation of non-ARQ connection using SDU SN extended sub-header before handover and using SN report header after NW re-entry |                                   | m      |         |
| 13                | Support receiving Bandwidth Request header with zero BR as a notification of MS's successful re-entry registration                       | 6.3.21.2.7, 11.6                  | m      |         |
| 14                | Support sending traffic IP address refresh bit   | 11.6                              | m      |         |
| 15                | Sending SN request extended subheader to request additional SN Report Header after network re-entry                                      | 6.3.2.2.7.7                       | o      |         |
| Comments:         |  |                                   |        |         |

Table A.214: CID and SAID Update

| Base Station (BS) |  |               |        |         |
|-------------------|--|---------------|--------|---------|
| Item              | Capability                               | Reference     | Status | Support |
| 1                 | CID update from BS by RNG-RSP            | 11.7.9, 11.6  | m      |         |
| 2                 | CID update from BS by REG-RSP            | 11.7.9        | m      |         |
| 3                 | Compressed CID update from BS by RNG-RSP | 11.7.9.1      | m      |         |
| 4                 | Compressed CID update from BS by REG-RSP | 11.7.9.1      | m      |         |
| 5                 | SAID update from BS by RNG-RSP           | 11.7.17, 11.6 | m      |         |
| 6                 | SAID update from BS by SA-TEK-RSP        | 11.7.20       | m      |         |
| Comments:         |  |               |        |         |

## A.5.1.2.2.2.11 Idle Mode

Table A.215: Idle Mode

| Base Station (BS) |   |              |        |         |
|-------------------|---|--------------|--------|---------|
| Item              | Capability  | Reference    | Status | Support |
| 1                 | General Idle Mode functionality   | 6.3.24       | m      |         |
| 2                 | Idle mode initiation by DREG-REQ message from BS  | 6.3.24.1     | m      |         |
| 3                 | Idle Mode initiation by unsolicited DREG-CMD from BS                                    | 6.3.24.1     | m      |         |
| 4                 | Maintain connection information at BS side during Idle Mode initiation process          | 6.3.24.1     | m      |         |
| 5                 | Request for BS to retain service and operational information by DREG-CMD message        | 6.3.24.1     | m      |         |
| 6                 | Request from BS to BS to retain service and operational information by DREG-REQ message | 6.3.24.1     | m      |         |
| 7                 | BS capability of transmitting Broadcast Control Pointer IE                              | 6.3.24.5     | m      |         |
| 8                 | Paging Group Update MS  | 6.3.4.8.1.1  | m      |         |
| 9                 | Timer Location Update MS  | 6.3.24.8.1.2 | m      |         |
| 10                | Power Down Location Update MS   | 6.3.24.8.1.3 | m      |         |
| 11                | Secure Location Update  | 6.3.24.8.2.1 | m      |         |
| 12                | Un-secure Location Update   | 6.3.24.8.2.2 | m      |         |
| 13                | Paging Preference   | 11.13.30     | m      |         |
| 14                | Idle mode multicast CID support at BS   | 10.4         | m      |         |
| Comments:         |   |              |        |         |

## A.5.1.2.2.2.11-a Expedited Re-entry from Idle Mode

Table A.216: Expedited Re-entry from Idle Mode

| Base Station (BS) |   |           |        |         |
|-------------------|---|-----------|--------|---------|
| Item              | Capability  | Reference | Status | Support |
| 1                 | Expedited network re-entry from Idle Mode support   | 6.3.23.9  | m      |         |
| 2                 | Support Omission of SBC-REQ management messages   | 11.6      | m      |         |
| 3                 | Support Omission of PKM Authentication phase except TEK phase   | 11.6      | m      |         |
| 4                 | Support Omission of PKM TEK creation phase during re-entry processing   | 11.6      | m      |         |
| 5                 | Support "Full State Sharing" - No exchange of network re-entry messages after ranging before resuming normal operations | 11.6      | m      |         |
| 6                 | Unsolicited SBC-RSP management message with updated capabilities information  | 11.6      | m      |         |
| 7                 | Support SBC-RSP TLVs as part of RNG-RSP message   | 11.6      | m      |         |
| 8                 | Support Omission of REG-REQ during NW re-entry  | 11.6      | m      |         |
| 9                 | Unsolicited REG-RSP with updated capabilities information   | 11.6      | m      |         |
| 10                | Support REG-RSP TLV as part of RNG-RSP message  | 11.6      | m      |         |
| 11                | MS send Bandwidth Request header with zero BR as a notification of MS's successful re-entry registration.               | 11.6      | m      |         |
| 12                | Support of transmission of IP refresh bit   | 11.6      | m      |         |
| Comments:         |   |           |        |         |

## A.5.1.2.2.2.12 Feedback Mechanism

Table A.217: Feedback Mechanism

| Base Station (BS) |  |               |        |         |
|-------------------|--|---------------|--------|---------|
| Item              | Capability                               | Reference     | Status | Support |
| 1                 | Feedback Header                          | 6.3.2.1.2.2.1 | m      |         |
| 2                 | Bandwidth request and UL Tx Power Report | 6.3.2.1.2.1.2 | m      |         |
| 3                 | SN report header                         | 6.3.2.1.2.1.7 | m      |         |
| 4                 | SN request extended subheader            | 6.3.2.2.7.7   | o      |         |
| Comments:         |  |               |        |         |

## A.5.1.2.2.2.13 Multicast Traffic Connection

**Table A.218: Multicast Traffic Connection**

| Base Station (BS) |                              |           |        |         |
|-------------------|------------------------------|-----------|--------|---------|
| Item              | Capability                   | Reference | Status | Support |
| 1                 | Multicast traffic connection | 6.3.13    | m      |         |
| Comments:         |                              |           |        |         |

## A.5.1.2.2.2.14 Security Sublayer

**Table A.219: Security functions**

| Base Station (BS) |  |                    |        |         |
|-------------------|--|--------------------|--------|---------|
| Item              | Capability   | Reference          | Status | Support |
| 1                 | BS supports two simultaneous active TEKS                   | 6.3.9.8, 7.2.1     | m      |         |
| 2                 | BS supports SAID update using RNG-REQ/RNG-RSP              | 11.6               | m      |         |
| 3                 | BS supports SAID update using SA-TEK-REQ/SA-TEK-RSP        | 11.7.20            | m      |         |
| 4                 | BS exchanges PKMv2 EAP-Transfer                            | 7.2.2.2            | m      |         |
| 5                 | BS derives AK  | 7.2.2.2            | m      |         |
| 6                 | BS derives KEK   | 7.2.2.2            | m      |         |
| 7                 | BS derives message authentication keys                     | 7.2.2.2            | m      |         |
| 8                 | BS sends PKMv2 SA-TEK-Challenge                            | 7.2.2.2            | m      |         |
| 9                 | BS checks whether AKID is valid or not                     | 7.2.2.2            | m      |         |
| 10                | BS receives PKMv2 SA-TEK-Request                           | 7.2.2.2            | m      |         |
| 11                | BS sends PKMv2 SA-TEK-Response                             | 7.2.2.2            | m      |         |
| 12                | BS manages SAs it included in PKMv2 SA-TEK-Response        | 7.2.2.2            | m      |         |
| 13                | BS re-sends PKMv2 SA-TEK-challenge when SATEKTimer timeout | 7.2.2.2            | m      |         |
| 14                | BS receives PKMv2 Key-Request                              | 7.2.2.2            | m      |         |
| 15                | BS sends PKMv2 Key-Reply                                   | 7.2.2.2            | m      |         |
| 16                | BS supports Dot16KDF algorithm                             | 7.2.2.2, 7.5.4.6.1 | m      |         |
| Comments:         |  |                    |        |         |

**Table A.220: PKM message encodings support**

| Base Station (BS) |                                 |           |        |         |
|-------------------|---------------------------------|-----------|--------|---------|
| Item              | Capability                      | Reference | Status | Support |
| 1                 | (one or more) SA_TEK_Update     | 11.7.21   | m      |         |
| 2                 | Security negotiation parameters | 11.8.4    | m      |         |
| 3                 | Display-String                  | 11.9.1    | o      |         |
| 4                 | Key lifetime                    | 11.9.4    | m      |         |
| 5                 | Key sequence number             | 11.9.5    | m      |         |
| 6                 | SAID                            | 11.9.7    | m      |         |
| 7                 | TEK-Parameters                  | 11.9.8    | m      |         |
| 8                 | Error-code                      | 11.9.10   | m      |         |
| 9                 | Security capabilities           | 11.9.13   | m      |         |
| 10                | SA descriptor(s)                | 11.9.17   | m      |         |
| 11                | Nonce                           | 11.9.20   | m      |         |
| 12                | MS_random                       | 11.9.21   | m      |         |
| 13                | BS_random                       | 11.9.22   | m      |         |
| 14                | CMAC Digest                     | 11.9.27   | m      |         |
| 15                | AKID                            | 11.9.32   | m      |         |
| 16                | EAP payload                     | 11.9.33   | m      |         |
| 17                | PKMv2 configuration settings    | 11.9.36   | m      |         |
| 18                | Frame Number                    | 11.9.37   | m      |         |
| Comments:         |                                 |           |        |         |

**Table A.221: Authorization Policy Support**

| Base Station (BS) |  |           |        |         |
|-------------------|--|-----------|--------|---------|
| Item              | Capability   | Reference | Status | Support |
| 1                 | 802.16 Authorization policy support (this is about the capability of negotiating authorization policy) | 11.7.8.7  | m      |         |
| Comments:         |  |           |        |         |

**Table A.222: PKM Version Support**

| Base Station (BS) |               |           |        |         |
|-------------------|---------------|-----------|--------|---------|
| Item              | Capability    | Reference | Status | Support |
| 1                 | PKMv2 Support | 11.8.4.1  | m      |         |
| Comments:         |               |           |        |         |

**Table A.223: PKMv2 Authorization Policy Support-Initial Network Entry**

| Base Station (BS) |                         |                                 |        |         |
|-------------------|-------------------------|---------------------------------|--------|---------|
| Item              | Capability              | Reference                       | Status | Support |
| 1                 | No Authorization        | 11.8.4.2                        | m      |         |
| 2                 | EAP-based authorization | 11.8.4.2, 7.1.3.2 and 7.2.2.2.2 | m      |         |
| Comments:         |                         |                                 |        |         |

**Table A.224: PKMv2 Authorization Policy Support-Network Re-entry**

| Base Station (BS) |                         |                                 |        |         |
|-------------------|-------------------------|---------------------------------|--------|---------|
| Item              | Capability              | Reference                       | Status | Support |
| 1                 | No Authorization        | 11.8.4.2                        | m      |         |
| 2                 | EAP-based authorization | 11.8.4.2, 7.1.3.2 and 7.2.2.2.2 | m      |         |
| Comments:         |                         |                                 |        |         |

**Table A.225: Supported Cryptographic Suites**

| Base Station (BS)  |   |           |        |         |
|--|---|-----------|--------|---------|
| Item   | Capability  | Reference | Status | Support |
| 1  | No data encryption, no data authentication and 3-DES, 128     | 11.9.14   | m      |         |
| 2  | CCM-Mode 128-bit AES, CCM-Mode, AES Key Wrap with 128-bit key | 11.9.14   | m      |         |
| Comments: For Item 1: This cryptographic suite means that no encryption and no TEK exchange. |   |           |        |         |

**Table A.226: Message Authentication Code Mode**

| Base Station (BS) |                           |           |        |         |
|-------------------|---------------------------|-----------|--------|---------|
| Item              | Capability                | Reference | Status | Support |
| 1                 | No message authentication | 11.8.4.3  | m      |         |
| 2                 | CMAC                      | 11.8.4.3  | m      |         |
| Comments:         |                           |           |        |         |

**Table A.227: Security Association**

| Base Station (BS) |                       |                   |        |         |
|-------------------|-----------------------|-------------------|--------|---------|
| Item              | Capability            | Reference         | Status | Support |
| 1                 | Support of Static SA  | 7.2.1.1 and 7.3.2 | m      |         |
| 2                 | Support of Dynamic SA | 7.2.1.1           | m      |         |
| 3                 | Support of Primary SA | 7.2.1.1           | m      |         |
| Comments:         |                       |                   |        |         |

**Table A.228: SA Service Type**

| Base Station (BS) |            |           |        |         |
|-------------------|------------|-----------|--------|---------|
| Item              | Capability | Reference | Status | Support |
| 1                 | Unicast    | 11.9.35   | m      |         |
| Comments:         |            |           |        |         |

A.5.1.2.2.2.15 MBS

**Table A.229: MBS**

| Base Station (BS) |  |            |        |         |
|-------------------|--|------------|--------|---------|
| Item              | Capability                             | Reference  | Status | Support |
| 1                 | Multi-BS-MBS                           | 6.3.13     | IO-MBS |         |
| 2                 | Support for MBS_MAP-IE                 | 6.3.13.2.3 | IO-MBS |         |
| 3                 | BS initiated MBS request using DSA-REQ | 11.13.20   | IO-MBS |         |
| 4                 | BS initiated MBS request using DSA-REQ | 11.13.20   | IO-MBS |         |
| Comments:         |  |            |        |         |

A.5.1.2.2.2.16 MS's Network Entry issued by BS restart

**Table A.230: MS's Network Entry issued by BS restart**

| Base Station (BS) |   |                  |        |         |
|-------------------|---|------------------|--------|---------|
| Item              | Capability  | Reference        | Status | Support |
| 1                 | BS transmits BS restart counter TLV when applicable | 6.3.9.11, 11.4.1 | m      |         |
| Comments:         |   |                  |        |         |

A.5.1.2.2.2.17 MAC support for H-ARQ

**Table A.231: MAC support for H-ARQ**

| Base Station (BS)  |   |                  |        |         |
|--|---|------------------|--------|---------|
| Item   | Capability  | Reference        | Status | Support |
| 1  | HARQ Support  | 6.3.17           | m      |         |
| 2  | HARQ Buffer Negotiation Capability                          | 11.8.3.7.19      | m      |         |
| 3  | HARQ Channel mapping  | 6.3.17, 11.13.32 | m      |         |
| 4  | Capability of DL HARQ channels Number negotiation           | 11.8.3.7.2       | m      |         |
| 5  | Capability of UL HARQ channels Number negotiation           | 11.8.3.7.3       | m      |         |
| 6  | Capability of HARQ ACK delay negotiation in DL transmission | 11.4.1           | m      |         |
| 7  | Capability of HARQ ACK delay negotiation in UL transmission | 11.3.1           | m      |         |
| 8  | PDU SN extended subheader for HARQ reordering               | 11.13.33         | m      |         |
| Comments: All items above are conditional dependently on HARQ support. HARQ Channel mapping is determined by BS. |   |                  |        |         |

## A.6 List of PDUs, MAP IEs, sub-headers, and extended sub-headers

### A.6.1 PDUs for MAC layer

#### A.6.1.1 PDUs for network entry and initialization

**Table A.232: BS sending MAC PDUs for network entry and initialization**

| Base Station (BS) |                   |                         |        |         |
|-------------------|-------------------|-------------------------|--------|---------|
| Item              | Capability        | Reference               | Status | Support |
| 1                 | DL-MAP            | [4] 6.3.9.2, 6.3.2.3.2  | m      |         |
| 2                 | DCD               | [4] 6.3.9.2, 6.3.2.3.1  | m      |         |
| 3                 | UL-MAP            | [4] 6.3.9.3, 6.3.2.3.4  | m      |         |
| 4                 | UCD               | [4] 6.3.9.3, 6.3.2.3.3  | m      |         |
| 5                 | RNG-RSP           | [4] 6.3.9.5, 6.3.2.3.6  | m      |         |
| 6                 | SBC-RSP           | [4] 6.3.9.7, 6.3.2.3.24 | m      |         |
| 7                 | PKM-RSP           | [4] 6.3.9.8, 6.3.2.3.9  | m      |         |
| 8                 | REG-RSP           | [4] 6.3.9.9             | m      |         |
| 9                 | Compressed DL-MAP | 8.4.5.6                 | m      |         |
| 10                | Compressed UL-MAP | 8.4.5.6                 | m      |         |

Comments:

**Table A.233: BS receiving MAC PDUs for network entry and initialization**

| Base Station (BS) |            |                         |        |         |
|-------------------|------------|-------------------------|--------|---------|
| Item              | Capability | Reference               | Status | Support |
| 1                 | RNG-REQ    | [1] 6.3.9.5, 6.3.2.3.5  | M      |         |
| 2                 | SBC-REQ    | [1] 6.3.9.7, 6.3.2.3.23 | M      |         |
| 3                 | PKM-REQ    | [1] 6.3.9.8, 6.3.2.3.9  | M      |         |
| 4                 | REG-REQ    | [1] 6.3.9.9, 6.3.2.3.7  | M      |         |

Comments:

**Table A.234: MS sending MAC PDUs for network entry and initialization**

| Mobile Station (MS) |            |                         |        |         |
|---------------------|------------|-------------------------|--------|---------|
| Item                | Capability | Reference               | Status | Support |
| 1                   | RNG-REQ    | [4] 6.3.9.5, 6.3.2.3.5  | m      |         |
| 2                   | SBC-REQ    | [4] 6.3.9.7, 6.3.2.3.23 | m      |         |
| 3                   | PKM-REQ    | [4] 6.3.9.8, 6.3.2.3.9  | m      |         |
| 4                   | REG-REQ    | [4] 6.3.9.9, 6.3.2.3.7  | m      |         |

Comments:



Table A.235: MS receiving MAC PDUs for network entry and initialization

| Mobile Station (MS) |                   |                         |        |         |
|---------------------|-------------------|-------------------------|--------|---------|
| Item                | Capability        | Reference               | Status | Support |
| 1                   | DL-MAP            | [1] 6.3.9.2, 6.3.2.3.2  | M      |         |
| 2                   | DCD               | [1] 6.3.9.2, 6.3.2.3.1  | M      |         |
| 3                   | UL-MAP            | [1] 6.3.9.3, 6.3.2.3.4  | M      |         |
| 4                   | UCD               | [1] 6.3.9.3, 6.3.2.3.3  | M      |         |
| 5                   | RNG-RSP           | [1] 6.3.9.5, 6.3.2.3.6  | M      |         |
| 6                   | SBC-RSP           | [1] 6.3.9.7, 6.3.2.3.24 | M      |         |
| 7                   | PKM-RSP           | [1] 6.3.9.8, 6.3.2.3.9  | M      |         |
| 8                   | REG-RSP           | [1] 6.3.9.9             | M      |         |
| 9                   | Compressed DL-MAP | 8.4.5.6                 | m      |         |
| 10                  | Compressed UL-MAP | 8.4.5.6                 | m      |         |
| Comments:           |                   |                         |        |         |

## A.6.1.2 PDUs for service flows

Table A.236: BS sending PDUs for service flows

| Base Station (BS) |                              |            |        |         |
|-------------------|------------------------------|------------|--------|---------|
| Item              | Capability                   | Reference  | Status | Support |
| 1                 | DSA-REQ (create)             | 6.3.2.3.10 | m      |         |
| 2                 | DSA-RSP                      | 6.3.2.3.11 | m      |         |
| 3                 | DSA-ACK                      | 6.3.2.3.12 | m      |         |
| 4                 | DSC-REQ (change)             | 6.3.2.3.13 | m      |         |
| 5                 | DSC-RSP                      | 6.3.2.3.14 | m      |         |
| 6                 | DSC-ACK                      | 6.3.2.3.15 | m      |         |
| 7                 | DSD-REQ (delete)             | 6.3.2.3.16 | m      |         |
| 8                 | DSD-RSP                      | 6.3.2.3.17 | m      |         |
| 9                 | DSX-RVD (creation or change) | 6.3.2.3.27 | m      |         |
| Comments:         |                              |            |        |         |

Table A.237: BS receiving PDUs for service flows

| Base Station (BS) |                  |            |        |         |
|-------------------|------------------|------------|--------|---------|
| Item              | Capability       | Reference  | Status | Support |
| 1                 | DSA-REQ (create) | 6.3.2.3.10 | m      |         |
| 2                 | DSA-RSP          | 6.3.2.3.11 | m      |         |
| 3                 | DSA-ACK          | 6.3.2.3.12 | m      |         |
| 4                 | DSC-REQ (change) | 6.3.2.3.13 | m      |         |
| 5                 | DSC-RSP          | 6.3.2.3.14 | m      |         |
| 6                 | DSC-ACK          | 6.3.2.3.15 | m      |         |
| 7                 | DSD-REQ (delete) | 6.3.2.3.16 | m      |         |
| 8                 | DSD-RSP          | 6.3.2.3.17 | m      |         |
| Comments:         |                  |            |        |         |

Table A.238: MS sending PDUs for service flows

| Mobile Station (MS) |                  |            |        |         |
|---------------------|------------------|------------|--------|---------|
| Item                | Capability       | Reference  | Status | Support |
| 1                   | DSA-REQ (create) | 6.3.2.3.10 | m      |         |
| 2                   | DSA-RSP          | 6.3.2.3.11 | m      |         |
| 3                   | DSA-ACK          | 6.3.2.3.12 | m      |         |
| 4                   | DSC-REQ (change) | 6.3.2.3.13 | m      |         |
| 5                   | DSC-RSP          | 6.3.2.3.14 | m      |         |
| 6                   | DSC-ACK          | 6.3.2.3.15 | m      |         |
| 7                   | DSD-REQ (delete) | 6.3.2.3.16 | m      |         |
| 8                   | DSD-RSP          | 6.3.2.3.17 | m      |         |
| Comments:           |                  |            |        |         |

Table A.239: MS receiving PDUs for service flows

| Mobile Station (MS) |                              |            |        |         |
|---------------------|------------------------------|------------|--------|---------|
| Item                | Capability                   | Reference  | Status | Support |
| 1                   | DSA-REQ (create)             | 6.3.2.3.10 | m      |         |
| 2                   | DSA-RSP                      | 6.3.2.3.11 | m      |         |
| 3                   | DSA-ACK                      | 6.3.2.3.12 | m      |         |
| 4                   | DSC-REQ (change)             | 6.3.2.3.13 | m      |         |
| 5                   | DSC-RSP                      | 6.3.2.3.14 | m      |         |
| 6                   | DSC-ACK                      | 6.3.2.3.15 | m      |         |
| 7                   | DSD-REQ (delete)             | 6.3.2.3.16 | m      |         |
| 8                   | DSD-RSP                      | 6.3.2.3.17 | m      |         |
| 9                   | DSX-RVD (creation or change) | 6.3.2.3.27 | m      |         |
| Comments:           |                              |            |        |         |

## A.6.1.3 PDUs for ARQ

Table A.240: BS sending PDUs for ARQ

| Base Station (BS) |              |           |        |         |
|-------------------|--------------|-----------|--------|---------|
| Item              | Capability   | Reference | Status | Support |
| 1                 | ARQ-feedback | [4] 6.3.4 | m      |         |
| 2                 | ARQ-discard  | [4] 6.3.4 | m      |         |
| 3                 | ARQ-reset    | [4] 6.3.4 | m      |         |
| Comments:         |              |           |        |         |

Table A.241: BS receiving PDUs for ARQ

| Base Station (BS) |              |           |        |         |
|-------------------|--------------|-----------|--------|---------|
| Item              | Capability   | Reference | Status | Support |
| 1                 | ARQ-feedback | [1] 6.3.4 | m      |         |
| 2                 | ARQ-discard  | [1] 6.3.4 | m      |         |
| 3                 | ARQ-reset    | [1] 6.3.4 | m      |         |
| Comments:         |              |           |        |         |

Table A.242: MS sending PDUs for ARQ

| Mobile Station (MS) |              |           |        |         |
|---------------------|--------------|-----------|--------|---------|
| Item                | Capability   | Reference | Status | Support |
| 1                   | ARQ-feedback | [4] 6.3.4 | m      |         |
| 2                   | ARQ-discard  | [4] 6.3.4 | m      |         |
| 3                   | ARQ-reset    | [4] 6.3.4 | m      |         |
| Comments:           |              |           |        |         |

Table A.243: MS receiving PDUs for ARQ

| Mobile Station (MS) |              |           |        |         |
|---------------------|--------------|-----------|--------|---------|
| Item                | Capability   | Reference | Status | Support |
| 1                   | ARQ-feedback | [1] 6.3.4 | M      |         |
| 2                   | ARQ-discard  | [1] 6.3.4 | M      |         |
| 3                   | ARQ-reset    | [1] 6.3.4 | M      |         |
| Comments:           |              |           |        |         |

## A.6.1.4 PDUs for miscellaneous capabilities

Table A.244: BS sending MAC PDUs for miscellaneous capabilities

| Base Station (BS) |            |                |        |         |
|-------------------|------------|----------------|--------|---------|
| Item              | Capability | Reference      | Status | Support |
| 1                 | RES-CMD    | [4] 6.3.2.3.22 | o      |         |
| 2                 | CLK-CMP    | [4] 6.3.2.3.25 | o      |         |
| 3                 | DREG-CMD   | [4] 6.3.2.3.26 | m      |         |
| 4                 | DSX-RVD    | [4] 6.3.2.3.27 | m      |         |
| 5                 | REP-REQ    | [4] 6.3.2.3.33 | m      |         |
| 6                 | FPC        | [4] 6.3.2.3.34 | o      |         |
| Comments:         |            |                |        |         |

Table A.245: BS receiving MAC PDUs for miscellaneous capabilities

| Base Station (BS) |            |                |        |         |
|-------------------|------------|----------------|--------|---------|
| Item              | Capability | Reference      | Status | Support |
| 1                 | DREG-REQ   | [1] 6.3.2.3.43 | m      |         |
| 2                 | REP-RSP    | [1] 6.3.2.3.33 | m      |         |
| Comments:         |            |                |        |         |

Table A.246: MS sending MAC PDUs for miscellaneous capabilities

| Mobile Station (MS) |            |                |        |         |
|---------------------|------------|----------------|--------|---------|
| Item                | Capability | Reference      | Status | Support |
| 1                   | DREG-REQ   | [4] 6.3.2.3.43 | m      |         |
| 2                   | REP-RSP    | [4] 6.3.2.3.33 | m      |         |
| Comments:           |            |                |        |         |

Table A.247: MS receiving MAC PDUs for miscellaneous capabilities

| Mobile Station (MS) |            |                |        |         |
|---------------------|------------|----------------|--------|---------|
| Item                | Capability | Reference      | Status | Support |
| 1                   | RES-CMD    | [1] 6.3.2.3.22 | o      |         |
| 2                   | CLK-CMP    | [1] 6.3.2.3.25 | o      |         |
| 3                   | DREG-CMD   | [1] 6.3.2.3.26 | m      |         |
| 4                   | DSX-RVD    | [1] 6.3.2.3.27 | m      |         |
| 5                   | REP-REQ    | [1] 6.3.2.3.33 | m      |         |
| 6                   | FPC        | [1] 6.3.2.3.34 | m      |         |
| Comments:           |            |                |        |         |

## A.6.1.5 PDUs for security

Table A.248: BS sending MAC security messages

| Base Station (BS) |                                |           |        |         |
|-------------------|--------------------------------|-----------|--------|---------|
| Item              | Capability                     | Reference | Status | Support |
| 1                 | PKM-REQ/RSP PKMv2-EAP-Transfer | 6.3.2.3.9 | m      |         |
| 2                 | PKM-RSP PKMv2-SA-TEK-Challenge | 6.3.2.3.9 | m      |         |
| 3                 | PKM-RSP PKMv2-SA-TEK-Response  | 6.3.2.3.9 | m      |         |
| 4                 | PKM-RSP PKMv2-Key-Response     | 6.3.2.3.9 | m      |         |
| 5                 | PKM-RSP PKMv2-Key-Reject       | 6.3.2.3.9 | m      |         |
| 6                 | PKM-RSP PKMv2-SA-Addition      | 6.3.2.3.9 | m      |         |
| 7                 | PKM-RSP PKMv2-TEK-Invalid      | 6.3.2.3.9 | m      |         |
| Comments:         |                                |           |        |         |

**Table A.249: BS receiving MAC security messages  
(Including some PKMv1 which is needed also for PKMv2)**

| Base Station (BS) |                                |           |        |         |
|-------------------|--------------------------------|-----------|--------|---------|
| Item              | Capability                     | Reference | Status | Support |
| 1                 | PKM-REQ PKMv2-EAP-Start        | 6.3.2.3.9 | m      |         |
| 2                 | PKM-REQ/RSP PKMv2-EAP-Transfer | 6.3.2.3.9 | m      |         |
| 3                 | PKM-REQ PKMv2-SA-TEK-Request   | 6.3.2.3.9 | m      |         |
| 4                 | PKM-REQ PKMv2-Key-Request      | 6.3.2.3.9 | m      |         |
| Comments:         |                                |           |        |         |

**Table A.250: MS sending MAC security messages  
(Including some PKMv1 which is needed also for PKMv2)**

| Base Station (BS) |                                |           |        |         |
|-------------------|--------------------------------|-----------|--------|---------|
| Item              | Capability                     | Reference | Status | Support |
| 1                 | PKM-REQ PKMv2-EAP-Start        | 6.3.2.3.9 | m      |         |
| 2                 | PKM-REQ/RSP PKMv2-EAP-Transfer | 6.3.2.3.9 | m      |         |
| 3                 | PKM-REQ PKMv2-SA-TEK-Request   | 6.3.2.3.9 | m      |         |
| 4                 | PKM-REQ PKMv2-Key-Request      | 6.3.2.3.9 | m      |         |
| Comments:         |                                |           |        |         |

**Table A.251: MS receiving MAC security messages**

| Base Station (BS) |                                |           |        |         |
|-------------------|--------------------------------|-----------|--------|---------|
| Item              | Capability                     | Reference | Status | Support |
| 1                 | PKM-REQ/RSP PKMv2-EAP-Transfer | 6.3.2.3.9 | m      |         |
| 2                 | PKM-RSP PKMv2-SA-TEK-Challenge | 6.3.2.3.9 | m      |         |
| 3                 | PKM-RSP PKMv2-SA-TEK-Response  | 6.3.2.3.9 | m      |         |
| 4                 | PKM-RSP PKMv2-Key-Response     | 6.3.2.3.9 | m      |         |
| 5                 | PKM-RSP PKMv2-Key-Reject       | 6.3.2.3.9 | m      |         |
| 6                 | PKM-RSP PKMv2-SA-Addition      | 6.3.2.3.9 | m      |         |
| 7                 | PKM-RSP PKMv2-TEK-Invalid      | 6.3.2.3.9 | m      |         |
| Comments:         |                                |           |        |         |

### A.6.1.6 PDUs for Sleep Mode

**Table A.252: BS sending MAC PDUs for Sleep Mode**

| Base Station (BS) |                                     |   |        |         |
|-------------------|-------------------------------------|---|--------|---------|
| Item              | Capability                          | Reference                                       | Status | Support |
| 1                 | MOB_SLP-RSP message                 | 6.3.2.3.45                                      | m      |         |
| 2                 | MOB_TRF-IND message                 | 6.3.2.3.46                                      | m      |         |
| 3                 | DL Sleep control extended subheader | 6.3.21.2<br>6.3.21.3<br>6.3.21.4<br>6.3.2.2.7.2 | m      |         |
| Comments:         |                                     |   |        |         |

**Table A.253: BS receiving MAC PDUs for Sleep mode**

| Item      | Capability  | Reference                | Status | Support |
|-----------|---|--------------------------|--------|---------|
| 1         | MOB_SLP-REQ message                               | 6.3.2.3.44               | m      |         |
| 2         | Bandwidth request and uplink sleep control header | 6.3.2.1.1, 6.3.2.1.2.1.6 | m      |         |
| Comments: |   |                          |        |         |

**Table A.254: MS receiving MAC PDUs for Sleep Mode**

| Mobile Station (MS) |                                     |   |        |         |
|---------------------|-------------------------------------|---|--------|---------|
| Item                | Capability                          | Reference                                       | Status | Support |
| 1                   | MOB_SLP-RSP message                 | 6.3.2.3.45                                      | m      |         |
| 2                   | MOB_TRF-IND message                 | 6.3.2.3.46                                      | m      |         |
| 3                   | DL Sleep control extended subheader | 6.3.21.2<br>6.3.21.3<br>6.3.21.4<br>6.3.2.2.7.2 | m      |         |
| Comments:           |                                     |   |        |         |

**Table A.255: MS sending MAC PDUs for Sleep Mode**

| Mobile Station (MS) |   |               |        |         |
|---------------------|---|---------------|--------|---------|
| Item                | Capability  | Reference     | Status | Support |
| 1                   | MOB_SLP-REQ message                               | 6.3.2.3.44    | m      |         |
| 2                   | Bandwidth request and uplink sleep control header | 6.3.2.1.2.1.6 | m      |         |
| Comments:           |   |               |        |         |

### A.6.1.7 PDUs for Handover

**Table A.256: BS sending MAC PDUs for Handover**

| Base Station (BS) |   |            |        |         |
|-------------------|---|------------|--------|---------|
| Item              | Capability                              | Reference  | Status | Support |
| 1                 | MOB_SCN-RSP                             | 6.3.2.3.49 | m      |         |
| 2                 | MOB_NBR-ADV                             | 6.3.2.3.47 | m      |         |
| 3                 | MOB_BSHO-REQ (Mode = 0x0b000)           | 6.3.2.3.52 | m      |         |
| 4                 | MOB_BSHO-REQ (Mode = 0x0b001 to 0xb110) | 6.3.2.3.52 | o      |         |
| 5                 | MOB_BSHO-RSP (Mode = 0x0b000)           | 6.3.2.3.54 | m      |         |
| 6                 | MOB_BSHO-RSP (Mode = 0x0b001 to 0xb110) | 6.3.2.3.54 | o      |         |
| 7                 | MOB_BSHO-RSP (Mode = 0b111)             | 6.3.2.3.54 | o      |         |
| Comments:         |   |            |        |         |

**Table A.257: BS receiving MAC PDUs for Handover**

| Base Station (BS) |                                    |            |        |         |
|-------------------|------------------------------------|------------|--------|---------|
| Item              | Capability                         | Reference  | Status | Support |
| 1                 | MOB_SCN-REQ                        | 6.3.2.3.48 | m      |         |
| 2                 | MOB_SCN-REP                        | 6.3.2.3.50 | m      |         |
| 3                 | MOB_MSHO-REQ                       | 6.3.2.3.53 | m      |         |
| 4                 | MOB_HO-IND ( Mode = 0b00)          | 6.3.2.3.55 | m      |         |
| 5                 | MOB_HO-IND ( Mode = 0b01 or 0b10 ) | 6.3.2.3.55 | o      |         |
| Comments:         |                                    |            |        |         |

**Table A.258: MS sending MAC PDUs for Handover**

| Base Station (BS) |                                    |            |        |         |
|-------------------|------------------------------------|------------|--------|---------|
| Item              | Capability                         | Reference  | Status | Support |
| 1                 | MOB_SCN-REQ                        | 6.3.2.3.48 | m      |         |
| 2                 | MOB_SCN-REP                        | 6.3.2.3.50 | m      |         |
| 3                 | MOB_MSHO-REQ                       | 6.3.2.3.53 | m      |         |
| 4                 | MOB_HO-IND ( Mode = 0b00)          | 6.3.2.3.55 | m      |         |
| 5                 | MOB_HO-IND ( Mode = 0b01 or 0b10 ) | 6.3.2.3.55 | o      |         |
| Comments:         |                                    |            |        |         |

**Table A.259: MS receiving MAC PDUs for Handover**

| Base Station (BS) |   |            |        |         |
|-------------------|---|------------|--------|---------|
| Item              | Capability                              | Reference  | Status | Support |
| 1                 | MOB_SCN-RSP                             | 6.3.2.3.49 | M      |         |
| 2                 | MOB_NBR-ADV                             | 6.3.2.3.47 | M      |         |
| 3                 | MOB_BSHO-REQ (Mode = 0x0b000)           | 6.3.2.3.52 | M      |         |
| 4                 | MOB_BSHO-REQ (Mode = 0x0b001 to 0xb110) | 6.3.2.3.52 | O      |         |
| 5                 | MOB_BSHO-RSP (Mode = 0x0b000)           | 6.3.2.3.54 | M      |         |
| 6                 | MOB_BSHO-RSP (Mode = 0x0b001 to 0xb110) | 6.3.2.3.54 | O      |         |
| 7                 | MOB_BSHO-RSP (Mode = 0xb111)            | 6.3.2.3.54 | O      |         |

Comments:

### A.6.1.8 PDUs for Idle mode

**Table A.260: MS sending MAC PDUs for Idle Mode**

| Mobile Station (MS) |            |            |        |         |
|---------------------|------------|------------|--------|---------|
| Item                | Capability | Reference  | Status | Support |
| 1                   | DREG-REQ   | 6.3.2.3.42 | m      |         |

Comments:

**Table A.261: MS receiving MAC PDUs for Idle Mode**

| Mobile Station (MS) |             |            |        |         |
|---------------------|-------------|------------|--------|---------|
| Item                | Capability  | Reference  | Status | Support |
| 1                   | DREG-CMD    | 6.3.2.3.26 | m      |         |
| 2                   | MOB_PAG-ADV | 6.3.2.3.56 | m      |         |

Comments:

**Table A.262: BS sending MAC PDUs for Idle Mode**

| Base Station (BS) |             |            |        |         |
|-------------------|-------------|------------|--------|---------|
| Item              | Capability  | Reference  | Status | Support |
| 1                 | DREG-CMD    | 6.3.2.3.26 | m      |         |
| 2                 | MOB_PAG-ADV | 6.3.2.3.26 | m      |         |

Comments:

**Table A.263: BS receiving MAC PDUs for Idle Mode**

| Base Station (BS) |            |            |        |         |
|-------------------|------------|------------|--------|---------|
| Item              | Capability | Reference  | Status | Support |
| 1                 | DREG-REQ   | 6.3.2.3.42 | m      |         |

Comments:

### A.6.1.9 PDUs for Feedback

**Table A.264: MS sending MAC PDUs for Feedback**

| Mobile Station (MS) |  |               |        |         |
|---------------------|--|---------------|--------|---------|
| Item                | Capability                               | Reference     | Status | Support |
| 1                   | Feedback header                          | 6.3.2.1.2.2.1 | m      |         |
| 2                   | Bandwidth request and UL Tx Power Report | 6.3.2.1.2.1.2 | m      |         |
| 3                   | SN report header                         | 6.3.2.1.2.1.7 | m      |         |

Comments:

**Table A.265: BS receiving MAC PDUs for Feedback**

| Base Station (BS) |  |               |        |         |
|-------------------|--|---------------|--------|---------|
| Item              | Capability                               | Reference     | Status | Support |
| 1                 | Feedback header                          | 6.3.2.1.2.2.1 | m      |         |
| 2                 | Bandwidth request and UL Tx Power Report | 6.3.2.1.2.1.2 | m      |         |
| 3                 | SN report header                         | 6.3.2.1.2.1.7 | m      |         |
| Comments:         |  |               |        |         |

**Table A.266: BS sending MAC PDUs for Feedback**

| Base Station (BS) |                               |             |        |         |
|-------------------|-------------------------------|-------------|--------|---------|
| Item              | Capability                    | Reference   | Status | Support |
| 1                 | SN request extended subheader | 6.3.2.2.7.7 | o      |         |
| Comments:         |                               |             |        |         |

**Table A.267: MS receiving MAC PDUs for Feedback**

| Mobile Station (MS) |                               |             |        |         |
|---------------------|-------------------------------|-------------|--------|---------|
| Item                | Capability                    | Reference   | Status | Support |
| 1                   | SN request extended subheader | 6.3.2.2.7.7 | o      |         |
| Comments:           |                               |             |        |         |

### A.6.1.10 PDUs and MAP IEs for Power Control

**Table A.268: BS sending MAC PDUs and MAP IEs for Power Control**

| Base Station (BS)  |  |                              |        |         |
|--|--|------------------------------|--------|---------|
| Item   | Capability   | Reference                    | Status | Support |
| 1  | RNG_RSP message                                    | 8.4.10.3.1 and 11.6          | m      |         |
| 2  | PMC_RSP message                                    | 8.4.10.3.2 and<br>6.3.2.3.59 | m      |         |
| 3  | REP_REQ message                                    | 8.4.10.3 and<br>6.3.2.3.33   | o      |         |
| 4  | Fast power control message                         | 8.4.10.3 and<br>6.3.2.3.34   | o      |         |
| 5  | power control IE                                   | 8.4.10.3 and 8.4.5.4.5       | m      |         |
| 6  | UL interference and noise level IE                 | 8.4.10.3 and<br>8.4.5.3.19   | m      |         |
| 7  | Tx power report TLV in UCD                         | 11.3.1                       | m      |         |
| 8  | Normalized C/N override 2 TLV in UCD               | 11.3.1                       | m      |         |
| 9  | Normalized C/N for Channel Sounding TLV in UCD     | 11.3.1                       | IO-BF  |         |
| 10   | OFDMA uplink power control support TLVs in SBC-RSP | 11.8.3.7.11                  | m      |         |
| 11   | BS_EIRP TLV in DCD                                 | 6.3.9.5.1 and 11.4.1         | m      |         |
| 12   | EIRxPIR,max TLV in DCD                             | 6.3.9.5.1 and 11.4.1         | m      |         |
| NOTE: PDU of Item 3 is only applicable to closed loop power control. |  |                              |        |         |
| Comments:  |  |                              |        |         |

**Table A.269: BS receiving MAC PDUs and MAP IEs for Power Control**

| Base Station (BS)  |  |                              |        |         |
|--|--|------------------------------|--------|---------|
| Item   | Capability   | Reference                    | Status | Support |
| 1  | PMC_REQ message                                    | 8.4.10.3.2 and<br>6.3.2.3.58 | m      |         |
| 2  | REP_RSP message                                    | 8.4.10.3 and<br>6.3.2.3.33   | o      |         |
| 3  | Maximum transmit power TLV in SBC-REQ              | 11.8.3.2                     | m      |         |
| 4  | OFDMA uplink power control support TLVs in SBC-REQ | 11.8.3.7.11                  | m      |         |
| 5  | Bandwidth request and UL Tx power report header    | 6.3.2.1.2.1.2                | m      |         |
| NOTE: PDU of Item 2 is only applicable to closed loop power control. |  |                              |        |         |
| Comments:  |  |                              |        |         |

**Table A.270: MS sending MAC PDUs and MAP IEs for Power Control**

| Mobile Station (MS)  |  |                              |        |         |
|--|--|------------------------------|--------|---------|
| Item   | Capability   | Reference                    | Status | Support |
| 1  | PMC_REQ message                                    | 8.4.10.3.2 and<br>6.3.2.3.58 | m      |         |
| 2  | REP_RSP message                                    | 8.4.10.3 and<br>6.3.2.3.33   | m      |         |
| 3  | Maximum transmit power TLV in SBC-REQ              | 11.8.3.2                     | m      |         |
| 4  | OFDMA uplink power control support TLVs in SBC-REQ | 11.8.3.7.11                  | m      |         |
| 5  | Bandwidth request and UL Tx power report header    | 6.3.2.1.2.1.2                | m      |         |
| NOTE: PDU of Item 2 is only applicable to closed loop power control. |  |                              |        |         |
| Comments: Message of Item 2 is mandatory as a response to REP-REQ.   |  |                              |        |         |

**Table A.271: MS receiving MAC PDUs and MAP IEs for Power Control**

| Mobile Station (MS)  |  |                              |        |         |
|--|--|------------------------------|--------|---------|
| Item   | Capability   | Reference                    | Status | Support |
| 1  | RNG_RSP message                                    | 8.4.10.3.1 and<br>11.6       | m      |         |
| 2  | PMC_RSP message                                    | 8.4.10.3.2 and<br>6.3.2.3.59 | m      |         |
| 3  | REP_REQ message                                    | 8.4.10.3 and<br>6.3.2.3.33   | m      |         |
| 4  | Fast power control message                         | 8.4.10.3 and<br>6.3.2.3.34   | m      |         |
| 5  | power control IE                                   | 8.4.10.3 and<br>8.4.5.4.5    | m      |         |
| 6  | UL interference and noise level IE                 | 8.4.10.3 and<br>8.4.5.3.19   | m      |         |
| 7  | Tx power report TLV in UCD                         | 11.3.1                       | m      |         |
| 8  | Normalized C/N override 2 TLV in UCD               | 11.3.1                       | m      |         |
| 9  | Normalized C/N for Channel Sounding TLV in UCD     | 11.3.1                       | m      |         |
| 10   | OFDMA uplink power control support TLVs in SBC-RSP | 11.8.3.7.11                  | m      |         |
| 11   | BS_EIRP TLV in DCD                                 | 6.3.9.5.1 and<br>11.4.1      | m      |         |
| 12   | EIRxPIR,max TLV in DCD                             | 6.3.9.5.1 and<br>11.4.1      | m      |         |
| NOTE: PDU of Item 3 is only applicable to closed loop power control. |  |                              |        |         |
| Comments:  |  |                              |        |         |



## A.6.1.11 PDUs for band AMC

Table A.272: BS sending MAC PDUs for band AMC

| Base Station (BS) |  |  |        |         |
|-------------------|--|--|--------|---------|
| Item              | Capability   | Reference                                  | Status | Support |
| 1                 | REP_REQ message<br>(Channel Type Request : Type=1.3, Value = 0b01) | 6.3.2.3.33, 6.3.19,<br>8.4.6.3.2 and 11.11 | m      |         |
| Comments:         |  |  |        |         |

Table A.273: BS receiving MAC PDUs for band AMC

| Base Station (BS)                                       |   |  |        |         |
|---|---|--|--------|---------|
| Item  | Capability  | Reference                                  | Status | Support |
| 1   | REP_RSP message<br>(Enhanced Band-AMC report: Type=2.4) | 6.3.2.3.33, 6.3.19,<br>8.4.6.3.2 and 11.12 | m      |         |
| Comments: The CINR shall be measured from the preamble. |   |  |        |         |

Table A.274: MS sending MAC PDUs for band AMC

| Mobile Station (MS) |   |  |        |         |
|---------------------|---|--|--------|---------|
| Item                | Capability  | Reference                                  | Status | Support |
| 1                   | REP_RSP message<br>(Enhanced Band-AMC report: Type=2.4) | 6.3.2.3.33, 6.3.19,<br>8.4.6.3.2 and 11.12 | m      |         |
| Comments:           |   |  |        |         |

Table A.275: MS receiving MAC PDUs for band AMC

| Mobile Station (MS)                                     |  |  |        |         |
|---|--|--|--------|---------|
| Item  | Capability   | Reference                                  | Status | Support |
| 1   | REP_REQ message<br>(Channel Type Request : Type=1.3, Value = 0b01) | 6.3.2.3.33, 6.3.19,<br>8.4.6.3.2 and 11.11 | m      |         |
| Comments: The CINR shall be measured from the preamble. |  |  |        |         |

## A.6.2 MAP IEs

Table A.276: BS sending MAP IEs for DL

| Base Station (BS) |  |              |         |         |
|-------------------|--|--------------|---------|---------|
| Item              | Capabilities                                 | Reference    | Status  | Support |
| 1                 | DL-MAP IE (DIUC 0 ~ 12)                      | 8.4.5.3      | m       |         |
| 2                 | DL-MAP IE (DIUC 13: Gap/PAPR reduction)      | 8.4.5.3      | m       |         |
| 3                 | DL-MAP IE (DIUC 15: Extended DIUC- General)  | 8.4.5.3      | m       |         |
| 4                 | DL-MAP IE (DIUC 14: Extended2 DIUC- General) | 8.4.5.3      | m       |         |
| 5                 | Space-Time Coding (STC)/Zone switch IE       | 8.4.5.3.4    | m       |         |
| 6                 | CID Switch IE                                | 8.4.5.3.7    | m       |         |
| 7                 | MIMO DL Basic IE                             | 8.4.5.3.8    | IO-MIMO |         |
| 8                 | HARQ and Sub-MAP pointer IE                  | 8.4.5.3.10   | m       |         |
| 9                 | MBS MAP IE                                   | 8.4.5.3.12   | IO-MBS  |         |
| 10                | MBS Data IE                                  | 6.3.2.3.57   | IO-MBS  |         |
| 11                | UL Interference and Noise Level IE           | 8.4.5.3.19   | m       |         |
| 12                | RCID IE                                      | 8.4.5.3.20.1 | m       |         |
| 13                | HARQ DL-MAP IE                               | 8.4.5.3.21   | m       |         |
| 14                | DL HARQ Chase sub-burst IE                   | 8.4.5.3.21   | m       |         |
| 15                | MIMO DL Chase HARQ sub-burst IE              | 8.4.5.3.21   | IO-MIMO |         |
| 16                | Dedicated MIMO DL Control IE                 | 8.4.5.3.21.1 | IO-MIMO |         |
| 17                | Broadcast Control Pointer IE                 | 8.4.5.3.25   | m       |         |

NOTE 1: There can be two PUSC MIMO zones 1st with broadcasted pilots and 2<sup>nd</sup> with dedicated pilots.  
NOTE 2: Beamforming to multiple users with different pilot patterns is not supported.

Comments: With respect to item 16:

- Limit "Control header" = "0b001 or 0b011" for MIMO information and possible CQI information (no closed loop MIMO).
- Limit "N\_Layers" = 0b00 for single layer.
- If dedicated pilots are used for decoding [i.e. "Dedicated pilots" = 1] limit Num\_beamformed\_streams = 1, combination of MIMO and BF.

Table A.277: BS sending MAP IEs for UL

| Base Station (BS) |  |                                    |         |         |
|-------------------|--|------------------------------------|---------|---------|
| Item              | Capability   | Reference                          | Status  | Support |
| 1                 | UL-MAP IE (UIUC 1 ~ 10)  | 8.4.5.4                            | m       |         |
| 2                 | UL-MAP IE (UIUC 0: Fast Feedback Channel == FAST-FEEDBACK allocation IE) | 8.4.5.4,<br>8.4.5.4.1<br>8.4.5.4.9 | m       |         |
| 3                 | UL-MAP IE (UIUC 12: CDMA Bandwidth Request/CDMA Ranging)                 | 8.4.5.4,<br>8.4.5.4.1              | m       |         |
| 4                 | UL-MAP IE (UIUC 13: PAPR reduction and safety zone allocation)           | 8.4.5.4,<br>8.4.5.4.2              | IO-BF   |         |
| 5                 | UL-MAP IE (UIUC 14: CDMA allocation IE)                                  | 8.4.5.4,<br>8.4.5.4.3              | m       |         |
| 6                 | UL-MAP IE (UIUC 15: Extended UIUC- General)                              | 8.4.5.4,<br>8.4.5.4.3              | m       |         |
| 7                 | UL-MAP IE (UIUC 11: Extended UIUC2- General)                             | 8.4.5.4,<br>8.4.5.4.3              | m       |         |
| 8                 | Power Control IE   | 8.4.5.4.5                          | m       |         |
| 9                 | UL Zone switch IE  | 8.4.5.4.7                          | m       |         |
| 10                | MIMO UL Basic IE   | 8.4.5.4.11                         | IO-MIMO |         |
| 11                | CQICH Allocation IE  | 8.4.5.4.12                         | m       |         |
| 12                | UL allocation start IE   | 8.4.5.4.15                         | m       |         |
| 13                | Fast Ranging IE  | 8.4.5.4.21                         | m       |         |
| 14                | HARQ UL-MAP IE   | 8.4.5.4.24                         | m       |         |
| 15                | UL HARQ Chase sub-burst IE   | 8.4.5.4.24                         | m       |         |
| 16                | MIMO UL Chase HARQ sub-burst IE  | 8.4.5.4.24                         | IO-MIMO |         |
| 17                | Dedicated UL control IE  | 8.4.5.4.24.1                       | o       |         |
| 18                | HARQ ACKCH region allocation IE  | 8.4.5.4.25 and<br>8.4.5.4.13       | m       |         |
| 19                | UL Sounding Command IE   | 8.4.5.4.26                         | IO-BF   |         |
| 20                | Feedback polling IE  | 8.4.5.4.28                         | m       |         |

Comments: Applicable to item 17:

- Limited to "Num SDMA layers" = 0b01 to represent 2 layer Collaborative SM, and "Pilot pattern" =0b00 or 0b01, for pattern A or B.

Table A.278: MS receiving MAP IEs for DL

| Mobile Station (MS)  |  |              |        |         |
|--|--|--------------|--------|---------|
| Item   | Capability                                   | Reference    | Status | Support |
| 1  | DL-MAP IE (DIUC 0 ~ 12)                      | 8.4.5.3      | m      |         |
| 2  | DL-MAP IE (DIUC 15: Extended DIUC- General)  | 8.4.5.3      | m      |         |
| 3  | DL-MAP IE (DIUC 14: Extended2 DIUC- General) | 8.4.5.3      | m      |         |
| 4  | Space-Time Coding (STC)/Zone switch IE       | 8.4.5.3.4    | m      |         |
| 5  | CID Switch IE                                | 8.4.5.3.7    | m      |         |
| 6  | MIMO DL Basic IE                             | 8.4.5.3.8    | m      |         |
| 7  | HARQ and Sub-MAP pointer IE                  | 8.4.5.3.10   | m      |         |
| 8  | MBS MAP IE                                   | 8.4.5.3.12   | m      |         |
| 9  | MBS Data IE                                  | 6.3.2.3.57   | m      |         |
| 10   | UL Interference and Noise Level IE           | 8.4.5.3.19   | m      |         |
| 11   | RCID IE                                      | 8.4.5.3.20.1 | m      |         |
| 12   | HARQ DL-MAP IE                               | 8.4.5.3.21   | m      |         |
| 13   | DL HARQ Chase sub-burst IE                   | 8.4.5.3.21   | m      |         |
| 14   | MIMO DL Chase HARQ sub-burst IE              | 8.4.5.3.21   | m      |         |
| 15   | Dedicated MIMO DL Control IE                 | 8.4.5.3.21.1 | m      |         |
| 16   | Broadcast Control Pointer IE                 | 8.4.5.3.25   | m      |         |
| NOTE 1: There can be two PUSC MIMO zones, 1st with broadcasted pilots and 2 <sup>nd</sup> with dedicated pilots.   |  |              |        |         |
| NOTE 2: Beamforming to multiple users with different pilot patterns is not supported.  |  |              |        |         |
| Comments: With respect to item 15:   |  |              |        |         |
| <ul style="list-style-type: none"> <li>Limit "Control header" = "0b001 or 0b011" for MIMO information and possible CQI information (no closed loop MIMO).</li> <li>Limit "N_Layers" = 0b00 for single layer.</li> <li>If dedicated pilots are used for decoding [i.e. "Dedicated pilots" = 1] limit Num_beamformed_streams = 1, combination of MIMO and BF.</li> </ul> |  |              |        |         |

Table A.279: MS receiving MAP IEs for UL

| Mobile Station (MS)   |  |                                    |        |         |
|---|--|------------------------------------|--------|---------|
| Item  | Capability   | Reference                          | Status | Support |
| 1   | UL-MAP IE (UIUC 1 ~ 10)  | 8.4.5.4                            | m      |         |
| 2   | UL-MAP IE (UIUC 0: Fast Feedback Channel == FAST-FEEDBACK allocation IE) | 8.4.5.4,<br>8.4.5.4.1<br>8.4.5.4.9 | m      |         |
| 3   | UL-MAP IE (UIUC 12: CDMA Bandwidth Request/CDMA Ranging)                 | 8.4.5.4,<br>8.4.5.4.1              | m      |         |
| 4   | UL-MAP IE (UIUC 13: PAPR reduction and safety zone allocation)           | 8.4.5.4,<br>8.4.5.4.2              | m      |         |
| 5   | UL-MAP IE (UIUC 14: CDMA allocation IE)                                  | 8.4.5.4,<br>8.4.5.4.3              | m      |         |
| 6   | UL-MAP IE (UIUC 15: Extended UIUC- General)                              | 8.4.5.4,<br>8.4.5.4.3              | m      |         |
| 7   | UL-MAP IE (UIUC 11: Extended UIUC2- General)                             | 8.4.5.4,<br>8.4.5.4.3              | m      |         |
| 8   | Power Control IE   | 8.4.5.4.5                          | m      |         |
| 9   | UL Zone switch IE  | 8.4.5.4.7                          | m      |         |
| 10  | MIMO UL Basic IE   | 8.4.5.4.11                         | m      |         |
| 11  | CQICH Allocation IE  | 8.4.5.4.12                         | m      |         |
| 12  | UL allocation start IE   | 8.4.5.4.15                         | m      |         |
| 13  | Fast Ranging IE  | 8.4.5.4.21                         | m      |         |
| 14  | HARQ UL-MAP IE   | 8.4.5.4.24                         | m      |         |
| 15  | UL HARQ Chase sub-burst IE   | 8.4.5.4.24                         | m      |         |
| 16  | MIMO UL Chase HARQ sub-burst IE  | 8.4.5.4.24                         | m      |         |
| 17  | Dedicated UL control IE  | 8.4.5.4.24.1                       | m      |         |
| 18  | HARQ ACKCH region allocation IE  | 8.4.5.4.25                         | m      |         |
| 19  | UL Sounding Command IE   | 8.4.5.4.26                         | m      |         |
| 20  | Feedback polling IE  | 8.4.5.4.28                         | m      |         |
| Comments: Item 17 is limited to "Num SDMA layers" = 0b01 to represent 2 layer Collaborative SM, and "Pilot pattern" = 0b00 or 0b01, for pattern A or B. |  |                                    |        |         |

## A.7 PDU fields

### A.7.1 Fields of PDUs for MAC layer

#### A.7.1.1 DL-MAP

**Table A.280: PDU: DL-MAP**

| Item | Capability                | Reference     | Status | Support |
|------|---------------------------|---------------|--------|---------|
| 1    | Management Message type=2 | [4] 6.3.2.3.2 | m      |         |
| 2    | DCD count                 | [4] 6.3.2.3.2 | m      |         |
| 3    | Base station ID           | [4] 6.3.2.3.2 | m      |         |
| 4    | PHY Synchronization Field |               | m      |         |

Comments:

**Table A.281: PDU: Sub downlink/uplink map**

| Item | Capability                  | Reference      | Status | Support |
|------|-----------------------------|----------------|--------|---------|
| 1    | Compressed Map Indicator    | [5] 6.3.2.3.60 | m      |         |
| 2    | Map message length          | [5] 6.3.2.3.60 | m      |         |
| 3    | RCID_type                   | [5] 6.3.2.3.60 | m      |         |
| 4    | HARQ ACK offset indicator   | [5] 6.3.2.3.60 | m      |         |
| 5    | DL HARQ AK offset           | [5] 6.3.2.3.60 | m      |         |
| 6    | UL HARQ ACK offset          | [5] 6.3.2.3.60 | m      |         |
| 7    | DL IE Count                 | [5] 6.3.2.3.60 | m      |         |
| 8    | DL_MAP information elements | [5] 6.3.2.3.60 | m      |         |
| 9    | OFDMA Symbol Offset         | [5] 6.3.2.3.60 | m      |         |
| 10   | Subchannel offset           | [5] 6.3.2.3.60 | m      |         |
| 11   | UL_MAP information elements | [5] 6.3.2.3.60 | m      |         |

Comments:

**Table A.282: PDU: Common Part of DL-MAP Information Elements**

| Item | Capability                           | Reference   | Status | Support |
|------|--------------------------------------|-------------|--------|---------|
| 1    | CID only if INC_CID = 1              | [4] 8.4.5.3 | m      |         |
| 2    | DIUC                                 | [4] 8.4.5.3 | m      |         |
| 3    | N_CID only if INC_CID = 1            | [4] 8.4.5.3 | m      |         |
| 4    | RCID_IE if included in SUB-DL-UL-MAP | [4] 8.4.5.3 | m      |         |

Comments:

**Table A.283: PDU: Common Part of Extended DIUC**

| Item | Capability       | Reference     | Status | Support |
|------|------------------|---------------|--------|---------|
| 1    | Extended DIUC    | [4] 8.4.5.3.1 | m      |         |
| 2    | Length           | [4] 8.4.5.3.1 | m      |         |
| 3    | Unspecified data | [4] 8.4.5.3.1 | m      |         |

Comments:

**Table A.284: PDU: Common Part of Extended-2 DIUC**

| Item | Capability       | Reference     | Status | Support |
|------|------------------|---------------|--------|---------|
| 1    | Extended-2 DIUC  | [4] 8.4.5.3.2 | m      |         |
| 2    | Length           | [4] 8.4.5.3.2 | m      |         |
| 3    | Unspecified data | [4] 8.4.5.3.2 | m      |         |

Comments:

## A.7.1.2 DCD

Table A.285: PDU : DCD

| Item      | Capability                 | Reference             | Status | Support |
|-----------|----------------------------|-----------------------|--------|---------|
| 1         | Management Message type=1  | [4] and [5] 6.3.2.3.1 | m      |         |
| 2         | Reserved (Note)            | [4] and [5] 6.3.2.3.1 | m      |         |
| 3         | Configuration Change count | [4] and [5] 6.3.2.3.1 | m      |         |
| Comments: |                            |                       |        |         |

Table A.286: DCD TLV

| Item      | Capability                                 | Reference                     | Status | Support |
|-----------|--|-------------------------------|--------|---------|
| 1         | Frequency                                  | [4] and [5] 11.4.1            | m      |         |
| 2         | BS Id                                      | [4] and [5] 11.4.1            | m      |         |
| 3         | MAC version                                | [4] and [5] 11.4.1            | m      |         |
| 4         | BS EIRP                                    | [5] 4.3.2, [4] and [5] 11.4.1 | m      |         |
| 5         | TTG  | [5] 4.3.2, [4] and [5] 11.4.1 | m      |         |
| 6         | RTG  | [5] 4.3.2, [4] and [5] 11.4.1 | m      |         |
| 7         | EIRxP <sub>IR,max</sub>                    | 4.3.2, [4] and [5] 11.4.1     | m      |         |
| 8         | HO Type Support                            | 4.3.2, [4] and [5] 11.4.1     | m      |         |
| 9         | Paging Group ID                            | 4.3.2, [4] and [5] 11.4.1     | m      |         |
| 10        | Trigger, Compound TLV see next Trigger TLV | 4.3.2, [4] and [5] 11.4.1     | m      |         |
| 11        | BS Restart Count                           | 4.3.2, [4] and [5] 11.4.1     | m      |         |
| 12        | Default RSSI and CINR averaging parameter  | 4.3.2, [4] and [5] 11.4.1     | m      |         |
| 13        | DL AMC Allocated Physical Bands Bitmap     | 4.3.2, [4] and [5] 11.4.1     | m      |         |
| 14        | OFDMA Downlink_Burst_Profile               | [4] 8.4.5.5                   | m      |         |
| 15        | Hysteresis margin                          |                               | m      |         |
| 16        | Time to trigger duration                   |                               | m      |         |
| Comments: |  |                               |        |         |

Table A.287: OFDMA Downlink\_Burst\_Profile

| Item   | Capability      | Reference           | Status | Support |
|--|-----------------|---------------------|--------|---------|
| 1  | Type = 1        | [1] 8.4.5.5, 11.4.2 | m      |         |
| 2  | Length          | [1] 8.4.5.5, 11.4.2 | m      |         |
| 3  | Reserved (Note) | [1] 8.4.5.5, 11.4.2 | m      |         |
| 4  | DIUC            | [1] 8.4.5.5, 11.4.2 | m      |         |
| 5  | FEC Code Type   | [1] 11.4.2          | m      |         |
| Comments: Reserved bit shall be set to zero. |                 |                     |        |         |

Table A.288: Trigger TLV

| Item      | Capability                 | Reference         | Status | Support |
|-----------|----------------------------|-------------------|--------|---------|
| 1         | Type/Function/Action       | 4.3.2, [4] 11.4.1 | m      |         |
| 2         | Trigger Value              | 4.3.2, [4] 11.4.1 | m      |         |
| 3         | Trigger Averaging Duration | 4.3.2, [4] 11.4.1 | m      |         |
| Comments: |                            |                   |        |         |

Table A.289: Type/Function/Action Description

| Item      | Capability | Reference  | Status | Support |
|-----------|------------|------------|--------|---------|
| 1         | Type       | [1] 11.4.1 | m      |         |
| 2         | Function   | [1] 11.4.1 | m      |         |
| 3         | Action     | [1] 11.4.1 | m      |         |
| Comments: |            |            |        |         |

## A.7.1.3 UCD

Table A.290: PDU: UCD

| Item      | Capability                 | Reference     | Status | Support |
|-----------|----------------------------|---------------|--------|---------|
| 1         | Management Message type=0  | [4] 6.3.2.3.3 |        |         |
| 2         | Configuration Change count | [4] 6.3.2.3.3 |        |         |
| 3         | Ranging backoff start      | [4] 6.3.2.3.3 |        |         |
| 4         | Ranging backoff End        | [4] 6.3.2.3.3 |        |         |
| 5         | Request backoff start      | [4] 6.3.2.3.3 |        |         |
| 6         | Request backoff End        | [4] 6.3.2.3.3 |        |         |
| Comments: |                            |               |        |         |

Table A.291: UCD TLV

| Item      | Capability                             | Reference                 | Status | Support |
|-----------|--|---------------------------|--------|---------|
| 1         | Frequency                              | 4.3.2,[4] and [5] 11.3.1  | m      |         |
| 2         | Contention-based Reservation Timeout   | 4.3.2,[4] and [5] 11.3.1  | m      |         |
| 3         | Start of Ranging Codes Group           | 4.3.2,[ 4] and [5] 11.3.1 | m      |         |
| 4         | Band AMC Allocation Threshold          | 4.3.2,[4] and [5] 11.3.1  | m      |         |
| 5         | Band AMC Release Threshold             | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 6         | Band AMC Allocation Timer              | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 7         | Band AMC Release Timer                 | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 8         | Band Status Reporting Max Period       | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 9         | Band AMC Retry Timer                   | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 10        | Normalized C/N Override-2              | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 11        | Use CQICH Indication Flag              | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 12        | Handover Ranging Codes                 | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 13        | Initial Ranging Codes                  | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 14        | Initial Ranging interval               | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 15        | Tx Power Report                        | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 16        | Normalized C/N for Channel Sounding    | 4.3.2, [4] and [5] 11.3.1 | IO-BF  |         |
| 17        | Initial Ranging backoff start          | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 18        | Initial Ranging backoff end            | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 19        | Bandwidth request backoff start        | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 20        | Bandwidth request backoff end          | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 21        | Permutation Base                       | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 22        | UL allocated subchannels bitmap        | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 23        | HARQ Ack Delay for DL burst            | 4.3.2, [4] and 11.3.1     | m      |         |
| 24        | UL AMC allocated physical bands bitmap | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 25        | Size of CQICH-ID field                 | 4.3.2, [4] and [5]        | m      |         |
| 26        | Band-AMC entry average CINR            | 4.3.2, [4] and [5] 11.3.1 | m      |         |
| 27        | HO_ranging_start                       | [5] 11.3.1                | m      |         |
| 28        | HO_ranging_end                         | [5] 11.3.1                | m      |         |
| 29        | Periodic Ranging Codes                 | [1] 11.3.1                | m      |         |
| 30        | Bandwidth Request Codes                | [1] 11.3.1                | m      |         |
| 31        | Periodic Ranging Backoff Start         | [1] 11.3.1                | m      |         |
| 32        | Periodic Ranging Backoff End           | [1] 11.3.1                | m      |         |
| 33        | CQICH Band AMC Transition Delay        | [1] 11.3.1                | m      |         |
| 34        | OFDMA Uplink_Burst_Profile             | [4], [5] 8.4.5.5          | m      |         |
| Comments: |  |                           |        |         |



Table A.292: OFDMA Uplink\_ Burst\_Profile

| Item | Capability                        | Reference           | Status | Support |
|------|-----------------------------------|---------------------|--------|---------|
| 1    | Type = 1                          | [4] 8.4.5.5         | m      |         |
| 2    | Length                            | [4] 8.4.5.5         | m      |         |
| 3    | Reserved (See Note)               | [4] 8.4.5.5         | m      |         |
| 4    | UIUC                              | [4] 8.4.5.5         | m      |         |
| 5    | FEC Code Type and Modulation Type | 4.3.2, [4] 11.3.1.1 | m      |         |

Comments: Reserved bit shall be set to zero.

## A.7.1.4 UL-MAP

Table A.293: PDU: UL-MAP

| Item | Capability                | Reference             | Status | Support |
|------|---------------------------|-----------------------|--------|---------|
| 1    | Management Message type=3 | [4] and [5] 6.3.2.3.4 | m      |         |
| 2    | Reserved (Note)           | [4] and [5] 6.3.2.3.4 | m      |         |
| 3    | UCD count                 | [4] and [5] 6.3.2.3.4 | m      |         |
| 4    | Allocation start time     | [4] and [5] 6.3.2.3.4 | m      |         |

Comments:

Table A.294: UL-MAP Information Element(s)

| Item | Capability   | Reference   | Status | Support |
|------|--|-------------|--------|---------|
| 1    | CID  | [4] 8.4.5.4 | m      |         |
| 2    | UIUC   | [4] 8.4.5.4 | m      |         |
| 3    | Duration   | [4] 8.4.5.4 | m      |         |
| 4    | OFDMA Symbol Offset if UIUC = 12                                       | [4] 8.4.5.4 | m      |         |
| 5    | Subchannel offset if UIUC = 12   | [4] 8.4.5.4 | m      |         |
| 6    | No. of OFDMA symbols if UIUC = 12                                      | [4] 8.4.5.4 | m      |         |
| 7    | No. subchannels if UIUC = 12   | [4] 8.4.5.4 | m      |         |
| 8    | Ranging method if UIUC = 12  | [4] 8.4.5.4 | m      |         |
| 9    | BS Sending of UL-MAP IE (UIUC = 12) with dedicated ranging indicator   | [4] 8.4.5.4 | o      |         |
| 10   | MS Receiving of UL-MAP IE (UIUC = 12) with dedicated ranging indicator | [4] 8.4.5.4 | m      |         |
| 11   | Repetition coding indication   | [4] 8.4.5.4 | m      |         |
| 12   | Slot Offset if AAS or AMC UL Zone                                      | [4] 8.4.5.4 | m      |         |
| 13   | Padding nibble, if needed  | [4] 8.4.5.4 | m      |         |

Comments:

Table A.295: Extended UIUC dependent IE

| Item | Capability       | Reference       | Status | Support |
|------|------------------|-----------------|--------|---------|
| 1    | Extended UIUC    | [4] 8.4.5.4.4.1 | m      |         |
| 2    | Length           | [4] 8.4.5.4.4.1 | m      |         |
| 3    | Unspecified data | [4] 8.4.5.4.4.1 | m      |         |

Comments:

Table A.296: Extended-2 UIUC dependent IE

| Item | Capability       | Reference       | Status | Support |
|------|------------------|-----------------|--------|---------|
| 1    | Extended-2 UIUC  | [4] 8.4.5.4.4.2 | m      |         |
| 2    | Length           | [4] 8.4.5.4.4.2 | m      |         |
| 3    | Unspecified data | [4] 8.4.5.4.4.2 | m      |         |

Comments:

**Table A.297: PAPR reduction, safety zone and sounding zone IE**

| Item | Capability                 | Reference     | Status            | Support |
|------|----------------------------|---------------|-------------------|---------|
| 1    | OFDMA symbol offset        | [4] 8.4.5.4.2 | IO-BF<br>M for MS |         |
| 2    | Subchannel offset          | [4] 8.4.5.4.2 | IO-BF<br>M for MS |         |
| 3    | No. OFDMA symbols          | [4] 8.4.5.4.2 | IO-BF<br>M for MS |         |
| 4    | No. subchannels            | [4] 8.4.5.4.2 | IO-BF<br>M for MS |         |
| 5    | PAPR Reduction/Safety zone | [4] 8.4.5.4.2 | IO-BF<br>M for MS |         |
| 6    | Reserved                   | [4] 8.4.5.4.2 | IO-BF<br>M for MS |         |
| 7    | Sounding Zone              | [4] 8.4.5.4.2 | IO-BF<br>M for MS |         |

Comments:

**Table A.298: CDMA Allocation IE**

| Item | Capability                   | Reference     | Status | Support |
|------|------------------------------|---------------|--------|---------|
| 1    | Duration                     | [4] 8.4.5.4.3 | m      |         |
| 2    | UIUC                         | [4] 8.4.5.4.3 | m      |         |
| 3    | Repetition Coding Indication | [4] 8.4.5.4.3 | m      |         |
| 4    | Frame Number Index           | [4] 8.4.5.4.3 | m      |         |
| 5    | Ranging Code                 | [4] 8.4.5.4.3 | m      |         |
| 6    | Ranging Symbol               | [4] 8.4.5.4.3 | m      |         |
| 7    | Ranging subchannel           | [4] 8.4.5.4.3 | m      |         |
| 8    | BW request mandatory         | [4] 8.4.5.4.3 | m      |         |

Comments:

**Table A.299: Fast Feedback alloc IE**

| Item | Capability          | Reference     | Status | Support |
|------|---------------------|---------------|--------|---------|
| 1    | OFDMA symbol offset | [4] 8.4.5.4.9 | m      |         |
| 2    | Subchannel offset   | [4] 8.4.5.4.9 | m      |         |
| 3    | No. OFDMA symbols   | [4] 8.4.5.4.9 | m      |         |
| 4    | No subchannels      | [4] 8.4.5.4.9 | m      |         |
| 5    | reserved            | [4] 8.4.5.4.9 | m      |         |

Comments:

### A.7.1.5 RNG-REQ and RNG-RSP

**Table A.300: PDU: RNG-REQ**

| Item | Capability                | Reference             | Status | Support |
|------|---------------------------|-----------------------|--------|---------|
| 1    | Management Message type=4 | [4] and [5] 6.3.2.3.5 | m      |         |
| 2    | Reserved (Note)           | [4] and [5] 6.3.2.3.5 | m      |         |

Comments:

Table A.301: RNG-REQ TLV

| Item      | Capability                                 | Reference           | Status | Support |
|-----------|--|---------------------|--------|---------|
| 1         | Requested Downlink Burst profile           | [4] 6.3.2.3.5, 11.5 | m      |         |
| 2         | SS MAC address                             | [4] 6.3.2.3.5, 11.5 | m      |         |
| 3         | MAC version                                | [4] 6.3.2.3.5, 11.5 | m      |         |
| 4         | Serving BS ID                              | [5] 11.5            | m      |         |
| 5         | HO ID                                      | [5] 11.5            | m      |         |
| 6         | Paging Controller ID                       | [5] 11.5            | m      |         |
| 7         | Power_Down_Indicator                       | [5] 11.5            | m      |         |
| 8         | Enabled_Action-Triggered                   | [5] 11.5            | o      |         |
| 9         | Requested downlink repetition coding level | [5] 11.5            | m      |         |
| 10        | Ranging Purpose Indication                 | [5] 11.5            | m      |         |
| 11        | CMAC Tuple                                 |                     | m      |         |
| Comments: |  |                     |        |         |

Table A.302: PDU : RNG-RSP

| Item      | Capability                | Reference             | Status | Support |
|-----------|---------------------------|-----------------------|--------|---------|
| 1         | Management Message type=5 | [4] and [5] 6.3.2.3.6 | m      |         |
| 2         | Reserved (Note            | [4] and [5] 6.3.2.3.6 | m      |         |
| Comments: |                           |                       |        |         |

Table A.303: RNG-RSP TLV

| Item      | Capability                | Reference           | Status | Support |
|-----------|---------------------------|---------------------|--------|---------|
| 1         | Timing Adjust Information | [4] 6.3.2.3.6, 11.6 | m      |         |
| 2         | Power Adjust Information  | [4] 6.3.2.3.6, 11.6 | m      |         |
| 3         | Ranging Status            | [4] 6.3.2.3.6, 11.6 | m      |         |
| 4         | DL Frequency Override     | [4] 6.3.2.3.6, 11.6 | m      |         |
| 5         | Basic CID                 | [4] 6.3.2.3.6, 11.6 | m      |         |
| 6         | Primary Management CID    | [4] 6.3.2.3.6, 11.6 | m      |         |
| 7         | SS MAC Address            | [4] 6.3.2.3.6, 11.6 | m      |         |
| 8         | Ranging code attributes   |                     | m      |         |
| 9         | CID_update                | [5] 11.6            | m      |         |
| 10        | SAID update               | [5] 11.6            | m      |         |
| 11        | Offset Frequency_Adjust   | [5] 11.6            | m      |         |
| 12        | Global_Service_Name       | [5] 11.6            | o      |         |
| 13        | QoS_Parameters            | [5] 11.6            | o      |         |
| 14        | SFID                      | [5] 11.6            | o      |         |
| 15        | Resource_Retain_Flag      | [5] 11.6            | o      |         |
| 16        | HO_Process_Optimization   | [5] 11.6            | m      |         |
| 17        | HO_ID                     | [5] 11.6            | m      |         |
| 18        | SBC-RSP_encoding          | [5] 11.6            | m      |         |
| 19        | REG-RSP encoding          | [5] 11.6            | m      |         |
| 20        | Location Update_Reponse   | [5] 11.6            | m      |         |
| 21        | Paging Information        | [5] 11.6            | m      |         |
| 22        | Paging_Contrller_ID       | [5] 11.6            | m      |         |
| 23        | Next_Periodic_Ranging     | [5] 11.6            | m      |         |
| 24        | Enabled-Action_Triggered  | [5] 11.6            | o      |         |
| 25        | SA TEK Update             |                     | o      |         |
| 26        | CMAC Tuple                |                     | m      |         |
| Comments: |                           |                     |        |         |

## A.7.1.6 SBC-REQ and SBC-RSP

Table A.304: PDU: SBC-REQ

| Item | Capability                 | Reference  | Status | Support |
|------|----------------------------|------------|--------|---------|
| 1    | Management Message type=26 | 6.3.2.3.23 | m      |         |

Comments:

Table A.305: SBC-REQ TLV

| Item | Capability   | Reference        | Status | Support |
|------|--|------------------|--------|---------|
| 1    | Physical Parameters supported (see table A.170)            | 11.8.1           | m      |         |
| 2    | Capabilities for Construction and Transmission of MAC PDUs | 11.8.2           | m      |         |
| 3    | PKM Flow control   | 11.7.8.6, 11.8.4 | m      |         |
| 4    | Authorization Policy Support                               | 11.7.8.7, 11.8.5 | m      |         |
| 5    | Maximum number of supported security association           | 11.7.8.8, 11.8.6 | m      |         |
| 7    | Security negotiation parameters                            | 11.8.4           | m      |         |
| 8    | Power save class type capability                           | 11.8.5           | m      |         |
| 9    | Extension capability                                       | 11.8.6           | m      |         |
| 10   | HO trigger metric support                                  | 11.8.7           | m      |         |
| 12   | CMAC Tuple   | 11.1.2           | m      |         |

Comments: Item 2 Bandwidth allocation support: this does not apply to TDD systems.

Table A.306: Physical Parameters Supported fields for SBC-REQ

| Item | Capability   | Reference        | Status | Support |
|------|--|------------------|--------|---------|
| 1    | Subscriber transition gap                            | 11.8.3.1         | m      |         |
| 2    | Maximum transmit power                               | 11.8.3.2         | m      |         |
| 3    | Current transmit power                               | 11.1.1, 11.8.3.3 | m      |         |
| 4    | OFDMA MS FFT sizes                                   | 11.8.3.7.1       | m      |         |
| 5    | OFDMA SS demodulator                                 | 11.8.3.7.2       | m      |         |
| 6    | OFDMA SS modulator                                   | 11.8.3.7.3       | m      |         |
| 7    | The number of UL HARQ channel                        | 11.8.3.7.3       | m      |         |
| 8    | OFDMA SS permutation support                         | 11.8.3.7.4       | m      |         |
| 9    | OFDMA SS MIMO uplink support                         | 11.8.3.7.6       | m      |         |
| 10   | OFDMA SS CINR measurement capability                 | 11.8.3.7.9       | m      |         |
| 11   | The number of DL HARQ channel                        | 11.8.3.7.2       | m      |         |
| 12   | HARQ Chase combining and CC-IR buffer capability     | 11.8.3.7.19.2    | m      |         |
| 13   | OFDMA SS uplink power control support                | 11.8.3.7.11      | m      |         |
| 14   | OFDMA MAP capability                                 | 11.8.3.7.12      | m      |         |
| 15   | Uplink control channel support                       | 11.8.3.7.13      | m      |         |
| 16   | OFDMA MS CSIT capability                             | 11.8.3.7.14      | m      |         |
| 17   | Maximum number of burst per frame capability in HARQ | 11.8.3.7.15      | m      |         |
| 18   | OFDMA SS demodulator for MIMO support                | 11.8.3.7.5       | m      |         |
| 19   | OFDMA SS modulator for MIMO support                  | 11.8.3.7.16      | m      |         |

Comments: With regards to item 3, MS may ignore power updates between RNG-RSP and this message.

Table A.307: PDU: SBC-RSP

| Item | Capability                 | Reference  | Status | Support |
|------|----------------------------|------------|--------|---------|
| 1    | Management Message type=27 | 6.3.2.3.24 | m      |         |

Comments:

Table A.308: SBC-RSP TLV

| Item | Capability   | Reference        | Status | Support |
|------|--|------------------|--------|---------|
| 1    | Capabilities for Construction and Transmission of MAC PDUs | 11.8.2           | m      |         |
| 2    | PKM Flow control   | 11.7.8.6, 11.8.4 | m      |         |
| 3    | Authorization Policy Support                               | 11.7.8.7, 11.8.5 | m      |         |
| 4    | Maximum number of supported security association           | 11.7.8.8, 11.8.6 | m      |         |
| 5    | Security negotiation parameters                            | 11.8.4           | m      |         |
| 6    | Power save class type capability                           | 11.8.5           | m      |         |
| 7    | Extension capability                                       | 11.8.6           | m      |         |
| 8    | HO trigger metric support                                  | 11.8.7           | m      |         |
| 9    | CMAC Tuple   | 11.1.2           | m      |         |

Comments: Item 2 Bandwidth allocation support: this does not apply to TDD systems.

Table A.309: Physical Parameters Supported fields for SBC-RSP

| Item | Capability   | Reference     | Status  | Support |
|------|--|---------------|---------|---------|
| 1    | Subscriber transition gap                            | 11.8.3        | m       |         |
| 2    | OFDMA MS FFT sizes                                   | 11.8.3.7.1    | m       |         |
| 3    | OFDMA SS demodulator                                 | 11.8.3.7.2    | m       |         |
| 4    | OFDMA SS modulator                                   | 11.8.3.7.3    | m       |         |
| 5    | The number of UL HARQ channel                        | 11.8.3.7.3    | m       |         |
| 6    | OFDMA SS permutation support                         | 11.8.3.7.4    | m       |         |
| 7    | OFDMA SS MIMO uplink support                         | 11.8.3.7.6    | IO-MIMO |         |
| 8    | OFDMA SS CINR measurement capability                 | 11.8.3.7.9    | m       |         |
| 9    | The number of DL HARQ channel                        | 11.8.3.7.2    | m       |         |
| 10   | HARQ Chase combining and CC-IR buffer capability     | 11.8.3.7.19.2 | m       |         |
| 11   | OFDMA SS uplink power control support                | 11.8.3.7.11   | m       |         |
| 12   | OFDMA MAP capability                                 | 11.8.3.7.12   | m       |         |
| 13   | Uplink control channel support                       | 11.8.3.7.13   | m       |         |
| 14   | OFDMA MS CSIT capability                             | 11.8.3.7.14   | IO-BF   |         |
| 15   | Maximum number of burst per frame capability in HARQ | 11.8.3.7.15   | m       |         |
| 16   | OFDMA SS demodulator for MIMO support                | 11.8.3.7.5    | IO-MIMO |         |
| 17   | OFDMA SS modulator for MIMO support                  | 11.8.3.7.16   | IO-MIMO |         |

Comments:

### A.7.1.7 ARQ messages

Table A.310: PDU: ARQ feedback message

| Item | Capability                 | Reference      | Status | Support |
|------|----------------------------|----------------|--------|---------|
| 1    | Management Message type=33 | [4] 6.3.2.3.30 | m      |         |

Comments:

Table A.311: ARQ Feedback Information Elements

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

Comments:

Table A.312: PDU: ARQ Discard message

| Item      | Capability                    | Reference      | Status | Support |
|-----------|-------------------------------|----------------|--------|---------|
| 1         | Management Message type=34    | [4] 6.3.2.3.31 | m      |         |
| 2         | Connection ID                 | [4] 6.3.2.3.31 | m      |         |
| 3         | Fragmentation Sequence Number | [4] 6.3.2.3.31 | m      |         |
| Comments: |                               |                |        |         |

Table A.313: PDU: ARQ Reset message

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=35 | [4] 6.3.2.3.32 | m      |         |
| 2         | Connection ID              | [4] 6.3.2.3.32 | m      |         |
| 3         | Type                       | [4] 6.3.2.3.32 | m      |         |
| 4         | Direction                  | [1] 6.3.2.3.32 | m      |         |
| 5         | Reserved                   | [1] 6.3.2.3.32 | m      |         |
| Comments: |                            |                |        |         |

### A.7.1.8 RES-CMD

Table A.314: PDU: RES-CMD

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=25 | [4] 6.3.2.3.22 | o      |         |
| Comments: |                            |                |        |         |

Table A.315: RES-CMD TLV

| Item      | Capability | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | CMAC Tuple | [4] 6.3.2.3.22 | o      |         |
| Comments: |            |                |        |         |

### A.7.1.9 CLK-CMP

Table A.316: PDU: CLK-CMP

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=28 | [4] 6.3.2.3.25 | o      |         |
| 2         | Clock count                | [4] 6.3.2.3.25 | o      |         |
| 3         | Clock Id                   | [4] 6.3.2.3.25 | o      |         |
| 4         | Sequence number            | [4] 6.3.2.3.25 | o      |         |
| 5         | Clock comparison value     | [4] 6.3.2.3.25 | o      |         |
| Comments: |                            |                |        |         |

### A.7.1.10 DREG-REQ and DREG-CMD

Table A.317: PDU: DREG-REQ

| Item      | Capability                   | Reference      | Status | Support |
|-----------|------------------------------|----------------|--------|---------|
| 1         | Management Message type=49   | [4] 6.3.2.3.42 | m      |         |
| 2         | De-registration request code | [4] 6.3.2.3.42 | m      |         |
| Comments: |                              |                |        |         |

Table A.318: DREG-REQ TLV

| Item      | Capability                   | Reference      | Status | Support |
|-----------|------------------------------|----------------|--------|---------|
| 1         | CMAC Tuple                   | [4] 6.3.2.3.42 | m      |         |
| 2         | Paging Cycle Request         | [4] 6.3.2.3.42 | m      |         |
| 3         | Idle Mode Retain Information | [4] 6.3.2.3.42 | m      |         |
| Comments: |                              |                |        |         |

Table A.319: PDU: DREG-CMD

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=29 | [4] 6.3.2.3.26 | m      |         |
| 2         | action code                | [4] 6.3.2.3.26 | m      |         |
| Comments: |                            |                |        |         |

Table A.320: DREG-CMD TLV

| Item      | Capability                   | Reference      | Status | Support |
|-----------|------------------------------|----------------|--------|---------|
| 1         | CMAC Tuple                   | [4] 6.3.2.3.26 | m      |         |
| 2         | Paging Information           | [4] 6.3.2.3.26 | m      |         |
| 3         | Paging Controller ID         | [4] 6.3.2.3.26 | m      |         |
| 4         | Idle Mode Retain Information | [4] 6.3.2.3.26 | m      |         |
| 5         | REQ-Duration                 | [4] 6.3.2.3.26 | m      |         |
| Comments: |                              |                |        |         |

### A.7.1.11 DSX-RVD

Table A.321: PDU: DSX-RVD

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=30 | [4] 6.3.2.3.27 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.27 | m      |         |
| 3         | Confirmation Code          | [4] 6.3.2.3.27 | m      |         |
| Comments: |                            |                |        |         |

### A.7.1.12 REP-REQ and REP-RSP

Table A.322: PDU: REP-REQ

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=36 | [4] 6.3.2.3.33 | m      |         |
| Comments: |                            |                |        |         |

Table A.323: REP-REQ TLV for report request

| Item      | Capability                           | Reference | Status | Support |
|-----------|--------------------------------------|-----------|--------|---------|
| 1         | Report type                          | [4] 11.11 | m      |         |
| 2         | Channel Type request                 | 11.11     | m      |         |
| 3         | Zone-specific physical CINR request  | 11.11     | m      |         |
| 4         | Preamble physical CINR request       | 11.11     | m      |         |
| 5         | Zone-specific effective CINR request | 11.11     | m      |         |
| Comments: |                                      |           |        |         |

Table A.324: PDU: REP-RSP

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=37 | [4] 6.3.2.3.33 | m      |         |
| Comments: |                            |                |        |         |

Table A.325: REP-RSP TLV for report

| Item      | Capability   | Reference   | Status | Support |
|-----------|--|-------------|--------|---------|
| 1         | CINR report  | [4] 11.12   | m      |         |
| 2         | RSSI report  | [4] 11.12   | m      |         |
| 3         | Normal sub-channel Report (CQI value)  | 11.12       | m      |         |
| 4         | Enhanced Band AMC Report   | 11.12       | m      |         |
| 5         | physical CINR measured on PUSC zone with 'use all SC=0'                                    | 11.12       | m      |         |
| 6         | physical CINR measured on PUSC zone with 'use all SC=1'                                    | 11.12       | m      |         |
| 7         | physical CINR measured on FUSC zone  | 11.12       | m      |         |
| 8         | physical CINR measured on AMC zone   | 11.12       | m      |         |
| 9         | The estimation of physical CINR measured from preamble for frequency reuse configuration=1 | 11.12       | m      |         |
| 10        | The estimation of physical CINR measured from preamble for frequency reuse configuration=3 | 11.12       | m      |         |
| 11        | effective CINR measured on PUSC zone with 'use all SC=0'                                   | 11.12       | m      |         |
| 12        | effective CINR measured on PUSC zone with 'use all SC=1' / PUSC AAS zone                   | 11.12       | m      |         |
| 13        | effective CINR measured on FUSC zone   | 11.12       | m      |         |
| 14        | effective CINR measured on AMC AAS zone  | 11.12, [7]. | m      |         |
| Comments: |  |             |        |         |

## A.7.1.13 FPC

Table A.326: PDU: FPC

| Item   | Capability                 | Reference      | Status    | Support |
|--|----------------------------|----------------|-----------|---------|
| 1  | Management Message type=38 | [4] 6.3.2.3.34 | BS:o MS:m |         |
| 2  | Number of stations         | [4] 6.3.2.3.34 | BS:o MS:m |         |
| 3  | Basic CID                  | [4] 6.3.2.3.34 | BS:o MS:m |         |
| 4  | Power adjust               | [4] 6.3.2.3.34 | BS:o MS:m |         |
| Comments: set of Basic CID and Power adjust values for each station defined. |                            |                |           |         |

## A.7.1.14 REG-REQ and REG-RSP

Table A.327: PDU: Registration Request (REG-REQ)

| Item      | Capability                | Reference | Status | Support |
|-----------|---------------------------|-----------|--------|---------|
| 1         | Management Message type=6 | 6.3.2.3.7 | m      |         |
| Comments: |                           |           |        |         |



Table A.328: PDU: REG-REQ TLV

| Item | Capability  | Reference    | Status | Support |
|------|---|--------------|--------|---------|
| 1    | Vendor ID Encoding  | [4] 11.1.5   | o      |         |
| 2    | Vendor specific information                                 | [4] 11.1.6   | o      |         |
| 3    | Number of UL transport CIDs supported                       | [5] 11.7.6.1 | m      |         |
| 4    | Number of DL transport CIDs supported                       | [5] 11.7.6.2 | m      |         |
| 5    | CMAC Tuple  | 11.1.2       | m      |         |
| 6    | Classification, PHS options, SDU encapsulation support      | 11.7.7.1     | m      |         |
| 7    | Maximum number of classifiers                               | 11.7.7.2     | m      |         |
| 8    | PHS support   | 11.7.7.3     | m      |         |
| 9    | ARQ support   | 11.7.8.1     | m      |         |
| 10   | DSx flow control  | 11.7.8.2     | m      |         |
| 11   | Maximum MAC data per frame support                          | 11.7.8.10    | m      |         |
| 12   | Packing support   | 11.7.8.11    | m      |         |
| 13   | MAC extended rtPS support                                   | 11.7.8.12    | m      |         |
| 14   | Maximum number of bursts transmitted concurrently to the MS | 11.7.8.13    | m      |         |
| 15   | Handover supported  | 11.7.12      | m      |         |
| 16   | HO process optimization MS timer                            | 11.7.13.2    | m      |         |
| 17   | Mobility feature supported                                  | 11.7.14.1    | m      |         |
| 18   | Sleep-mode recovery time                                    | 11.7.15      | m      |         |
| 19   | Idle mode timeout   | 11.7.20.1    | m      |         |
| 20   | ARQ-ACK type  | 11.7.23      | m      |         |
| 21   | MS HO connections parameters processing time                | 11.7.24      | m      |         |
| 22   | MS HO TEK processing time                                   | 11.7.24      | m      |         |
| 23   | MAC header and subheader support                            | 11.7.25      | m      |         |

Comments: Item 8 Classification, PHS options, SDU encapsulation support: Length field has the value of 2. The value for TLV of item 5 shall be set to "0".

Table A.329: PDU: Registration Response (REG-RSP)

| Item | Capability                | Reference | Status | Support |
|------|---------------------------|-----------|--------|---------|
| 1    | Management Message type=7 | 6.3.2.3.8 | m      |         |
| 2    | Response                  | 6.3.2.3.8 | m      |         |

Comments:

Table A.330: PDU: REG-RSP TLV

| Item   | Capability  | Reference         | Status | Support |
|--|---|-------------------|--------|---------|
| 1  | IP version  | 11.7.4            | m      |         |
| 2  | Vendor ID Encoding  | 11.1.5            | o      |         |
| 3  | Vendor-specific information                                 | 11.1.6            | o      |         |
| 4  | SS management support                                       | 6.3.2.3.8, 11.7.2 | m      |         |
| 5  | Uplink transport CIDs supported                             | 11.7.6.1          | m      |         |
| 6  | Downlink transport CIDs supported                           | 11.7.6.2          | m      |         |
| 7  | CMAC Tuple  | 11.1.2            | m      |         |
| 8  | Classification, PHS options, SDU encapsulation support      | 11.7.7.1          | m      |         |
| 9  | Maximum number of classifiers                               | 11.7.7.2          | m      |         |
| 10   | PHS support   | 11.7.7.3          | m      |         |
| 11   | ARQ support   | 11.7.8.1          | m      |         |
| 12   | DSx flow control  | 11.7.8.2          | m      |         |
| 13   | Maximum MAC data per frame support                          | 11.7.8.10         | m      |         |
| 14   | Packing support   | 11.7.8.11         | m      |         |
| 15   | MAC extended rtPS support                                   | 11.7.8.12         | m      |         |
| 16   | Maximum number of bursts transmitted concurrently to the MS | 11.7.8.13         | m      |         |
| 17   | Handover supported  | 11.7.12           | m      |         |
| 18   | HO process optimization MS timer                            | 11.7.13.2         | m      |         |
| 19   | Mobility feature supported                                  | 11.7.14.1         | m      |         |
| 20   | Idle mode timeout   | 11.7.20.1         | m      |         |
| 21   | ARQ-ACK type  | 11.7.23           | m      |         |
| 22   | MS HO connections parameters processing time                | 11.7.24           | m      |         |
| 23   | MS HO TEK processing time                                   | 11.7.24           | m      |         |
| 24   | MAC header and subheader support                            | 11.7.25           | m      |         |
| 25   | CID update encodings  | 11.7.10           | m      |         |
| 26   | Compressed CID update encodings                             | 11.7.10.1         | m      |         |
| 27   | System resource retain timer                                | 11.7.13.1         | m      |         |
| 28   | MS handover retransmission timer                            | 11.7.13.3         | m      |         |
| 29   | Total number of provisional service flow                    | 11.7.19           | m      |         |
| 30   | SA TEK update   | 11.7.21           | m      |         |
| Comments: Item 9 Classification, PHS options, SDU encapsulation support: Length field has the value of 2. The value for TLV of item 4 shall be set to "0". |   |                   |        |         |

### A.7.1.15 PKM-REQ and PKM-RSP Messages

Table A.331: PDU: PKM Request (PKM-REQ)

| Item      | Capability                | Reference     | Status | Support |
|-----------|---------------------------|---------------|--------|---------|
| 1         | Management Message type=9 | [4] 6.3.2.3.9 | m      |         |
| 2         | Code                      | [4] 6.3.2.3.9 | m      |         |
| 3         | PKM Identifier            | [4] 6.3.2.3.9 | m      |         |
| Comments: |                           |               |        |         |

Table A.332: PDU: PKM Reply (PKM-RSP)

| Item      | Capability                 | Reference     | Status | Support |
|-----------|----------------------------|---------------|--------|---------|
| 1         | Management Message type=10 | [4] 6.3.2.3.9 | m      |         |
| 2         | Code                       | [4] 6.3.2.3.9 | m      |         |
| 3         | PKM Identifier             | [4] 6.3.2.3.9 | m      |         |
| Comments: |                            |               |        |         |

**Table A.333: PKMv2 SA\_TEK\_Challenge TLV support**

| Item      | Capability          | Reference | Status | Support |
|-----------|---------------------|-----------|--------|---------|
| 1         | BS_random           | 11.9.22   | m      |         |
| 2         | Key sequence number | 11.9.5    | m      |         |
| 3         | AKID                | 11.9.32   | m      |         |
| 4         | Key lifetime        | 11.9.4    | m      |         |
| 5         | CMAC Digest         | 11.9.27   | m      |         |
| Comments: |                     |           |        |         |

**Table A.334: PKMv2 SA\_TEK\_Request TLV support**

| Item      | Capability                      | Reference | Status | Support |
|-----------|---------------------------------|-----------|--------|---------|
| 1         | MS_random                       | 11.9.21   | m      |         |
| 2         | BS_random                       | 11.9.22   | m      |         |
| 3         | Key sequence number             | 11.9.5    | m      |         |
| 4         | AKID                            | 11.9.32   | m      |         |
| 5         | Security capabilities           | 11.9.13   | m      |         |
| 6         | Security negotiation parameters | 11.8.4    | m      |         |
| 7         | CMAC Digest                     | 11.9.27   | m      |         |
| Comments: |                                 |           |        |         |

**Table A.335: PKMv2 SA\_TEK\_Response TLV support**

| Item      | Capability                      | Reference | Status | Support |
|-----------|---------------------------------|-----------|--------|---------|
| 1         | MS_random                       | 11.9.21   | m      |         |
| 2         | BS_random                       | 11.9.22   | m      |         |
| 3         | Key sequence number             | 11.9.5    | m      |         |
| 4         | AKID                            | 11.9.32   | m      |         |
| 5         | (one or more) SA_TEK_Update     | 11.7.21   | m      |         |
| 6         | Frame Number                    | 11.9.37   | m      |         |
| 7         | (one or more) SA descriptor(s)  | 11.9.17   | m      |         |
| 8         | Security negotiation parameters | 11.8.4    | m      |         |
| 9         | PKMv2 configuration settings    | 11.9.36   | m      |         |
| 10        | CMAC Digest                     | 11.9.27   | m      |         |
| Comments: |                                 |           |        |         |

**Table A.336: PKMv2 EAP\_Start TLV support**

| Item      | Capability          | Reference | Status | Support |
|-----------|---------------------|-----------|--------|---------|
| 1         | Key sequence number | 11.9.5    | m      |         |
| 2         | CMAC Digest         | 11.9.27   | m      |         |
| Comments: |                     |           |        |         |

**Table A.337: PKMv2 EAP\_Transfer TLV support**

| Item      | Capability          | Reference | Status | Support |
|-----------|---------------------|-----------|--------|---------|
| 1         | EAP payload         | 11.9.33   | m      |         |
| 2         | Key sequence number | 11.9.5    | m      |         |
| 3         | CMAC Digest         | 11.9.27   | m      |         |
| Comments: |                     |           |        |         |

Table A.338: PKMv2 Key-Request TLV

| Item      | Capability          | Reference | Status | Support |
|-----------|---------------------|-----------|--------|---------|
| 1         | Key Sequence Number | 11.9.5    | m      |         |
| 2         | SAID                | 11.9.7    | m      |         |
| 3         | Nonce               | 11.9.20   | m      |         |
| 4         | CMAC Digest         | 11.9.27   | m      |         |
| Comments: |                     |           |        |         |

Table A.339: PKMv2 Key-Reply

| Item      | Capability              | Reference | Status | Support |
|-----------|-------------------------|-----------|--------|---------|
| 1         | Key Sequence Number     | 11.9.5    | m      |         |
| 2         | SAID                    | 11.9.7    | m      |         |
| 3         | TEK-Parameters (older)  | 11.9.8    | m      |         |
| 4         | TEK-Parameters (newer)  | 11.9.8    | m      |         |
| 5         | GKEK-Parameters (older) | 11.9.28   | o      |         |
| 6         | GKEK-Parameters (newer) | 11.9.28   | o      |         |
| 7         | Nonce                   | 11.9.20   | m      |         |
| 8         | CMAC Digest             | 11.9.27   | m      |         |
| Comments: |                         |           |        |         |

Table A.340: PKMv2 Key-Reject TLV

| Item      | Capability          | Reference | Status | Support |
|-----------|---------------------|-----------|--------|---------|
| 1         | Key Sequence Number | 11.9.5    | m      |         |
| 2         | SAID                | 11.9.7    | m      |         |
| 3         | Error-code          | 11.9.10   | m      |         |
| 4         | Display-String      | 11.9.1    | o      |         |
| 5         | Nonce               | 11.9.20   | m      |         |
| 6         | CMAC Digest         | 11.9.27   | m      |         |
| Comments: |                     |           |        |         |

Table A.341: PKMv2 SA-Addition

| Item      | Capability          | Reference | Status | Support |
|-----------|---------------------|-----------|--------|---------|
| 1         | Key Sequence Number | 11.9.5    | m      |         |
| 2         | SA-Descriptor       | 11.9.17   | m      |         |
| 3         | CMAC Digest         | 11.9.27   | m      |         |
| Comments: |                     |           |        |         |

Table A.342: PKMv2 TEK-Invalid

| Item      | Capability          | Reference | Status | Support |
|-----------|---------------------|-----------|--------|---------|
| 1         | Key Sequence Number | 11.9.5    | m      |         |
| 2         | Error-code          | 11.9.10   | m      |         |
| 3         | Display-String      | 11.9.1    | o      |         |
| 4         | CMAC Digest         | 11.9.27   | m      |         |
| Comments: |                     |           |        |         |

### A.7.1.16 DSA-REQ, DSA-RSP and DSA-ACK messages

Table A.343: PDU: DSA-REQ

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=11 | [4] 6.3.2.3.10 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.10 | m      |         |
| Comments: |                            |                |        |         |

Table A.344: DSA-REQ parameters

| Item | Capability   | Reference           | Status                              | Support |
|------|--|---------------------|-------------------------------------|---------|
| 1    | CMAC Tuple   | [4] 6.3.2.3.10      | m                                   |         |
| 2    | Service flow identifier - SFID transmitted from BS side, received at MS side | [4] 11.13.1         | m                                   |         |
| 3    | CID transmitted from BS side, received at MS side                            | [4] 11.13.2         | m                                   |         |
| 4    | Service class name   | [4] 11.13.3         | o                                   |         |
| 5    | QOS parameter set type   | [4] 11.13.4         | m                                   |         |
| 6    | Traffic priority   | [4] 11.13.5         | m                                   |         |
| 7    | Maximum sustained traffic rate   | [4] 11.13.6         | m                                   |         |
| 8    | Minimum reserved traffic rate  | [4] 11.13.8         | m                                   |         |
| 9    | Vendor specific QOS parameters   | [4] 11.13.10        | o                                   |         |
| 10   | Service flow scheduling type   | [4] 11.13.11        | m                                   |         |
| 11   | Request/transmission policy  | [4] 11.13.12        | m                                   |         |
| 12   | Tolerated jitter   | [4] 11.13.13        | m                                   |         |
| 13   | Maximum latency  | [4] 11.13.14        | m                                   |         |
| 14   | Fixed length versus variable length SDU indicator                            | [4] 11.13.15        | m                                   |         |
| 15   | SDU size   | [4] 11.13.16        | o                                   |         |
| 16   | Target SAID  | [4] 11.13.17        | o                                   |         |
| 17   | ARQ enable   | [4] 11.13.18.1      | m                                   |         |
| 18   | ARQ_WINDOW_SIZE  | [4] 11.13.18.2      | m                                   |         |
| 19   | ARQ_RETRY_TIMEOUT- Transmitter Delay   | [4] 11.13.18.3      | m                                   |         |
| 20   | ARQ_RETRY_TIMEOUT- Receiver Delay  | [4] 11.13.18.3      | m                                   |         |
| 21   | ARQ_BLOCK_LIFETIME   | [4] 11.13.18.4      | m                                   |         |
| 22   | ARQ_SYNC_LOSS_TIMEOUT  | [4] 11.13.18.5      | m                                   |         |
| 23   | ARQ_DELIVER_IN_ORDER   | [4] 11.13.18.6      | m                                   |         |
| 24   | ARQ_RX_PURGE_TIMEOUT   | [4] 11.13.18.7      | m                                   |         |
| 25   | ARQ_BLOCK_SIZE   | [4] 11.13.18.8      | m                                   |         |
| 26   | RECEIVER_ARQ_ACK_PROCESSING_TIME   | 11.13.18.9          | o                                   |         |
| 27   | Unsolicited Grant Interval   | [4] 11.13.20        | m                                   |         |
| 28   | Unsolicited Polling Interval   | [4] 11.13.21        | m                                   |         |
| 29   | FSN size   | 11.13.22            | o                                   |         |
| 30   | MBS Service  | 11.13.23            | m                                   |         |
| 31   | Global Service Class Name  | 11.13.24            | m                                   |         |
| 32   | Type of Data Delivery Services   | 11.13.25            | m                                   |         |
| 33   | Time Base  | 11.13.27            | m                                   |         |
| 34   | Traffic Indication Preference  | 11.13.28            | m                                   |         |
| 35   | MBS zone identifier assignment   | 11.13.29            | IO-MBS                              |         |
| 36   | Paging preference  | 11.13.30            | m                                   |         |
| 37   | SN Feedback Enabled  | 11.13.31            | m                                   |         |
| 38   | HARQ Service Flows   | 11.13.32            | m                                   |         |
| 39   | Authorization Token  | 11.13.34            | o                                   |         |
| 40   | HARQ Channel mapping   | 11.13.35            | m                                   |         |
| 41   | PDU SN extended subheader for HARQ reordering (TLV)                          | 11.13.36            | m                                   |         |
| 42   | CS specification   | [4] 11.13.19.1      | m                                   |         |
| 43   | Packet Classification Rule   | [4] 11.13.19.3.4    | m                                   |         |
| 44   | Classifier Rule Priority   | [4] 11.13.19.3.4.1  | m                                   |         |
| 45   | IP Type of Service/DSCP  | [4] 11.13.19.3.4.2  | m                                   |         |
| 46   | Protocol   | [4] 11.13.19.3.4.3  | m                                   |         |
| 47   | IP Masked Source Address   | [4] 11.13.19.3.4.4  | m                                   |         |
| 48   | IP Masked Destination Address  | [4] 11.13.19.3.4.5  | m                                   |         |
| 49   | Protocol Source Port Range   | [4] 11.13.19.3.4.6  | m                                   |         |
| 50   | Protocol destination Port Range  | [4] 11.13.19.3.4.7  | m                                   |         |
| 51   | Ethernet Destination MAC Address   | [4] 11.13.19.3.4.8  | IO-ETH1 or<br>IO-ETH2 or<br>IO-ETH3 |         |
| 52   | Ethernet Source MAC Address  | [4] 11.13.19.3.4.9  | IO-ETH1 or<br>IO-ETH2 or<br>IO-ETH3 |         |
| 53   | Ethertype/IEEE 802.2 [17] SAP  | [4] 11.13.19.3.4.10 | IO-ETH1 or<br>IO-ETH2 or<br>IO-ETH3 |         |
| 54   | Associated Payload Header Suppression Index                                  | [4] 11.13.19.3.4.13 | m                                   |         |
| 55   | Vendor Specific Classifier Parameters  | [4] 11.13.19.3.4.15 | o                                   |         |
| 56   | Payload Header Suppression Rule  | [4] 11.13.19.3.7    | m                                   |         |

| Item      | Capability  | Reference           | Status | Support |
|-----------|---|---------------------|--------|---------|
| 57        | Payload Header Suppression Index  | [4] 11.13.19.3.7.1  | m      |         |
| 58        | Payload Header Suppression Field  | [4] 11.13.19.3.7.2  | m      |         |
| 59        | Payload Header Suppression Mask   | [4] 11.13.19.3.7.3  | m      |         |
| 60        | Payload Header Suppression Size   | [4] 11.13.19.3.7.4  | m      |         |
| 61        | Payload Header Suppression Verification   | [4] 11.13.19.3.7.5  | m      |         |
| 62        | Vendor Specific PHS Parameters  | [4] 11.13.19.3.7.6  | o      |         |
| 63        | Packet classification rule index  | [4] 11.13.19.3.4.14 | m      |         |
| 64        | CMAC Tuple  | [4] 6.3.2.3.10      | m      |         |
| 65        | Large Context ID for ROHC- or EC RTP-compressed packet or ROHC feedback packet        | 11.13.19.3.4.16     | m      |         |
| 66        | Classifier Action Rule  | 11.13.19.3.4.17     | m      |         |
| 67        | Short-format Context ID for ROHC- or EC RTP-compressed packet or ROHC feedback packet | 11.13.19.3.4.18     | m      |         |
| Comments: |   |                     |        |         |

Table A.345: PDU: DSA-RSP

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=12 | [4] 6.3.2.3.11 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.11 | m      |         |
| 3         | Confirmation code          | [4] 6.3.2.3.11 | m      |         |
| 4         | ARQ enable                 | [4] 11.13.18.1 | m      |         |
| Comments: |                            |                |        |         |

Table A.346: DSA-RSP TLV for Service flow parameters

| Item      | Capability | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | CMAC Tuple | [4] 6.3.2.3.11 | m      |         |
| Comments: |            |                |        |         |

Table A.347: PDU: DSA-ACK

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=13 | [4] 6.3.2.3.12 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.12 | m      |         |
| 3         | Confirmation code          | [4] 6.3.2.3.12 | m      |         |
| Comments: |                            |                |        |         |

Table A.348: DSA-ACK TLV

| Item      | Capability | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | CMAC Tuple | [4] 6.3.2.3.12 | m      |         |
| Comments: |            |                |        |         |

### A.7.1.17 DSC-REQ, DSC-RSP and DSC-ACK messages

Table A.349: PDU: DSC-REQ

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=14 | [4] 6.3.2.3.13 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.13 | m      |         |
| Comments: |                            |                |        |         |

Table A.350: DSC-REQ parameters

| Item      | Capability                     | Reference        | Status | Support |
|-----------|--------------------------------|------------------|--------|---------|
| 1         | Classifier DSC action          | [4] 11.13.19.3.2 | m      |         |
| 2         | CMAC Tuple                     | [4] 6.3.2.3.13   | m      |         |
| 3         | Service flow identifier- SFID  | [4] 11.13.1      | m      |         |
| 4         | CID                            | [4] 11.13.2      | m      |         |
| 5         | Service class name             | [4] 11.13.3      | o      |         |
| 6         | QOS parameter set type         | [4] 11.13.4      | m      |         |
| 7         | Traffic priority               | [4] 11.13.5      | m      |         |
| 8         | Maximum sustained traffic rate | [4] 11.13.6      | m      |         |
| 9         | Minimum reserved traffic rate  | [4] 11.13.8      | m      |         |
| 10        | Vendor specific QOS parameters | [4] 11.13.10     | o      |         |
| 11        | Tolerated jitter               | [4] 11.13.13     | m      |         |
| 12        | Maximum latency                | [4] 11.13.14     | m      |         |
| 13        | Target SAID                    | [4] 11.13.17     | m      |         |
| 14        | Unsolicited Grant Interval     | [4] 11.13.20     | m      |         |
| 15        | Unsolicited Polling Interval   | [4] 11.13.21     | m      |         |
| 16        | MBS Service                    | 11.13.23         | m      |         |
| 17        | Global Service Class Name      | 11.13.24         | o      |         |
| 18        | Time Base                      | 11.13.27         | m      |         |
| 19        | Traffic Indication Preference  | 11.13.28         | m      |         |
| 20        | Paging preference              | 11.13.30         | m      |         |
| 21        | SN Feedback Enabled            | 11.13.31         | m      |         |
| 22        | Authorization Token            | 11.13.34         | o      |         |
| 23        | CS specification               | [4] 11.13.19.1   | m      |         |
| Comments: |                                |                  |        |         |

Table A.351: PDU : DSC-RSP

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=15 | [4] 6.3.2.3.14 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.14 | m      |         |
| 3         | Confirmation code          | [4] 6.3.2.3.14 | m      |         |
| Comments: |                            |                |        |         |

Table A.352: DSC-RSP TLV

| Item      | Capability | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | CMAC Tuple | [4] 6.3.2.3.14 | m      |         |
| Comments: |            |                |        |         |

Table A.353: PDU: DSC-ACK

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=16 | [4] 6.3.2.3.15 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.15 | m      |         |
| 3         | Confirmation code          | [4] 6.3.2.3.15 | m      |         |
| Comments: |                            |                |        |         |

Table A.354: DSC-ACK TLV

| Item      | Capability | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | CMAC Tuple | [4] 6.3.2.3.15 | m      |         |
| Comments: |            |                |        |         |

## A.7.1.18 DSD-REQ and DSD-RSP messages

Table A.355: PDU: DSD-REQ

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=17 | [4] 6.3.2.3.16 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.16 | m      |         |
| 3         | Service flow ID            | [4] 6.3.2.3.16 | m      |         |
| Comments: |                            |                |        |         |

Table A.356: DSD-REQ TLV

| Item      | Capability | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | CMAC Tuple | [4] 6.3.2.3.16 | m      |         |
| Comments: |            |                |        |         |

Table A.357: PDU: DSD-RSP

| Item      | Capability                 | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=18 | [4] 6.3.2.3.17 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.17 | m      |         |
| 3         | Confirmation code          | [4] 6.3.2.3.17 | m      |         |
| 4         | Service flow ID            | [4] 6.3.2.3.17 | m      |         |
| Comments: |                            |                |        |         |

Table A.358: DSD-RSP TLV

| Item      | Capability | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | CMAC Tuple | [4] 6.3.2.3.17 | m      |         |
| Comments: |            |                |        |         |

## A.7.1.19 TLVs for Handover, Sleep and Idle Mode

Table A.359: MOB\_SLP-REQ TLV

| Item      | Capability               | Reference                             | Status | Support |
|-----------|--------------------------|---------------------------------------|--------|---------|
| 1         | Enabled-Action-Triggered | [8] 6.3.2.3.44, 6.3.21.1, and 11.17.3 | m      |         |
| 2         | CMAC Tuple               | [8] 6.3.2.3.44, 11.1.2.1 and 11.1.2.2 | m      |         |
| Comments: |                          |                                       |        |         |

Table A.360: MOB\_SLP-RSP TLV

| Item      | Capability               | Reference                             | Status | Support |
|-----------|--------------------------|---------------------------------------|--------|---------|
| 1         | Enabled-Action-Triggered | [8] 6.3.2.3.45, 6.3.21.1, and 11.17.3 | m      |         |
| 2         | CMAC Tuple               | [8] 6.3.2.3.45, 11.1.2.1 and 11.1.2.2 | m      |         |
| Comments: |                          |                                       |        |         |

Table A.361: MOB\_TRF-IND TLV

| Item      | Capability   | Reference                                      | Status | Support |
|-----------|--------------|--|--------|---------|
| 1         | SLPID_Update | [8] 6.3.2.3.46, 6.3.21.1, 6.3.21.5, and 1116.1 | m      |         |
| Comments: |              |  |        |         |



Table A.362: PDU: MOB\_SLP-REQ

| Item      | Capability                      | Reference      | Status | Support |
|-----------|---------------------------------|----------------|--------|---------|
| 1         | Management Message type=50      | [8] 6.3.2.3.44 | m      |         |
| 2         | Number of Classes               | [8] 6.3.2.3.44 | m      |         |
| 3         | Definition                      | [8] 6.3.2.3.44 | m      |         |
| 4         | Operation                       | [8] 6.3.2.3.44 | m      |         |
| 5         | Power_Saving_Class_ID           | [8] 6.3.2.3.44 | m      |         |
| 6         | Start_frame_number              | [8] 6.3.2.3.44 | m      |         |
| 7         | Reserved                        | [8] 6.3.2.3.44 | m      |         |
| 8         | Power_Saving_Class_Type = 1     | [8] 6.3.2.3.44 | m      |         |
| 9         | Direction                       | [8] 6.3.2.3.44 | m      |         |
| 10        | Traffic_triggered_wakening_flag | [8] 6.3.2.3.44 | m      |         |
| 11        | Reserved                        | [8] 6.3.2.3.44 | m      |         |
| 12        | Initial-sleep window            | [8] 6.3.2.3.44 | m      |         |
| 13        | Listening-window                | [8] 6.3.2.3.44 | m      |         |
| 14        | Final-sleep window base         | [8] 6.3.2.3.44 | m      |         |
| 15        | Final-sleep window exponent     | [8] 6.3.2.3.44 | m      |         |
| 16        | Number_of_Sleep_CIDs            | [8] 6.3.2.3.44 | m      |         |
| 17        | CID                             | [8] 6.3.2.3.44 | m      |         |
| Comments: |                                 |                |        |         |

Table A.363: PDU: MOB\_SLP-RSP

| Item      | Capability                                 | Reference      | Status | Support |
|-----------|--|----------------|--------|---------|
| 1         | Management Message type=51                 | [8] 6.3.2.3.45 | m      |         |
| 2         | Number of Classes                          | [8] 6.3.2.3.45 | m      |         |
| 3         | Length of Data                             | [8] 6.3.2.3.45 | m      |         |
| 4         | Sleep Approved                             | [8] 6.3.2.3.45 | m      |         |
| 5         | Definition                                 | [8] 6.3.2.3.45 | m      |         |
| 6         | Operation                                  | [8] 6.3.2.3.45 | m      |         |
| 7         | Power_Saving_Class_ID                      | [8] 6.3.2.3.45 | m      |         |
| 8         | Start_frame_number                         | [8] 6.3.2.3.45 | m      |         |
| 9         | Reserved                                   | [8] 6.3.2.3.45 | m      |         |
| 10        | Power_Saving_Class_Type                    | [8] 6.3.2.3.45 | m      |         |
| 11        | Direction                                  | [8] 6.3.2.3.45 | m      |         |
| 12        | Initial-sleep window                       | [8] 6.3.2.3.45 | m      |         |
| 13        | Listening-window                           | [8] 6.3.2.3.45 | m      |         |
| 14        | Final-sleep window base                    | [8] 6.3.2.3.45 | m      |         |
| 15        | Final-sleep window exponent                | [8] 6.3.2.3.45 | m      |         |
| 16        | TRF-IND required                           | [8] 6.3.2.3.45 | m      |         |
| 17        | Traffic_triggered_wakenging_flag           | [8] 6.3.2.3.45 | m      |         |
| 18        | Reserved                                   | [8] 6.3.2.3.45 | m      |         |
| 19        | SLPID                                      | [8] 6.3.2.3.45 | m      |         |
| 20        | Reserved                                   | [8] 6.3.2.3.45 | m      |         |
| 21        | Number_of_CIDs                             | [8] 6.3.2.3.45 | m      |         |
| 22        | CID  | [8] 6.3.2.3.45 | m      |         |
| 23        | Padding                                    | [8] 6.3.2.3.45 | m      |         |
| 24        | Power Saving Class TLV encoded information | [8] 6.3.2.3.45 | m      |         |
| 25        | REQ-duration                               | [8] 6.3.2.3.45 | m      |         |
| Comments: |  |                |        |         |

Table A.364: PDU: MOB\_TRF-IND

| Item | Capability                     | Reference      | Status | Support |
|------|--------------------------------|----------------|--------|---------|
| 1    | Management Message type=52     | [8] 6.3.2.3.46 | m      |         |
| 2    | FMT                            | [8] 6.3.2.3.46 | m      |         |
| 3    | SLPID Group Indication bit-map | [8] 6.3.2.3.46 | m      |         |
| 4    | Traffic Indication Bitmap      | [8] 6.3.2.3.46 | m      |         |
| 5    | Num_Pos                        | [8] 6.3.2.3.46 | m      |         |
| 6    | SLPID                          | [8] 6.3.2.3.46 | m      |         |
| 7    | Padding                        | [8] 6.3.2.3.46 | m      |         |

Comments:

Table A.365: DL Sleep control extended subheader

| Item | Capability                  | Reference     | Status | Support |
|------|-----------------------------|---------------|--------|---------|
| 1    | Power_Saving_Class_ID       | [8] 6.3.2.7.2 | m      |         |
| 2    | Operation                   | [8] 6.3.2.7.2 | m      |         |
| 3    | Final_Sleep_Window_Exponent | [8] 6.3.2.7.2 | m      |         |
| 4    | Final_Sleep_Window_Base     | [8] 6.3.2.7.2 | m      |         |
| 5    | Reserved                    | [8] 6.3.2.7.2 | m      |         |

Comments:

Table A.366: Bandwidth request and uplink sleep control header

| Item | Capability            | Reference     | Status | Support |
|------|-----------------------|---------------|--------|---------|
| 1    | Type                  | 6.3.2.1.2.1.6 | m      |         |
| 2    | BR                    | 6.3.2.1.2.1.6 | m      |         |
| 3    | Power_Saving_Class_ID | 6.3.2.1.2.1.6 | m      |         |
| 4    | Operation             | 6.3.2.1.2.1.6 | m      |         |
| 5    | Reserved              | 6.3.2.1.2.1.6 | m      |         |
| 6    | CID                   | 6.3.2.1.2.1.6 | m      |         |
| 7    | HCS                   | 6.3.2.1.2.1.6 | m      |         |

Comments:

## A.7.1.20 MOB\_NBR-ADV

Table A.367: PDU: MOB\_NBR-ADV

| Item | Capability                     | Reference      | Status | Support |
|------|--------------------------------|----------------|--------|---------|
| 1    | Management Message type=53     | [4] 6.3.2.3.47 | m      |         |
| 2    | Skip-optional-fields bitmap    | [4] 6.3.2.3.47 | m      |         |
| 3    | DCD Configuration Change Count | [4] 6.3.2.3.47 | m      |         |
| 4    | UCD Configuration Change Count | [4] 6.3.2.3.47 | m      |         |

Comments:

Table A.368: MOB\_NBR-ADV TLV

| Item | Capability                 | Reference                 | Status | Support |
|------|----------------------------|---------------------------|--------|---------|
| 1    | Mobility Feature Supported | [4] 6.3.2.3.47, 11.7.14.1 | m      |         |
| 2    | Paging Group ID            |                           | m      |         |
| 3    | DCD_settings               | [4] 6.3.2.3.47, 11.1.7    | m      |         |
| 4    | UCD_settings               | [4] 6.3.2.3.47, 11.1.7    | m      |         |
| 5    | PHY Mode ID                | [4] 6.3.2.3.47, 11.18.1   | m      |         |
| 6    | Neighbor BS Trigger        | [4] 6.3.2.3.47, 11.1.7    | m      |         |

Comments:

## A.7.1.21 MOB\_SCN-REQ

Table A.369: PDU: MOB\_SCN-REQ

| Item      | Capability                                 | Reference      | Status | Support |
|-----------|--|----------------|--------|---------|
| 1         | Management Message type=54                 | [4] 6.3.2.3.48 | m      |         |
| 2         | Scan duration                              | [4] 6.3.2.3.48 | m      |         |
| 3         | Interleaving interval                      | [4] 6.3.2.3.48 | m      |         |
| 4         | Scan Iteration                             | [4] 6.3.2.3.48 | m      |         |
| 5         | N_Recommended_BS_Index                     | [4] 6.3.2.3.48 | m      |         |
| 6         | Configuration Change Count for MOB_NBR-ADV | [4] 6.3.2.3.48 | m      |         |
| 7         | Neighbor_BS_Index                          | [4] 6.3.2.3.48 | m      |         |
| 8         | Scanning type                              | [4] 6.3.2.3.48 | m      |         |
| 9         | Recommended BS ID                          | [4] 6.3.2.3.48 | m      |         |
| 10        | N_Recommended_BS_Full                      | [4] 6.3.2.3.48 | m      |         |
| Comments: |  |                |        |         |

Table A.370: MOB\_SCN-REQ TLV

| Item      | Capability | Reference  | Status | Support |
|-----------|------------|------------|--------|---------|
| 1         | CMAC Tuple | [4] 11.1.2 | m      |         |
| Comments: |            |            |        |         |

## A.7.1.22 MOB\_SCN-RSP

Table A.371: PDU: MOB\_SCN-RSP

| Item      | Capability                                 | Reference      | Status | Support |
|-----------|--|----------------|--------|---------|
| 1         | Management Message type=55                 | [4] 6.3.2.3.49 | m      |         |
| 2         | Scan duration                              | [4] 6.3.2.3.49 | m      |         |
| 3         | Report mode                                | [4] 6.3.2.3.49 | m      |         |
| 4         | Report period                              | [4] 6.3.2.3.49 | m      |         |
| 5         | Report metric                              | [4] 6.3.2.3.49 | m      |         |
| 6         | Start Frame                                | [4] 6.3.2.3.49 | m      |         |
| 7         | Interleaving interval                      | [4] 6.3.2.3.49 | m      |         |
| 8         | Scan iteration                             | [4] 6.3.2.3.49 | m      |         |
| 9         | Configuration Change Count for MOB_NBR-ADV | [4] 6.3.2.3.49 | m      |         |
| 10        | N_Recommended_BS_Index                     | [4] 6.3.2.3.49 | m      |         |
| 11        | Neighbor_BS_Index                          | [4] 6.3.2.3.49 | m      |         |
| 12        | Scanning type                              | [4] 6.3.2.3.49 | m      |         |
| 13        | N_Recommended_BS_Full                      | [4] 6.3.2.3.49 | m      |         |
| 14        | Recommended BS ID                          | [4] 6.3.2.3.49 | m      |         |
| 15        | Rendezvous time                            | [4] 6.3.2.3.49 | o      |         |
| 16        | CDMA code                                  | [4] 6.3.2.3.49 | o      |         |
| 17        | Transmission opportunity offset            | [4] 6.3.2.3.49 | o      |         |
| Comments: |  |                |        |         |

Table A.372: MOB\_SCN-RSP TLV

| Item      | Capability | Reference  | Status | Support |
|-----------|------------|------------|--------|---------|
| 1         | CMAC Tuple | [4] 11.1.2 | m      |         |
| Comments: |            |            |        |         |

## A.7.1.23 MOB\_SCN-REP

Table A.373: PDU: MOB\_SCN-REP

| Item | Capability                                 | Reference      | Status | Support |
|------|--|----------------|--------|---------|
| 1    | Management Message type=60                 | [5] 6.3.2.3.50 | m      |         |
| 2    | Report mode                                | [5] 6.3.2.3.50 | m      |         |
| 3    | N_current_Bs                               | [5] 6.3.2.3.50 | m      |         |
| 4    | Report metric                              | [5] 6.3.2.3.50 | m      |         |
| 5    | BS CINR mean                               |                | m      |         |
| 6    | BS RSSI mean                               |                | m      |         |
| 7    | BS RTD                                     |                | m      |         |
| 8    | N_Neighbor_BS_Index                        | [5] 6.3.2.3.50 | m      |         |
| 9    | N_Neighbor_BS_Full                         | [5] 6.3.2.3.50 | m      |         |
| 10   | Configuration Change Count for MOB_NBR-ADV | [5] 6.3.2.3.50 | m      |         |
| 11   | Neighbor_BS_Index                          | [5] 6.3.2.3.50 | m      |         |
| 12   | Neighbor BSID                              | [5] 6.3.2.3.50 | m      |         |

Comments:

Table A.374: MOB\_SCN-REP TLV

| Item | Capability | Reference  | Status | Support |
|------|------------|------------|--------|---------|
| 1    | CMAC Tuple | [5] 11.1.2 | m      |         |

Comments:

## A.7.1.24 MOB\_BSHO-REQ

Table A.375: PDU: MOB\_BSHO-REQ

| Item | Parameter                                     | Reference      | Status | Support |
|------|---|----------------|--------|---------|
| 1    | Management Message type=56                    | [5] 6.3.2.3.52 | m      |         |
| 2    | Network Assisted HO supported                 | [5] 6.3.2.3.52 | m      |         |
| 3    | Mode  | [5] 6.3.2.3.52 | m      |         |
| 4    | HO operation mode                             | [5] 6.3.2.3.52 | m      |         |
| 5    | N_Recommended                                 | [5] 6.3.2.3.52 | m      |         |
| 6    | Resource Retain Flag                          | [5] 6.3.2.3.52 | m      |         |
| 7    | Neighbor BSID                                 | [5] 6.3.2.3.52 | m      |         |
| 8    | Service Level Prediction                      | [5] 6.3.2.3.52 | m      |         |
| 9    | Preamble Index/Subchannel Index               | [5] 6.3.2.3.52 | m      |         |
| 10   | HO process optimization                       | [5] 6.3.2.3.52 | m      |         |
| 11   | Network Assisted HO supported per neighbor BS | [5] 6.3.2.3.52 | m      |         |
| 12   | HO_ID_included_indication                     | [5] 6.3.2.3.52 | m      |         |
| 13   | HO_authorization policy indicator             | [5] 6.3.2.3.52 | m      |         |
| 14   | HO_ID   | [5] 6.3.2.3.52 | m      |         |
| 15   | HO_authorization_policy_support               | [5] 6.3.2.3.52 | o      |         |
| 16   | Action Time                                   | [5] 6.3.2.3.52 | m      |         |

Comments: In Item 9, only Preamble Index is applicable for OFDMA.

Table A.376: MOB\_BSHO-REQ TLV

| Item | Capability           | Reference      | Status | Support |
|------|----------------------|----------------|--------|---------|
| 1    | CMAC Tuple           | [4] 11.1.2     | m      |         |
| 2    | Resource Retain Time | [4] 6.3.2.3.52 | m      |         |

Comments:

## A.7.1.25 MOB\_BSHO-RSP

Table A.377: PDU: MOB\_BSHO-RSP

| Item | Capability                 | Reference      | Status | Support |
|------|----------------------------|----------------|--------|---------|
| 1    | Management Message type=58 | [4] 6.3.2.3.54 | m      |         |
| 2    | Mode                       | [4] 6.3.2.3.54 | m      |         |
| 3    | Action Time                | [4] 6.3.2.3.54 | m      |         |
| 4    | Resource Retain Flag       | [4] 6.3.2.3.54 | m      |         |

Comments:

Table A.378: MOB\_BSHO-RSP TLV

| Item | Capability           | Reference      | Status | Support |
|------|----------------------|----------------|--------|---------|
| 1    | CMAC Tuple           | [4] 11.1.2     | m      |         |
| 2    | Resource Retain Time | [4] 6.3.2.3.54 | m      |         |

Comments:

## A.7.1.26 MOB\_MSHO-REQ

Table A.379: PDU: MOB\_MSHO-REQ

| Item | Capability                                 | Reference      | Status | Support |
|------|--|----------------|--------|---------|
| 1    | Management Message type=57                 | [4] 6.3.2.3.53 | m      |         |
| 2    | Report metric                              | [4] 6.3.2.3.53 | m      |         |
| 3    | N_New_BS_Index                             | [4] 6.3.2.3.53 | m      |         |
| 4    | N_New_BS_Full                              | [4] 6.3.2.3.53 | m      |         |
| 5    | Configuration Change Count for MOB_NBR-ADV | [4] 6.3.2.3.53 | m      |         |
| 6    | Neighbor_BS_Index                          | [4] 6.3.2.3.53 | m      |         |
| 7    | Neighbor BSID                              | [4] 6.3.2.3.53 | m      |         |
| 8    | Preamble index/ Subchannel Index           | [4] 6.3.2.3.53 | m      |         |

Comments:

Table A.380: MOB\_MSHO-REQ TLV

| Item | Capability | Reference  | Status | Support |
|------|------------|------------|--------|---------|
| 1    | CMAC Tuple | [4] 11.1.2 | m      |         |

Comments:

## A.7.1.27 MOB\_HO-IND

Table A.381: PDU: MOB\_HO-IND

| Item | Parameter                        | Reference      | Status | Support |
|------|----------------------------------|----------------|--------|---------|
| 1    | Management Message type=59       | [5] 6.3.2.3.55 | m      |         |
| 2    | Mode                             | [5] 6.3.2.3.55 | m      |         |
| 3    | HO_IND_TYPE                      | [5] 6.3.2.3.55 | m      |         |
| 4    | Ranging Params valid indication  | [5] 6.3.2.3.55 | m      |         |
| 5    | Target_BS_ID                     | [5] 6.3.2.3.55 | m      |         |
| 6    | Preamble Index/ Subchannel Index | [5] 6.3.2.3.55 | m      |         |

Comments:

Table A.382: MOB\_HO-IND TLV

| Item | Capability | Reference  | Status | Support |
|------|------------|------------|--------|---------|
| 1    | CMAC Tuple | [4] 11.1.2 | m      |         |

Comments:

## A.7.1.28 PDUs fields for Idle Mode

Table A.383: PDU: MOB\_PAG-ADV

| Item      | Capability          | Reference    | Status | Support |
|-----------|---------------------|--------------|--------|---------|
| 1         | MS MAC Address Hash | 6.3.24.1     | m      |         |
| 2         | Paging Group ID     | 6.3.24.8.1.1 | m      |         |
| 3         | Action Code         | 6.3.2.3.56   | m      |         |
| Comments: |                     |              |        |         |

Table A.384: PAG-ADV TLV

| Item      | Capability   | Reference | Status | Support |
|-----------|--|-----------|--------|---------|
| 1         | Receiving of CDMA code and transmission opportunity assignment at MS | 11.7.1    | m      |         |
| 2         | Receiving of Page-Response window at MS                              | 11.7.2    | m      |         |
| Comments: |  |           |        |         |

Table A.385: PHY Synchronization Field

| Item      | Capability                  | Reference | Status | Support |
|-----------|-----------------------------|-----------|--------|---------|
| 1         | Frame size and frame number | 6.3.24.3  | m      |         |
| Comments: |                             |           |        |         |

## A.7.1.29 Feedback

Table A.386: PDU: Feedback Header

| Item      | Capability       | Reference              | Status | Support |
|-----------|------------------|------------------------|--------|---------|
| 1         | CII              | 6.3.2.1.2.2.1 Table 7h | m      |         |
| 2         | Feedback Type    | [5] Table 7i           | m      |         |
| 3         | Feedback Content | [5] Table 7i           | m      |         |
| 4         | HCS              | [5] Table 7i           | m      |         |
| Comments: |                  |                        |        |         |

Table A.387: PDU: Feedback Header types

| Item   | Capability  | Reference    | Status | Support |
|--|---|--------------|--------|---------|
| 1  | MIMO feedback type + feedback payload (Type 0000) | Table 7i [5] | m      |         |
| Comments:  |   |              |        |         |
| <p>Feedback Type (from Table 302b)</p> <p>0b000 - 0b010 (Fast DL measurement/Default Feedback) are valid</p> <p>Only CQICH Types = 000 is valid for WiMAX</p> <p>0b000 = Fast DL measurement/Default Feedback with antenna grouping</p> <p>0b001 = Fast DL measurement/Default Feedback with antenna selection</p> <p>0b010 = Fast DL measurement/Default Feedback with reduced codebook</p> <p>Feedback Payload (from Table 298f)</p> <p>The possible payloads are identical to those available for the regular CQICH.</p> <ol style="list-style-type: none"> <li>Define that the measurement configuration is the same as the last REP-REQ or CQICH.</li> <li>Define that FH will not be used for reporting CQI if CQICH was allocated to the user, however, it can be used for MIMO mode feedback in the case we want to use CQICH channel to report CQI every frame. The feedback polling IE allocate will be restricted to the end of the frame when Dedicated UL Allocation Included.</li> <li>The number of burst per MS in the UL will be limited to 2 per frame (including the Dedicated UL allocation).</li> </ol> |   |              |        |         |

---

## Annex B (normative): Protocol ICS (PICS) for HiperMAN/WiMAX- ETWG profile

|  |
|--|
| Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the PICS proforma in this annex so that it can be used for its intended purposes and may further publish the completed PICS. |
|--|

---

### B.1 Guidance for completing PICS Proforma

#### B.1.1 Purposes and Structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in [1] and [2] (which mandates requirements defined in [4]) may provide information about the implementation in a standardized manner. The PICS proforma does not cover every possible compliant HiperMAN/WiMAX implementation, but only those implementations that are compliant with the system profiles as defined in [3].

The PICS proforma is subdivided into clauses for the following categories of information:

- guidance for completing the PICS proforma;
- identification and implementation;
- identification of the standard;
- global statement of conformance;
- roles;
- Mobile Station (MS);
- Base Station (BS).

#### B.1.2 Abbreviations and Conventions

##### **Item column**

- The Item column contains a number which identifies the item in the table.

##### **Capability column**

- The capability column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "Is <capability> supported by the implementation?".

##### **Reference column**

- The reference column indicates the clause of [1], [2], [4] from which the requirement for the capability is derived. A reference to [4] is to be understood as a reference to IEEE 802.16-2004 [4] as corrected and amended by IEEE 802.16e-2005 [5].

### Status column

- The following notations, defined in [8], are used in the status column.

|     |  |
|-----|--|
| m   | Mandatory - the capability is required to be supported   |
| o   | Optional - the capability may be supported or not  |
| n/a | Not applicable - in the given context, it is impossible to use the capability  |
| x   | Prohibited (excluded) - there is a requirement not to use this capability in the given context   |
| o.i | Qualified option - for mutually exclusive or selectable options from a set. "i" is an integer which identifies a group of related optional items and the logic of their selection which is defined immediately following the table                       |
| ci  | Conditional - the requirement on the capability ("m", "o", "x", or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying a conditional status expression which is defined immediately following the table. |
| i   | Irrelevant (out of scope) - capability outside the scope of the reference specification. No answer is requested from the supplier.   |

### Support column

- The support column shall be filled in by the supplier of the implementation. The following common notations, defined in [8] are used for the support column.

|               |   |
|---------------|---|
| Y or y        | Supported by implementation.  |
| N or n        | Not supported by implementation.  |
| N/A, n/a or - | No answer required (allowed only if the status is n/a either directly or after the evaluation of a conditional status). |

If this PICS proforma is completed in order to describe a multiple profile implementation, it may be necessary to answer that a capability is supported for one profile and not supported for another. In that case, the supplier shall enter a unique reference to a conditional expression, preceded by "?" (e.g. ?3). This expression shall be given in the space provided for comments at the bottom of the table. It uses the predicates defined in [8], each of which refers to a single profile or a family of profiles and which takes the value TRUE if and only if that profile is to be used.

EXAMPLE:     ?3: If profM1 then Y else N.

NOTE:     As stated in [8], support for a received PDU requires the ability to parse all valid parameters of that PDU. Supporting a PDU while having no ability to parse a valid parameter is non-conformant. Support for a parameter on a PDU means that the semantics of that parameter are supported.

### Values allowed column

- The values allowed column is only used when necessary in a table. It contains the type, the list, the range, or the length of values allowed. The following notations are used.

|                       |  |
|-----------------------|--|
| Range of values:      | <min value>..<max value>                               |
| Example:              | 5..20  |
| List of values:       | <value1>, <value2>, ..., <valueN>                      |
| Example 1:            | 2, 4, 6, 8, 9  |
| Example 2:            | 1101b, 1011b, 1111b                                    |
| Example 3:            | 0x0A, 0x34, 0x2F                                       |
| List of named values: | <name1>(<val1>), <name2>(<val2>), ..., <nameN>(<valN>) |
| Example:              | reject(1), accept(2)                                   |
| Length:               | Size (<min size>..<max size>)                          |
| Example:              | Size (1..8)  |

### Values supported column

- The values supported column is only present when the values allowed column is present. It shall be filled in by the supplier of the implementation. In this column, the value or the ranges of values supported by the implementation shall be indicated.



### Reference to items

- For each possible item answer in the support column within the PICS proforma a unique reference exists which may be used, for example, in conditional expressions. It is defined as the table identifier, followed by the "/" character, followed by the item number in the table. If there is more than one support column in a table, the columns are discriminated by letters (a, b, etc.).

|            |   |
|------------|---|
| Example 1: | Table B.5/4 is the reference to the answer of item 4 in table B.5.  |
| Example 2: | Table B.6/3b is the reference to the second answer (i.e., in the second support column) of item 3 in table B.6. |

### Prerequisite Line

- A prerequisite line takes the form: Prerequisite: <predicate>.
- A prerequisite line after a clause or table title indicates that the entire clause or the entire table is not required to be completed if the predicate is FALSE.

## B.1.3 Instructions for completing the PICS Proforma

The supplier of the implementation shall complete the PICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered, in the support or values supported column boxes provided, using the notation described in clause B.1.2.

However, tables related to Mobile Station shall only be completed for Mobile Station (MS) implementations, and tables related to Base Station shall only be filled in for Base Station implementations.

If necessary, the supplier may provide additional comments in space at the bottom of the tables or separately.

---

## B.2 Identification of the implementation

Identification of the Implementation Under Test (IUT) and the system in which it resides (the System Under Test (SUT)) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the PICS should be named as the contact person.

### B.2.1 Date of statement

|  |  |
|--|--|
| <b>Date of statement (MM/DD/YYYY):</b> |  |
|--|--|

### B.2.2 Implementation Under Test (IUT) identification

|                     |  |
|---------------------|--|
| <b>IUT name:</b>    |  |
| <b>IUT version:</b> |  |

### B.2.3 System Under Test (SUT) identification

|                                |  |
|--------------------------------|--|
| <b>SUT name:</b>               |  |
| <b>Hardware configuration:</b> |  |
| <b>Operating system:</b>       |  |

### B.2.4 Product supplier

|                                |  |
|--------------------------------|--|
| <b>Name:</b>                   |  |
| <b>Address:</b>                |  |
| <b>Telephone Nr.:</b>          |  |
| <b>Fax Nr:</b>                 |  |
| <b>E-mail address:</b>         |  |
| <b>Additional information:</b> |  |

### B.2.5 Client (if different from product supplier)

|                                |  |
|--------------------------------|--|
| <b>Name:</b>                   |  |
| <b>Address:</b>                |  |
| <b>Telephone Nr.:</b>          |  |
| <b>Fax Nr:</b>                 |  |
| <b>E-mail address:</b>         |  |
| <b>Additional information:</b> |  |

### B.2.6 PICS contact person

(A person to contact if there are any queries concerning the content of the PICS.)

|                                |  |
|--------------------------------|--|
| <b>Name:</b>                   |  |
| <b>Address:</b>                |  |
| <b>Telephone Nr.:</b>          |  |
| <b>Fax Nr:</b>                 |  |
| <b>E-mail address:</b>         |  |
| <b>Additional information:</b> |  |

## B.3 Identification of the standard

This PICS proforma applies to the ETSI HiperMAN/WiMAX standard consisting of the following normative references:

- HiperMAN/WiMAX Physical Layer: 1.
- HiperMAN/WiMAX Data Logical Control Layer: 2 which normatively references 4.

## B.4 Global statement of conformance

|   |  |
|---|--|
| <b>Are all mandatory capabilities implemented? (Yes/No)</b> |  |
|---|--|

NOTE: Answering "No" to this question indicates non-conformance to the HiperMAN/WiMAX standard. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conforming, on pages attached to the PICS proforma.

## B.5 System profiles

**Table B.1: System profiles**

| Item | Role                                      | Reference | IEEE   | HM | WIMAX /ETG | Support |
|------|---|-----------|--------|----|------------|---------|
| 1    | WirelessMAN-SC                            | [4] 12.1  | Ob.1.1 | X  | X          |         |
| 2    | WirelessMAN-SCa                           | [4] 12.2  | Ob.1.1 | X  | X          |         |
| 3    | WirelessMAN-OFDM and WirelessHUMAN-OFDM   | [4] 12.3  | Ob.1.1 | m  | m          |         |
| 4    | WirelessMAN-OFDMA and WirelessHUMAN-OFDMA | [4] 12.4  | Ob.1.1 | X  | X          |         |

Ob.1.1: It is mandatory to support at least one of these items.

Comments:

**Table B.2: Roles**

| Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM. |                     |           |        |         |
|--|---------------------|-----------|--------|---------|
| Item   | Role                | Reference | Status | Support |
| 1  | Mobile Station (MS) | [4]       | Ob.2.1 |         |
| 2  | Base Station (BS)   | [4]       | Ob.2.1 |         |

Ob.2.1: It is mandatory to support exactly one of these items.

NOTE: These Items do not reflect the capability to support the given role as part of the current implementation, but indicates the role of the implementation which is relevant to fill all the items of this PICS proforma.

Comments:

**Table B.3: Usage Scenarios**

| Prerequisite: B.2/1 Mobile Station. |                |           |        |         |
|-------------------------------------|----------------|-----------|--------|---------|
| Item                                | Usage scenario | Reference | Status | Support |
| 1                                   | Fixed          | [6] 3.2   | Ob.3.1 |         |
| 2                                   | Nomadic        | [6] 3.2   | Ob.3.1 |         |
| 3                                   | Portable       | [6] 3.2   | Ob.3.1 |         |

Ob.3.1: It is mandatory to support at least one of these items.

Comments:

## B.5.1 WirelessMAN-SC

Void.

## B.5.2 WirelessMAN-SCa

Void.

## B.5.3 WirelessMAN-OFDM and WirelessHUMAN-OFDM

**Table B.4: Network topology**

| Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM.  |                                 |           |      |    |       |         |
|---|---------------------------------|-----------|------|----|-------|---------|
| Item  | Role                            | Reference | IEEE | HM | WIMAX | Support |
| 1   | profM3_PMP - Basic packet PMP   | [4] 6.1   | Ob.4 | m  | m     |         |
| 2   | profM3_Mesh - Basic packet Mesh | [4] 6.2   | Ob.4 | X  | X     |         |
| Ob.4: It is mandatory to support at least one of these items. |                                 |           |      |    |       |         |
| Comments:   |                                 |           |      |    |       |         |

**Table B.5: Channelization**

| Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM.  |                                    |              |        |         |
|---|------------------------------------|--------------|--------|---------|
| Item  | Name                               | Reference    | Status | Support |
| 1   | profP3_1,75 - 1,75 MHz channel PHY | [4] 12.3.2.1 | Ob.5   |         |
| 2   | profP3_3,5 - 3,5 MHz channel PHY   | [4] 12.3.2.2 | Ob.5   |         |
| 3   | profP3_7 - 7,0 MHz channel PHY     | [4] 12.3.2.3 | Ob.5   |         |
| 4   | profP3_3 - 3 MHz channel PHY       | [4] 12.3.2.4 | Ob.5   |         |
| 5   | profP3_5,5 - 5,5 MHz channel PHY   | [4] 12.3.2.5 | Ob.5   |         |
| 6   | profP3_10 - 10 MHz channel PHY     | [4] 12.3.2.6 | Ob.5   |         |
| 7   | profP3_2,5- 2,5 MHz channel PHY    | [6] 5        | Ob.5   |         |
| 8   | profP3_5 - 5 MHz channel PHY       | [6] 5        | Ob.5   |         |
| Ob.5: It is mandatory to support at least one of these items. |                                    |              |        |         |
| Comments:   |                                    |              |        |         |

**Table B.6: Power classes**

| Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM.  |  |           |        |         |
|---|--|-----------|--------|---------|
| Item  | Name   | Reference | Status | Support |
| 1   | profC3_0 - $P_{TX,max} < 14$ dBm             | [4] 12.3  | Ob.6   |         |
| 2   | profC3_14 - $14$ dBm $< P_{TX,max} < 17$ dBm | [4] 12.3  | Ob.6   |         |
| 3   | profC3_17 - $17$ dBm $< P_{TX,max} < 20$ dBm | [4] 12.3  | Ob.6   |         |
| 4   | profC3_20 - $20$ dBm $< P_{TX,max} < 23$ dBm | [4] 12.3  | Ob.6   |         |
| 5   | profC3_23 - $P_{TX,max} > 23$ dBm            | [4] 12.3  | Ob.6   |         |
| Ob.6: It is mandatory to support at least one of these items. |  |           |        |         |
| Comments:   |  |           |        |         |

**Table B.7: Duplexing modes**

| Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM.  |   |             |        |         |
|---|---|-------------|--------|---------|
| Item  | Name  | Reference   | Status | Support |
| 1   | prof_TDD - TDD Time Division Duplexing      | [4] 6.3.7.2 | Ob.7   |         |
| 2   | prof_FDD - FDD Frequency Division Duplexing | [4] 6.3.7.1 | Ob.7   |         |
| Ob.7: It is mandatory to support at least one of these items. |   |             |        |         |
| Comments:   |   |             |        |         |

**Table B.8: FDD Duplexing modes**

| Prerequisite: B.7/2 prof_FDD - FDD Frequency Division Duplexing.  |  |             |        |         |
|---|--|-------------|--------|---------|
| Item  | Name   | Reference   | Status | Support |
| 1   | Supports FDD Frequency Division Duplexing Full Duplex            | [4] 6.3.7.1 | Cb.8.1 |         |
| 2   | Supports FDD Frequency Division Duplexing Half Duplex (see note) | [4] 6.3.7.1 | Cb.8.1 |         |
| Ob.8: It is mandatory to support at least one of these items.   |  |             |        |         |
| Cb.8.1: IF B.2/1 THEN Ob.8 ELSE m.  |  |             |        |         |
| NOTE: For the Base Station, supporting FDD Half Duplex means "respects Half Duplex Nature of half-duplex FDD MS". |  |             |        |         |
| Comments:   |  |             |        |         |

**Table B.9: RF Profiles**

| Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM.                            |  |                |        |         |
|---|--|----------------|--------|---------|
| Item  | Name   | Reference      | Status | Support |
| 1   | profR10_1 - RF Profile for 10 MHz Channelization 5000<br>+ n x 5 MHz, n {55, 57, 59, 61, 63, 65, 67}                       | [4] 12.3.3.1.1 | Ob.9   |         |
| 2   | profR10_2 - RF Profile for 10 MHz Channelization 5000<br>+ n x 5 MHz, n {148, 150, 152, 154, 156, 158, 160, 162, 164, 166} | [4] 12.3.3.1.1 | Ob.9   |         |
| 3   | profR10_3 - RF Profile for 10 MHz Channelization 5000<br>+ n x 5 MHz, n {147 149 151 153 155 157 159 161 163 165 167}      | [4] 12.3.3.1.1 | Ob.9   |         |
| 4   | profR3_1 - RF Profile for licensed bands with steps of 250 kHz   | [4] 8.3.10.2   | Cb.9.1 |         |
| Ob.9: IF B.5/6 THEN It is mandatory to support at least one of these items ELSE x.      |  |                |        |         |
| Cb.9.1: IF (B.5/1 OR B.5/2 OR B.5/3 OR B.5/4 OR B.5/5 OR B.5/7 OR B.5/8) THEN m ELSE x. |  |                |        |         |
| Comments:   |  |                |        |         |

### B.5.3.1 MS in PMP topology

#### B.5.3.1.1 PHY functions

**Table B.10: Frame duration codes for MS**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |                      |             |        |         |
|---|----------------------|-------------|--------|---------|
| Item  | Frame Duration in ms | Reference   | Status | Support |
| 1   | 2,5                  | [4] 8.3.5.4 | m      |         |
| 2   | 4                    | [4] 8.3.5.4 | m      |         |
| 3   | 5                    | [4] 8.3.5.4 | m      |         |
| 4   | 8                    | [4] 8.3.5.4 | m      |         |
| 5   | 10                   | [4] 8.3.5.4 | m      |         |
| 6   | 12,5                 | [4] 8.3.5.4 | m      |         |
| 7   | 20                   | [4] 8.3.5.4 | m      |         |
| Comments:   |                      |             |        |         |

**Table B.11: Cyclic Prefix for MS**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |               |             |        |         |
|---|---------------|-------------|--------|---------|
| Item  | Cyclic Prefix | Reference   | Status | Support |
| 1   | 1/4           | [4] 8.3.2.4 | m      |         |
| 2   | 1/8           | [4] 8.3.2.4 | m      |         |
| 3   | 1/16          | [4] 8.3.2.4 | m      |         |
| 4   | 1/32          | [4] 8.3.2.4 | m      |         |
| Comments:   |               |             |        |         |

Table B.12: Modulation for MS

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |            |               |         |         |
|---|------------|---------------|---------|---------|
| Item  | Modulation | Reference     | Status  | Support |
| 1   | BPSK       | [4] 8.3.3.4.1 | m       |         |
| 2   | QPSK       | [4] 8.3.3.4.1 | m       |         |
| 3   | 16-QAM     | [4] 8.3.3.4.1 | m       |         |
| 4   | 64-QAM     | [4] 8.3.3.4.1 | Cb.12.1 |         |
| Cb.12.1: IF HUMAN THEN o ELSE m.  |            |               |         |         |
| Comments:   |            |               |         |         |

Table B.13: Major PHY functions for MS

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |  |                                   |         |         |
|---|--|-----------------------------------|---------|---------|
| Item  | Name   | Reference                         | Status  | Support |
| 1   | AAS (Adaptive Antenna) supported                     | [4] 6.3.7.6                       | o       |         |
| 2   | DL Subchannelization                                 | [4] 8.3.5.1.1                     | o       |         |
| 3   | UL Subchannelization                                 | [4] 8.3.2.4                       | Cb.13.5 |         |
| 4   | Dynamic Frequency Support DFS                        | [4] 6.3.15                        | Cb.13.1 |         |
| 5   | Concatenated Reed-Solomon-convolutional code (RS-CC) | [4] 8.3.3.2                       | m       |         |
| 6   | Block Turbo Coding (BTC)                             | [4] 8.3.3.2                       | o       |         |
| 7   | Convolutional Turbo Codes (CTC)                      | [4] 8.3.3.2                       | o       |         |
| 8   | Randomization  | [4] 8.3.3.1                       | m       |         |
| 9   | Block Interleaving                                   | [4] 8.3.3.3                       | m       |         |
| 10  | Gray-coded constellation mapping                     | [4] 8.3.3.4.1                     | m       |         |
| 11  | Long preamble  | [4] 8.3.3.6                       | m       |         |
| 12  | Short preamble                                       | [4] 8.3.3.6                       | m       |         |
| 13  | Pilot modulation mapping                             | [4] 8.3.3.4.2                     | m       |         |
| 14  | Rate ID decoding                                     | [4] 8.3.3.4.3                     | m       |         |
| 15  | Subchannelization preamble                           | [4] 8.3.3.6                       | Cb.13.2 |         |
| 16  | UL Midambles   | [4] 8.3.3.6, 8.3.6.3              | m       |         |
| 17  | Compressed Private MAP                               | [4] 8.3.6.6                       | o       |         |
| 18  | Reduced Private MAP                                  | [4] 8.3.6.7                       | o       |         |
| 19  | STC  | [4] 8.3.8                         | o       |         |
| 20  | AAS preamble   | [4] 8.3.3.6                       | Cb.13.3 |         |
| 21  | Full contention BW requesting                        | [4] 8.3.7.3.2                     | m       |         |
| 22  | Focused Contention BW requesting                     | [4] 8.3.7.3.3                     | o       |         |
| 23  | RSSI mean and std measurement                        | [4] 8.3.9.2                       | m       |         |
| 24  | CINR mean and std measurement                        | [4] 8.3.9.3                       | m       |         |
| 25  | Closed loop power control mode                       | [4] 8.3.7.4.1                     | m       |         |
| 26  | Open loop power control mode                         | [4] 8.3.7.4.2                     | o       |         |
| 27  | Can detect used cyclic prefix                        | [4] 8.3.1.1.1                     | m       |         |
| 28  | TC sublayer support                                  | [4] 8.3.4                         | o       |         |
| 29  | Preamble cyclic time shift                           | [4] 8.3.3.6, 8.3.6.2.7, 8.3.6.3.7 | Cb.13.4 |         |
| 30  | Handover   | [4] 8.3                           | Cb.13.6 |         |
| Cb.13.1: IF license exempt band THEN m ELSE n/a.                          |  |                                   |         |         |
| Cb.13.2: IF (B.13/31 OR B.13/3) THEN m ELSE i.                            |  |                                   |         |         |
| Cb.13.3: IF B.13/1 THEN m ELSE i.   |  |                                   |         |         |
| Cb.13.4: IF B.13/1 THEN m ELSE n/a.                                       |  |                                   |         |         |
| Cb.13.5: IF (B3/2 or B3/3) THEN m ELSE o                                  |  |                                   |         |         |
| Cb.13.6: IF (B3/3) THEN m ELSE o  |  |                                   |         |         |
| Comments:   |  |                                   |         |         |

**Table B.14: MS Multiplexing and multiple access**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |   |             |        |         |
|---|---|-------------|--------|---------|
| Item  | Name  | Reference   | Status | Support |
| 1   | Synchronize to long preamble                                    | [4] 8.3.5.1 | m      |         |
| 2   | Demodulate bursts   | [4] 8.3.5.1 | m      |         |
| 3   | Support contention slot for initial ranging                     | [4] 8.3.5.1 | m      |         |
| 4   | Support contention slot for bandwidth request                   | [4] 8.3.5.1 | m      |         |
| 5   | Support for Initial Ranging with a subchannelized ranging burst | [4] 8.3.7.2 | m      |         |
| Comments:   |   |             |        |         |

**Table B.15: MS Radio subsystem control**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.                      |  |              |        |         |  |                  |
|--|--|--------------|--------|---------|--|------------------|
| Item   | Capability   | Reference    | Status | Support | Values allowed   | Values supported |
| 1  | MS adjusts TX frequency based on frequency offset data from BS.                                | [4] 8.3.12   | m      |         | Ca.15.1  |                  |
| 2  | MS adjusts TX power based on power level data from BS.   | [4] 8.3.10.1 | m      |         | ±1,5 dB for step sizes ≤ 15 dB,<br>±3 dB for 15 dB < step sizes ≤ 30 dB,<br>±5 dB for step sizes > 30 dB |                  |
| 3  | MS TX power control algorithm dynamic range.   | [4] 8.3.10.1 | m      |         | Cb.15.2  |                  |
| 4  | MS TX power control algorithm slew rate.   | [4] 8.3.7.4  | m      |         | ≥ 30 dB/s  |                  |
| 5  | MS computes full initial ranging TX power based on data from BS and RSSI measurements          | [4] 6.3.9.5  | m      |         | n/a  |                  |
| 6  | MS TX power control algorithm accounts for effects of different burst profiles on RF power amp | [4] 8.3.7.4  | m      |         | n/a  |                  |
| 7  | MS adjusts Symbol clock based on frequency offset data from BS                                 | [4] 8.3.12   | m      |         | 5 ppm  |                  |
| 8  | The power control algorithm shall support power fading depths                                  | [4] 8.3.7.4  | m      |         | ≥10 dB   |                  |
| Ca.15.1: IF (B.13/2OR B.13/3) THEN ≥ ±1 % ELSE ≥ ±2 % of subcarrier spacing, minimum accuracy. |  |              |        |         |  |                  |
| Cb.15.2: IF (B.13/2OR B.13/3) THEN ≥ 50 dB ELSE ≥ 30 dB.                                       |  |              |        |         |  |                  |
| Comments:  |  |              |        |         |  |                  |

Table B.16: MS Minimum performance

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |   |                |         |         |  |                  |
|---|---|----------------|---------|---------|--|------------------|
| Item  | Capability  | Reference      | Status  | Support | Values allowed   | Values supported |
| 1   | Max DL Concurrent bursts  | [4] 8.3.5.1.1  | m       |         | 1  |                  |
| 2   | Max concurrent bursts in UL subframe  | [4] 8.3.5.1    | m       |         | 1  |                  |
| 3   | Tx Power Level minimum adjustment step  | [4] 8.3.10.1   | m       |         | ≤ 1 dB   |                  |
| 4   | Tx Power Level minimum relative step accuracy   | [4] 8.3.10.1   | m       |         | ±1,5 dB for step sizes ≤ 15 dB,<br>±3 dB for 15 dB < step sizes ≤ 30 dB,<br>±5 dB for step sizes > 30 dB |                  |
| 5   | Tx Spectral flatness Absolute difference between adj. carriers  | [4] 8.3.10.1.1 | m       |         | ≤ 0,1 dB   |                  |
| 6   | Tx Spectral flatness Deviation of average energy in each carrier from the measured energy averaged over all 200 active tones. Carrier -50..-1, 1..50:     | [4] 8.3.10.1.1 | m       |         | ≤ ±2 dB  |                  |
| 7   | Tx Spectral flatness Deviation of average energy in each carrier from the measured energy averaged over all 200 active tones. Carrier -100..-50, 50..100: | [4] 8.3.10.1.1 | m       |         | ≤ +2/-4 dB   |                  |
| 8   | Tx relative constellation error:<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4  | [4] 8.3.10.1.2 | m       |         | ≤ -13 dB<br>≤ -16 dB<br>≤ -18,5 dB<br>≤ -21,5 dB<br>≤ -25 dB   |                  |
| 9   | Tx relative constellation error:<br>64QAM-2/3<br>64QAM-3/4  | [4] 8.3.10.1.2 | Cb.16.1 |         | ≤ -29 dB<br>≤ -30 dB   |                  |
| 10  | TX power at spectral line 0.  | [4] 8.3.10.4   | m       |         | ≥ -15 dBm relative to total transmitted power  |                  |
| 11  | Min SNR requirements for BER=10 <sup>-6</sup> in AWGN channel:<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4<br>64QAM-2/3<br>64QAM-3/4    | [4] 8.3.11.1   | m       |         | 3 dB<br>6 dB<br>8.5 dB<br>11.5 dB<br>15 dB<br>19 dB<br>21 dB   |                  |
| 12  | Adjacent channel rejection at BER=10 <sup>-6</sup> for 3 dB degradation C/I<br>16QAM-3/4  | [4] 8.3.11.2   | m       |         | - 11 dB  |                  |
| 13  | Adjacent channel rejection at BER=10 <sup>-6</sup> for 3 dB degradation C/I<br>64QAM-3/4  | [4] 8.3.11.2   | Cb.16.1 |         | - 4 dB   |                  |



| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |   |              |         |         |                            |                  |
|---|---|--------------|---------|---------|----------------------------|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed             | Values supported |
| 14  | Non-adjacent channel rejection at BER=10 <sup>-6</sup> for 3 dB degradation C/I 16QAM-3/4 | [4] 8.3.11.2 | m       |         | - 30 dB                    |                  |
| 15  | Non-adjacent channel rejection at BER=10 <sup>-6</sup> for 3 dB degradation C/I 64QAM-3/4 | [4] 8.3.11.2 | Cb.16.1 |         | - 23 dB                    |                  |
| 16  | Rx max. input level on-channel reception tolerance  | [4] 8.3.11.3 | m       |         | ≥ -30 dBm                  |                  |
| 17  | Rx max. input level on-channel damage tolerance   | [4] 8.3.11.3 | m       |         | ≥ 0 dBm                    |                  |
| 18  | Reference time tolerance  | [4] 12.3.2   | m       |         | +/- (T <sub>b</sub> /32)/2 |                  |
| Cb.16.1: IF B.12/4 THEN m ELSE i.   |   |              |         |         |                            |                  |
| Comments:   |   |              |         |         |                            |                  |

**Table B.17: MS ProfP3\_1.75 specific minimum performance**

| Prerequisite: B.5/1 profP3_1,75 - 1,75 MHz channel PHY.        |   |              |         |         |   |                  |
|--|---|--------------|---------|---------|---|------------------|
| Item   | Capability  | Reference    | Status  | Support | Values allowed  | Values supported |
| 1  | $T_b$   | [4] 12.3.2.1 | m       |         | 128 μs  |                  |
| 2  | BER performance threshold, BER=10 <sup>-6</sup><br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.1 | m       |         | ≤ -96 dBm<br>≤ -93 dBm<br>≤ -91 dBm<br>≤ -88 dBm<br>≤ -84 dBm |                  |
| 3  | BER performance threshold, BER=10 <sup>-6</sup><br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.1 | Cb.17.1 |         | ≤ -80 dBm<br>≤ -78 dBm  |                  |
| 4  | Reference frequency tolerance<br>MS to BS synchronization tolerance   | [4] 12.3.2.1 | m       |         | Cb.17.2   |                  |
| Cb.17.1: IF B.12/4 THEN m ELSE i.                              |   |              |         |         |   |                  |
| Cb.17.2: IF (B.13/2OR B.13/3) THEN ≤ 78,13 Hz ELSE ≤ 156,25 Hz |   |              |         |         |   |                  |
| Comments:  |   |              |         |         |   |                  |

Table B.18: MS ProfP3\_3.5 specific minimum performance

| Prerequisite: B.5/2 profP3_3,5 - 3,5 MHz channel PHY.                     |   |              |         |         |  |                  |
|---|---|--------------|---------|---------|--|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [4] 12.3.2.2 | m       |         | 64 $\mu$ s   |                  |
| 2   | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.2 | m       |         | $\leq -93$ dBm<br>$\leq -90$ dBm<br>$\leq -88$ dBm<br>$\leq -85$ dBm<br>$\leq -81$ dBm |                  |
| 3   | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.2 | Cb.18.1 |         | $\leq -77$ dBm<br>$\leq -75$ dBm   |                  |
| 4   | Reference frequency tolerance<br>MS to BS synchronization tolerance                                     | [4] 12.3.2.2 | m       |         | Cb.18.2  |                  |
| Cb.18.1: IF B.12/4 THEN m ELSE i.   |   |              |         |         |  |                  |
| Cb.18.2: IF (B.13/2OR B.13/3) THEN $\leq 156,25$ Hz ELSE $\leq 312,5$ Hz. |   |              |         |         |  |                  |
| Comments:   |   |              |         |         |  |                  |

Table B.19: MS ProfP3\_7.0 specific minimum performance

| Prerequisite: B.5/3 profP3_7 - 7,0 MHz channel PHY.                    |   |              |        |         |  |                  |
|--|---|--------------|--------|---------|--|------------------|
| Item   | Capability  | Reference    | Status | Support | Values allowed   | Values supported |
| 1  | $T_b$   | [4] 12.3.2.3 | m      |         | 32 $\mu$ s   |                  |
| 2  | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.3 | m      |         | $\leq -90$ dBm<br>$\leq -87$ dBm<br>$\leq -85$ dBm<br>$\leq -82$ dBm<br>$\leq -78$ dBm |                  |
| 3  | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.3 | Cb.19  |         | $\leq -74$ dBm<br>$\leq -72$ dBm   |                  |
| 4  | Reference frequency tolerance<br>MS to BS synchronization tolerance                                     | [4] 12.3.2.3 | m      |         | Cb.19.2  |                  |
| Cb.19.1: IF B.12/4 THEN m ELSE i.                                      |   |              |        |         |  |                  |
| Cb.19.2: IF (B.13/2OR B.13/3) THEN $\leq 312,5$ Hz ELSE $\leq 625$ Hz. |   |              |        |         |  |                  |
| Comments:  |   |              |        |         |  |                  |

Table B.20: MS ProfP3\_3 specific minimum performance

| Prerequisite: B.5/4 profP3_3 - 3 MHz channel PHY.                           |   |              |         |         |  |                  |
|---|---|--------------|---------|---------|--|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [4] 12.3.2.4 | m       |         | 74 18/43 $\mu$ s   |                  |
| 2   | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.4 | m       |         | $\leq -94$ dBm<br>$\leq -91$ dBm<br>$\leq -88$ dBm<br>$\leq -85$ dBm<br>$\leq -82$ dBm |                  |
| 3   | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.4 | Cb.20.1 |         | $\leq -78$ dBm<br>$\leq -76$ dBm   |                  |
| 4   | Reference frequency tolerance<br>MS to BS synchronization tolerance                                     | [4] 12.3.2.4 | m       |         | Cb.20.2  |                  |
| Cb.20.1: IF B.12/4 THEN m ELSE i.   |   |              |         |         |  |                  |
| Cb.20.2: IF (B.13/2 OR B.13/3) THEN $\leq 134,38$ Hz ELSE $\leq 273,13$ Hz. |   |              |         |         |  |                  |
| Comments:   |   |              |         |         |  |                  |

Table B.21: MS ProfP3\_5.5 specific minimum performance

| Prerequisite: B.5/5 profP3_5.5 - 5,5 MHz channel PHY.                       |   |              |         |         |  |                  |
|---|---|--------------|---------|---------|--|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [4] 12.3.2.5 | m       |         | 40 40/79 $\mu$ s   |                  |
| 2   | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.5 | m       |         | $\leq -89$ dBm<br>$\leq -86$ dBm<br>$\leq -84$ dBm<br>$\leq -79$ dBm<br>$\leq -77$ dBm |                  |
| 3   | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.5 | Cb.21.1 |         | $\leq -72$ dBm<br>$\leq -71$ dBm   |                  |
| 4   | Reference frequency tolerance<br>MS to BS synchronization tolerance                                     | [4] 12.3.2.5 | m       |         | Cb.21.2  |                  |
| Cb.21.1: IF B.12/4 THEN m ELSE i.   |   |              |         |         |  |                  |
| Cb.21.2: IF (B.13/2 OR B.13/3) THEN $\leq 246,88$ Hz ELSE $\leq 493,75$ Hz. |   |              |         |         |  |                  |
| Comments:   |   |              |         |         |  |                  |

Table B.22: MS ProfP3\_10 specific minimum performance

| Prerequisite: B.5/6 profP3_10 - 10 MHz channel PHY.                   |   |              |         |         |  |                  |
|---|---|--------------|---------|---------|--|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [4] 12.3.2.6 | m       |         | 22 2/9 $\mu$ s   |                  |
| 2   | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.6 | m       |         | $\leq -86$ dBm<br>$\leq -83$ dBm<br>$\leq -81$ dBm<br>$\leq -76$ dBm<br>$\leq -74$ dBm |                  |
| 3   | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.6 | Cb.22.1 |         | $\leq -72$ dBm<br>$\leq -71$ dBm   |                  |
| 4   | Reference frequency tolerance<br>MS to BS synchronization tolerance                                     | [4] 12.3.2.6 | m       |         | Cb.22.2  |                  |
| Cb.22.1: IF B.12/4 THEN m ELSE i.                                     |   |              |         |         |  |                  |
| Cb.22.2: IF (B.13/2 OR B.13/3) THEN $\leq 450$ Hz ELSE $\leq 900$ Hz. |   |              |         |         |  |                  |
| Comments:   |   |              |         |         |  |                  |

Table B.23: MS ProfP3\_2.5 specific minimum performance

| Prerequisite: B.5/7 profP3_2.5- 2,5 MHz channel PHY.                    |   |           |         |         |  |                  |
|---|---|-----------|---------|---------|--|------------------|
| Item  | Capability  | Reference | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [6] 5.3.7 | m       |         | 88 8/9 $\mu$ s   |                  |
| 2   | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [6] 5.3.7 | m       |         | $\leq -93$ dBm<br>$\leq -90$ dBm<br>$\leq -88$ dBm<br>$\leq -85$ dBm<br>$\leq -81$ dBm |                  |
| 3   | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [6] 5.3.7 | Cb.23.1 |         | $\leq -77$ dBm<br>$\leq -75$ dBm   |                  |
| 4   | Reference frequency tolerance<br>MS to BS synchronization tolerance                                     | [6] 5.3.7 | m       |         | Cb.23.2  |                  |
| Cb.23.1: IF B.12/4 THEN m ELSE i.                                       |   |           |         |         |  |                  |
| Cb.23.2: IF (B.13/2 OR B.13/3) THEN $\leq 112,5$ Hz ELSE $\leq 225$ Hz. |   |           |         |         |  |                  |
| Comments:   |   |           |         |         |  |                  |

**Table B.24: MS ProfP3\_5 specific minimum performance**

| Prerequisite: B.5/8 profP3_5- 5 MHz channel PHY.                     |   |           |        |         |  |                  |
|--|---|-----------|--------|---------|--|------------------|
| Item   | Capability  | Reference | Status | Support | Values allowed   | Values supported |
| 1  | $T_b$   | [6] 5.3.8 | m      |         | 44 4/9 $\mu$ s   |                  |
| 2  | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [6] 5.3.8 | m      |         | $\leq -90$ dBm<br>$\leq -87$ dBm<br>$\leq -85$ dBm<br>$\leq -82$ dBm<br>$\leq -78$ dBm |                  |
| 3  | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [6] 5.3.8 |        | Cb.24.1 | $\leq -74$ dBm<br>$\leq -72$ dBm   |                  |
| 4  | Reference frequency tolerance<br>MS to BS synchronization tolerance                                     | [6] 5.3.8 | m      |         | Cb.24.2  |                  |
| Cb.24.1: IF B.12/4 THEN m ELSE i.                                    |   |           |        |         |  |                  |
| Cb.24.2: IF (B.13/2OR B.13/3) THEN $\leq 225$ Hz ELSE $\leq 450$ Hz. |   |           |        |         |  |                  |
| Comments:  |   |           |        |         |  |                  |

### B.5.3.1.2 Convergence sub layer

**Table B.25: MS Convergence Sub layer protocol support**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |                              |           |        |         |
|---|------------------------------|-----------|--------|---------|
| Item  | Name                         | Reference | Status | Support |
| 1   | Packet convergence sub layer | [4] 5.2   | m      |         |
| Comments:   |                              |           |        |         |

**Table B.26: MS Packet Convergence Sub layer protocol support**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |                                  |           |         |         |
|---|----------------------------------|-----------|---------|---------|
| Item  | Name                             | Reference | Status  | Support |
| 1   | Internet Protocol (IPv4)         | [4] 5.2.6 | o       |         |
| 2   | Internet Protocol (IPv6)         | [4] 5.2.6 | o       |         |
| 3   | IEEE 802.3 (Ethernet) [12]       | [4] 5.2.4 | m       |         |
| 4   | IEEE 802.1Q VLAN [13]            | [4] 5.2.5 | o       |         |
| 5   | IPv4 over 802.3 Ethernet [12]    | [4] 5.2.4 | m       |         |
| 6   | IPv6 over 802.3 Ethernet [12]    | [4] 5.2.4 | o       |         |
| 7   | IPv4 over 802.1Q VLAN [13]       | [4] 5.2.5 | Cb.26.1 |         |
| 8   | IPv6 over 802.1Q VLAN [13]       | [4] 5.2.5 | Cb.26.1 |         |
| 9   | Payload header suppression (PHS) | [4] 5.2.3 | o       |         |
| Cb.26.1: IF (A 26/4) THEN o ELSE i.                                       |                                  |           |         |         |
| Comments:   |                                  |           |         |         |

**Table B.27: MS Major packet classification**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.               |                                      |                  |         |         |
|---|--------------------------------------|------------------|---------|---------|
| Item  | Name                                 | Reference        | Status  | Support |
| 1   | IP Classification                    | [4] 11.13.19.3.4 | Cb.27.1 |         |
| 2   | Ethernet classification              | [4] 11.13.19.3.4 | Cb.27.2 |         |
| 3   | IEEE 802.1Q VLAN classification [13] | [4] 11.13.19.3.4 | Cb.27.3 |         |
| Cb.27.1: IF (A 26/1 or A 26/2 or A 26/5 or A 26/6 or A 26/7 or A 26/8) THEN m ELSE n/a. |                                      |                  |         |         |
| Cb.27.2: IF (A 26/3 or A 26/5 or A 26/6 or) THEN m ELSE n/a.                            |                                      |                  |         |         |
| Cb.27.3: IF (A 26/4 or A 26/7 or A 26/8) THEN m ELSE n/a.                               |                                      |                  |         |         |
| Comments:   |                                      |                  |         |         |

**Table B.28: IP packet classification in the UL**

| Prerequisite: (B.2/1 and B.4/1 and B.27/1) Mobile Station (MS) and Basic packet PMP and IP support.                                  |   |                              |       |    |       |         |
|--|---|------------------------------|-------|----|-------|---------|
| Item   | Name  | Reference                    | IEEE  | HM | WiMAX | Support |
| 1  | Classification based on DSCP/IP TOS field               | [4] 5.2.2,<br>11.13.19.3.4.2 | Ob.28 | m  | m     |         |
| 2  | Classification based on IP Protocol/Next Header field   | [4] 5.2.2,<br>11.13.19.3.4.3 | Ob.28 | m  | m     |         |
| 3  | Classification based on IP masked Source Address        | [4] 5.2.2,<br>11.13.19.3.4.4 | Ob.28 | m  | m     |         |
| 4  | Classification based on IP Destination Address          | [4] 5.2.2,<br>11.13.19.3.4.5 | Ob.28 | m  | m     |         |
| 5  | Classification based on protocol source port range      | [4] 5.2.2,<br>11.13.19.3.4.6 | Ob.28 | m  | m     |         |
| 6  | Classification based on protocol destination port range | [4] 5.2.2,<br>11.13.19.3.4.7 | Ob.28 | m  | m     |         |
| Ob.28: It is mandatory to support at least one of these items.   |   |                              |       |    |       |         |
| NOTE: The status was made mandatory for HM and WiMAX, because for interoperability issue, the MS should support all the classifiers. |   |                              |       |    |       |         |
| Comments:  |   |                              |       |    |       |         |

**Table B.29: Ethernet packet classification in the UL**

| Prerequisite: (B.2/1 and B.4/1 and B.27/2) Mobile Station (MS) and Basic packet PMP and Ethernet support.                            |   |                               |       |    |       |         |
|--|---|-------------------------------|-------|----|-------|---------|
| Item   | Name  | Reference                     | IEEE  | HM | WiMAX | Support |
| 1  | Classification based on Destination MAC Address | [4] 5.2.2,<br>11.13.19.3.4.8  | Ob.29 | m  | m     |         |
| 2  | Classification based on Source MAC Address      | [4] 5.2.2,<br>11.13.19.3.4.9  | Ob.29 | m  | m     |         |
| 3  | Classification based on Ethertype/SAP           | [4] 5.2.2,<br>11.13.19.3.4.10 | Ob.29 | m  | m     |         |
| Ob.29: It is mandatory to support at least one of these items.   |   |                               |       |    |       |         |
| NOTE: The status was made mandatory for HM and WiMAX, because for interoperability issue, the MS should support all the classifiers. |   |                               |       |    |       |         |
| Comments:  |   |                               |       |    |       |         |

**Table B.30: 802.1Q packet classification in the UL**

| Prerequisite: (B.2/1 and B.4/1 and B.27/3) Mobile Station (MS) and Basic packet PMP and 802.1Q support.                              |  |                            |       |    |       |         |
|--|--|----------------------------|-------|----|-------|---------|
| Item   | Name   | Reference                  | IEEE  | HM | WiMAX | Support |
| 1  | Classification based on 802.1D user priority | [4] 5.2.2, 11.13.19.3.4.11 | Ob.30 | m  | m     |         |
| 2  | Classification based on 802.1Q VLAN ID       | [4] 5.2.2, 11.13.19.3.4.12 | Ob.30 | m  | m     |         |
| Ob.30: It is mandatory to support at least one of these items.   |  |                            |       |    |       |         |
| NOTE: The status was made mandatory for HM and WiMAX, because for interoperability issue, the MS should support all the classifiers. |  |                            |       |    |       |         |
| Comments:  |  |                            |       |    |       |         |

## B.5.3.1.3 MAC common part sub layer

Table B.31: Major MAC Common part functionalities for MS

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |   |            |        |         |
|---|---|------------|--------|---------|
| Item  | Name                                    | Reference  | Status | Support |
| 1   | Addressing and connections              | [4] 6.3.1  | m      |         |
| 2   | Construction of PDUs                    | [4] 6.3.3  | m      |         |
| 3   | ARQ                                     | [4] 6.3.4  | o      |         |
| 4   | Uplink scheduling service               | [4] 6.3.5  | m      |         |
| 5   | Bandwidth allocation and request        | [4] 6.3.6  | m      |         |
| 6   | Contention resolution                   | [4] 6.3.8  | m      |         |
| 7   | Network entry and initialization        | [4] 6.3.9  | m      |         |
| 8   | Ranging                                 | [4] 6.3.10 | m      |         |
| 9   | Update of UL and DL channel descriptors | [4] 6.3.11 | m      |         |
| 10  | Quality of service                      | [4] 6.3.14 | o      |         |
| Comments:   |   |            |        |         |

Table B.32: Miscellaneous management functions for MS in PMP

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |   |                                  |         |         |
|---|---|----------------------------------|---------|---------|
| Item  | Name  | Reference                        | Status  | Support |
| 1   | Participation in multicast polling groups                                   | [4] 6.3.12,<br>12.3.1.1          | m       |         |
| 2   | Downlink Burst profile management initiated by MS (DBPC messages)           | [4] 6.3.2.3.20<br>[4] 6.3.2.3.21 | m       |         |
| 3   | MS reset initiated by BS (RES-CMD)  | [4] 6.3.2.3.22                   | m       |         |
| 4   | MS network clock comparison initiated by BS (CLK-CMP)                       | [4] 6.3.2.3.25                   | Cb.32.1 |         |
| 5   | MS notifies BS of de-registration (DREG-REQ)                                | [4] 6.3.2.3.43                   | o       |         |
| 6   | MS forced by BS to change its channel access (DREG-CMD)                     | [4] 6.3.2.3.26                   | m       |         |
| 7   | MS receives quick answer from BS to its DSx-REQ (DSX-RVD)                   | [4] 6.3.2.3.27                   | Cb.32.2 |         |
| 8   | MS informs BS of reception of Config file (TFTP messages)                   | [4] 6.3.2.3.28<br>[4] 6.3.2.3.29 | m       |         |
| 9   | MS answers to BS channel management report request (REP-REQ and REP-RSP)    | [4] 6.3.2.3.33                   | m       |         |
| 10  | MS applies the power change requested by the BS (FPC)                       | [4] 6.3.2.3.34                   | m       |         |
| 11  | MS answers the AAS feedback message request from the BS (AAS-FBCK messages) | [4] 6.3.2.3.40                   | Cb.32.3 |         |
| 12  | MS inform the BS of preferred beam direction (AAS-BEAM select message)      | [4] 6.3.2.3.41                   | Cb.32.3 |         |
| 13  | MS answers the AAS beam message request from the BS (AAS-Beam messages)     | [4] 6.3.2.3.42                   | Cb.32.3 |         |
| Cb.32.1: IF B.41/1 THEN m ELSE o.   |   |                                  |         |         |
| Cb.32.2: IF (B.57/2 or B.57/5 or B.57/8) THEN m ELSE n/a.                 |   |                                  |         |         |
| Cb.32.3: IF B.13/1 THEN m ELSE n/a.                                       |   |                                  |         |         |
| Comments:   |   |                                  |         |         |

Table B.33: MS Management capability

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |                       |                   |        |         |
|---|-----------------------|-------------------|--------|---------|
| Item  | Capability            | Reference         | Status | Support |
| 1   | MS Management Support | [4] 6.3.9, 11.7.2 | o      |         |
| 2   | MS IP Management      | [4] 6.3.9, 11.7.3 | o      |         |
| Comments:   |                       |                   |        |         |

**Table B.34: MS Addressing and Connections - PMP**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |  |              |         |         |
|---|--|--------------|---------|---------|
| Item  | Capability   | Reference    | Status  | Support |
| 1   | Globally Unique MS MAC Address   | [4] 6.3.1    | m       |         |
| 2   | MAC Management messages only applicable on connection types as specified in [4] table 14       | [4] 6.3.2.3  | m       |         |
| 3   | User data only on transport connections  | [4] 6.3.1    | m       |         |
| 4   | Data transferred over the secondary management shall be encapsulated in 802.3 Ethernet packets | [4] 6.3.1    | Cb.34.2 |         |
| 5   | DHCP for MS IP address establishment and maintenance on the secondary management connection    | [4] 6.3.9.10 | Cb.34.1 |         |
| 6   | Time protocol on the secondary management connection   | [4] 6.3.9.11 | Cb.34.1 |         |
| 7   | TFTP during initialization on the secondary management connection                              | [4] 6.3.9.12 | Cb.34.1 |         |
| 8   | SNMP packets used for MS management on the secondary management connection                     | [4] 6.3.1    | Cb.34.1 |         |
| Cb.34.1: IF B.33/2 THEN m ELSE n/a.                                       |  |              |         |         |
| Cb.34.2: IF B.33/1 THEN m ELSE n/a.                                       |  |              |         |         |
| Comments:   |  |              |         |         |

#### B.5.3.1.4 Construction and Transmission of MAC PDUs

**Table B.35: MS Transmission conventions**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |  |             |        |         |
|---|--|-------------|--------|---------|
| Item  | Capability   | Reference   | Status | Support |
| 1   | Fields of MAC messages are transmitted in the same order as they appear in the corresponding tables in the standard  | [4] 6.3.3.1 | m      |         |
| 2   | Fields of MAC messages and fields of TLVs, which are specified in the standard as binary numbers (including CRC and HCS) are transmitted as a sequence of their binary digits, starting from MSB. Bit masks (for example, in ARQ) are considered numerical fields. For signed numbers MSB is allocated for the sign. Length field in the "definite form" of ITU-T Recommendation X.690 [14] is also considered a numerical field | [4] 6.3.3.1 | m      |         |
| 3   | Fields specified as SDUs or SDU fragments (for example, MAC PDU payloads) are transmitted in the same order of bytes as received from upper layers   | [4] 6.3.3.1 | m      |         |
| 4   | Fields specified as strings are transmitted in the order of symbols in the string. In cases c and d, bits within a byte are transmitted in the order MSB first   | [4] 6.3.3.1 | m      |         |
| Comments:   |  |             |        |         |

**Table B.36: MS PDU concatenation**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |   |             |        |         |
|---|---|-------------|--------|---------|
| Item  | Capability  | Reference   | Status | Support |
| 1   | Concatenate Multiple MAC PDUs into a single burst of the allocated length | [4] 6.3.3.2 | m      |         |
| 2   | Receive concatenated MAC PDUs and determine disposition via CID           | [4] 6.3.3.2 | m      |         |
| 3   | Padding of any unused space in the UL Burst to a known state              | [4] 6.3.3.7 | m      |         |
| Comments:   |   |             |        |         |



**Table B.37: MS SDU Fragmentation**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |  |               |         |         |
|---|--|---------------|---------|---------|
| Item  | Capability   | Reference     | Status  | Support |
| 1   | Fragment a MAC SDU into multiple MAC PDUs applicable to Management messages on Primary management connection     | [4] 6.3.3.3   | m       |         |
| 2   | Add Fragmentation Sub header to the SDU fragment including setting FC according to the Fragmentation rules table | [4] 6.3.3.3   | m       |         |
| 3   | Increment the FSN modulo 8 for non-ARQ connections   | [4] 6.3.3.3   | o       |         |
| 4   | Increment the FSN modulo 2048 for non-ARQ connections  | [4] 6.3.3.3   | m       |         |
| 5   | Increment the BSN modulo 2048 for ARQ connection   | [4] 6.3.3.4.2 | Cb.37.1 |         |
| 6   | Do not perform fragmentation of PDUs on Basic and Initial Ranging connections                                    | [4] 6.3.2.3   | m       |         |
| Cb.37.1: IF A31/3 THEN m ELSE i.  |  |               |         |         |
| Comments:   |  |               |         |         |

**Table B.38: MS SDU reassembly**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |  |             |        |         |
|---|--|-------------|--------|---------|
| Item  | Capability                                     | Reference   | Status | Support |
| 1   | Receive and reassemble fragmented SDUs         | [4] 6.3.3.3 | m      |         |
| 2   | Discard SDUs corrupted due to loss of fragment | [4] 6.3.3.3 | m      |         |
| Comments:   |  |             |        |         |

**Table B.39: MS Packing**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |  |                            |         |         |
|---|--|----------------------------|---------|---------|
| Item  | Capability   | Reference                  | Status  | Support |
| 1   | Supports Fixed length non-ARQ SDUs in a MAC PDU                                    | [4] 6.3.3.4.1.1            | o       |         |
| 2   | Pack Fixed length non-ARQ SDUs in a MAC PDU  | [4] 6.3.3.4.1.1            | o       |         |
| 3   | Unpack Fixed length non-ARQ SDUs in a MAC PDU                                      | [4] 6.3.3.4.1.1            | Cb.39.1 |         |
| 4   | Supports variable length non-ARQ SDUs in a MAC PDU                                 | [4] 6.3.3.4.1.2            | m       |         |
| 5   | Pack variable length non-ARQ SDUs in a MAC PDU                                     | [4] 6.3.3.4.1.2            | o       |         |
| 6   | Unpack variable length non-ARQ SDUs in a MAC PDU                                   | [4] 6.3.3.4.1.2            | m       |         |
| 7   | Pack variable length ARQ-enabled SDUs or SDUs fragments in a MAC PDU               | [4] 6.3.3.4.2<br>[2] 5.1.2 | Cb.39.2 |         |
| 8   | Unpack variable length ARQ-enabled SDUs or SDUs fragments in a MAC PDU             | [4] 6.3.3.4.2<br>[2] 5.1.2 | Cb.39.2 |         |
| 9   | Do not perform packing of SDUs on Basic, Broadcast and Initial Ranging connections | [4] 6.3.2.3                | m       |         |
| 10  | Perform packing of ARQ Feedback Payload  | [4] 6.3.3.4.3              | Cb.39.3 |         |
| 11  | Extracting ARQ Feedback IEs from received ARQ Feedback Payload                     | [4] 6.3.3.4.3              | Cb.39.3 |         |
| 12  | Pack several ARQ feedback information elements in a single ARQ feedback payload    | [4] 6.3.4 [2] 5.1.3        | Cb.39.4 |         |
| 13  | Insert a single ARQ feedback payload as first packet in a MAC PDU                  | [4] 6.3.4 [2] 5.1.3        | Cb.39.4 |         |
| Cb.39.1: IF A39/1 THEN m ELSE o.  |  |                            |         |         |
| Cb.39.2: IF A31/3 THEN m ELSE i.  |  |                            |         |         |
| Cb.39.3: IF (B.31/3 And B.39/7) THEN m ELSE i.                            |  |                            |         |         |
| Cb.39.4: IF B.31/3 THEN m ELSE n/a.                                       |  |                            |         |         |
| Comments:   |  |                            |         |         |

**Table B.40: MS CRC**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |                     |             |        |         |
|---|---------------------|-------------|--------|---------|
| Item  | Capability          | Reference   | Status | Support |
| 1   | Compute and add CRC | [4] 6.3.3.5 | m      |         |
| 2   | Check CRC           | [4] 6.3.3.5 | m      |         |
| Comments:   |                     |             |        |         |

**Table B.41: MS Uplink scheduling services**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |   |                             |         |         |
|---|---|-----------------------------|---------|---------|
| Item  | Name  | Reference                   | Status  | Support |
| 1   | Unsolicited grant service (UGS)   | [4] 6.3.5.2.1,<br>[6] 6.1.1 | m       |         |
| 2   | Real time polling service (rtPS)  | [4] 6.3.5.2.2               | o       |         |
| 3   | Non-Real time polling service (nrtPS)   | [4] 6.3.5.2.3               | m       |         |
| 4   | Best effort service (BE)  | [4] 6.3.5.2.4               | m       |         |
| 5   | Extended Real time polling service (ertPS)  | [4] 6.3.5.2.2               | o       |         |
| 6   | Refrain from issuing requests on UGS connections other than Poll-me bits and Slip indicator | [4] 6.3.5                   | Cb.41.1 |         |
| Cb.41.1: IF A41/1 THEN m ELSE n/a.  |   |                             |         |         |
| Comments:   |   |                             |         |         |

**Table B.42: Bandwidth allocation and request for MS**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |  |                                |         |         |
|---|--|--------------------------------|---------|---------|
| Item  | Name   | Reference                      | Status  | Support |
| 1   | MS requests aggregate bandwidth via Bandwidth Request Header                     | [4] 6.3.6.1                    | m       |         |
| 2   | MS requests incremental bandwidth via Bandwidth Request Header                   | [4] 6.3.6.1                    | o       |         |
| 3   | MS requests incremental bandwidth via piggyback request                          | [4] 6.3.6.1                    | Cb.42.1 |         |
| 4   | MS transmits Bandwidth request during REQ Region Full.                           | [4] 6.3.6.4                    | m       |         |
| 5   | MS transmits Bandwidth request during Focused Contention IE.                     | [4] 6.3.6.1                    | o       |         |
| 6   | MS transmits Bandwidth request during Subchannelized Region.                     | [4] 6.3.6.1                    | Cb.42.2 |         |
| 7   | MS transmits Bandwidth request during any IE having UIUCs in the range of 5 - 12 | [4] 6.3.6.1                    | m       |         |
| 8   | MS responds to Unicast, or Broadcast polls                                       | [4] 6.3.6.3.2<br>[4] 6.3.6.3.1 | m       |         |
| 9   | MS responds to Multicast polls   | [4] 6.3.6.3.2                  | Cb.42.3 |         |
| 10  | MS uses Poll-me (PM) bit   | [4] 6.3.6.3.3                  | Cb.42.4 |         |
| 11  | MS uses SI   | [4] 6.3.5.2.1                  | Cb.42.4 |         |
| 12  | Receive AAS IE   | [4] 6.3.6.1                    | Cb.42.5 |         |
| Cb.42.1: IF B.42/2 THEN m ELSE o.   |  |                                |         |         |
| Cb.42.2: IF (B.13/2 OR B.13/3) THEN m, ELSE n/a.                          |  |                                |         |         |
| Cb.42.3: IF B.32/1 THEN m ELSE n/a.                                       |  |                                |         |         |
| Cb.42.4: IF B.41/1 THEN m ELSE n/a.                                       |  |                                |         |         |
| Cb.42.5: IF B.13/1 THEN m ELSE n/a.                                       |  |                                |         |         |
| Comments  |  |                                |         |         |

**Table B.43: MS MAP Relevance**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |                          |               |        |         |                        |                 |
|---|--------------------------|---------------|--------|---------|------------------------|-----------------|
| Item  | Capability               | Reference     | Status | Support | Value allowed          | Value supported |
| 1   | Minimum UL MAP Relevance | [4] 6.3.7.5.3 | m      |         | Cb.43.1                |                 |
| 2   | Maximum UL-MAP Relevance | [4] 6.3.7.5.3 | m      |         | End of following frame |                 |
| Cb.43.1: IF B.7/2: THEN round trip delay + Tproc ELSE ATDD split.         |                          |               |        |         |                        |                 |
| Comments  |                          |               |        |         |                        |                 |

**Table B.44: Contention resolution for MS**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |  |           |        |         |
|---|--|-----------|--------|---------|
| Item  | Name   | Reference | Status | Support |
| 1   | The MS supports truncated exponential backoff for initial ranging              | [4] 6.3.8 | m      |         |
| 2   | The MS supports truncated exponential backoff for bandwidth request contention | [4] 6.3.8 | m      |         |
| Comments:   |  |           |        |         |

**Table B.45: Network entry and initialization for MS in PMP**

| Item   | Capability  | Reference            | IEEE    | HM      | ETG     | Support |
|--|---|----------------------|---------|---------|---------|---------|
| 1  | Scanning and synchronization to the downlink                    | [4] 6.3.9.1          | m       | m       | m       |         |
| 2  | Obtain Downlink Parameters                                      | [4] 6.3.9.2          | m       | m       | m       |         |
| 3  | Obtain Uplink Parameters  | [4] 6.3.9.3, 6.3.9.4 | m       | m       | m       |         |
| 4  | Perform Initial Ranging   | [4] 6.3.9.5, 6.3.9.6 | m       | m       | m       |         |
| 5  | Inform BS of Basic Capabilities                                 | [4] 6.3.9.7          | m       | m       | m       |         |
| 6  | Perform MS Authorization  | [4] 6.3.9.8, 7.2     | o       | m       | m       |         |
| 7  | Perform registration  | [4] 6.3.9.9          | m       | m       | m       |         |
| 8  | Request for IP connectivity                                     | [4] 6.3.9.10         | Cb.45.1 | Cb.45.1 | Cb.45.1 |         |
| 9  | Establish Time of day   | [4] 6.3.9.11         | Cb.45.1 | Cb.45.1 | Cb.45.1 |         |
| 10   | Transfer operational parameters                                 | [4] 6.3.9.12         | Cb.45.1 | Cb.45.1 | Cb.45.1 |         |
| 11   | Supports Network Entry triggered by BS restart count TLV change | [4] 6.3.9.15         | m       | m       | o       |         |
| 12   | Initial ranging with subchannelization                          | [4] 8.3.7.2          | Cb.45.2 | Cb.45.2 | Cb.45.2 |         |
| Cb.45.1: IF B.33/1 THEN m ELSE n/a.              |   |                      |         |         |         |         |
| Cb.45.2: IF (B.13/2 OR B.13/3) THEN m, ELSE n/a. |   |                      |         |         |         |         |
| Comments:  |   |                      |         |         |         |         |

**Table B.46: MS Obtain DL Parameters**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |                              |             |        |         |
|---|------------------------------|-------------|--------|---------|
| Item  | Capability                   | Reference   | Status | Support |
| 1   | MS receives DLFP correctly   | [4] 8.3.5.1 | m      |         |
| 2   | MS receives DL-MAP correctly | [4] 6.3.9.2 | m      |         |
| 3   | MS receives DCD correctly    | [4] 6.3.9.2 | m      |         |
| Comments:   |                              |             |        |         |

**Table B.47: MS Obtain UL Parameters**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |                              |                      |        |         |
|---|------------------------------|----------------------|--------|---------|
| Item  | Capability                   | Reference            | Status | Support |
| 1   | MS receives UCD correctly    | [4] 6.3.9.3, 6.3.9.4 | m      |         |
| 2   | MS receives UL-MAP correctly | [4] 6.3.9.3, 6.3.9.4 | m      |         |
| Comments:   |                              |                      |        |         |

**Table B.48: MS Initial ranging**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |   |              |        |         |
|---|---|--------------|--------|---------|
| Item  | Capability  | Reference    | Status | Support |
| 1   | MS receives UL-MAP containing Initial Ranging IE  | [4] 6.3.9.5  | m      |         |
| 2   | MS sends RNG-REQ in random transmission opportunity (TO) within backoff window, using the correct burst profile | [4] 6.3.9.5  | m      |         |
| 3   | MS receives RNG-RSP   | [4] 6.3.9.5  | m      |         |
| 4   | MS establishes Basic and Primary Management connections   | [4] 6.3.9.5  | m      |         |
| 5   | MS performs timing and power adjustment, and frequency adjustment   | [4] 6.3.9.6  | m      |         |
| 6   | Use the RNG-REQ message to request a DL burst profile change  | [4] 6.3.10.1 | o      |         |
| 7   | MS performs network entry and initialization on DL Frequency Override channel, if instructed                    | [4] 6.3.9.5  | m      |         |
| Comments:   |   |              |        |         |

**Table B.49: MS Negotiate basic capabilities**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |                               |             |        |         |
|---|-------------------------------|-------------|--------|---------|
| Item  | Capability                    | Reference   | Status | Support |
| 1   | MS sends SBC-REQ              | [4] 6.3.9.7 | m      |         |
| 2   | MS receives SBC-RSP           | [4] 6.3.9.7 | m      |         |
| 3   | MS resends SBC-REQ on timeout | [4] 6.3.9.7 | m      |         |
| Comments:   |                               |             |        |         |

**Table B.50: MS Registration**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |  |             |         |         |
|---|--|-------------|---------|---------|
| Item  | Capability   | Reference   | Status  | Support |
| 1   | MS sends REG-REQ to register with a BS   | [4] 6.3.9.9 | m       |         |
| 2   | MS receives REG-RSP  | [4] 6.3.9.9 | m       |         |
| 3   | MS re-sends REG-REQ upon time out, until REG-RSP is received or until T6 expires | [4] 6.3.9.9 | m       |         |
| 4   | MS establishes Secondary Management Connection                                   | [4] 6.3.9.9 | Cb.50.1 |         |
| Cb.50.1: IF B.33/1 THEN m ELSE n/a.                                       |  |             |         |         |
| Comments:   |  |             |         |         |

**Table B.51: MS Establish IP connectivity**

| Prerequisite: (B.2/1 and B.4/1 and B.33/2) Mobile Station (MS) and Basic packet PMP and MS IP Management. |  |              |        |         |
|---|--|--------------|--------|---------|
| Item  | Capability   | Reference    | Status | Support |
| 1   | DHCP mechanisms following the RFC 2131 [15] rules            | [4] 6.3.9.10 | m      |         |
| 2   | MS sends DHCP discover on Secondary Management Connection    | [4] 6.3.9.10 | m      |         |
| 3   | MS receives DHCP offer on Secondary Management Connection    | [4] 6.3.9.10 | m      |         |
| 4   | MS sends DHCP request on Secondary Management Connection     | [4] 6.3.9.10 | m      |         |
| 5   | MS receives DHCP response on Secondary Management Connection | [4] 6.3.9.10 | m      |         |
| 6   | MS sets up IP parameters from DHCP response                  | [4] 6.3.9.10 | m      |         |
| Comments: As per item B.21/5 all the DHCP packets mentioned here are intended for MS management.          |  |              |        |         |

**Table B.52: MS Establish time of day**

| Prerequisite: (B.2/1 and B.4/1 and B.33/2) Mobile Station (MS) and Basic packet PMP and MS IP Management. |                                  |              |        |         |
|---|----------------------------------|--------------|--------|---------|
| Item  | Capability                       | Reference    | Status | Support |
| 1   | MS sends Time of Day request     | [4] 6.3.9.11 | m      |         |
| 2   | MS receives Time of Day response | [4] 6.3.9.11 | m      |         |
| 3   | MS establishes Time of Day       | [4] 6.3.9.11 | m      |         |
| Comments:   |                                  |              |        |         |

**Table B.53: MS Transfer operational parameters**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP and MS IP Management. |   |              |         |         |
|--|---|--------------|---------|---------|
| Item   | Capability  | Reference    | Status  | Support |
| 1  | MS sends TFTP-CPLT on Secondary management connection, after successful configuration using DHCP protocol | [4] 6.3.9.12 | Cb.53.1 |         |
| 2  | MS sends TFTP-CPLT on Primary management connection, for notification                                     | [4] 6.3.9.12 | m       |         |
| 3  | MS receives TFTP-RSP as response to TFTP-CPLT   | [4] 6.3.9.12 | m       |         |
| 4  | MS keeps sending TFTP-CPLT on timeout while waiting for TFTP-RSP  | [4] 6.3.9.12 | m       |         |
| 5  | Transfer Config File  | [4] 6.3.9.12 | o       |         |
| 6  | Support Configuration File format   | [4] 9.2.1    | Cb.53.2 |         |
| 7  | MS MIC Configuration setting  | [4] 9.2.3    | Cb.53.2 |         |
| 8  | End Configuration Setting   | [4] 9.2.3    | Cb.53.2 |         |
| 9  | Software Upgrade Filename   | [4] 9.2.2    | Cb.53.2 |         |
| 10   | Software Server Ip Address  | [4] 9.2.2    | Cb.53.2 |         |
| 11   | Pad Configuration setting   | [4] 9.2.1    | Cb.53.2 |         |
| 12   | Vendor specific configuration settings  | [4] 9.2.2    | o       |         |
| Cb.53.1: IF B.45/10 THEN m ELSE x.   |   |              |         |         |
| Cb.53.2: IF B.53/5 THEN m ELSE n/a.  |   |              |         |         |
| Comments:  |   |              |         |         |

**Table B.54:MS Periodic ranging**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |  |            |        |         |
|---|--|------------|--------|---------|
| Item  | Capability   | Reference  | Status | Support |
| 1   | Reinitialize after T4 with no periodic ranging opportunity                           | [4] 6.3.10 | m      |         |
| 2   | Adjust PHY parameters in response to RNG-RSP after initial ranging                   | [4] 6.3.10 | m      |         |
| 3   | Use the RNG-REQ message to request a DL burst profile change                         | [4] 6.3.10 | m      |         |
| 4   | Use the DBPC-REQ message to request a DL burst profile change in data grant interval | [4] 6.3.10 | m      |         |
| 5   | Change DL burst profile based upon RNG-RSP   | [4] 6.3.10 | m      |         |
| 6   | Change DL burst profile based upon DBPC-RSP  | [4] 6.3.10 | m      |         |
| Comments:   |  |            |        |         |

**Table B.55: Update of channel descriptors by MS**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |   |            |        |         |
|---|---|------------|--------|---------|
| Item  | Capability  | Reference  | Status | Support |
| 1   | MS stores new uplink burst descriptors upon receiving UCD message with incremented Configuration change count (I+1 mod 256)   | [4] 6.3.11 | m      |         |
| 2   | MS 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) | [4] 6.3.11 | m      |         |
| 3   | MS stores new downlink burst descriptors upon receiving DCD message with incremented Configuration Change Count (I+1 mod 256)   | [4] 6.3.11 | m      |         |
| 4   | MS receives using new generation of burst descriptors after receiving DL-MAP with DCD Count matching the new Configuration Change Count (I+1 mod 256)                 | [4] 6.3.11 | m      |         |
| 5   | MS Supports two simultaneous sets of burst descriptors  | [4] 6.3.11 | m      |         |
| Comments:   |   |            |        |         |

**Table B.56: Assignment of SSs to multicast groups**

| Prerequisite: (B.2/1 and B.4/1 and B.32/1) Mobile Station (MS) and Basic packet PMP and MCA_REQ from BS allowed. |  |            |        |         |
|--|--|------------|--------|---------|
| Item   | Capability   | Reference  | Status | Support |
| 1  | MS receives a request for joining or leaving a multicast polling group, using MCA-REQ  | [4] 6.3.12 | m      |         |
| 2  | MS supports participation in multicast polling group and adds multicast CID to transmission opportunities to join the group    | [4] 6.3.12 | o      |         |
| 3  | MS supports participation in multicast polling group and delete multicast CID to transmission opportunities to leave the group | [4] 6.3.12 | o      |         |
| 4  | MS transmits MCA-RSP to acknowledge the action and indicate status (ok, reject, etc.)  | [4] 6.3.12 | m      |         |

Comments:

**Table B.57: MS Service flow operations**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |  |                |        |         |
|---|--|----------------|--------|---------|
| Item  | Capability   | Reference      | Status | Support |
| 1   | MS receives DSA-REQ on pre provisioned service flows, to get encodings             | [4] 6.3.14.7.1 | m      |         |
| 2   | MS initiates (DSA-REQ) the creation of a Dynamic service flow                      | [4] 6.3.14.7.2 | o      |         |
| 3   | MS answers (DSA-RSP) to the creation of a Dynamic service flow initiated by BS     | [4] 6.3.14.7.2 | m      |         |
| 4   | MS receives DSC-REQ for modification of existing service flows                     | [4] 6.3.14.9.4 | m      |         |
| 5   | MS initiates (DSC-REQ) the modification of a Dynamic service flow                  | [4] 6.3.14.9.4 | o      |         |
| 6   | MS answers (DSC-RSP) to the modification of a Dynamic service flow initiated by BS | [4] 6.3.14.9.4 | m      |         |
| 7   | MS receives DSD-REQ for deletion of existing service flows                         | [4] 6.3.14.9.5 | m      |         |
| 8   | MS initiates (DSD-REQ) the release of a Dynamic service flow                       | [4] 6.3.14.9.5 | o      |         |
| 9   | MS answers (DSD-RSP) to the release of a Dynamic service flow initiated by BS      | [4] 6.3.14.9.5 | m      |         |

Comments:

### B.5.3.1.5 MAC procedures for Mobility Management

#### B.5.3.1.5.1 Data delivery services

**Table B.58: MS Data delivery services for mobile network**

| Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP. |   |                |        |         |
|---|---|----------------|--------|---------|
| Item  | Capability  | Reference      | Status | Support |
| 1   | Unsolicited Grant Service (UGS)                   | [4] 6.3.20.1.1 | m      |         |
| 2   | Real-Time Variable Rate (RT-VR)                   | [4] 6.3.20.1.2 | o      |         |
| 3   | Non-Real-Time Variable Rate (NRT-VR)              | [4] 6.3.20.1.3 | m      |         |
| 4   | Best Effort (BE)                                  | [4] 6.3.20.1.4 | m      |         |
| 5   | Extended Real-Time Variable Rate Service (ERT-VR) | [4] 6.3.20.1.5 | o      |         |

Comments:

## B.5.3.1.5.2 Sleep Mode

Table B.59: MS- Sleep Mode

| Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level. |  |                    |         |         |
|---|--|--------------------|---------|---------|
| Item  | Capability   | Reference          | Status  | Support |
| 1   | Sleep Mode implementation  | [4] 6.3.21         | o       |         |
| 2   | Supports Power saving Class type 1   | [4] 6.3.21.2       | Cb.59.4 |         |
| 3   | Supports use of MOB_TRF-IND to indicate appearance of DL traffic             | [4] 6.3.21.2       | Cb.59.1 |         |
| 4   | Supports traffic triggered waking flag                                       | [4] 6.3.22.2       | Cb.59.1 |         |
| 5   | Supports Power saving Class type 2   | [4] 6.3.21.3       | Cb.59.4 |         |
| 6   | Supports Power saving Class type 3   | [4] 6.3.21.4       | Cb.59.4 |         |
| 7   | Supports activation of Power Saving by unsolicited MOB_SLP-RSP               | [4] 6.3.22.2.2     | Cb.59.2 |         |
| 8   | Supports activation of Power Saving by RNG-REQ                               | [4] 6.3.21.3       | Cb.59.3 |         |
| 9   | Supports activation of Power Saving by RNG-RSP                               | [4] 6.3.21.3 and 4 | Cb.59.2 |         |
| 10  | Supports activation of Power Saving with BR and Uplink sleep control header  | [4] 6.3.21.3 and 4 | Cb.59.2 |         |
| 11  | Supports activation of Power Saving with DL sleep control extended subheader | [4] 6.3.21.3 and 4 | Cb.59.2 |         |
| 12  | Supports periodic ranging in sleep mode                                      | [4] 6.3.21.5       | Cb.59.5 |         |
| 13  | Supports DL Traffic indication by RNG-RSP message.                           | [4] 6.3.21.5       | Cb.59.5 |         |
| Cb.59.1: IF B.59/2 THEN o ELSE n/a.   |  |                    |         |         |
| Cb.59.2: IF (B.59/5 or B.59/6) THEN o ELSE n/a.   |  |                    |         |         |
| Cb.59.3: IF B.59/5 THEN o ELSE n/a.   |  |                    |         |         |
| Cb.59.4: IF B.59/1 THEN It is mandatory to support at least one of these items ELSE n/a.                                  |  |                    |         |         |
| Cb.59.5: IF B.59/1 THEN o ELSE n/a.   |  |                    |         |         |
| Comments:   |  |                    |         |         |

## B.5.3.1.5.3 Neighbor advertisement

Table B.60: MS network topology acquisition procedures

| Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level. |   |                        |         |         |
|---|---|------------------------|---------|---------|
| Item  | Capability  | Reference              | Status  | Support |
| 1   | Network topology advertisement                          | [4] 6.3.22.1.1         | Cb.60.1 |         |
| 2   | Scanning for cell selection                             | [4] 6.3.22.1.2         | Cb.60.1 |         |
| 3   | Unsolicited scanning interval allocation by BS          | [4] 6.3.22.1.2         | Cb.60.1 |         |
| 4   | MS requests scanning interval allocations from BS       | [4] 6.3.22.1.2         | Cb.60.1 |         |
| 5   | Event triggered scanning based on serving BS metrics    | [4] 6.3.22.1.2         | o       |         |
| 6   | Periodic scan reporting (MOB_SCN-REP message)           | [4] 6.3.22.1.2, 11.4.1 | Cb.60.1 |         |
| 7   | Event triggered scan reporting (metric conditions)      | [4] 6.3.22.1.2, 11.4.1 | o       |         |
| 8   | Association procedure                                   | [4] 6.3.22.1.3         | o       |         |
| 9   | Support "Ranging Parameter Validity Time" (MOB_SCN-REP) | [4] 6.3.22.1.2, 11.19  | o       |         |
| 10  | Supports Mean BS CINR                                   | [4] 6.3.2.3.53, 11.8.7 | Cb.60.1 |         |
| 11  | Supports Mean BS RSSI                                   | [4] 6.3.2.3.53, 11.8.7 | Cb.60.1 |         |
| 12  | Supports relative RX Delay                              | [4] 6.3.2.3.53, 11.8.7 | o       |         |
| 13  | Supports BS Round Trip Delay                            | [4] 6.3.2.3.53, 11.8.7 | o       |         |
| Cb.60.1: IF (B3/3) THEN m ELSE o.   |   |                        |         |         |
| Comments:   |   |                        |         |         |

## B.5.3.1.5.4 Handover

Table B.61: MS- HO Process

| Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level. |   |                           |         |         |
|---|---|---------------------------|---------|---------|
| Item  | Capability  | Reference                 | Status  | Support |
| 1   | General HO support  | [4] 6.3.22.2              | Cb.60.1 |         |
| 2   | Cell Reselection  | [4] 6.3.22.2.1            | Cb.60.1 |         |
| 3   | Metric Triggered HO requests                                    | [4] 6.3.22.2.1,<br>11.1.7 | o       |         |
| 4   | HO decision and initiation initiated by MS                      | [4] 6.3.22.2.2            | o       |         |
| 5   | HO decision and initiation initiated by BS                      | [4] 6.3.22.2.2            | Cb.60.1 |         |
| 6   | HO Cancellation   | [4] 6.3.22.2.3            | Cb.60.1 |         |
| 7   | Use of scanning and association results                         | [4] 6.3.22.2.4            | Cb.60.1 |         |
| 8   | Termination with the Serving BS                                 | [4] 6.3.22.2.5            | Cb.60.1 |         |
| 9   | Supports resource retention (MOB_BSHO-REQ/RSP)                  | [4] 6.3.22.2.5            | Cb.60.1 |         |
| 10  | Drops during HO   | [4] 6.3.22.2.6            | Cb.60.1 |         |
| 11  | Network entry/re-entry  | [4] 6.3.22.2.7            | Cb.60.1 |         |
| 12  | Supports HO_ID (MOB_BSHO-REQ/RSP)                               | [4] 6.3.22.2.7            | Cb.60.1 |         |
| 13  | MS-Assisted coordination of DL transmission at Target BS for HO | [4] 6.3.22.2.8            | Cb.60.1 |         |
| 14  | HO process  | [4] 6.3.22.2.9            | Cb.60.1 |         |
| Cb.61.1: IF (B3/3) THEN m ELSE o.   |   |                           |         |         |
| Comments:   |   |                           |         |         |

Table B.62: MS- HO Optimization

| Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level. |  |                      |        |         |
|---|--|----------------------|--------|---------|
| Item  | Capability   | Reference            | Status | Support |
| 1   | Supports HO optimization   | [4] 6.3.22.2.7, 11.6 | o      |         |
| 2   | Supports omission of SBC-REQ management messages (Bit #0)  | [4] 6.3.22.2.7, 11.6 | o      |         |
| 3   | Supports omission of PKM authentication phase, except TEK (Bit #1)   | [4] 6.3.22.2.7, 11.6 | o      |         |
| 4   | Supports omission of PKM TEK creation phase (Bit #2)   | [4] 6.3.22.2.7, 11.6 | o      |         |
| 5   | Supports omission of Network Address Acquisition (Bit #3)  | [4] 6.3.22.2.7, 11.6 | o      |         |
| 6   | Supports omission of Time of the Day Acquisition (Bit #4)  | [4] 6.3.22.2.7, 11.6 | o      |         |
| 7   | Supports omission of TFTP Phase (Bit #5)   | [4] 6.3.22.2.7, 11.6 | o      |         |
| 8   | Supports Full service and operational state transfer (Bit #6)  | [4] 6.3.22.2.7, 11.6 | o      |         |
| 9   | Supports notifying MS of DL data Pending (Bit #7)  | [4] 6.3.22.2.7, 11.6 | o      |         |
| 10  | Supports receiving of unsolicited SBC-RSP management messages with updated capabilities information (Bit #8)                           | [4] 6.3.22.2.7, 11.6 | o      |         |
| 11  | Supports receiving of unsolicited SBC-RSP message in the same frame as RNG-RSP   | [4] 6.3.22.2.7, 11.6 | o      |         |
| 12  | Supports receiving of SBC-RSP TLV in RNG-RSP   | [4] 6.3.22.2.7, 11.6 | o      |         |
| 13  | Supports omission of REG-REQ during NW re-entry (Bit #9)   | [4] 6.3.22.2.7, 11.6 | o      |         |
| 14  | Supports receiving of unsolicited REG-RSP management messages with updated capabilities information (Bit #10)                          | [4] 6.3.22.2.7, 11.6 | o      |         |
| 15  | Supports receiving of unsolicited REG-RSP message in the same frame as RNG-RSP   | [4] 6.3.22.2.7, 11.6 | o      |         |
| 16  | Supports receiving of REG-RSP TLV in RNG-RSP   | [4] 6.3.22.2.7, 11.6 | o      |         |
| 17  | Supports ARQ continuation using SN report header after NW re-entry.  | [4] 6.3.22.2.8       | o      |         |
| 18  | Supports continuation of non-ARQ connection using SDU SN extended subheader before handover and using report header after NW re-entry. | [4] 6.3.22.2.8       | o      |         |
| 19  | Supports sending Bandwith Request header with zero BR as a notification of successful re-entry registration (Bit #12)                  | [4] 6.3.22.2.7, 11.6 | o      |         |
| 20  | Supports triggering a higher layer protocol required to refresh its traffic IP address (Bit #13)                                       | [4] 11.6             | o      |         |
| 21  | Supports SN request extended subheader (Bit #11)   | [4] 11.6             | o      |         |
| Comments:   |  |                      |        |         |



## B.5.3.1.5.5 Idle Mode

Table B.63: MS- Idle Mode

| Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level. |  |                  |         |         |
|---|--|------------------|---------|---------|
| Item  | Capability   | Reference        | Status  | Support |
| 1   | Supports Idle mode functionality   | [4] 6.3.24       | o       |         |
| 2   | Supports Idle mode initiation by DREG-REQ message.   | [4] 6.3.24.1     | Cb.63.1 |         |
| 3   | Supports Idle mode initiation by unsolicited DREG-CMD message.   | [4] 6.3.24.1     | Cb.63.1 |         |
| 4   | Supports maintaining connection information at BS during Idle Mode initiation process.                                     | [4] 6.3.24.1     | Cb.63.2 |         |
| 5   | Supports retaining service and operational information by DREG-CMD   | [4] 6.3.24.1     | Cb.63.2 |         |
| 6   | Supports retaining service and operational information by DREG-REQ   | [4] 6.3.24.1     | Cb.63.2 |         |
| 7   | Support of inclusion of MS MAC address hash ion paging message.  | [4] 6.3.24.1     | Cb.63.2 |         |
| 8   | Supports handling of Broadcast Control Pointer IE  | [4] 6.3.24.5     | Cb.63.2 |         |
| 9   | Supports handling of dedicated ranging region and code allocation for location update and network entry of MS in idle mode | [4] 6.3.24.7.1   | Cb.63.2 |         |
| 10  | Supports Paging Group Update   | [4] 6.3.24.8.1.1 | Cb.63.2 |         |
| 11  | Supports Timer Location Update   | [4] 6.3.24.8.1.2 | Cb.63.2 |         |
| 12  | Supports Power Down Location Update  | [4] 6.3.24.8.1.3 | Cb.63.2 |         |
| 13  | Supports MAC Hash Skip Threshold Location Update   | [4] 6.3.24.8.1.4 | Cb.63.2 |         |
| 14  | Supports Secure Location Update  | [4] 6.3.24.8.2.1 | Cb.63.2 |         |
| 15  | Supports Unsecure Location Update  | [4] 6.3.24.8.2.1 | Cb.63.2 |         |
| Cb.63.1: IF B.63/1 THEN It is mandatory to support at least one of these items ELSE n/a.                                  |  |                  |         |         |
| Cb.63.2: IF B.63/1 THEN o ELSE N/A.   |  |                  |         |         |
| Comments:   |  |                  |         |         |

Table B.64: MS- network re-entry from Idle Mode

| Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level. |   |                    |        |         |
|---|---|--------------------|--------|---------|
| Item  | Capability  | Reference          | Status | Support |
| 1   | Expedited network re-entry from Idle Mode   | [4] 6.3.24.9       | o      |         |
| 2   | Supports omission of SBC-REQ management messages (Bit #0)   | [4] 6.3.24.9, 11.6 | o      |         |
| 3   | Supports omission of PKM authentication phase, except TEK (Bit #1)  | [4] 6.3.24.9, 11.6 | o      |         |
| 4   | Supports omission of PKM TEK creation phase (Bit #2)  | [4] 6.3.24.9, 11.6 | o      |         |
| 5   | Supports omission of Network Address Acquisition (Bit #3)   | [4] 6.3.24.9, 11.6 | o      |         |
| 6   | Supports omission of Time of the Day Acquisition (Bit #4)   | [4] 6.3.24.9, 11.6 | o      |         |
| 7   | Supports omission of TFTP Phase (Bit #5)  | [4] 6.3.24.9, 11.6 | o      |         |
| 8   | Supports Full service and operational state transfer (Bit #6)   | [4] 6.3.24.9, 11.6 | o      |         |
| 9   | Supports notifying MS of DL data Pending (Bit #7)   | [4] 6.3.24.9, 11.6 | o      |         |
| 10  | Supports receiving of unsolicited SBC-RSP management messages with updated capabilities information (Bit #8)          | [4] 6.3.24.9, 11.6 | o      |         |
| 11  | Supports receiving of unsolicited SBC-RSP message in the same frame as RNG-RSP  | [4] 6.3.24.9, 11.6 | o      |         |
| 12  | Supports receiving of SBC-RSP TLV in RNG-RSP  | [4] 6.3.24.9, 11.6 | o      |         |
| 13  | Supports omission of REG-REQ during NW re-entry (Bit #9)  | [4] 6.3.24.9, 11.6 | o      |         |
| 14  | Supports receiving of unsolicited REG-RSP management messages with updated capabilities information (Bit #10)         | [4] 6.3.24.9, 11.6 | o      |         |
| 15  | Supports receiving of unsolicited REG-RSP message in the same frame as RNG-RSP  | [4] 6.3.24.9, 11.6 | o      |         |
| 16  | Supports receiving of REG-RSP TLV in RNG-RSP  | [4] 6.3.24.9, 11.6 | o      |         |
| 17  | Supports sending Bandwith Request header with zero BR as a notification of successful re-entry registration (Bit #12) | [4] 6.3.24.9, 11.6 | o      |         |
| 18  | Supports triggering a higher layer protocol required to refresh its traffic IP address (Bit #13)                      | [4] 11.6           | o      |         |
| Comments:   |   |                    |        |         |

## B.5.3.1.6 Security

Table B.65: MS- PKM version

| Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization. |                        |                |        |         |
|---|------------------------|----------------|--------|---------|
| Item  | Capability             | Reference      | Status | Support |
| 1   | Supports PKM version 1 | [4] 7.2.1      | m      |         |
| 2   | Supports PKM version 2 | [4] 7.2.2, 7.8 | m      |         |
| Comments:   |                        |                |        |         |

Table B.66: PKM v1 Major Privacy functions for MS in PMP

| Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization. |  |                    |         |         |
|---|--|--------------------|---------|---------|
| Item  | Capability   | Reference          | Status  | Support |
| 1   | MS send Auth Request (PKM-REQ with Code=4)                               | [4] 7.2            | m       |         |
| 2   | AK decryption using RSA with 1024 bit key                                | [4] 11.1.2         | m       |         |
| 3   | MS supports PKM message authentication using HMAC with SHA-1.            | [4] 7.5.3          | m       |         |
| 4   | MS supports MAC management message authentication using HMAC with SHA-1. | [4] 7.5.3          | m       |         |
| 5   | TEK decryption using 3-DES   | [4] 7.5.2.1        | m       |         |
| 6   | TEK decryption using RSA with 1024 bit key                               | [4] 7.5.2.2        | o       |         |
| 7   | TEK-128 decryption using AES   | [4] 7.5.2.3        | Cb.66.2 |         |
| 8   | DES data encryption/decryption on a per SA basis.                        | [4] 7.5.1.1        | m       |         |
| 9   | AES data encryption/decryption on a per SA basis.                        | [4] 7.5.1.2        | o       |         |
| 10  | Support of no encryption/decryption on a per- SA basis.                  | [4] 7.1.5, 11.9.14 | m       |         |
| Cb.66.1: IF B.66/ THEN m ELSE n/a.  |  |                    |         |         |
| Cb.66.2: IF B.66/9 THEN m ELSE n/a.   |  |                    |         |         |
| Comments:   |  |                    |         |         |

Table B.67: MS- PKM v2 Authorization Policy support - initial network entry

| Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization. |   |              |        |         |
|---|---|--------------|--------|---------|
| Item  | Capability  | Reference    | Status | Support |
| 1   | No Authorization  | [4] 11.8.4.2 | m      |         |
| 2   | EAP-based authorization   | [4] 11.8.4.2 | m      |         |
| 3   | EAP-based authorization and Authenticated (EIK) EAP-based authorization | [4] 11.8.4.2 | o      |         |
| 4   | RSA-based authorization   | [4] 11.8.4.2 | o      |         |
| 5   | RSA-based authorization and Authenticated (EIK) EAP-based authorization | [4] 11.8.4.2 | o      |         |
| 6   | RSA-based authorization and EAP-based authorization                     | [4] 11.8.4.2 | o      |         |
| Comments:   |   |              |        |         |

**Table B.68: MS- PKM v2 Authorization Policy support - network re-entry**

| Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization. |   |              |        |         |
|---|---|--------------|--------|---------|
| Item  | Capability  | Reference    | Status | Support |
| 1   | No Authorization  | [4] 11.8.4.2 | m      |         |
| 2   | EAP-based authorization   | [4] 11.8.4.2 | m      |         |
| 3   | EAP-based authorization and Authenticated (EIK) EAP-based authorization | [4] 11.8.4.2 | n/a    |         |
| 4   | RSA-based authorization   | [4] 11.8.4.2 | n/a    |         |
| 5   | RSA-based authorization and Authenticated (EIK) EAP-based authorization | [4] 11.8.4.2 | n/a    |         |
| 6   | RSA-based authorization and EAP-based authorization                     | [4] 11.8.4.2 | n/a    |         |
| Comments:   |   |              |        |         |

**Table B.69: MS Cryptographic suites**

| Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization. |  |             |        |         |               |                 |
|---|--|-------------|--------|---------|---------------|-----------------|
| Item  | Capability   | Reference   | Status | Support | Value allowed | Value supported |
| 1   | No data encrypt, no data authent and 3-DES 128                                   | [4] 11.9.14 | m      |         | 0x000001      |                 |
| 2   | CBC-mode 56bit DES, no data authent and 3-DES 128                                | [4] 11.9.14 | m      |         | 0x010001      |                 |
| 3   | No data encrypt, no data authent and RSA, 1024                                   | [4] 11.9.14 | o      |         | 0x000002      |                 |
| 4   | CBC-mode 56bit DES, no data authent and RSA, 1024                                | [4] 11.9.14 | o      |         | 0x010002      |                 |
| 5   | CCM-Mode 128-bit AES, CCM-Mode, 128-bit, ECB mode AES with 128-bit key           | [4] 11.9.14 | o      |         | 0x020103      |                 |
| 6   | CCM-Mode 128bits AES, CCM-Mode, AES Key Wrap with 128-bit key                    | [4] 11.9.14 | m      |         | 0x020104      |                 |
| 7   | CBC-Mode 128-bit AES, no data authentication, ECB mode AES with 128-bit key      | [4] 11.9.14 | o      |         | 0x030003      |                 |
| 8   | MBS CTR Mode 128 bits AES, no data authentication, AES ECB mode with 128-bit key | [4] 11.9.14 | o      |         | 0x800003      |                 |
| 9   | MBS CTR mode 128 bits AES, no data authentication, AES Key Wrap with 128-bit key | [4] 11.9.14 | o      |         | 0x800004      |                 |
| Comments:   |  |             |        |         |               |                 |

**Table B.70: CID and SAID update for MS in PMP**

| Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization. |  |                        |        |         |
|---|--|------------------------|--------|---------|
| Item  | Capability                               | Reference              | Status | Support |
| 1   | Support CID update by RNG-RSP            | [4] 6.3.2.3.6, 11.7.10 | m      |         |
| 2   | Support CID update by REG-RSP            | [4] 6.3.2.3.8, 11.7.10 | m      |         |
| 3   | Support compressed CID update by RNG-RSP | [4] 6.3.2.3.6, 11.7.10 | m      |         |
| 4   | Support compressed CID update by REG-RSP | [4] 6.3.2.3.8, 11.7.10 | m      |         |
| 5   | Support SAID update by RNG-RSP           | [4] 6.3.2.3.6, 11.7.18 | m      |         |
| 6   | Support SAID update by REG-RSP           | [4] 6.3.2.3.8, 11.7.18 | m      |         |
| 7   | Support SAID update by SA-TEK-RSP        | [4] 7.8.1, 11.7.21     | m      |         |
| Comments:   |  |                        |        |         |

**Table B.71: MS- PKM v2 Message Authentication Code (MAC) mode**

| Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization. |                           |              |        |         |
|---|---------------------------|--------------|--------|---------|
| Item  | Capability                | Reference    | Status | Support |
| 1   | No message authentication | [4] 11.8.4.3 | m      |         |
| 2   | HMAC                      | [4] 11.8.4.3 | m      |         |
| 3   | CMAC                      | [4] 11.8.4.3 | m      |         |
| 4   | 64-bit short-HMAC         | [4] 11.8.4.3 | o      |         |
| 5   | 80-bit short-HMAC         | [4] 11.8.4.3 | o      |         |
| 6   | 96-bit short-HMAC         | [4] 11.8.4.3 | o      |         |
| Comments:   |                           |              |        |         |

**Table B.72: Security association for MS in PMP**

| Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization. |                       |                      |        |         |
|---|-----------------------|----------------------|--------|---------|
| Item  | Capability            | Reference            | Status | Support |
| 1   | Support of Primary SA | [4] 7.2.1.1, 7.2.2.3 | m      |         |
| 2   | Support of Static SA  | [4] 7.2.1.1, 7.2.2.3 | m      |         |
| 3   | Support of Dynamic SA | [4] 7.2.1.1, 7.2.2.3 | m      |         |
| Comments:   |                       |                      |        |         |

**Table B.73: Security association service types for MS in PMP**

| Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization. |                                    |               |        |         |
|---|------------------------------------|---------------|--------|---------|
| Item  | Capability                         | Reference     | Status | Support |
| 1   | Support of Unicast service         | [4] 7.2       | m      |         |
| 2   | Support of Group multicast service | [4] 7.2.2.3.2 | m      |         |
| 3   | Support of MBS services            | [4] 7.2.2.3.3 | m      |         |
| Comments:   |                                    |               |        |         |

**Table B.74: Certificate for MS in PMP**

| Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization. |  |                |        |         |
|---|--|----------------|--------|---------|
| Item  | Capability   | Reference      | Status | Support |
| 1   | Support of X.509 MS certificate for device authorization | [4] 7.2.1, 7.8 | m      |         |
| 2   | Support of X.209 manufacturer certificate                | [4] 7.2.1, 7.8 | m      |         |
| 3   | Support of X.209 certificate profile                     | [4] 7.2.1, 7.8 | m      |         |
| Comments:   |  |                |        |         |

### B.5.3.2 MS in MESH topology

Void.

### B.5.3.3 BS in PMP topology

#### B.5.3.3.1 PHY functions

**Table B.75: Frame duration codes for BS**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |                      |             |        |         |
|---|----------------------|-------------|--------|---------|
| Item  | Frame Duration in ms | Reference   | Status | Support |
| 1   | 2.5                  | [4] 8.3.5.4 | Ob.75  |         |
| 2   | 4                    | [4] 8.3.5.4 | Ob.75  |         |
| 3   | 5                    | [4] 8.3.5.4 | Ob.75  |         |
| 4   | 8                    | [4] 8.3.5.4 | Ob.75  |         |
| 5   | 10                   | [4] 8.3.5.4 | Ob.75  |         |
| 6   | 12,5                 | [4] 8.3.5.4 | Ob.75  |         |
| 7   | 20                   | [4] 8.3.5.4 | Ob.75  |         |
| Ob.75: It is mandatory to support at least one of these items.          |                      |             |        |         |
| Comments:   |                      |             |        |         |

**Table B.76: Cyclic Prefix for BS**

| Prerequisite: (B2/2 and B4/1) Base Station (BS) and Basic packet PMP. |               |             |        |         |
|---|---------------|-------------|--------|---------|
| Item  | Cyclic Prefix | Reference   | Status | Support |
| 1   | 1/4           | [4] 8.3.2.4 | Ob.76  |         |
| 2   | 1/8           | [4] 8.3.2.4 | Ob.76  |         |
| 3   | 1/16          | [4] 8.3.2.4 | Ob.76  |         |
| 4   | 1/32          | [4] 8.3.2.4 | Ob.76  |         |
| Ob.76: It is mandatory to support at least one of these items.        |               |             |        |         |
| Comments:   |               |             |        |         |

**Table B.77: Modulation for BS**

| Prerequisite: (B2/2 and B4/1) Base Station (BS) and Basic packet PMP. |            |               |         |         |
|---|------------|---------------|---------|---------|
| Item  | Modulation | Reference     | Status  | Support |
| 1   | BPSK       | [4] 8.3.3.4.1 | m       |         |
| 2   | QPSK       | [4] 8.3.3.4.1 | m       |         |
| 3   | 16-QAM     | [4] 8.3.3.4.1 | m       |         |
| 4   | 64-QAM     | [4] 8.3.3.4.1 | Cb.77.1 |         |
| Cb.77.1: IF HUMAN THEN o ELSE m.                                      |            |               |         |         |
| Comments:   |            |               |         |         |

**Table B.78: Major PHY functions for BS**

| Prerequisite: (B2/2 and B4/1) Base Station (BS) and Basic packet PMP. |  |                      |          |         |
|---|--|----------------------|----------|---------|
| Item  | Name   | Reference            | Status   | Support |
| 1   | AAS (Adaptive Antenna) supported                     | [4] 6.3.7.6          | o        |         |
| 2   | DL Subchannelization                                 | [4] 8.3.5.1.1        | o        |         |
| 3   | UL Subchannelization                                 | [4] 8.3.2.4          | m        |         |
| 4   | Dynamic Frequency Support DFS                        | [4] 6.3.15           | Cb.78.1  |         |
| 5   | Concatenated Reed-Solomon-convolutional code (RS-CC) | [4] 8.3.3.2          | m        |         |
| 6   | Block Turbo Coding (BTC)                             | [4] 8.3.3.2          | o        |         |
| 7   | Convolutional Turbo Codes                            | [4] 8.3.3.2          | o        |         |
| 8   | Randomization  | [4] 8.3.3.1          | m        |         |
| 9   | Block Interleaving                                   | [4] 8.3.3.3          | m        |         |
| 10  | Gray-coded constellation mapping                     | [4] 8.3.3.4.1        | m        |         |
| 11  | Long preamble  | [4] 8.3.3.6          | m        |         |
| 12  | DL Short preamble                                    | [4] 8.3.3.6          | o        |         |
| 13  | Subchannelization preamble - Rx                      | [4] 8.3.3.6          | Cb. 78.2 |         |
| 14  | UL Midambles - Rx                                    | [4] 8.3.3.6, 8.3.6.3 | o        |         |
| 15  | Compressed Private MAP                               | [4] 8.3.6.6          | o        |         |
| 16  | Reduced Private MAP                                  | [4] 8.3.6.7          | o        |         |

| Prerequisite: (B2/2 and B4/1) Base Station (BS) and Basic packet PMP. |   |                                      |          |         |
|---|---|--------------------------------------|----------|---------|
| Item  | Name                                      | Reference                            | Status   | Support |
| 17  | STC                                       | [4] 8.3.8                            | o        |         |
| 18  | AAS preamble - Rx                         | [4] 8.3.3.6                          | Cb. 78.3 |         |
| 19  | Full contention BW requesting             | [4] 8.3.7.3.2                        | m        |         |
| 20  | Focused Contention BW requesting          | [4] 8.3.7.3.3                        | o        |         |
| 21  | Closed loop power control mode            | [4] 8.3.7.4.1                        | m        |         |
| 22  | Open loop power control mode              | [4] 8.3.7.4.2                        | o        |         |
| 23  | DLFP encoding                             | [4] 8.3.5.1                          | m        |         |
| 24  | Network Synchronization to external 1 pps | [4] 8.3.7.1.1                        | o        |         |
| 25  | Preamble cyclic time shift                | [4] 8.3.3.6,<br>8.3.6.2.7, 8.3.6.3.7 | Cb. 78.4 |         |
| 26  | Handover                                  | [4] 8.3                              | m        |         |
| Cb.78.1: IF license exempt band THEN m ELSE n/a.                      |   |                                      |          |         |
| Cb.78.2: IF (B.78/2 or B.78/3) THEN m ELSE x.                         |   |                                      |          |         |
| Cb.78.3: IF B.78/1 THEN m ELSE x.                                     |   |                                      |          |         |
| Cb.78.4: IF B.78/1 THEN m ELSE n/a.                                   |   |                                      |          |         |
| Comments:   |   |                                      |          |         |

Table B.79: BS Multiplexing and multiple access

| Prerequisite: (B2/2 and B4/1) Base Station (BS) and Basic packet PMP. |   |             |        |         |
|---|---|-------------|--------|---------|
| Item  | Name  | Reference   | Status | Support |
| 1   | Synchronize to short UL preamble              | [4] 8.3.5.1 | m      |         |
| 2   | Synchronize to long UL preamble               | [4] 8.3.5.1 | m      |         |
| 3   | Demodulate bursts                             | [4] 8.3.5.1 | m      |         |
| 4   | Support contention slot for initial ranging   | [4] 8.3.5.1 | m      |         |
| 5   | Support contention slot for bandwidth request | [4] 8.3.5.1 | m      |         |
| 6   | TC sublayer support                           | [4] 8.3.4   | o      |         |
| Comments:   |   |             |        |         |

Table B.80: BS Radio Subsystem Control

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |              |        |         |
|---|--|--------------|--------|---------|
| Item  | Capability   | Reference    | Status | Support |
| 1   | BS measures uplink burst timing and commands MS TX adjustments as needed                           | [4] 6.3.10.2 | m      |         |
| 2   | The BS measures receiver power sufficiently often to handle the fading rate requirement of 10 dB/s | [4] 8.3.7.4  | m      |         |
| Comments:   |  |              |        |         |

Table B.81: BS Minimum performance

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |            |        |         |                |                  |
|---|--|------------|--------|---------|----------------|------------------|
| Item  | Capability   | Reference  | Status | Support | Values allowed | Values supported |
| 1   | Tx Dynamic range BS  | [4] 12.3.2 | m      |         | ≥ 10 dB        |                  |
| 2   | Tx Spectral flatness Absolute difference between adj. carriers   | [4] 12.3.2 | m      |         | ≤ 0,1 dB       |                  |
| 3   | Tx Spectral flatness Deviation of average energy in each carrier from the measured energy averaged over all 200 active tones. Carrier -50..-1, 1..50 | [4] 12.3.2 | m      |         | ≤ ±2 dB        |                  |

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |              |         |         |   |                  |
|---|--|--------------|---------|---------|---|------------------|
| Item  | Capability   | Reference    | Status  | Support | Values allowed  | Values supported |
| 4   | Tx Spectral flatness<br>Deviation of average energy in each carrier from the measured energy averaged over all 200 active tones.<br>Carrier -100..-50, 50..100 | [4] 12.3.2   | m       |         | $\leq +2/-4$ dB   |                  |
| 5   | Tx relative constellation error:<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4   | [4] 12.3.2   | m       |         | $\leq -13$ dB<br>$\leq -16$ dB<br>$\leq -18,5$ dB<br>$\leq -21,5$ dB<br>$\leq -25$ dB |                  |
| 6   | Tx relative constellation error:<br>64QAM-2/3<br>64QAM-3/4   | [4] 12.3.2   | Cb.81.1 |         | $\leq -29$ dB<br>$\leq -31$ dB  |                  |
| 7   | TX power at spectral line 0.   | [4] 8.3.10.4 | m       |         | $\geq -15$ dBm<br>relative to total transmitted power                                 |                  |
| 8   | Min SNR requirements for BER= $10^{-6}$ in AWGN channel:<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4<br>64QAM-2/3<br>64QAM-3/4               | [4] 8.3.11.1 | m       |         | 3 dB<br>6 dB<br>8.5 dB<br>11.5 dB<br>15 dB<br>19 dB<br>21 dB                          |                  |
| 9   | Rx max. input level on-channel reception tolerance   | [4] 12.3.2   | m       |         | $\geq -30$ dBm  |                  |
| 10  | Rx max. input level on-channel damage tolerance  | [4] 12.3.2   | m       |         | $\geq 0$ dBm  |                  |
| 11  | Adjacent channel rejection at BER= $10^{-6}$ for 3 dB degradation C/I<br>16QAM-3/4   | [4] 12.3.2   | m       |         | - 11 dB   |                  |
| 12  | Adjacent channel rejection at BER= $10^{-6}$ for 3 dB degradation C/I<br>64QAM-3/4   | [4] 12.3.2   | Cb.81.1 |         | - 4 dB  |                  |
| 13  | Non-adjacent channel rejection at BER= $10^{-6}$ for 3 dB degradation C/I<br>16QAM-3/4   | [4] 12.3.2   | m       |         | - 30 dB   |                  |
| 14  | Non-adjacent channel rejection at BER= $10^{-6}$ for 3 dB degradation C/I<br>64QAM-3/4   | [4] 12.3.2   | Cb.81.1 |         | - 23 dB   |                  |

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |               |         |         |   |                  |
|---|--|---------------|---------|---------|---|------------------|
| Item  | Capability                               | Reference     | Status  | Support | Values allowed  | Values supported |
| 15  | Reference frequency tolerance            | [4] 12.3.2    | m       |         | $\leq \pm 8$ ppm up to 10 years after the date of equipment manufacture |                  |
| 16  | Network Synchronization to external 1pps | [4] 8.3.7.1.1 | Cb.81.2 |         | Start of Frame $< \pm 2$ us from 1 pps                                  |                  |
| Cb.81.1: IF B.77/4 THEN m ELSE i.                                       |  |               |         |         |   |                  |
| Cb.81.2: IF B.78/24 THEN m ELSE n/a.                                    |  |               |         |         |   |                  |
| Comments:   |  |               |         |         |   |                  |

Table B.82: BS ProfP3\_1.75 specific minimum performance

| Prerequisite: B.5/1 profP3_1,75 - 1,75 MHz channel PHY. |   |              |         |         |  |                  |
|---|---|--------------|---------|---------|--|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [4] 12.3.2.1 | m       |         | 128 $\mu$ s  |                  |
| 2   | BER performance threshold, BER=10 <sup>-6</sup><br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.1 | m       |         | $\leq -94$ dBm<br>$\leq -91$ dBm<br>$\leq -89$ dBm<br>$\leq -84$ dBm<br>$\leq -82$ dBm |                  |
| 3   | BER performance threshold, BER=10 <sup>-6</sup><br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.1 | Cb.82.1 |         | $\leq -77$ dBm<br>$\leq -76$ dBm   |                  |
| Cb.82.1: IF B.77/4 THEN m ELSE i.                       |   |              |         |         |  |                  |
| Comments:   |   |              |         |         |  |                  |

Table B.83: BS ProfP3\_3.5 specific minimum performance

| Prerequisite: B.5/2 profP3_3,5 - 3,5 MHz channel PHY. |   |              |         |         |  |                  |
|---|---|--------------|---------|---------|--|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [4] 12.3.2.2 | m       |         | 64 $\mu$ s   |                  |
| 2   | BER performance threshold, BER=10 <sup>-6</sup><br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.2 | m       |         | $\leq -91$ dBm<br>$\leq -88$ dBm<br>$\leq -86$ dBm<br>$\leq -81$ dBm<br>$\leq -79$ dBm |                  |
| 3   | BER performance threshold, BER=10 <sup>-6</sup><br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.2 | Cb.83.1 |         | $\leq -74$ dBm<br>$\leq -73$ dBm   |                  |
| Cb.83.1: IF B.77/4 THEN m ELSE i.                     |   |              |         |         |  |                  |
| Comments:   |   |              |         |         |  |                  |



**Table B.84: BS ProfP3\_7.0 specific minimum performance**

| Prerequisite: B.5/3 profP3_7 - 7,0 MHz channel PHY. |   |              |         |         |  |                  |
|---|---|--------------|---------|---------|--|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [4] 12.3.2.3 | m       |         | 32 $\mu$ s   |                  |
| 2   | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.3 | m       |         | $\leq -88$ dBm<br>$\leq -85$ dBm<br>$\leq -83$ dBm<br>$\leq -78$ dBm<br>$\leq -76$ dBm |                  |
| 3   | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.3 | Cb.84.1 |         | $\leq -71$ dBm<br>$\leq -70$ dBm   |                  |
| Cb.84.1: IF B.77/4 THEN m ELSE i.                   |   |              |         |         |  |                  |
| Comments:   |   |              |         |         |  |                  |

**Table B.85: BS ProfP3\_3 specific minimum performance**

| Prerequisite: B.5/4 profP3_3 - 3 MHz channel PHY. |   |              |         |         |  |                  |
|---|---|--------------|---------|---------|--|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [4] 12.3.2.4 | m       |         | 74 18/43 $\mu$ s   |                  |
| 2   | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.4 | m       |         | $\leq -91$ dBm<br>$\leq -88$ dBm<br>$\leq -87$ dBm<br>$\leq -81$ dBm<br>$\leq -80$ dBm |                  |
| 3   | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.4 | Cb.85.1 |         | $\leq -75$ dBm<br>$\leq -73$ dBm   |                  |
| Cb.85.1: IF B.77/4 THEN m ELSE i.                 |   |              |         |         |  |                  |
| Comments:   |   |              |         |         |  |                  |

**Table B.86: BS ProfP3\_5.5 specific minimum performance**

| Prerequisite: B.5/5 profP3_5,5 - 5,5 MHz channel PHY. |   |              |         |         |  |                  |
|---|---|--------------|---------|---------|--|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [4] 12.3.2.5 | m       |         | 40 40/79 $\mu$ s   |                  |
| 2   | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.5 | m       |         | $\leq -89$ dBm<br>$\leq -86$ dBm<br>$\leq -84$ dBm<br>$\leq -79$ dBm<br>$\leq -77$ dBm |                  |
| 3   | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.5 | Cb.86.1 |         | $\leq -72$ dBm<br>$\leq -71$ dBm   |                  |
| Cb.86.1: IF B.77/4 THEN m ELSE i.                     |   |              |         |         |  |                  |
| Comments:   |   |              |         |         |  |                  |

**Table B.87: BS ProfP3\_10 specific minimum performance**

| Prerequisite: B.5/6 profP3_10 - 10 MHz channel PHY. |   |              |         |         |  |                  |
|---|---|--------------|---------|---------|--|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [4] 12.3.2.6 | m       |         | 22 2/9 $\mu$ s   |                  |
| 2   | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [4] 12.3.2.6 | m       |         | $\leq -86$ dBm<br>$\leq -83$ dBm<br>$\leq -81$ dBm<br>$\leq -76$ dBm<br>$\leq -74$ dBm |                  |
| 3   | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [4] 12.3.2.6 | Cb.87.1 |         | $\leq -72$ dBm<br>$\leq -71$ dBm   |                  |
| Cb.87.1: IF B.77/4 THEN m ELSE i.                   |   |              |         |         |  |                  |
| Comments:   |   |              |         |         |  |                  |

**Table B.88: BS ProfP3\_2.5 specific minimum performance**

| Prerequisite: B.5/7 profP3_2.5- 2.5 MHz channel PHY. |   |              |         |         |  |                  |
|--|---|--------------|---------|---------|--|------------------|
| Item   | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1  | $T_b$   | [5] 12.3.2.6 | m       |         | 88 8/9 $\mu$ s   |                  |
| 2  | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [5] 12.3.2.6 | m       |         | $\leq -93$ dBm<br>$\leq -90$ dBm<br>$\leq -88$ dBm<br>$\leq -85$ dBm<br>$\leq -81$ dBm |                  |
| 3  | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [5] 12.3.2.6 | Cb.88.1 |         | $\leq -77$ dBm<br>$\leq -75$ dBm   |                  |
| Cb.88.1: IF B.77/4 THEN m ELSE i.                    |   |              |         |         |  |                  |
| Comments:  |   |              |         |         |  |                  |

**Table B.89: BS ProfP3\_5 specific minimum performance**

| Prerequisite: B.5/8 profP3_5 - 5 MHz channel PHY. |   |              |         |         |  |                  |
|---|---|--------------|---------|---------|--|------------------|
| Item  | Capability  | Reference    | Status  | Support | Values allowed   | Values supported |
| 1   | $T_b$   | [5] 12.3.2.6 | m       |         | 44 4/9 $\mu$ s   |                  |
| 2   | BER performance threshold, BER= $10^{-6}$<br>BPSK-1/2<br>QPSK-1/2<br>QPSK-3/4<br>16QAM-1/2<br>16QAM-3/4 | [5] 12.3.2.6 | m       |         | $\leq -90$ dBm<br>$\leq -87$ dBm<br>$\leq -85$ dBm<br>$\leq -82$ dBm<br>$\leq -78$ dBm |                  |
| 3   | BER performance threshold, BER= $10^{-6}$<br>64QAM-2/3<br>64QAM-3/4                                     | [5] 12.3.2.6 | Cb.89.1 |         | $\leq -74$ dBm<br>$\leq -72$ dBm   |                  |
| Cb.89.1: IF B.77/4 THEN m ELSE i.                 |   |              |         |         |  |                  |
| Comments:   |   |              |         |         |  |                  |

## B.5.3.3.2 Convergence sub layer

**Table B.90: BS Convergence Sub layer protocol support**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |                              |           |        |         |
|---|------------------------------|-----------|--------|---------|
| Item  | Name                         | Reference | Status | Support |
| 1   | Packet convergence sub layer | [4] 5.2   | m      |         |

Comments:

**Table B.91: BS Packet Convergence Sub layer protocol support**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |                                  |           |         |         |
|---|----------------------------------|-----------|---------|---------|
| Item  | Name                             | Reference | Status  | Support |
| 1   | Internet Protocol (IPv4)         | [4] 5.2.6 | o       |         |
| 2   | Internet Protocol (IPv6)         | [4] 5.2.6 | o       |         |
| 3   | IEEE 802.3 (Ethernet) [12]       | [4] 5.2.4 | m       |         |
| 4   | IEEE 802.1Q VLAN [13]            | [4] 5.2.5 | o       |         |
| 5   | IPv4 over 802.3 Ethernet [12]    | [4] 5.2.4 | m       |         |
| 6   | IPv6 over 802.3 Ethernet [12]    | [4] 5.2.4 | o       |         |
| 7   | IPv4 over 802.1Q VLAN [13]       | [4] 5.2.5 | Cb.91.1 |         |
| 8   | IPv6 over 802.1Q VLAN [13]       | [4] 5.2.5 | Cb.91.1 |         |
| 9   | Payload Header Suppression (PHS) | [4] 5.2.3 | o       |         |

Cb.91.1: IF (A 91/4) THEN o ELSE i.

Comments:

**Table B.92: BS Major packet classification**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |                                      |                  |         |         |
|---|--------------------------------------|------------------|---------|---------|
| Item  | Name                                 | Reference        | Status  | Support |
| 1   | IP Classification                    | [4] 11.13.19.3.4 | Cb.92.1 |         |
| 2   | Ethernet classification              | [4] 11.13.19.3.4 | Cb.92.2 |         |
| 3   | IEEE 802.1Q VLAN classification [13] | [4] 11.13.19.3.4 | Cb.92.3 |         |

Cb.92.1: IF (A 91/1 or A 91/2 or A 91/5 or A 91/6 or A 91/7 or A 91/8) THEN m ELSE n/a.

Cb.92.2: IF (A 91/3 or A 91/5 or A 91/6 or) THEN m ELSE n/a.

Cb.92.3: IF (A 91/4 or A 91/7 or A 91/8) THEN m ELSE n/a.

Comments:

**Table B.93: IP packet classification in the DL**

| Prerequisite: (B.2/2 and B.4/1 and B.92/1) Base Station (BS) and Basic packet PMP and IP support. |   |                    |        |         |
|---|---|--------------------|--------|---------|
| Item  | Name  | Reference          | Status | Support |
| 1   | Classification based on DSCP/IP TOS field               | [4] 11.13.19.3.4.2 | Ob.93  |         |
| 2   | Classification based on IP Protocol/Next Header field   | [4] 11.13.19.3.4.3 | Ob.93  |         |
| 3   | Classification based on IP masked Source Address        | [4] 11.13.19.3.4.4 | Ob.93  |         |
| 4   | Classification based on IP Destination Address          | [4] 11.13.19.3.4.5 | Ob.93  |         |
| 5   | Classification based on protocol source port range      | [4] 11.13.19.3.4.6 | Ob.93  |         |
| 6   | Classification based on protocol destination port range | [4] 11.13.19.3.4.7 | Ob.93  |         |

Ob.93: It is mandatory to support at least one of these items.

Comments:

**Table B.94: Ethernet packet classification in the DL**

| Prerequisite: (B.2/2 and B.4/1 and B. 92/2)Base Station (BS) and Basic packet PMP and Ethernet support. |   |                     |        |         |
|---|---|---------------------|--------|---------|
| Item  | Name  | Reference           | Status | Support |
| 1   | Classification based on Destination MAC Address | [4] 11.13.19.3.4.8  | Ob.94  |         |
| 2   | Classification based on Source MAC Address      | [4] 11.13.19.3.4.9  | Ob.94  |         |
| 3   | Classification based on Ethertype/SAP           | [4] 11.13.19.3.4.10 | Ob.94  |         |

Ob.94: It is mandatory to support at least one of these items.

Comments:

**Table B.95: 802.1Q packet classification in the DL**

| Prerequisite: (B.2/2 and B.4/1 and B. 92/3)Base Station (BS) and Basic packet PMP and 802.1Q support. |  |                     |        |         |
|---|--|---------------------|--------|---------|
| Item  | Name   | Reference           | Status | Support |
| 1   | Classification based on 802.1D user priority | [4] 11.13.19.3.4.11 | Ob.95  |         |
| 2   | Classification based on 802.1Q VLAN ID       | [4] 11.13.19.3.4.12 | Ob.95  |         |
| Ob.95: It is mandatory to support at least one of these items.  |  |                     |        |         |
| Comments:   |  |                     |        |         |

### B.5.3.3.3 MAC common part sub layer

**Table B.96: Major MAC Common part functionalities for BS**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |   |            |        |         |
|---|---|------------|--------|---------|
| Item  | Name                                    | Reference  | Status | Support |
| 1   | Addressing and connections              | [4] 6.3.1  | m      |         |
| 2   | Construction of PDUs                    | [4] 6.3.3  | m      |         |
| 3   | ARQ                                     | [4] 6.3.4  | o      |         |
| 4   | Uplink scheduling service               | [4] 6.3.5  | m      |         |
| 5   | Bandwidth allocation and request        | [4] 6.3.6  | m      |         |
| 6   | Contention resolution                   | [4] 6.3.8  | m      |         |
| 7   | Network entry and initialization        | [4] 6.3.9  | m      |         |
| 8   | Ranging                                 | [4] 6.3.10 | m      |         |
| 9   | Update of UL and DL channel descriptors | [4] 6.3.11 | m      |         |
| 10  | Quality of service                      | [4] 6.3.14 | o      |         |
| Comments:   |   |            |        |         |

**Table B.97: Miscellaneous management functions for BS in PMP**

| Prerequisite: (B. 2/2) Base Station (BS).   |   |                                  |         |         |
|---|---|----------------------------------|---------|---------|
| Item  | Name  | Reference                        | Status  | Support |
| 1   | Assignment of SSs to multicast polling groups                               | [4] 6.3.12,<br>12.3.1.1          | m       |         |
| 2   | Change of Downlink Burst profile management (DBPC messages initiated by MS) | [4] 6.3.2.3.20<br>[4] 6.3.2.3.21 | m       |         |
| 3   | BS initiates MS reset (RES-CMD)   | [4] 6.3.2.3.22                   | m       |         |
| 4   | BS initiates MS network clock comparison (CLK-CMP)                          | [4] 6.3.2.3.25                   | m       |         |
| 5   | BS notified by MS of MS de-registration (DREG-REQ)                          | [4] 6.3.2.3.43                   | m       |         |
| 6   | BS forces MS to change its channel access (DREG-CMD)                        | [4] 6.3.2.3.26                   | m       |         |
| 7   | BS sends quick answer to DSx-REQ sent by MS (DSX-RVD) (see Note 1)          | [4] 6.3.2.3.27                   | o       |         |
| 8   | BS receives confirmation of reception of Config file (TFTP messages)        | [4] 6.3.2.3.28<br>[4] 6.3.2.3.29 | m       |         |
| 9   | BS sends channel management report request (REP-REQ)                        | [4] 6.3.2.3.33                   | Cb.97.1 |         |
| 10  | BS requests the power change (FPC)  | [4] 6.3.2.3.34                   | o       |         |
| 11  | BS sends AAS feedback message request (AAS-FBCK messages)                   | [4] 6.3.2.3.40                   | Cb.97.2 |         |
| 12  | BS is informed of preferred beam direction (AAS-BEAM select message)        | [4] 6.3.2.3.41                   | Cb.97.2 |         |
| 13  | BS sends AAS beam message request (AAS-Beam messages)                       | [4] 6.3.2.3.42                   | Cb.97.2 |         |
| Cb.97.1: IF band below 11 GHz THEN m ELSE n/a.  |   |                                  |         |         |
| Cb.97.2: IF A78/1 THEN m ELSE n/a.  |   |                                  |         |         |
| NOTE: This item represents the capability of the BS to use sometime, but not every time, DSX-RVD instead of DSX-RSP to inform the MS in a more timely manner. |   |                                  |         |         |
| Comments:   |   |                                  |         |         |

**Table B.98: BS Addressing and Connections - PMP**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |           |        |         |
|---|--|-----------|--------|---------|
| Item  | Capability   | Reference | Status | Support |
| 1   | Globally Unique 48 bits MAC Address, making up three 16 bits CID           | [4] 6.3.1 | m      |         |
| 2   | Time urgent MAC Management messages on basic connection                    | [4] 6.3.1 | m      |         |
| 3   | Delay tolerant MAC Management messages on primary management connection    | [4] 6.3.1 | m      |         |
| 4   | SNMP packets used for MS management on the secondary management connection | [4] 6.3.1 | m      |         |
| Comments:   |  |           |        |         |

#### B.5.3.3.4 Construction and Transmission of MAC PDUs

**Table B.99: BS Transmission conventions**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |   |             |        |         |
|---|---|-------------|--------|---------|
| Item  | Capability                                    | Reference   | Status | Support |
| 1   | Transmit messages most significant byte first | [4] 6.3.3.1 | m      |         |
| 2   | Transmit bytes most significant bit first     | [4] 6.3.3.1 | m      |         |
| Comments:   |   |             |        |         |

**Table B.100: BS PDU concatenation**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |   |             |        |         |
|---|---|-------------|--------|---------|
| Item  | Capability  | Reference   | Status | Support |
| 1   | Concatenate Multiple MAC PDUs into a single burst               | [4] 6.3.3.2 | m      |         |
| 2   | Receive concatenated MAC PDUs and determine disposition via CID | [4] 6.3.3.2 | m      |         |
| 3   | Padding of any unused space in the DL Burst to a known state    | [4] 6.3.3.7 | m      |         |
| Comments:   |   |             |        |         |

**Table B.101: BS SDU Fragmentation**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |               |          |         |
|---|--|---------------|----------|---------|
| Item  | Capability   | Reference     | Status   | Support |
| 1   | Fragment a MAC SDU into multiple MAC PDUs applicable to Management messages on Primary management connection | [4] 6.3.3.3   | m        |         |
| 2   | Correctly set the Fragmentation Control (FC) bits  | [4] 6.3.3.3   | m        |         |
| 3   | Increment the FSN modulo 8 for non-ARQ connections   | [4] 6.3.3.3   | o        |         |
| 4   | Increment the FSN modulo 2048 for non-ARQ connections  | [4] 6.3.3.3   | m        |         |
| 5   | Increment the BSN modulo 2048 for ARQ connection   | [4] 6.3.3.4.2 | Cb.101.1 |         |
| 6   | Do not perform fragmentation of PDUs on Basic, Broadcast and Initial Ranging connections                     | [4] 6.3.2.3   | m        |         |
| Cb.101.1: IF A96/3 THEN m ELSE i.                                       |  |               |          |         |
| Comments:   |  |               |          |         |

**Table B.102: BS SDU reassembly**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |             |        |         |
|---|--|-------------|--------|---------|
| Item  | Capability                                     | Reference   | Status | Support |
| 1   | Receive and reassemble fragmented SDUs.        | [4] 6.3.3.3 | m      |         |
| 2   | Discard SDUs corrupted due to loss of fragment | [4] 6.3.3.3 | m      |         |
| Comments:   |  |             |        |         |

**Table B.103: BS Packing**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |                            |          |         |
|---|--|----------------------------|----------|---------|
| Item  | Capability   | Reference                  | Status   | Support |
| 1   | Supports Fixed length non-ARQ SDUs in a MAC PDU                                    | [4] 6.3.3.4.1.1            | o        |         |
| 2   | Pack Fixed length non-ARQ SDUs in a MAC PDU  | [4] 6.3.3.4.1.1            | o        |         |
| 3   | Unpack Fixed length non-ARQ SDUs in a MAC PDU                                      | [4] 6.3.3.4.1.1            | Cb.103.1 |         |
| 4   | Supports variable length non-ARQ SDUs in a MAC PDU                                 | [4] 6.3.3.4.1.2            | m        |         |
| 5   | Pack variable length non-ARQ SDUs in a MAC PDU                                     | [4] 6.3.3.4.1.2            | o        |         |
| 6   | Unpack variable length non-ARQ SDUs in a MAC PDU                                   | [4] 6.3.3.4.1.2            | m        |         |
| 7   | Pack variable length ARQ-enabled SDUs or SDUs fragments in a MAC PDU               | [4] 6.3.3.4.2<br>[2] 5.1.2 | Cb.103.2 |         |
| 8   | Unpack variable length ARQ-enabled SDUs or SDUs fragments in a MAC PDU             | [4] 6.3.3.4.2<br>[2] 5.1.2 | m        |         |
| 9   | Do not perform packing of SDUs on Basic, Broadcast and Initial Ranging connections | [4] 6.3.2.3                | m        |         |
| 10  | Perform packing of ARQ Feedback Payload  | [4] 6.3.3.4.3              | Cb.103.3 |         |
| 11  | Extracting ARQ Feedback IEs from received ARQ Feedback Payload                     | [4] 6.3.3.4.3              | Cb.103.3 |         |
| Cb.103.1: IF B.103/1 THEN m ELSE 0.                                     |  |                            |          |         |
| Cb.103.2: IF A96/3 THEN m ELSE i.                                       |  |                            |          |         |
| Cb.103.3: IF (A96/3 And B.103/7) THEN m ELSE i.                         |  |                            |          |         |
| Comments:   |  |                            |          |         |

**Table B.104: BS CRC**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |                     |             |        |         |
|---|---------------------|-------------|--------|---------|
| Item  | Capability          | Reference   | Status | Support |
| 1   | Compute and add CRC | [4] 6.3.3.5 | m      |         |
| 2   | Check CRC           | [4] 6.3.3.5 | m      |         |
| Comments:   |                     |             |        |         |

**Table B.105: BS ARQ**

| Prerequisite: (B.2/2 and B.4/1 and B.96/3) Base Station (BS) and Basic packet PMP.and ARQ |   |                        |        |         |
|---|---|------------------------|--------|---------|
| Item  | Capability  | Reference              | Status | Support |
| 1   | Pack several ARQ feedback information elements in a single ARQ feedback payload | [4] 6.3.4<br>[2] 5.1.3 | m      |         |
| 2   | Insert a single ARQ feedback payload as first packet in a MAC PDU               | [4] 6.3.4 [2] 5.1.3    | m      |         |
| Comments:   |   |                        |        |         |

**Table B.106: BS Uplink scheduling services**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |                       |        |         |
|---|--|-----------------------|--------|---------|
| Item  | Capability                                 | Reference             | Status | Support |
| 1   | Unsolicited grant service (UGS)            | [4] 6.3.5.2.1, 12.1.2 | o      |         |
| 2   | Real time polling service (rtPS)           | [4] 6.3.5.2.2, 12.1.2 | o      |         |
| 3   | Non-Real time polling service (nrtPS)      | [4] 6.3.5.2.3         | m      |         |
| 4   | Best effort service (BE)                   | [4] 6.3.5.2.4         | m      |         |
| 5   | Extended Real time polling service (ertPS) | [4] 6.3.5.2.2         | o      |         |
| Comments:   |  |                       |        |         |

**Table B.107: Bandwidth allocation and request**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |   |                                |           |         |
|---|---|--------------------------------|-----------|---------|
| Item  | Name  | Reference                      | Status    | Support |
| 1   | BS receives request for aggregate bandwidth via Bandwidth Request Header        | [4] 6.3.6.1                    | m         |         |
| 2   | BS receives request for incremental bandwidth via Bandwidth Request Header      | [4] 6.3.6.1                    | m         |         |
| 3   | BS receives request for incremental bandwidth via piggyback request             | [4] 6.3.6.1                    | m         |         |
| 4   | BS receives Bandwidth request during REQ Region Full                            | [4] 6.3.6.4                    | m         |         |
| 5   | BS receives Bandwidth request during Focused Contention IE                      | [4] 6.3.6.1                    | o         |         |
| 6   | BS receives Bandwidth request during Subchannelized Region                      | [4] 6.3.6.1                    | Cb.107.1  |         |
| 7   | BS receives Bandwidth request during any IE having UIUCs in the range of 5 - 12 | [4] 6.3.6.1                    | m         |         |
| 8   | BS sends Unicast, or Broadcast polls  | [4] 6.3.6.3.2<br>[4] 6.3.6.3.1 | m         |         |
| 9   | BS sends Multicast polls  | [4] 6.3.6.3.2                  | Cb. 107.2 |         |
| 10  | BS accepts Poll-me (PM) bit   | [4] 6.3.6.3.3                  | Cb. 107.3 |         |
| 11  | BS accepts SI   | [4] 6.3.5.2.1                  | Cb. 107.3 |         |
| 12  | BS accepts AAS IE   | [4] 6.3.6.1                    | Cb. 107.4 |         |
| Cb.107.1: IF (B.78/2 or B.78/3) THEN m, ELSE o.                         |   |                                |           |         |
| Cb. 107.2: IF B.97/1 THEN m ELSE n/a.                                   |   |                                |           |         |
| Cb. 107.3: IF B.106/1 THEN m ELSE n/a.                                  |   |                                |           |         |
| Cb. 107.4: IF B.78/1 THEN m ELSE n/a.                                   |   |                                |           |         |
| Comments:   |   |                                |           |         |

**Table B.108: BS MAP Relevance**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |                          |               |        |         |                        |                 |
|---|--------------------------|---------------|--------|---------|------------------------|-----------------|
| Item  | Capability               | Reference     | Status | Support | Value allowed          | Value supported |
| 1   | Minimum UL MAP Relevance | [4] 6.3.7.5.3 | m      |         | Cb.108.1               |                 |
| 2   | Maximum UL-MAP Relevance | [4] 6.3.7.5.3 | m      |         | End of following frame |                 |
| Cb.108.1: IF B.7/2: THEN round trip delay + Tproc ELSE ATDD split.      |                          |               |        |         |                        |                 |
| Comments:   |                          |               |        |         |                        |                 |

**Table B.109: Contention resolution**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |           |        |         |
|---|--|-----------|--------|---------|
| Item  | Name   | Reference | Status | Support |
| 1   | BS sets truncated exponential backoff for initial ranging              | [4] 6.3.8 | m      |         |
| 2   | BS sets truncated exponential backoff for bandwidth request contention | [4] 6.3.8 | m      |         |
| Comments:   |  |           |        |         |

**Table B.110: Network entry and initialization for BS in PMP**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |   |                      |          |          |          |         |
|---|---|----------------------|----------|----------|----------|---------|
| Item  | Name  | Reference            | IEEE     | HM       | WiMAX    | Support |
| 1   | Send Downlink Parameters via DCD periodic PDUs              | [4] 6.3.9.2          | m        | m        | m        |         |
| 2   | Send Uplink Parameters via UCD periodic PDUs                | [4] 6.3.9.3, 6.3.9.4 | m        | m        | m        |         |
| 3   | Allocate an Initial Ranging interval                        | [4] 6.3.9.5, 6.3.9.6 | m        | m        | m        |         |
| 4   | Allocate an Initial Ranging interval with Subchannelization | [4] 6.3.9.5, 6.3.9.6 | Cb.110.1 | Cb.110.1 | Cb.110.1 |         |
| 5   | Negotiate Basic Capabilities (SBC-RSP)                      | [4] 6.3.9.7          | m        | m        | m        |         |
| 6   | Perform authorization and key exchange                      | [4] 6.3.9.8, 7.2     | o        | m        | m        |         |
| 7   | Accept registration to allow MS in network                  | [4] 6.3.9.9          | m        | m        | m        |         |
| 8   | Establish IP connectivity and forward IP address            | [4] 6.3.9.10         | m        | m        | m        |         |
| 9   | Establish Time of day                                       | [4] 6.3.9.11         | m        | m        | m        |         |
| 10  | Receives operational parameters from MS                     | [4] 6.3.9.12         | m        | m        | m        |         |
| Cb.110.1: IF (B.78/2 or B.78/3) THEN m, ELSE n/a.                       |   |                      |          |          |          |         |
| Comments:   |   |                      |          |          |          |         |

**Table B.111: Sending DL Parameters**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |                           |             |        |         |
|---|---------------------------|-------------|--------|---------|
| Item  | Capability                | Reference   | Status | Support |
| 1   | BS sends DL-MAP correctly | [4] 6.3.9.2 | m      |         |
| 2   | BS sends DCD correctly    | [4] 6.3.9.2 | m      |         |
|   | BS sends DLFP correctly   | [4] 8.3.5.1 | m      |         |
| Comments:   |                           |             |        |         |

**Table B.112: Sending UL Parameters**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |                           |                      |        |         |
|---|---------------------------|----------------------|--------|---------|
| Item  | Capability                | Reference            | Status | Support |
| 1   | BS sends UCD correctly    | [4] 6.3.9.3, 6.3.9.4 | m      |         |
| 2   | BS sends UL-MAP correctly | [4] 6.3.9.3, 6.3.9.4 | m      |         |
| Comments:   |                           |                      |        |         |

**Table B.113: BS Initial ranging**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |             |        |         |
|---|--|-------------|--------|---------|
| Item  | Capability   | Reference   | Status | Support |
| 1   | BS allocates Initial Ranging IE  | [4] 6.3.9.5 | m      |         |
| 2   | BS assigns Basic and Primary Management CIDs                           | [4] 6.3.9.5 | m      |         |
| 3   | BS sends RNG-RSP, declared successful when it includes its MAC address | [4] 6.3.9.5 | m      |         |
| 4   | BS performs final tuning using RNG-REQ and RNG-RSP                     | [4] 6.3.9.5 | m      |         |
| Comments:   |  |             |        |         |

**Table B.114: BS Negotiate basic capabilities**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |                     |             |        |         |
|---|---------------------|-------------|--------|---------|
| Item  | Capability          | Reference   | Status | Support |
| 1   | BS receives SBC-REQ | [4] 6.3.9.7 | m      |         |
| 2   | BS sends SBC-RSP    | [4] 6.3.9.7 | m      |         |
| Comments:   |                     |             |        |         |



**Table B.115: BS Registration**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |             |        |         |
|---|--|-------------|--------|---------|
| Item  | Capability                                 | Reference   | Status | Support |
| 1   | BS sends REG-RSP and waits for TFTP-CPLT   | [4] 6.3.9.9 | m      |         |
| 2   | BS assigns Secondary Management Connection | [4] 6.3.9.9 | m      |         |
| Comments:   |  |             |        |         |

**Table B.116: BS Establish IP connectivity**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.       |  |              |        |         |
|---|--|--------------|--------|---------|
| Item  | Capability   | Reference    | Status | Support |
| 1   | DHCP mechanisms following the RFC 2131 [15] rules            | [4] 6.3.9.10 | m      |         |
| 2   | BS receives DHCP discover on Secondary Management Connection | [4] 6.3.9.10 | m      |         |
| 3   | BS sends DHCP offer on Secondary Management Connection       | [4] 6.3.9.10 | m      |         |
| 4   | BS receives DHCP request on Secondary Management Connection  | [4] 6.3.9.10 | m      |         |
| 5   | BS sends DHCP response on Secondary Management Connection    | [4] 6.3.9.10 | m      |         |
| Comments: All the DHCP packets mentioned here are intended for MS management. |  |              |        |         |

**Table B.117: BS Establish time of day**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |   |              |        |         |
|---|---|--------------|--------|---------|
| Item  | Capability  | Reference    | Status | Support |
| 1   | BS receives Time of Day request                         | [4] 6.3.9.11 | m      |         |
| 2   | BS processes the request and sends Time of Day response | [4] 6.3.9.11 | m      |         |
| Comments:   |   |              |        |         |

**Table B.118: BS Transfer operational parameters**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |   |              |        |         |
|---|---|--------------|--------|---------|
| 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 | [4] 6.3.9.12 | m      |         |
| 2   | BS sends TFTP-RSP as response to TFTP-CPLT  | [4] 6.3.9.12 | m      |         |
| Comments:   |   |              |        |         |

**Table B.119: BS Periodic ranging**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |   |            |            |         |
|---|---|------------|------------|---------|
| Item  | Capability  | Reference  | Status     | Support |
| 1   | Provide periodic ranging opportunities sufficiently often                                       | [4] 6.3.10 | m          |         |
| 2   | Command MS to adjust timing, power, and frequency parameters                                    | [4] 6.3.10 | m          |         |
| 3   | Use the RNG-RSP message to command an unsolicited DL burst profile change                       | [4] 6.3.10 | Cb.B.119.1 |         |
| 4   | Use the DBPC-RSP message to command an unsolicited DL burst profile change                      | [4] 6.3.10 | Cb.B.119.1 |         |
| 5   | Use the RNG-RSP message to command a DL burst profile change in response to a RNG-REQ message   | [4] 6.3.10 | m          |         |
| 6   | Use the DBPC-RSP message to command a DL burst profile change in response to a DBPC-REQ message | [4] 6.3.10 | m          |         |
| Cb.B.119.1: It is mandatory to support at least one of these Items.     |   |            |            |         |
| Comments:   |   |            |            |         |

**Table B.120: Update of channel descriptors by BS**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |            |        |         |
|---|--|------------|--------|---------|
| Item  | Capability   | Reference  | Status | Support |
| 1   | Support of two simultaneous sets of burst descriptors  | [4] 6.3.11 | m      |         |
| 2   | BS sends UL channel descriptors at regular intervals using UCD message with identical Configuration change count                                     | [4] 6.3.11 | m      |         |
| 3   | BS sends new UL burst descriptors using UCD message with incremented Configuration change count (I+1 mod 256)  | [4] 6.3.11 | m      |         |
| 4   | BS sends DL channel descriptors at regular intervals using DCD message with identical Configuration change count                                     | [4] 6.3.11 | m      |         |
| 5   | BS sends new DL burst descriptors using DCD message with incremented Configuration change count (I+1 mod 256)  | [4] 6.3.11 | m      |         |
| 6   | Receive with the new uplink parameters starting from the first PS that the UL-MAP with UCD Count matching the new Configuration Change Count covers  | [4] 6.3.11 | m      |         |
| 7   | Transmit with the new downlink parameters starting from the frame with the first DL-MAP with a DCD Count matching the new Configuration Change Count | [4] 6.3.11 | m      |         |
| Comments:   |  |            |        |         |

**Table B.121: BS Assignment of SSs to multicast groups**

| Prerequisite: (B.2/2 and B.4/1 and B.97/1) Base Station (BS) and Basic packet PMP and MCA_REQ from BS allowed. |  |            |        |         |
|--|--|------------|--------|---------|
| Item   | Capability   | Reference  | Status | Support |
| 1  | BS supports multicast polling groups   | [4] 6.3.12 | m      |         |
| 2  | BS adds or removes an MS to a multicast polling group, using MCA-REQ                     | [4] 6.3.12 | m      |         |
| 3  | BS waits for MCA-RSP that acknowledges the action and indicate status (ok, reject, etc.) | [4] 6.3.12 | m      |         |
| Comments:  |  |            |        |         |

**Table B.122: BS Service flow operations**

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |  |                |        |         |
|---|--|----------------|--------|---------|
| Item  | Capability   | Reference      | Status | Support |
| 1   | BS issues DSA-REQ on preprovisioned service flows, to pass encodings               | [4] 6.3.14.7.1 | m      |         |
| 2   | BS initiates (DSA-REQ) the creation of a Dynamic service flow                      | [4] 6.3.14.7.2 | m      |         |
| 3   | BS answers (DSA-RSP) to the creation of a Dynamic service flow initiated by MS     | [4] 6.3.14.7.1 | m      |         |
| 4   | BS initiates (DSC-REQ) the modification of a Dynamic service flow                  | [4] 6.3.14.9.4 | m      |         |
| 5   | BS answers (DSC-RSP) to the modification of a Dynamic service flow initiated by MS | [4] 6.3.14.9.4 | m      |         |
| 6   | BS initiates (DSD-REQ) the release of a Dynamic service flow                       | [4] 6.3.14.9.5 | m      |         |
| 7   | BS answers (DSD-RSP) to the release of a Dynamic service flow initiated by MS      | [4] 6.3.14.9.5 | m      |         |
| Comments:   |  |                |        |         |

## B.5.3.3.5 MAC procedures for Mobility Management

## B.5.3.3.5.1 Data delivery services

Table B.123: BS Data delivery services for mobile network

| Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP. |   |                |        |         |
|---|---|----------------|--------|---------|
| Item  | Capability  | Reference      | Status | Support |
| 1   | Unsolicited Grant Service (UGS)                   | [4] 6.3.20.1.1 | m      |         |
| 2   | Real-Time Variable Rate (RT-VR)                   | [4] 6.3.20.1.2 | o      |         |
| 3   | Non-Real-Time Variable Rate (NRT-VR)              | [4] 6.3.20.1.3 | m      |         |
| 4   | Best Effort (BE)                                  | [4] 6.3.20.1.4 | m      |         |
| 5   | Extended Real-Time Variable Rate Service (ERT-VR) | [4] 6.3.20.1.5 | o      |         |
| Comments:   |   |                |        |         |

## B.5.3.3.5.2 Sleep Mode

Table B.124: BS- Sleep Mode

| Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level. |  |                       |         |         |
|---|--|-----------------------|---------|---------|
| Item  | Capability   | Reference             | Status  | Support |
| 1   | Sleep Mode implementation  | [4] 6.3.21            | m       |         |
| 2   | Supports Power saving Class type 1   | [4] 6.3.21.2          | m       |         |
| 3   | Supports use of MOB_TRF-IND to indicate appearance of DL traffic             | [4] 6.3.21.2          | Cb.59.1 |         |
| 4   | Supports traffic triggered waking flag                                       | [4] 6.3.22.2          | Cb.59.1 |         |
| 5   | Supports Power saving Class type 2   | [4] 6.3.21.3          | o       |         |
| 6   | Supports Power saving Class type 3   | [4] 6.3.21.4          | o       |         |
| 7   | Supports activation of Power Saving by unsolicited MOB_SLP-RSP               | [4] 6.3.22.2.2        | Cb.59.2 |         |
| 8   | Supports activation of Power Saving by RNG-REQ                               | [4] 6.3.21.3          | Cb.59.3 |         |
| 9   | Supports activation of Power Saving by RNG-RSP                               | [4] 6.3.21.3<br>and 4 | Cb.59.2 |         |
| 10  | Supports activation of Power Saving with BR and Uplink sleep control header  | [4] 6.3.21.3<br>and 4 | Cb.59.2 |         |
| 11  | Supports activation of Power Saving with DL sleep control extended subheader | [4] 6.3.21.3<br>and 4 | Cb.59.2 |         |
| 12  | Supports periodic ranging in sleep mode                                      | [4] 6.3.21.5          | m       |         |
| 13  | Supports DL Traffic indication by RNG-RSP message                            | [4] 6.3.21.5          | o       |         |
| Cb.124.1 IF B.124/2 THEN o ELSE n/a.  |  |                       |         |         |
| Cb.124.2 IF (B.124/5 or B.124/6) THEN o ELSE n/a.   |  |                       |         |         |
| Cb.124.3 IF B.124/5 THEN o ELSE n/a.  |  |                       |         |         |
| Comments:   |  |                       |         |         |

## B.5.3.3.5.3 Network advertisement

Table B.125: BS network topology acquisition procedures

| Prerequisite: (B.2/2 and B.4/1 and B.78/26) Base Station (BS) and Basic packet PMP and Handover supported at PHY level. |   |                           |        |         |
|---|---|---------------------------|--------|---------|
| Item  | Capability  | Reference                 | Status | Support |
| 1   | Network topology advertisement                          | [4] 6.3.22.1.1            | m      |         |
| 2   | Scanning for cell selection                             | [4] 6.3.22.1.2            | m      |         |
| 3   | Unsolicited scanning interval allocation by BS          | [4] 6.3.22.1.2            | m      |         |
| 4   | MS requests scanning interval allocations from BS       | [4] 6.3.22.1.2            | m      |         |
| 5   | Event triggered scanning based on serving BS metrics    | [4] 6.3.22.1.2            | o      |         |
| 6   | Periodic scan reporting (MOB_SCN-RSP message)           | [4] 6.3.22.1.2,<br>11.4.1 | m      |         |
| 7   | Event triggered scan reporting (metric conditions)      | [4] 6.3.22.1.2,<br>11.4.1 | o      |         |
| 8   | Association procedure                                   | [4] 6.3.22.1.3            | o      |         |
| 9   | Support "Ranging Parameter Validity Time" (MOB_SCN-REP) | [4] 6.3.22.1.2,<br>11.19  | o      |         |
| 10  | Supports Mean BS CINR                                   | [4] 6.3.2.3.53,<br>11.8.7 | m      |         |
| 11  | Supports Mean BS RSSI                                   | [4] 6.3.2.3.53,<br>11.8.7 | m      |         |
| 12  | Supports relative RX Delay                              | [4] 6.3.2.3.53,<br>11.8.7 | o      |         |
| 13  | Supports BS Round Trip Delay                            | [4] 6.3.2.3.53,<br>11.8.7 | o      |         |
| Comments:   |   |                           |        |         |

## B.5.3.3.5.4 Handover

Table B.126: BS- HO Process

| Prerequisite: (B.2/2 and B.4/1 and B.78/26) Base Station (BS) and Basic packet PMP and Handover supported at PHY level. |   |                           |        |         |
|---|---|---------------------------|--------|---------|
| Item  | Capability  | Reference                 | Status | Support |
| 1   | General HO support  | [4] 6.3.22.2              | m      |         |
| 2   | Cell Reselection  | [4] 6.3.22.2.1            | m      |         |
| 3   | Metric Triggered HO requests  | [4] 6.3.22.2.1,<br>11.1.7 | o      |         |
| 4   | HO decision and initiation initiated by MS                                | [4] 6.3.22.2.2            | m      |         |
| 5   | HO decision and initiation initiated by BS                                | [4] 6.3.22.2.2            | m      |         |
| 6   | HO Cancellation   | [4] 6.3.22.2.3            | m      |         |
| 7   | Use of scanning and association results                                   | [4] 6.3.22.2.4            | m      |         |
| 8   | Termination with the Serving BS   | [4] 6.3.22.2.5            | m      |         |
| 9   | Supports resource retention (MOB_BSHO-REQ/RSP)                            | [4] 6.3.22.2.5            | m      |         |
| 10  | Supports negotiating of "HO authorization policy" during HO (between BSs) | [4] 6.3.22.2.5            | o      |         |
| 11  | Drops during HO   | [4] 6.3.22.2.6            | m      |         |
| 12  | Network entry/re-entry  | [4] 6.3.22.2.7            | m      |         |
| 13  | Supports HO_ID (MOB_BSHO-REQ/RSP)   | [4] 6.3.22.2.7            | m      |         |
| 14  | MS-Assisted coordination of DL transmission at Target BS for HO           | [4] 6.3.22.2.8            | m      |         |
| 15  | HO process  | [4] 6.3.22.2.9            | m      |         |
| Comments:   |   |                           |        |         |

Table B.127: BS- HO Optimization

| Prerequisite: (B.2/2 and B.4/1 and B.78/26) Base Station (BS) and Basic packet PMP and Handover supported at PHY level. |   |                               |        |         |
|---|---|-------------------------------|--------|---------|
| Item  | Capability  | Reference                     | Status | Support |
| 1   | Supports HO optimization  | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 2   | Supports omission of SBC-REQ management messages (Bit #0)   | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 3   | Supports omission of PKM authentication phase, except TEK (Bit #1)  | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 4   | Supports omission of PKM TEK creation phase (Bit #2)  | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 5   | Supports omission of Network Address Acquisition (Bit #3)   | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 6   | Supports omission of Time of the Day Acquisition (Bit #4)   | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 7   | Supports omission of TFTP Phase (Bit #5)  | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 8   | Supports Full service and operational state transfer (Bit #6)   | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 9   | Supports notifying MS of DL data Pending (Bit #7)   | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 10  | Supports sending of unsolicited SBC-RSP management messages with updated capabilities information (Bit #8)                            | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 11  | Supports sending of unsolicited SBC-RSP message in the same frame as RNG-RSP  | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 12  | Supports sending of SBC-RSP TLV in RNG-RSP  | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 13  | Supports omission of REG-REQ during NW re-entry (Bit #9)  | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 14  | Supports sending of unsolicited REG-RSP management messages with updated capabilities information (Bit #10)                           | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 15  | Supports sending of unsolicited REG-RSP message in the same frame as RNG-RSP  | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 16  | Supports sending of REG-RSP TLV in RNG-RSP  | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 17  | Supports ARQ continuation using SN report header after NW re-entry  | [4] 6.3.2.6, 6.3.22.2.8       | o      |         |
| 18  | Supports continuation of non-ARQ connection using SDU SN extended subheader before handover and using report header after NW re-entry | [4] 6.3.2.6, 6.3.22.2.8       | o      |         |
| 19  | Supports receiving Bandwith Request header with zero BR as a notification of successful re-entry registration (Bit #12)               | [4] 6.3.2.6, 6.3.22.2.7, 11.6 | o      |         |
| 20  | Supports SN request extended subheader (Bit #11)  | [4] 6.3.2.6, 11.6             | o      |         |
| Comments:   |   |                               |        |         |

## B.5.3.3.5.5 Idle Mode

Table B.128: BS- Idle Mode

| Prerequisite: (B.2/2 and B.4/1 and B.78/26) Base Station (BS) and Basic packet PMP and Handover supported at PHY level. |  |                  |          |         |
|---|--|------------------|----------|---------|
| Item  | Capability   | Reference        | Status   | Support |
| 1   | Supports Idle mode functionality   | [4] 6.3.24       | o        |         |
| 2   | Supports Idle mode initiation by DREG-REQ message.   | [4] 6.3.24.1     | Cb.128.1 |         |
| 3   | Supports Idle mode initiation by unsolicited DREG-CMD message.   | [4] 6.3.24.1     | Cb.128.1 |         |
| 4   | Supports maintaining connection information at BS during Idle Mode initiation process.                                     | [4] 6.3.24.1     | Cb.128.2 |         |
| 5   | Supports retaining service and operational information by DREG-CMD   | [4] 6.3.24.1     | Cb.128.2 |         |
| 6   | Supports retaining service and operational information by DREG-REQ   | [4] 6.3.24.1     | Cb.128.2 |         |
| 7   | Support of inclusion of MS MAC address hash ion paging message.  | [4] 6.3.24.1     | Cb.128.2 |         |
| 8   | Supports handling of Broadcast Control Pointer IE  | [4] 6.3.24.5     | Cb.128.2 |         |
| 9   | Supports handling of dedicated ranging region and code allocation for location update and network entry of MS in idle mode | [4] 6.3.24.7.1   | Cb.128.2 |         |
| 10  | Supports Paging Group Update   | [4] 6.3.24.8.1.1 | Cb.128.2 |         |
| 11  | Supports Timer Location Update   | [4] 6.3.24.8.1.2 | Cb.128.2 |         |
| 12  | Supports Power Down Location Update  | [4] 6.3.24.8.1.3 | Cb.128.2 |         |
| 13  | Supports MAC Hash Skip Threshold Location Update   | [4] 6.3.24.8.1.4 | Cb.128.2 |         |
| 14  | Supports Secure Location Update  | [4] 6.3.24.8.2.1 | Cb.128.2 |         |
| 15  | Supports Unsecure Location Update  | [4] 6.3.24.8.2.1 | Cb.128.2 |         |
| Cb.128.1: IF B.128/1 THEN m ELSE n/a.   |  |                  |          |         |
| Cb.128.2: IF B.128/1 THEN o ELSE N/A.   |  |                  |          |         |
| Comments:   |  |                  |          |         |

Table B.129: BS- network re-entry from Idle Mode

| Prerequisite: (B.2/2 and B.4/1 and B.78/26) Base Station (BS) and Basic packet PMP and Handover supported at PHY level. |   |                    |        |         |
|---|---|--------------------|--------|---------|
| Item  | Capability  | Reference          | Status | Support |
| 1   | Expedited network re-entry from Idle Mode   | [4] 6.3.24.9       | o      |         |
| 2   | Supports omission of SBC-REQ management messages (Bit #0)   | [4] 6.3.24.9, 11.6 | o      |         |
| 3   | Supports omission of PKM authentication phase, except TEK (Bit #1)  | [4] 6.3.24.9, 11.6 | o      |         |
| 4   | Supports omission of PKM TEK creation phase (Bit #2)  | [4] 6.3.24.9, 11.6 | o      |         |
| 5   | Supports omission of Network Address Acquisition (Bit #3)   | [4] 6.3.24.9, 11.6 | o      |         |
| 6   | Supports omission of Time of the Day Acquisition (Bit #4)   | [4] 6.3.24.9, 11.6 | o      |         |
| 7   | Supports omission of TFTP Phase (Bit #5)  | [4] 6.3.24.9, 11.6 | o      |         |
| 8   | Supports Full service and operational state transfer (Bit #6)   | [4] 6.3.24.9, 11.6 | o      |         |
| 9   | Supports notifying MS of DL data Pending (Bit #7)   | [4] 6.3.24.9, 11.6 | o      |         |
| 10  | Supports receiving of unsolicited SBC-RSP management messages with updated capabilities information (Bit #8)          | [4] 6.3.24.9, 11.6 | o      |         |
| 11  | Supports receiving of unsolicited SBC-RSP message in the same frame as RNG-RSP  | [4] 6.3.24.9, 11.6 | o      |         |
| 12  | Supports receiving of SBC-RSP TLV in RNG-RSP  | [4] 6.3.24.9, 11.6 | o      |         |
| 13  | Supports omission of REG-REQ during NW re-entry (Bit #9)  | [4] 6.3.24.9, 11.6 | o      |         |
| 14  | Supports receiving of unsolicited REG-RSP management messages with updated capabilities information (Bit #10)         | [4] 6.3.24.9, 11.6 | o      |         |
| 15  | Supports receiving of unsolicited REG-RSP message in the same frame as RNG-RSP  | [4] 6.3.24.9, 11.6 | o      |         |
| 16  | Supports receiving of REG-RSP TLV in RNG-RSP  | [4] 6.3.24.9, 11.6 | o      |         |
| 17  | Supports sending Bandwith Request header with zero BR as a notification of successful re-entry registration (Bit #12) | [4] 6.3.24.9, 11.6 | o      |         |
| 18  | Supports triggering a higher layer protocol required to refresh its traffic IP address (Bit #13)                      | [4] 11.6           | o      |         |
| Comments:   |   |                    |        |         |

## B.5.3.3.6 Security

Table B.130: BS- PKM version

| Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization. |                        |                |        |         |
|--|------------------------|----------------|--------|---------|
| Item   | Capability             | Reference      | Status | Support |
| 1  | Supports PKM version 1 | [4] 7.2.1      | m      |         |
| 2  | Supports PKM version 2 | [4] 7.2.2, 7.8 | m      |         |
| Comments:  |                        |                |        |         |

Table B.131: PKM v1 Major Privacy functions for BS in PMP

| Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization. |   |                  |          |         |
|--|---|------------------|----------|---------|
| Item   | Name  | Reference        | Status   | Support |
| 1  | Does the BS support Authorization Information messages?                                     | [4] 7.2          | o        |         |
| 2  | Does the BS support receipt of Auth Request (PKM-REQ with Code=4)                           | [4] 7.2          | m        |         |
| 3  | Does the BS verify that the MS provides its Basic CID as part of the Authorization Request? | [4] 7.2          | m        |         |
| 4  | Does the BS support generation of Auth Reply (PKM-RSP with Code=5)?                         | [4] 7.2          | m        |         |
| 5  | Does the BS support two simultaneously active AKs?  | [4] 7.2          | m        |         |
| 6  | BS supports AK generation   | [4] 7.5.4        | m        |         |
| 7  | AK encryption using RSA with 1 024 bit key  | [4] 7.5.5, 7.5.6 | m        |         |
| 8  | BS supports PKM message authentication using HMAC with SHA-1                                | [4] 11.1.2       | m        |         |
| 9  | BS supports MAC management message authentication using HMAC with SHA-1                     | [4] 7.5.3        | m        |         |
| 10   | TEK encryption using 3-DES  | [4] 7.5.2.1      | m        |         |
| 11   | TEK encryption using RSA with 1 024 bit key   | [4] 7.5.2.2      | o        |         |
| 12   | TEK-128 encryption using AES  | [4] 7.5.2.3      | Cb.131.3 |         |
| 13   | DES data encryption/decryption on a per SA basis.   | [4] 7.5.1.1      | m        |         |
| 14   | AES data encryption/decryption on a per SA basis.   | [4] 7.5.1.1      | o        |         |
| 15   | Support of no encryption/decryption on a per- SA basis                                      | [4] 6.3.2.1      | m        |         |
| Cb.131.1: IF table B.131/ THEN m, ELSE n/a.  |   |                  |          |         |
| Cb.131.2: IF table B.131/14 THEN m, ELSE n/a.  |   |                  |          |         |
| Comments:  |   |                  |          |         |

Table B.132: BS- PKM v2 Authorization Policy support - initial network entry

| Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization. |   |              |        |         |
|--|---|--------------|--------|---------|
| Item   | Capability  | Reference    | Status | Support |
| 1  | No Authorization  | [4] 11.8.4.2 | m      |         |
| 2  | EAP-based authorization   | [4] 11.8.4.2 | m      |         |
| 3  | EAP-based authorization and Authenticated (EIK) EAP-based authorization | [4] 11.8.4.2 | o      |         |
| 4  | RSA-based authorization   | [4] 11.8.4.2 | o      |         |
| 5  | RSA-based authorization and Authenticated (EIK) EAP-based authorization | [4] 11.8.4.2 | o      |         |
| 6  | RSA-based authorization and EAP-based authorization                     | [4] 11.8.4.2 | o      |         |
| Comments:  |   |              |        |         |

**Table B.133: BS- PKM v2 Authorization Policy support - network re-entry**

| Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization. |   |              |        |         |
|--|---|--------------|--------|---------|
| Item   | Capability  | Reference    | Status | Support |
| 1  | No Authorization  | [4] 11.8.4.2 | m      |         |
| 2  | EAP-based authorization   | [4] 11.8.4.2 | m      |         |
| 3  | EAP-based authorization and Authenticated (EIK) EAP-based authorization | [4] 11.8.4.2 | n/a    |         |
| 4  | RSA-based authorization   | [4] 11.8.4.2 | n/a    |         |
| 5  | RSA-based authorization and Authenticated (EIK) EAP-based authorization | [4] 11.8.4.2 | n/a    |         |
| 6  | RSA-based authorization and EAP-based authorization                     | [4] 11.8.4.2 | n/a    |         |
| Comments:  |   |              |        |         |

**Table B.134: BS Cryptographic suites**

| Prerequisite: (B.2/2 and B.4/1 and B. 110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization. |  |                       |        |         |               |                 |
|---|--|-----------------------|--------|---------|---------------|-----------------|
| Item  | Capability   | Reference             | Status | Support | Value allowed | Value supported |
| 1   | No data encrypt, no data authent and 3-DES 128                                   | [4] 11.9.14, 12.3.1.1 | o      |         | 0x000001      |                 |
| 2   | CBC-mode 56bit DES, no data authent and 3-DES 128                                | [4] 11.9.14, 12.3.1.1 | m      |         | 0x010001      |                 |
| 3   | No data encrypt, no data authent and RSA, 1024                                   | [4] 11.9.14, 12.3.1.1 | o      |         | 0x000002      |                 |
| 4   | CBC-mode 56bit DES, no data authent and RSA, 1024                                | [4] 11.9.14, 12.3.1.1 | o      |         | 0x010002      |                 |
| 5   | CCM-Mode 128-bit AES, CCM-Mode, 128-bit, ECB mode AES with 128-bit key           | [4] 11.9.14           | o      |         | 0x020103      |                 |
| 6   | CCM-Mode 128bits AES, CCM-Mode, AES Key Wrap with 128-bit key                    | [4] 11.9.14           | m      |         | 0x020104      |                 |
| 7   | CBC-Mode 128-bit AES, no data authentication, ECB mode AES with 128-bit key      | [4] 11.9.14           | o      |         | 0x030003      |                 |
| 8   | MBS CTR Mode 128 bits AES, no data authentication, AES ECB mode with 128-bit key | [4] 11.9.14           | o      |         | 0x800003      |                 |
| 9   | MBS CTR mode 128 bits AES, no data authentication, AES Key Wrap with 128-bit key | [4] 11.9.14           | o      |         | 0x800004      |                 |
| Comments:   |  |                       |        |         |               |                 |

**Table B.135: CID and SAID update for BS in PMP**

| Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization. |  |                        |        |         |
|--|--|------------------------|--------|---------|
| Item   | Capability                               | Reference              | Status | Support |
| 1  | Support CID update by RNG-RSP            | [4] 6.3.2.3.6, 11.7.10 | m      |         |
| 2  | Support CID update by REG-RSP            | [4] 6.3.2.3.8, 11.7.10 | m      |         |
| 3  | Support compressed CID update by RNG-RSP | [4] 6.3.2.3.6, 11.7.10 | m      |         |
| 4  | Support compressed CID update by REG-RSP | [4] 6.3.2.3.8, 11.7.10 | m      |         |
| 5  | Support SAID update by RNG-RSP           | [4] 6.3.2.3.6, 11.7.18 | m      |         |
| 6  | Support SAID update by REG-RSP           | [4] 6.3.2.3.8, 11.7.18 | m      |         |
| 7  | Support SAID update by SA-TEK-RSP        | [4] 7.8.1, 11.7.21     | m      |         |
| Comments:  |  |                        |        |         |



**Table B.136: BS- PKM v2 Message Authentication Code (MAC) mode**

| Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization. |                           |              |        |         |
|--|---------------------------|--------------|--------|---------|
| Item   | Capability                | Reference    | Status | Support |
| 1  | No message authentication | [4] 11.8.4.3 | m      |         |
| 2  | HMAC                      | [4] 11.8.4.3 | m      |         |
| 3  | CMAC                      | [4] 11.8.4.3 | m      |         |
| 4  | 64-bit short-HMAC         | [4] 11.8.4.3 | o      |         |
| 5  | 80-bit short-HMAC         | [4] 11.8.4.3 | o      |         |
| 6  | 96-bit short-HMAC         | [4] 11.8.4.3 | o      |         |

Comments:

**Table B.137: Security association for BS in PMP**

| Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization. |                       |                      |        |         |
|--|-----------------------|----------------------|--------|---------|
| Item   | Capability            | Reference            | Status | Support |
| 1  | Support of Primary SA | [4] 7.2.1.1, 7.2.2.3 | m      |         |
| 2  | Support of Static SA  | [4] 7.2.1.1, 7.2.2.3 | m      |         |
| 3  | Support of Dynamic SA | [4] 7.2.1.1, 7.2.2.3 | m      |         |

Comments:

**Table B.138: Security association service types for BS in PMP**

| Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization. |                                    |               |        |         |
|--|------------------------------------|---------------|--------|---------|
| Item   | Capability                         | Reference     | Status | Support |
| 1  | Support of Unicast service         | [4] 7.2       | m      |         |
| 2  | Support of Group multicast service | [4] 7.2.2.3.2 | m      |         |
| 3  | Support of MBS services            | [4] 7.2.2.3.3 | m      |         |

Comments:

**Table B.139: Certificate for BS in PMP**

| Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization. |  |                |        |         |
|--|--|----------------|--------|---------|
| Item   | Capability   | Reference      | Status | Support |
| 1  | Support of X.509 MS certificate for device authorization | [4] 7.2.1, 7.8 | m      |         |
| 2  | Support of X.209 manufacturer certificate                | [4] 7.2.1, 7.8 | m      |         |
| 3  | Support of X.209 certificate profile                     | [4] 7.2.1, 7.8 | m      |         |

Comments:

#### B.5.3.4 BS in MESH topology

Void.

#### B.5.4 WirelessMAN-OFDMA and WirelessHUMAN-OFDMA

Void.

## B.6 List of PDUs and their directions

In the following PDU tables, statuses with 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.

### B.6.1 Void

### B.6.2 PDUs for MAC layer

#### B.6.2.1 PDUs for MAC layer in PMP topology

##### B.6.2.1.1 PDUs for network entry and initialization in PMP

**Table B.140: BS sending MAC PDUs for network entry and initialization in PMP**

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

**Table B.141: MS sending MAC PDUs for network entry and initialization in PMP**

| Prerequisite: B.4/1 Basic packet PMP. |                      |              |          |         |
|---------------------------------------|----------------------|--------------|----------|---------|
| Item                                  | PDU                  | Reference    | Status   | Support |
| 1                                     | DL-MAP               | -            | n/a      |         |
| 2                                     | DCD                  | -            | n/a      |         |
| 3                                     | UL-MAP               | -            | n/a      |         |
| 4                                     | UCD                  | -            | n/a      |         |
| 5                                     | RNG-REQ              | [4] 6.3.9.5  | m        |         |
| 6                                     | RNG-RSP              | -            | n/a      |         |
| 7                                     | SBC-REQ              | [4] 6.3.9.7  | m        |         |
| 8                                     | SBC-RSP              | -            | n/a      |         |
| 9                                     | PKM-REQ              | [4] 6.3.9.8  | m        |         |
| 10                                    | PKM-RSP              | -            | n/a      |         |
| 11                                    | REG-REQ              | [4] 6.3.9.9  | m        |         |
| 12                                    | REG-RSP              | -            | n/a      |         |
| 13                                    | DHCP discover        | [4] 6.3.9.10 | Cb.141.1 |         |
| 14                                    | DHCP offer           | -            | n/a      |         |
| 15                                    | DHCP request         | [4] 6.3.9.10 | Cb.141.1 |         |
| 16                                    | DHCP response        | -            | n/a      |         |
| 17                                    | Time of day request  | [4] 6.3.9.11 | Cb.141.1 |         |
| 18                                    | Time of day response | -            | n/a      |         |
| Cb.141.1: IF B.33/1 THEN m ELSE n/a.  |                      |              |          |         |
| Comments:                             |                      |              |          |         |

## B.6.2.1.2 PDUs for service flows in PMP

**Table B.142: BS sending PDUs for service flows in PMP**

| Prerequisite: B.4/1 Basic packet PMP. |                  |                |        |         |
|---------------------------------------|------------------|----------------|--------|---------|
| Item                                  | PDU              | Reference      | Status | Support |
| 1                                     | DSA-REQ (create) | [4] 6.3.2.3.10 | m      |         |
| 2                                     | DSA-RSP          | [4] 6.3.2.3.11 | m      |         |
| 3                                     | DSA-ACK          | [4] 6.3.2.3.12 | m      |         |
| 4                                     | DSC-REQ (change) | [4] 6.3.2.3.13 | m      |         |
| 5                                     | DSC-RSP          | [4] 6.3.2.3.14 | m      |         |
| 6                                     | DSC-ACK          | [4] 6.3.2.3.15 | m      |         |
| 7                                     | DSD-REQ (delete) | [4] 6.3.2.3.16 | m      |         |
| 8                                     | DSD-RSP          | [4] 6.3.2.3.17 | m      |         |
| Comments:                             |                  |                |        |         |

**Table B.143: MS sending PDUs for service flows in PMP**

| Prerequisite: B.4/1 Basic packet PMP. |                  |                |          |         |
|---------------------------------------|------------------|----------------|----------|---------|
| Item                                  | PDU              | Reference      | Status   | Support |
| 1                                     | DSA-REQ (create) | [4] 6.3.2.3.10 | Cb.143.1 |         |
| 2                                     | DSA-RSP          | [4] 6.3.2.3.11 | m        |         |
| 3                                     | DSA-ACK          | [4] 6.3.2.3.12 | Cb.143.1 |         |
| 4                                     | DSC-REQ (change) | [4] 6.3.2.3.13 | Cb.143.2 |         |
| 5                                     | DSC-RSP          | [4] 6.3.2.3.14 | m        |         |
| 6                                     | DSC-ACK          | [4] 6.3.2.3.15 | Cb.143.2 |         |
| 7                                     | DSD-REQ (delete) | [4] 6.3.2.3.16 | Cb.143.3 |         |
| 8                                     | DSD-RSP          | [4] 6.3.2.3.17 | m        |         |
| Cb.143.1: IF A 57/2 THEN m ELSE n/a.  |                  |                |          |         |
| Cb.143.2: IF B.57/5 THEN m ELSE n/a.  |                  |                |          |         |
| Cb.143.3: IF A 57/8 THEN m ELSE n/a.  |                  |                |          |         |
| Comments:                             |                  |                |          |         |

## B.6.2.1.3 PDUs for ARQ in PMP

Table B.144: BS sending PDUs for ARQ in PMP

| Prerequisite: (B.4/1 and B. 96/3) Basic packet PMP and MS supports ARQ procedure. |              |           |          |         |
|---|--------------|-----------|----------|---------|
| Item  | PDU          | Reference | Status   | Support |
| 1   | ARQ-feedback | [4] 6.3.4 | Cb.144.1 |         |
| 2   | ARQ-discard  | [4] 6.3.4 | Cb.144.1 |         |
| 3   | ARQ-reset    | [4] 6.3.4 | Cb.144.1 |         |
| Cb.144.1: IF B.96/3 THEN m ELSE n/a.  |              |           |          |         |
| Comments:   |              |           |          |         |

Table B.145: MS sending PDUs for ARQ in PMP

| Prerequisite: (B.4/1 and B.31/3) Basic packet PMP and MS supports ARQ procedure. |              |           |          |         |
|--|--------------|-----------|----------|---------|
| Item   | PDU          | Reference | Status   | Support |
| 1  | ARQ-feedback | [4] 6.3.4 | Cb.145.1 |         |
| 2  | ARQ-discard  | [4] 6.3.4 | Cb.145.1 |         |
| 3  | ARQ-reset    | [4] 6.3.4 | Cb.145.1 |         |
| Cb.145.1: IF B.31/3 THEN m ELSE n/a.   |              |           |          |         |
| Comments:  |              |           |          |         |

## B.6.2.1.4 PDUs for miscellaneous capabilities in PMP

Table B.146: BS sending MAC PDUs for miscellaneous capabilities in PMP

| Prerequisite: B.4/1 Basic packet PMP. |                 |                |          |         |
|---------------------------------------|-----------------|----------------|----------|---------|
| Item                                  | PDU             | Reference      | Status   | Support |
| 1                                     | MCA-REQ         | [4] 6.3.2.3.18 | m        |         |
| 2                                     | MCA-RSP         | [4] 6.3.2.3.19 | n/a      |         |
| 3                                     | DBPC-REQ        | [4] 6.3.2.3.20 | n/a      |         |
| 4                                     | DBPC-RSP        | [4] 6.3.2.3.21 | m        |         |
| 5                                     | RES-CMD         | [4] 6.3.2.3.22 | m        |         |
| 6                                     | CLK-CMP         | [4] 6.3.2.3.25 | Cb.146.2 |         |
| 7                                     | DREG-CMD        | [4] 6.3.2.3.26 | m        |         |
| 8                                     | DSX-RVD         | [4] 6.3.2.3.27 | Cb.146.3 |         |
| 9                                     | TFTP-CPLT       | [4] 6.3.2.3.28 | n/a      |         |
| 10                                    | TFTP-RSP        | [4] 6.3.2.3.29 | m        |         |
| 11                                    | REP-REQ         | [4] 6.3.2.3.33 | m        |         |
| 12                                    | REP-RSP         | [4] 6.3.2.3.33 | n/a      |         |
| 13                                    | FPC             | [4] 6.3.2.3.34 | Cb.146.1 |         |
| 14                                    | AAS-FBCK-REQ    | [4] 6.3.2.3.40 | Cb.146.2 |         |
| 15                                    | AAS-FBCK-RSP    | [4] 6.3.2.3.40 | Cb.146.3 |         |
| 16                                    | AAS-BEAM-select | [4] 6.3.2.3.41 | n/a      |         |
| 17                                    | AAS-BEAM-REQ    | [4] 8.3.6.5    | Cb.146.4 |         |
| 18                                    | AAS-BEAM-RSP    | [4] 8.3.6.5    | Cb.146.5 |         |
| Cb.146.1: IF B.97/10 THEN m ELSE n/a. |                 |                |          |         |
| Cb.146.2: IF B.78/1 THEN m ELSE n/a.  |                 |                |          |         |
| Cb.146.3: IF B.106/1 THEN m ELSE n/a. |                 |                |          |         |
| Cb.146.4: IF B.97/7 THEN m ELSE n/a.  |                 |                |          |         |
| Comments:                             |                 |                |          |         |

**Table B.147: MS sending MAC PDUs for miscellaneous capabilities in PMP**

| Prerequisite: B.4/1 Basic packet PMP.                               |                 |                      |          |         |
|---|-----------------|----------------------|----------|---------|
| Item  | PDU             | Reference            | Status   | Support |
| 1   | MCA-REQ         | -                    | n/a      |         |
| 2   | MCA-RSP         | [4] 6.3.12, 12.3.1.1 | m        |         |
| 3   | DBPC-REQ        | [4] 6.3.2.3.20       | m        |         |
| 4   | DBPC-RSP        | -                    | n/a      |         |
| 5   | RES-CMD         | -                    | n/a      |         |
| 6   | CLK-CMP         | -                    | n/a      |         |
| 7   | DREG-REQ        | [4] 6.3.2.3.43       | o        |         |
| 8   | DREG-CMD        | -                    | n/a      |         |
| 9   | DSX-RVD         | -                    | n/a      |         |
| 10  | TFTP-CPLT       | [4] 6.3.2.3.28       | m        |         |
| 11  | TFTP-RSP        | -                    | n/a      |         |
| 12  | REP-REQ         | -                    | n/a      |         |
| 13  | REP-RSP         | [4] 6.3.2.3.33       | m        |         |
| 14  | FPC             | -                    | n/a      |         |
| 15  | AAS-FBCK-REQ    | -                    | n/a      |         |
| 16  | AAS-FBCK-RSP    | -                    | n/a      |         |
| 17  | AAS-BEAM-select | [4] 6.3.2.3.41       | Cb.147.1 |         |
| 18  | AAS-BEAM-REQ    | -                    | n/a      |         |
| 19  | AAS-BEAM-RSP    | -                    | n/a      |         |
| Cb.147.1: IF B.13/1 THEN (IF B.7/2or B.8/2 THEN m ELSE o) ELSE n/a. |                 |                      |          |         |
| Comments:   |                 |                      |          |         |

**B.6.2.1.5 PDUs for privacy in PMP****Table B.148: BS sending MAC Privacy PDUs in PMP**

| Prerequisite: B.4/1 Basic packet PMP.       |                                |               |          |         |
|---|--------------------------------|---------------|----------|---------|
| Item  | PDU                            | Reference     | Status   | Support |
| 1   | PKM-RSP SA Add (Code 3)        | [4] 6.3.2.3.9 | Cb.148.1 |         |
| 2   | PKM-REQ Auth Request (Code 4)  |               | n/a      |         |
| 3   | PKM-RSP Auth Reply (Code 5)    | [4] 6.3.2.3.9 | m        |         |
| 4   | PKM-RSP Auth Reject (Code 6)   | [4] 6.3.2.3.9 | m        |         |
| 5   | PKM-REQ Key Request (Code 7)   |               | n/a      |         |
| 6   | PKM-RSP Key Reply (Code 8)     | [4] 6.3.2.3.9 | m        |         |
| 7   | PKM-RSP Key Reject (Code 9)    | [4] 6.3.2.3.9 | m        |         |
| 8   | PKM-RSP Auth Invalid (Code 10) | [4] 6.3.2.3.9 | m        |         |
| 9   | PKM-RSP TEK Invalid (Code 11)  | [4] 6.3.2.3.9 | m        |         |
| 10  | PKM-REQ Authent Info (Code 12) |               | n/a      |         |
| Cb.148.1: IF table B.131/ THEN m, ELSE n/a. |                                |               |          |         |
| Comments:                                   |                                |               |          |         |

**Table B.149: MS sending MAC Privacy PDUs in PMP**

| Prerequisite: B.4/1 Basic packet PMP. |                                |               |        |         |
|---------------------------------------|--------------------------------|---------------|--------|---------|
| Item                                  | PDU                            | Reference     | Status | Support |
| 1                                     | PKM-RSP SA Add (Code 3)        | -             | n/a    |         |
| 2                                     | PKM-REQ Auth Request (Code 4)  | [4] 6.3.2.3.9 | m      |         |
| 3                                     | PKM-RSP Auth Reply (Code 5)    | -             | n/a    |         |
| 4                                     | PKM-RSP Auth Reject (Code 6)   | -             | n/a    |         |
| 5                                     | PKM-REQ Key Request (Code 7)   | [4] 6.3.2.3.9 | m      |         |
| 6                                     | PKM-RSP Key Reply (Code 8)     | -             | n/a    |         |
| 7                                     | PKM-RSP Key Reject (Code 9)    | -             | n/a    |         |
| 8                                     | PKM-RSP Auth Invalid (Code 10) | -             | n/a    |         |
| 9                                     | PKM-RSP TEK Invalid (Code 11)  | -             | n/a    |         |
| 10                                    | PKM-REQ Authent Info (Code 12) | [4] 6.3.2.3.9 | m      |         |
| Comments:                             |                                |               |        |         |

## B.6.2.1.6 PDUs for Mobility in PMP

Table B.150: BS sending MAC PDUs for Mobility in PMP

| Prerequisite: B.4/1 Basic packet PMP. |               |                |        |         |
|---------------------------------------|---------------|----------------|--------|---------|
| Item                                  | PDU           | Reference      | Status | Support |
| 1                                     | MOB_SLP-REQ   | [4] 6.3.2.3.44 | n/a    |         |
| 2                                     | MOB_SLP-RSP   | [4] 6.3.2.3.45 |        |         |
| 3                                     | MOB_TRF-IND   | [4] 6.3.2.3.46 |        |         |
| 4                                     | MOB_NBR-ADV   | [4] 6.3.2.3.47 | m      |         |
| 5                                     | MOB_SCN-REQ   | [4] 6.3.2.3.48 | n/a    |         |
| 6                                     | MOB_SCN-RSP   | [4] 6.3.2.3.49 |        |         |
| 7                                     | MOB_SCN-REP   | [4] 6.3.2.3.50 | n/a    |         |
| 8                                     | MOB_ASC-REP   | [4] 6.3.2.3.51 |        |         |
| 9                                     | MOB_BSHO-REQ  | [4] 6.3.2.3.52 |        |         |
| 10                                    | MOB_MSHO-REQ  | [4] 6.3.2.3.53 | n/a    |         |
| 11                                    | MOB_BSHO-RSP  | [4] 6.3.2.3.54 |        |         |
| 12                                    | MOB_HO-IND    | [4] 6.3.2.3.55 | n/a    |         |
| 13                                    | MOB_PAG-ADV   | [4] 6.3.2.3.56 |        |         |
| 14                                    | MBS_MAP       | [4] 6.3.2.3.57 |        |         |
| 15                                    | PMC_REQ       | [4] 6.3.2.3.58 | n/a    |         |
| 16                                    | PMC_RSP       | [4] 6.3.2.3.59 |        |         |
| 17                                    | SUB-DL-UL-MAP | [4] 6.3.2.3.60 |        |         |
| 18                                    | PRC-LT_CTRL   | [4] 6.3.2.3.61 |        |         |
| Cb.150.1: IF (B3/3) THEN m ELSE o.    |               |                |        |         |
| Comments:                             |               |                |        |         |

Table B.151: MS sending MAC PDUs for Mobility in PMP

| Prerequisite: B.4/1 Basic packet PMP. |               |                |          |         |
|---------------------------------------|---------------|----------------|----------|---------|
| Item                                  | PDU           | Reference      | Status   | Support |
| 1                                     | MOB_SLP-REQ   | [4] 6.3.2.3.44 |          |         |
| 2                                     | MOB_SLP-RSP   | [4] 6.3.2.3.45 | n/a      |         |
| 3                                     | MOB_TRF-IND   | [4] 6.3.2.3.46 | n/a      |         |
| 4                                     | MOB_NBR-ADV   | [4] 6.3.2.3.47 | n/a      |         |
| 5                                     | MOB_SCN-REQ   | [4] 6.3.2.3.48 | Cb.151.1 |         |
| 6                                     | MOB_SCN-RSP   | [4] 6.3.2.3.49 | n/a      |         |
| 7                                     | MOB_SCN-REP   | [4] 6.3.2.3.50 |          |         |
| 8                                     | MOB_ASC-REP   | [4] 6.3.2.3.51 | n/a      |         |
| 9                                     | MOB_BSHO-REQ  | [4] 6.3.2.3.52 | n/a      |         |
| 10                                    | MOB_MSHO-REQ  | [4] 6.3.2.3.53 |          |         |
| 11                                    | MOB_BSHO-RSP  | [4] 6.3.2.3.54 | n/a      |         |
| 12                                    | MOB_HO-IND    | [4] 6.3.2.3.55 |          |         |
| 13                                    | MOB_PAG-ADV   | [4] 6.3.2.3.56 | n/a      |         |
| 14                                    | MBS_MAP       | [4] 6.3.2.3.57 | n/a      |         |
| 15                                    | PMC_REQ       | [4] 6.3.2.3.58 |          |         |
| 16                                    | PMC_RSP       | [4] 6.3.2.3.59 | n/a      |         |
| 17                                    | SUB-DL-UL-MAP | [4] 6.3.2.3.60 | n/a      |         |
| 18                                    | PRC-LT_CTRL   | [4] 6.3.2.3.61 | n/a      |         |
| Cb.151.1: IF (B3/3) THEN m ELSE o.    |               |                |          |         |
| Comments:                             |               |                |          |         |

## B.6.2.2 PDUs for MAC layer in MESH topology

Void.

## B.7 PDU fields

All items in this clause concern only the status of the fields of PDU transmitted by the IUT. For PDU received by the IUT all the fields are supposed to have been received. So for the received PDU, all fields, which are sent by the sender side are mandatory.

To know which fields of a PDU received by the IUT are mandatory, please refer to the status of the transmitted PDU fields for the opposite side. Fields that are either mandatory or optional for the transmitter, become mandatory for the receiver.

### B.7.1 Fields of PDUs for MAC layer

#### B.7.1.1 PDUs fields for MAC in PMP topology

##### B.7.1.1.1 DL-MAP

**Table B.152: PDU: DL-MAP**

| Item | Parameter  | Reference     | Status | Support |
|------|--|---------------|--------|---------|
| 1    | Management Message type=2  | [4] 6.3.2.3.2 | m      |         |
| 2    | DCD count  | [4] 6.3.2.3.2 | m      |         |
| 3    | Base station ID  | [4] 6.3.2.3.2 | m      |         |
| 4    | DL_MAP Information Element(s)<br>See next DL-MAP Information Element | [4] 6.3.2.3.2 | m      |         |

Comments:

**Table B.153: PDU: DL-MAP Information Element**

| Item | Parameter                                     | Reference   | Status | Support |
|------|---|-------------|--------|---------|
| 1    | CID   | [4] 8.3.6.2 | m      |         |
| 2    | DIUC  | [4] 8.3.6.2 | m      |         |
| 3    | Preamble Present                              | [4] 8.3.6.2 | m      |         |
| 4    | Start Time                                    | [4] 8.3.6.2 | m      |         |
| 5    | Extended DIUC dependent IE<br>Only if DIUC=15 | [4] 8.3.6.2 | o      |         |

Comments:

**Table B.154: PDU: Extended DIUC dependent IE**

| Item | Parameter        | Reference     | Status | Support |
|------|------------------|---------------|--------|---------|
| 1    | Extended DIUC    | [4] 8.3.6.2.2 | m      |         |
| 2    | Length           | [4] 8.3.6.2.2 | m      |         |
| 3    | Unspecified data | [4] 8.3.6.2.2 | m      |         |

Comments:

## B.7.1.1.2 DCD

Table B.155: PDU: DCD

| Item                        | Parameter  | Reference                     | Status | Support |
|-----------------------------|--|-------------------------------|--------|---------|
| 1                           | Management Message type=1  | [4] 6.3.2.3.1                 | m      |         |
| 2                           | Reserved (see note)  | [4] 6.3.2.3.1                 | m      |         |
| 3                           | Configuration Change count                                       | [4] 6.3.2.3.1                 | m      |         |
| 4                           | TLV Encoded information<br>see next DCD TLV table                | [4] 6.3.2.3.1                 | m      |         |
| 5                           | Downlink burst profile(s)<br>see next DCD DL burst profile table | [4] 6.3.2.3.1,<br>8.1.4.1.2.5 | m      |         |
| NOTE: Shall be set to zero. |  |                               |        |         |
| Comments:                   |  |                               |        |         |

Table B.156: DCD TLV

| Item   | Parameter                   | Reference             | Status   | Support |
|--|-----------------------------|-----------------------|----------|---------|
| 1  | Channel Number              | [4] 11.4.1            | Cb.156.1 |         |
| 2  | Channel Switch Frame Number | [4] 11.4.1            | Cb.156.1 |         |
| 3  | Frequency                   | [4] 11.4.1            | m        |         |
| 4  | BS Id                       | [4] 11.4.1            | m        |         |
| 5  | Frame Duration Code         | [4] 11.4.1            | m        |         |
| 6  | Frame Number                | [4] 11.4.1            | m        |         |
| 7  | MAC version                 | [4] 11.4.1            | m        |         |
| 8  | BS EIRP                     | [2] 4.3.2, [4] 11.4.1 | m        |         |
| 9  | TTG                         | [2] 4.3.2, [4] 11.4.1 | n/a      |         |
| 10   | RTG                         | [2] 4.3.2, [4] 11.4.1 | n/a      |         |
| 11   | $EIRxP_{IR,max}$            | [2] 4.3.2, [4] 11.4.1 | m        |         |
| Cb.156.1: IF B. license exempt band THEN m ELSE n/a. |                             |                       |          |         |
| Comments:  |                             |                       |          |         |

Table B.157: DCD DL Burst Profile

| Item                        | Capability          | Reference                          | Status | Support |
|-----------------------------|---------------------|------------------------------------|--------|---------|
| 1                           | Type=1              | [2] 4.3.2, [4] 8.1.4.1.2.5, 11.4.2 | m      |         |
| 2                           | Length              | [2] 4.3.2, [4] 8.1.4.1.2.5, 11.4.2 | m      |         |
| 3                           | Reserved (see note) | [2] 4.3.2, [4] 8.1.4.1.2.5, 11.4.2 | m      |         |
| 4                           | DIUC                | [2] 4.3.2, [4] 8.1.4.1.2.5, 11.4.2 | m      |         |
| 5                           | FEC Code Type       | [2] 4.3.2, [4] 8.1.4.1.2.5, 11.4.2 | m      |         |
| 6                           | TCS_Enable          | [2] 4.3.2, [4] 8.1.4.1.2.5, 11.4.2 | o      |         |
| NOTE: Shall be set to zero. |                     |                                    |        |         |
| Comments:                   |                     |                                    |        |         |



## B.7.1.1.3 UCD

Table B.158: PDU: UCD

| Item      | Parameter  | Reference     | Status | Support |
|-----------|--|---------------|--------|---------|
| 1         | Management Message type=0  | [4] 6.3.2.3.3 | m      |         |
| 2         | Configuration Change count   | [4] 6.3.2.3.3 | m      |         |
| 3         | Ranging backoff start  | [4] 6.3.2.3.3 | m      |         |
| 4         | Ranging backoff End  | [4] 6.3.2.3.3 | m      |         |
| 5         | Request backoff start  | [4] 6.3.2.3.3 | m      |         |
| 6         | Request backoff End  | [4] 6.3.2.3.3 | m      |         |
| 7         | TLV Encoded information<br>see next UCD TLV table                            | [4] 6.3.2.3.3 | m      |         |
| 8         | Uplink burst profile(s)<br>see next UCD UL burst profile table for encodings | [4] 8.3.5.5   | m      |         |
| Comments: |  |               |        |         |

Table B.159: UCD TLV

| Item                                | Parameter                                    | Reference             | Status   | Support |
|-------------------------------------|--|-----------------------|----------|---------|
| 1                                   | Frequency                                    | [2] 4.3.2, [4] 11.3.1 | m        |         |
| 2                                   | Contention-based Reservation Timeout         | [2] 4.3.2, [4] 11.3.1 | m        |         |
| 3                                   | Contention ranging request opportunity size  | [4] 11.3.1            | m        |         |
| 4                                   | Contention ranging request burst size        | [4] 11.3.1            | m        |         |
| 5                                   | Subchannelization REQ Region-Full Parameters | [2] 4.3.2, [4] 11.3.1 | Cb.159.1 |         |
| 6                                   | Subchannelization focused contention codes   | [2] 4.3.2, [4] 11.3.1 | Cb.159.1 |         |
| 7                                   | Subchannelized Initial Ranging capable BS    | [2] 4.3.2, [4] 11.3.1 | m        |         |
| Cb.159.1: IF B.13/ THEN m ELSE n/a. |  |                       |          |         |
| Comments:                           |  |                       |          |         |

Table B.160: UCD UL Burst Profile

| Item   | Capability                     | Reference               | Status     | Support |
|--|--------------------------------|-------------------------|------------|---------|
| 1  | Type=1                         | [4] 8.3.5.5             | m          |         |
| 2  | Length                         | [4] 8.3.5.5             | m          |         |
| 3  | UIUC                           | [4] 8.3.5.5             | m          |         |
| 4  | Reserved (see note)            | [4] 8.3.5.5             | m          |         |
| 5  | FEC Code Type                  | [2] 4.3.2, [4] 11.3.1.1 | m          |         |
| 6  | Focused contention power boost | [2] 4.3.2, [4] 11.3.1.1 | Cb.B.160.1 |         |
| 7  | TCS enable                     | [4] 11.3.1.1            | o          |         |
| Cb.B.160.1: IF Focused Contention BW requesting THEN m ELSE o. |                                |                         |            |         |
| NOTE: This field shall be set to zero.                         |                                |                         |            |         |
| Comments:  |                                |                         |            |         |

## B.7.1.1.4 UL-MAP

Table B.161: PDU: UL-MAP

| Item                        | Parameter                                     | Reference     | Status | Support |
|-----------------------------|---|---------------|--------|---------|
| 1                           | Management Message type=3                     | [4] 6.3.2.3.4 | m      |         |
| 2                           | Reserved (see note)                           | [4] 6.3.2.3.4 | m      |         |
| 3                           | UCD count                                     | [4] 6.3.2.3.4 | m      |         |
| 4                           | Allocation start time                         | [4] 6.3.2.3.4 | m      |         |
| 5                           | UL_MAP Information Element(s), see next table | [4] 6.3.2.3.4 | m      |         |
| NOTE: Shall be set to zero. |   |               |        |         |
| Comments:                   |   |               |        |         |

**Table B.162: UL-MAP Information Element(s)**

| Item                                | Parameter                                   | Reference   | Status  | Support |
|-------------------------------------|---|-------------|---------|---------|
| 1                                   | CID   | [4] 8.3.6.3 | m       |         |
| 2                                   | Start Time                                  | [4] 8.3.6.3 | m       |         |
| 3                                   | Subchannel index                            | [4] 8.3.6.3 | m       |         |
| 4                                   | UUIC  | [4] 8.3.6.3 | m       |         |
| 5                                   | Duration                                    | [4] 8.3.6.3 | m       |         |
| 6                                   | Midamble repetition interval                | [4] 8.3.6.3 | m       |         |
| 7                                   | Focused_Contention_IE()                     | [4] 8.3.6.3 | C.162.1 |         |
| 8                                   | Subchannelized_Network_Entry_IE()           | [4] 8.3.6.3 | m       |         |
| 9                                   | Extended UUIC dependent IE (See next table) | [4] 8.3.6.3 | o       |         |
| 10                                  | Padding nibble, if needed                   | [4] 8.3.6.3 | o       |         |
| C.162.1: IF B78/20 THEN m ELSE n/a. |   |             |         |         |
| Comments:                           |   |             |         |         |

**Table B.163: Extended UIUC dependent IE**

| Item      | Parameter        | Reference     | Status | Support |
|-----------|------------------|---------------|--------|---------|
| 1         | Extended UIUC    | [4] 8.3.6.3.4 | m      |         |
| 2         | Length           | [4] 8.3.6.3.4 | m      |         |
| 3         | Unspecified data | [4] 8.3.6.3.4 | m      |         |
| Comments: |                  |               |        |         |

#### B.7.1.1.5 RNG-REQ and RNG-RSP

**Table B.164: PDU: RNG-REQ**

| Item                        | Parameter   | Reference     | Status | Support |
|-----------------------------|---|---------------|--------|---------|
| 1                           | Management Message type=4                             | [4] 6.3.2.3.5 | m      |         |
| 2                           | Reserved (see note)                                   | [4] 6.3.2.3.5 | m      |         |
| 3                           | TLV Encoded information<br>see next RNG-REQ TLV table | [4] 6.3.2.3.5 | m      |         |
| NOTE: Shall be set to zero. |   |               |        |         |
| Comments:                   |   |               |        |         |

**Table B.165: RNG-REQ TLV**

| Item                                | Parameter                        | Reference     | Status   | Support |
|-------------------------------------|----------------------------------|---------------|----------|---------|
| 1                                   | Requested Downlink Burst profile | [4] 6.3.2.3.5 | m        |         |
| 2                                   | MS MAC address                   | [4] 6.3.2.3.5 | m        |         |
| 3                                   | Ranging anomalies                | [4] 6.3.2.3.5 | o        |         |
| 4                                   | MAC version                      | [4] 6.3.2.3.5 | m        |         |
| 5                                   | AAS broadcast capability         | [4] 6.3.2.3.5 | Cb.165.1 |         |
| Cb.165.1: IF A13/1 THEN o ELSE n/a. |                                  |               |          |         |
| Comments:                           |                                  |               |          |         |

**Table B.166: PDU: RNG-RSP**

| Item                        | Parameter   | Reference     | Status | Support |
|-----------------------------|---|---------------|--------|---------|
| 1                           | Management Message type=5                             | [4] 6.3.2.3.6 | m      |         |
| 2                           | Reserved (see note)                                   | [4] 6.3.2.3.6 | m      |         |
| 3                           | TLV Encoded information<br>see next RNG-RSP TLV table | [4] 6.3.2.3.6 | m      |         |
| NOTE: Shall be set to zero. |   |               |        |         |
| Comments:                   |   |               |        |         |

Table B.167: RNG-RSP TLV

| Item   | Parameter                          | Reference     | Status   | Support |
|--|------------------------------------|---------------|----------|---------|
| 1  | Timing Adjust Information          | [4] 6.3.2.3.6 | o        |         |
| 2  | Power Adjust Information           | [4] 6.3.2.3.6 | o        |         |
| 3  | Ranging Status                     | [4] 6.3.2.3.6 | m        |         |
| 4  | DL Frequency Override              | [4] 6.3.2.3.6 | o        |         |
| 5  | UL Channel ID Override             | [4] 6.3.2.3.6 | o        |         |
| 6  | DL Operational Burst Profile       | [4] 6.3.2.3.6 | o        |         |
| 7  | Basic CID                          | [4] 6.3.2.3.6 | Cb.167.3 |         |
| 8  | Primary Management CID             | [4] 6.3.2.3.6 | Cb.167.3 |         |
| 9  | MS MAC Address                     | [4] 6.3.2.3.6 | Cb.167.3 |         |
| 10   | Frequency Adjust Information       | [4] 6.3.2.3.6 | o        |         |
| 11   | AAS broadcast permission           | [4] 6.3.2.3.6 | Cb.167.1 |         |
| 12   | Frame Number                       | [4] 6.3.2.3.6 | o        |         |
| 13   | Initial ranging opportunity Number | [4] 6.3.2.3.6 | o        |         |
| 14   | ranging sub channel                | [4] 6.3.2.3.6 | Cb.167.2 |         |
| Cb.167.1: IF B.13/1 THEN o ELSE n/a.               |                                    |               |          |         |
| Cb.167.2: IF B.13/ THEN o ELSE n/a.                |                                    |               |          |         |
| Cb.167.3: IF on initial ranging CID THEN m ELSE o. |                                    |               |          |         |
| Comments:  |                                    |               |          |         |

## B.7.1.1.6 SBC-REQ and SBC-RSP

Table B.168: PDU: SBC-REQ

| Item      | Parameter   | Reference      | Status | Support |
|-----------|---|----------------|--------|---------|
| 1         | Management Message type=26                            | [4] 6.3.2.3.23 | m      |         |
| 2         | TLV Encoded information<br>see next SBC-REQ TLV table | [4] 6.3.2.3.23 | m      |         |
| Comments: |   |                |        |         |

Table B.169: SBC-REQ TLV

| Item      | Parameter  | Reference      | Status | Support |
|-----------|--|----------------|--------|---------|
| 1         | Physical Parameters supported (see table B.170)            | [4] 6.3.2.3.23 | m      |         |
| 2         | Bandwidth Allocation Support                               | [4] 6.3.2.3.23 | m      |         |
| 3         | Capabilities for construction and transmission of MAC PDUs | [4] 6.3.2.3.23 | o      |         |
| 4         | PKM Flow control   | [4] 6.3.2.3.23 | o      |         |
| 5         | Authorization policy support                               | [4] 6.3.2.3.23 | o      |         |
| 6         | Maximum number of supported security association           | [4] 6.3.2.3.23 | o      |         |
| Comments: |  |                |        |         |

Table B.170: Physical Parameters Supported fields for SBC-REQ

| Item      | Parameter                 | Reference  | Status | Support |
|-----------|---------------------------|------------|--------|---------|
| 1         | Subscriber transition gap | [4] 11.8.3 | m      |         |
| 2         | Maximum transmit power    | [4] 11.8.3 | m      |         |
| 3         | Current transmit power    | [4] 11.8.3 | m      |         |
| 4         | MS FFT sizes              | [4] 11.8.3 | m      |         |
| 5         | MS demodulator            | [4] 11.8.3 | m      |         |
| 6         | MS modulator              | [4] 11.8.3 | m      |         |
| 7         | MS TC sublayer support    | [4] 11.8.3 | o      |         |
| Comments: |                           |            |        |         |

Table B.171: PDU: SBC-RSP

| Item      | Parameter   | Reference      | Status | Support |
|-----------|---|----------------|--------|---------|
| 1         | Management Message type=27                            | [4] 6.3.2.3.24 | m      |         |
| 2         | TLV Encoded information<br>see next SBC-RSP TLV table | [4] 6.3.2.3.24 | m      |         |
| Comments: |   |                |        |         |

Table B.172: SBC-RSP TLV

| Item  | Parameter  | Reference      | Status   | Support |
|---|--|----------------|----------|---------|
| 1   | Physical Parameters supported (see table B.173)            | [4] 6.3.2.3.24 | Cb.172.1 |         |
| 2   | Bandwidth Allocation Support                               | [4] 6.3.2.3.24 | Cb.172.1 |         |
| 3   | Capabilities for Construction and Transmission of MAC PDUs | [4] 6.3.2.3.23 | Cb.172.1 |         |
| 4   | PKM Flow control   | [4] 6.3.2.3.23 | Cb.172.1 |         |
| 5   | Authorization Policy Support                               | [4] 6.3.2.3.23 | Cb.172.1 |         |
| 6   | Maximum number of supported security association           | [4] 6.3.2.3.23 | Cb.172.1 |         |
| Cb.172.1: IF (parameter included in the SBC-REQ message) THEN m ELSE o. |  |                |          |         |
| Comments:   |  |                |          |         |

Table B.173: Physical Parameters Supported fields for SBC-RSP

| Item      | Parameter                 | Reference  | Status | Support |
|-----------|---------------------------|------------|--------|---------|
| 1         | Subscriber transition gap | [4] 11.8.3 | m      |         |
| 2         | MS FFT sizes              | [4] 11.8.3 | m      |         |
| 3         | MS demodulator            | [4] 11.8.3 | m      |         |
| 4         | MS modulator              | [4] 11.8.3 | m      |         |
| 5         | MS TC sublayer support    | [4] 11.8.3 | o      |         |
| Comments: |                           |            |        |         |

#### B.7.1.1.7 DHCP messages

Comments on Establish IP connectivity PDUs: **DHCP discover**, **DHCP offer**, **DHCP request** and **DHCP response** are defined by RFC 2131 [15].

#### B.7.1.1.8 Time of day messages

Comments on Establish Time of day PDUs: **Time of day request** and **Time of day response** are defined by RFC 868 [16].

#### B.7.1.1.9 ARQ messages

Table B.174: PDU: ARQ feedback message

| Item      | Parameter   | Reference      | Status | Support |
|-----------|---|----------------|--------|---------|
| 1         | Management Message type=33  | [4] 6.3.2.3.30 | m      |         |
| 2         | ARQ feedback payload: one or several ARQ feedback IE(s)<br>see next ARQ feedback IE table | [4] 6.3.2.3.30 | m      |         |
| Comments: |   |                |        |         |

**Table B.175: ARQ Feedback Information Elements**

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

**Table B.176: PDU: ARQ Discard message**

| Item      | Parameter                     | Reference      | Status | Support |
|-----------|-------------------------------|----------------|--------|---------|
| 1         | Management Message type=34    | [4] 6.3.2.3.31 | m      |         |
| 2         | Connection ID                 | [4] 6.3.2.3.31 | m      |         |
| 3         | Fragmentation Sequence Number | [4] 6.3.2.3.31 | m      |         |
| Comments: |                               |                |        |         |

**Table B.177: PDU: ARQ Reset message**

| Item      | Parameter                  | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=35 | [4] 6.3.2.3.32 | m      |         |
| 2         | Connection ID              | [4] 6.3.2.3.32 | m      |         |
| 3         | Type                       | [4] 6.3.2.3.32 | m      |         |
| Comments: |                            |                |        |         |

## B.7.1.1.10 MCA-REQ and MCA-RSP

**Table B.178: PDU: MCA-REQ**

| Item      | Parameter                  | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=21 | [4] 6.3.2.3.18 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.18 | m      |         |
| 3         | TLV encoded information    | [4] 6.3.2.3.18 | m      |         |
| Comments: |                            |                |        |         |

**Table B.179: MCA-REQ TLV**

| Item      | Parameter            | Reference      | Status | Support |
|-----------|----------------------|----------------|--------|---------|
| 1         | Transaction ID       | [4] 6.3.2.3.18 | m      |         |
| 2         | Multicast CID        | [4] 6.3.2.3.18 | m      |         |
| 3         | Assignment           | [4] 6.3.2.3.18 | m      |         |
| 4         | Multicast Group Type | [4] 11.10      | o      |         |
| 5         | Periodic Allocations | [4] 11.10      | m      |         |
| Comments: |                      |                |        |         |

**Table B.180: PDU: MCA-RSP**

| Item      | Parameter                  | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=22 | [4] 6.3.2.3.19 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.19 | m      |         |
| 3         | Confirmation Code          | [4] 6.3.2.3.19 | m      |         |
| Comments: |                            |                |        |         |

## B.7.1.1.11 DBPC-REQ and DBPC-RSP

Table B.181: PDU: DBPC-REQ

| Item                        | Parameter                     | Reference      | Status | Support |
|-----------------------------|-------------------------------|----------------|--------|---------|
| 1                           | Management Message type=23    | [4] 6.3.2.3.20 | m      |         |
| 2                           | Reserved (see note)           | [4] 6.3.2.3.20 | m      |         |
| 3                           | DIUC                          | [4] 6.3.2.3.20 | m      |         |
| 4                           | DL configuration change count | [4] 6.3.2.3.20 | m      |         |
| NOTE: Shall be set to zero. |                               |                |        |         |
| Comments:                   |                               |                |        |         |

Table B.182: PDU: DBPC-RSP

| Item                        | Parameter                     | Reference      | Status | Support |
|-----------------------------|-------------------------------|----------------|--------|---------|
| 1                           | Management Message type=24    | [4] 6.3.2.3.21 | m      |         |
| 2                           | Reserved (see note)           | [4] 6.3.2.3.21 | m      |         |
| 3                           | DIUC                          | [4] 6.3.2.3.21 | m      |         |
| 4                           | DL configuration change count | [4] 6.3.2.3.21 | m      |         |
| NOTE: Shall be set to zero. |                               |                |        |         |
| Comments:                   |                               |                |        |         |

## B.7.1.1.12 RES-CMD

Table B.183: PDU: RES-CMD

| Item      | Parameter                  | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=25 | [4] 6.3.2.3.22 | m      |         |
| 2         | TLV encoded information    | [4] 6.3.2.3.22 | m      |         |
| Comments: |                            |                |        |         |

Table B.184: RES-CMD TLV

| Item      | Parameter  | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | HMAC tuple | [4] 6.3.2.3.22 | m      |         |
| Comments: |            |                |        |         |

## B.7.1.1.13 CLK-CMP

Table B.185: PDU: CLK-CMP

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

## B.7.1.1.14 DREG-REQ and DREG-CMD

Table B.186: PDU: DREG-REQ

| Item      | Parameter                    | Reference      | Status | Support |
|-----------|------------------------------|----------------|--------|---------|
| 1         | Management Message type=49   | [4] 6.3.2.3.42 | m      |         |
| 2         | De-registration request code | [4] 6.3.2.3.42 | m      |         |
| 3         | TLV encoded information      | [4] 6.3.2.3.42 | m      |         |
| Comments: |                              |                |        |         |

Table B.187: DREG-REQ TLV

| Item      | Parameter  | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | HMAC tuple | [4] 6.3.2.3.42 | m      |         |
| Comments: |            |                |        |         |

Table B.188: PDU: DREG-CMD

| Item      | Parameter                  | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=29 | [4] 6.3.2.3.26 | m      |         |
| 2         | action code                | [4] 6.3.2.3.26 | m      |         |
| 3         | TLV encoded information    | [4] 6.3.2.3.26 | m      |         |
| Comments: |                            |                |        |         |

Table B.189: DREG-CMD TLV

| Item      | Parameter  | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | HMAC tuple | [4] 6.3.2.3.26 | m      |         |
| Comments: |            |                |        |         |

## B.7.1.1.15 DSX-RVD

Table B.190: PDU: DSX-RVD

| Item      | Parameter                  | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=30 | [4] 6.3.2.3.27 | m      |         |
| 2         | Transaction ID             | [4] 6.3.2.3.27 | m      |         |
| 3         | Confirmation Code          | [4] 6.3.2.3.27 | m      |         |
| Comments: |                            |                |        |         |

## B.7.1.1.16 TFTP-CPLT and TFTP-RSP

Table B.191: PDU: TFTP-CPLT

| Item      | Parameter                  | Reference      | Status | Support |
|-----------|----------------------------|----------------|--------|---------|
| 1         | Management Message type=31 | [4] 6.3.2.3.28 | m      |         |
| 2         | TLV encoded information    | [4] 6.3.2.3.28 | m      |         |
| Comments: |                            |                |        |         |

Table B.192: TFTP-CPLT TLV

| Item      | Parameter  | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | HMAC tuple | [4] 6.3.2.3.28 | m      |         |
| Comments: |            |                |        |         |

Table B.193: PDU: TFTP-RSP

| Item | Parameter                  | Reference      | Status | Support |
|------|----------------------------|----------------|--------|---------|
| 1    | Management Message type=32 | [4] 6.3.2.3.29 | m      |         |
| 2    | Response                   | [4] 6.3.2.3.29 | m      |         |

Comments:

## B.7.1.1.17 REP-REQ and REP-RSP

Table B.194: PDU: REP-REQ

| Item | Parameter                  | Reference      | Status | Support |
|------|----------------------------|----------------|--------|---------|
| 1    | Management Message type=36 | [4] 6.3.2.3.33 | m      |         |
| 2    | Report request TLVs        | [4] 6.3.2.3.33 | m      |         |

Comments:

Table B.195: REP-REQ TLV for report request

| Item | Parameter      | Reference | Status | Support |
|------|----------------|-----------|--------|---------|
| 1    | Report type    | [4] 11.11 | m      |         |
| 2    | Channel number | [4] 11.11 | o      |         |

Comments:

Table B.196: PDU: REP-RSP

| Item | Parameter                  | Reference      | Status | Support |
|------|----------------------------|----------------|--------|---------|
| 1    | Management Message type=37 | [4] 6.3.2.3.33 | m      |         |
| 2    | Report response TLVs       | [4] 6.3.2.3.33 | m      |         |

Comments:

Table B.197: REP-RSP TLV for report

| Item | Parameter              | Reference | Status | Support |
|------|------------------------|-----------|--------|---------|
| 1    | Channel number         | [4] 11.12 | o      |         |
| 2    | Start frame            | [4] 11.12 | o      |         |
| 3    | duration               | [4] 11.12 | o      |         |
| 4    | Basic report           | [4] 11.12 | o      |         |
| 5    | CINR report            | [4] 11.12 | o      |         |
| 6    | RSSI report            | [4] 11.12 | o      |         |
| 7    | Current Transmit Power | [4] 11.12 | m      |         |

Comments:

## B.7.1.1.18 AAS-FBCK-REQ and AAS-FBCK-RSP

Table B.198: PDU: AAS-FBCK-REQ

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

Comments:



**Table B.199: PDU: AAS-FBCK-RSP**

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

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

## B.7.1.1.19 AAS-BEAM messages

**Table B.200: PDU: AAS-Beam-Select**

| Item | Parameter                  | Reference      | Status | Support |
|------|----------------------------|----------------|--------|---------|
| 1    | Management Message type=46 | [4] 6.3.2.3.41 | m      |         |
| 2    | AAS beam direction index   | [4] 6.3.2.3.41 | m      |         |

Comments:

**Table B.201: PDU: AAS-BEAM-REQ**

| Item | Parameter                  | Reference   | Status | Support |
|------|----------------------------|-------------|--------|---------|
| 1    | Management Message type=47 | [4] 8.3.6.5 | m      |         |
| 2    | Frame number               | [4] 8.3.6.5 | m      |         |
| 3    | Feedback request number    | [4] 8.3.6.5 | m      |         |
| 4    | Measurement report type    | [4] 8.3.6.5 | m      |         |
| 5    | Resolution parameter       | [4] 8.3.6.5 | m      |         |
| 6    | Beam bit mask              | [4] 8.3.6.5 | m      |         |

Comments:

**Table B.202: PDU: AAS-BEAM-RSP**

| Item | Parameter                  | Reference   | Status | Support |
|------|----------------------------|-------------|--------|---------|
| 1    | Management Message type=48 | [4] 8.3.6.5 | m      |         |
| 2    | Frame number               | [4] 8.3.6.5 | m      |         |
| 3    | Feedback request number    | [4] 8.3.6.5 | m      |         |
| 4    | Measurement report type    | [4] 8.3.6.5 | m      |         |
| 5    | Resolution parameter       | [4] 8.3.6.5 | m      |         |
| 6    | Beam bit mask              | [4] 8.3.6.5 | m      |         |
| 7    | AAS_BEAM_REP_IE            | [4] 8.3.6.5 | m      |         |
| 8    | RSSI mean value            | [4] 8.3.6.5 | m      |         |
| 9    | CINR mean value            | [4] 8.3.6.5 | m      |         |

Comments:

## B.7.1.1.20 FPC

**Table B.203: PDU: FPC**

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

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

## B.7.1.1.21 REG-REQ and REG-RSP

Table B.204: PDU: Registration Request (REG-REQ)

| Item | Parameter   | Reference     | Status | Support |
|------|---|---------------|--------|---------|
| 1    | Management Message type=6                               | [4] 6.3.2.3.7 | m      |         |
| 2    | TLV Encoded Information<br>(See next table REG-REQ TLV) | [4] 6.3.2.3.7 | m      |         |

Comments:

Table B.205: PDU: REG-REQ TLV (PMP)

| Item | Parameter                             | Reference     | Status | Support |
|------|---------------------------------------|---------------|--------|---------|
| 1    | IP version                            | [4] 11.7.4    | o      |         |
| 2    | Vendor ID Encoding                    | [4] 11.1.5    | o      |         |
| 3    | Vendor specific information           | [4] 11.1.6    | o      |         |
| 4    | MS Capabilities Encodings             | [4] 11.7.8    | o      |         |
| 5    | Convergence Sub layer Capabilities    | [4] 11.7.7    | o      |         |
| 6    | ARQ parameters                        | [4] 11.7.1    | o      |         |
| 7    | Number of UL transport CIDs supported | [4] 11.7.6.1  | m      |         |
| 8    | Number of DL transport CIDs supported | [4] 11.7.6.2  | m      |         |
| 9    | MS management Support                 | [4] 11.7.2    | m      |         |
| 10   | IP management mode                    | [4] 11.7.3    | m      |         |
| 11   | HMAC Tuple                            | [4] 6.3.2.3.7 | m      |         |

Comments:

Table B.206: MS Capabilities encoding and values

| Item | MS Capability           | Reference    | Status | Support | Value         |           |
|------|-------------------------|--------------|--------|---------|---------------|-----------|
|      |                         |              |        |         | allowed range | Supported |
| 1    | ARQ support             | [4] 11.7.8.1 | o      |         | 0 - 1         |           |
| 2    | DSx flow control        | [4] 11.7.8.2 | o      |         | 0 - 255       |           |
| 3    | MCA flow control        | [4] 11.7.8.4 | o      |         | 0 - 255       |           |
| 4    | Multicast polling group | [4] 11.7.8.5 | o      |         | 0 - 255       |           |

Comments:

Table B.207: Convergence Sub layer Capabilities

| Item | Convergence Sub layer Capabilities    | Reference    | Status | Support |
|------|---------------------------------------|--------------|--------|---------|
| 1    | Convergence sub layer support Tx      | [4] 11.7.7.1 | o      |         |
| 2    | Max. number of classifiers Tx         | [4] 11.7.7.2 | o      |         |
| 3    | Payload header suppression support Tx | [4] 11.7.7.3 | o      |         |

Comments:

Table B.208: PDU: Registration Response (REG-RSP)

| Item | Parameter   | Reference     | Status | Support |
|------|---|---------------|--------|---------|
| 1    | Management Message type=7                             | [4] 6.3.2.3.8 | m      |         |
| 2    | Response  | [4] 6.3.2.3.8 | m      |         |
| 3    | TLV Encoded Information<br>see next table REG-RSP TLV | [4] 6.3.2.3.8 | m      |         |

Comments:

Table B.209: PDU: REG-RSP TLV (PMP)

| Item  | Parameter                                    | Reference     | Status   | Support |
|---|--|---------------|----------|---------|
| 1   | Secondary Management CID                     | [4] 11.7.5    | Cb.209.1 |         |
| 2   | MS Capabilities Encodings<br>See table B.206 | [4] 11.7.8    | Cb.209.2 |         |
| 3   | IP version                                   | [4] 11.7.4    | o        |         |
| 4   | Vendor ID Encoding                           | [4] 11.1.5    | o        |         |
| 5   | Vendor-specific information                  | [4] 11.1.6    | o        |         |
| 6   | ARQ parameters                               | [4] 11.7.1    | Cb.209.3 |         |
| 7   | IP management mode                           | [4] 11.7.3    | m        |         |
| 8   | MS management support                        | [4] 6.3.2.3.8 | Cb.209.3 |         |
| 9   | Traffic priority                             | [4] 11.13.5   | Cb.209.4 |         |
| 10  | Maximum sustained traffic rate               | [4] 11.13.6   | Cb.209.4 |         |
| 11  | Minimum reserved traffic rate                | [4] 11.13.8   | Cb.209.4 |         |
| 12  | Maximum latency                              | [4] 11.13.14  | Cb.209.4 |         |
| 13  | Uplink transport CIDs supported              | [4] 11.7.6.1  | m        |         |
| 14  | Downlink transport CIDs supported            | [4] 11.7.6.2  | m        |         |
| 15  | Convergence Sublayer Capabilities            | [4] 11.7.7    | Cb.209.2 |         |
| 16  | HMAC Tuple                                   | [4] 11.1.2    | m        |         |
| Cb.209.1: IF B.33/1 THEN m ELSE n/a.  |  |               |          |         |
| Cb.209.2: IF found in the REG-REQ or IF the BS requires the use of a non-default value. |  |               |          |         |
| Cb.209.3: IF found in the REG-REQ.  |  |               |          |         |
| Cb.209.4: IF A209/1 THEN o ELSE n/a.  |  |               |          |         |
| Comments:   |  |               |          |         |

## B.7.1.1.22 PKM-REQ and PKM-RSP Messages

Table B.210: PDU: PKM Request (PKM-REQ)

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

Table B.211: PDU: PKM Reply (PKM-RSP)

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

Table B.212: PDU: TLV Attributes (SA Add)

| Item      | Parameter           | Reference       | Status | Support |
|-----------|---------------------|-----------------|--------|---------|
| 1         | Key Sequence Number | [4] 6.3.2.3.9.1 | m      |         |
| 2         | SA Descriptors      | [4] 6.3.2.3.9.1 | m      |         |
| 3         | HMAC digest         | [4] 6.3.2.3.9.1 | m      |         |
| Comments: |                     |                 |        |         |

Table B.213: PDU: TLV Attributes (Auth Request)

| Item      | Parameter             | Reference       | Status | Support |
|-----------|-----------------------|-----------------|--------|---------|
| 1         | MS-Certificate        | [4] 6.3.2.3.9.2 | m      |         |
| 2         | Security Capabilities | [4] 6.3.2.3.9.2 | m      |         |
| 3         | SAID                  | [4] 6.3.2.3.9.2 | m      |         |
| Comments: |                       |                 |        |         |

Table B.214: PDU: TLV Attributes (Auth Reply)

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

Table B.215: PDU: TLV Attributes (Auth Reject)

| Item      | Parameter      | Reference       | Status | Support |
|-----------|----------------|-----------------|--------|---------|
| 1         | Error code     | [4] 6.3.2.3.9.4 | m      |         |
| 2         | Display-String | [4] 6.3.2.3.9.4 | o      |         |
| Comments: |                |                 |        |         |

Table B.216: PDU: TLV Attributes (Key Request)

| Item      | Parameter           | Reference       | Status | Support |
|-----------|---------------------|-----------------|--------|---------|
| 1         | Key-Sequence-Number | [4] 6.3.2.3.9.5 | m      |         |
| 2         | HMAC-Digest         | [4] 6.3.2.3.9.5 | m      |         |
| 3         | SAID                | [4] 6.3.2.3.9.5 | m      |         |
| Comments: |                     |                 |        |         |

Table B.217: PDU: TLV Attributes (Key Reply)

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

Table B.218: PDU: TLV Attributes (Key Reject)

| Item      | Parameter           | Reference       | Status | Support |
|-----------|---------------------|-----------------|--------|---------|
| 1         | Key-Sequence-number | [4] 6.3.2.3.9.7 | m      |         |
| 2         | HMAC-Digest         | [4] 6.3.2.3.9.7 | m      |         |
| 3         | SAID                | [4] 6.3.2.3.9.7 | m      |         |
| 4         | Error-code          | [4] 6.3.2.3.9.7 | m      |         |
| 5         | Display-String - Tx | [4] 6.3.2.3.9.7 | m      |         |
| Comments: |                     |                 |        |         |

Table B.219: PDU: TLV Attributes (Auth Invalid)

| Item      | Parameter      | Reference       | Status | Support |
|-----------|----------------|-----------------|--------|---------|
| 1         | Error-code     | [4] 6.3.2.3.9.8 | m      |         |
| 2         | Display-String | [4] 6.3.2.3.9.8 | m      |         |
| Comments: |                |                 |        |         |

**Table B.220: PDU: TLV Attributes (TEK Invalid)**

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

**Table B.221: PDU: TLV Attributes (Authentication Information)**

| Item      | Parameter      | Reference        | Status | Support |
|-----------|----------------|------------------|--------|---------|
| 1         | CA-Certificate | [4] 6.3.2.3.9.10 | m      |         |
| Comments: |                |                  |        |         |

### B.7.1.1.23 DSA-REQ, DSA-RSP and DSA-ACK messages

**Table B.222: PDU: DSA-REQ**

| Item      | Parameter  | Reference      | Status | Support |
|-----------|--|----------------|--------|---------|
| 1         | Management Message type=11                             | [4] 6.3.2.3.10 | m      |         |
| 2         | Transaction ID   | [4] 6.3.2.3.10 | m      |         |
| 3         | TLV Encoded Information<br>see next table: DSA-REQ TLV | [4] 6.3.2.3.10 | m      |         |
| Comments: |  |                |        |         |

**Table B.223: DSA-REQ parameter families**

| Item      | Parameter   | Reference                   | Status | Support |
|-----------|---|-----------------------------|--------|---------|
| 1         | Service flow parameters<br>See table B.224                  | [4] 6.3.2.3.10,<br>11.13    | m      |         |
| 2         | Convergence sublayer parameter encodings<br>see table B.225 | [4] 6.3.2.3.10,<br>11.13.19 | m      |         |
| 3         | HMAC tuple  | [4] 6.3.2.3.10              | m      |         |
| Comments: |   |                             |        |         |

Table B.224: DSA-REQ TLV for Service flow parameters

| Item  | Parameter   | Reference      | Status    | Support |
|---|---|----------------|-----------|---------|
| 1   | Service flow identifier - SFID                    | [4] 11.13.1    | Cb.224.1  |         |
| 2   | CID   | [4] 11.13.2    | Cb.224.1  |         |
| 3   | Service class name                                | [4] 11.13.3    | o         |         |
| 4   | QOS parameter set type                            | [4] 11.13.4    | m         |         |
| 5   | Traffic priority                                  | [4] 11.13.5    | Cb.224.2  |         |
| 6   | Maximum sustained traffic rate                    | [4] 11.13.6    | m         |         |
| 7   | Maximum traffic burst                             | [4] 11.13.7    | o         |         |
| 8   | Minimum reserved traffic rate                     | [4] 11.13.8    | Cb.224.3  |         |
| 9   | Minimum tolerable traffic rate                    | [4] 11.13.9    | o         |         |
| 10  | Vendor specific QOS parameters                    | [4] 11.13.10   | o         |         |
| 11  | Uplink Grant scheduling type                      | [4] 11.13.11   | Cb.224.4  |         |
| 12  | Request/transmission policy                       | [4] 11.13.12   | m         |         |
| 13  | Tolerated jitter                                  | [4] 11.13.13   | Cb.224.5  |         |
| 14  | Maximum latency                                   | [4] 11.13.14   | Cb.224.6  |         |
| 15  | Fixed length versus variable length SDU indicator | [4] 11.13.15   | m         |         |
| 16  | SDU size  | [4] 11.13.16   | Cb.224.7  |         |
| 17  | Target SAID                                       | [4] 11.13.17   | m         |         |
| 18  | ARQ enable  | [4] 11.13.18.1 | m         |         |
| 19  | ARQ_WINDOW_SIZE                                   | [4] 11.13.18.2 | Cb.224.8  |         |
| 20  | ARQ_TX_delay                                      | [4] 11.13.18.3 | Cb.224.8  |         |
| 21  | ARQ_RX_delay                                      | [4] 11.13.18.3 | Cb.224.8  |         |
| 22  | ARQ_BLOCK_LIFETIME                                | [4] 11.13.18.4 | Cb.224.8  |         |
| 23  | ARQ_SYNC_LOSS_TIMEOUT                             | [4] 11.13.18.5 | Cb.224.8  |         |
| 24  | ARQ_DELIVER_IN_ORDER                              | [4] 11.13.18.6 | Cb.224.8  |         |
| 25  | ARQ_RX_PURGE_TIMEOUT                              | [4] 11.13.18.7 | Cb.224.8  |         |
| 26  | ARQ_BLOCK_SIZE                                    | [4] 11.13.18.8 | Cb.224.8  |         |
| 27  | Unsolicited Grant Interval                        | [4] 11.13.20   | Cb.224.9  |         |
| 28  | Unsolicited Polling Interval                      | [4] 11.13.21   | Cb.224.10 |         |
| 29  | FSN size  | [4] 11.13.22   | o         |         |
| 30  | CS specification                                  | [4] 11.13.19.1 | m         |         |
| Cb.224.1: IF B.2/2 THEN m ELSE x  |   |                |           |         |
| Cb.224.2: IF (B.41/3 OR B.41/4) THEN m ELSE n/a.                                  |   |                |           |         |
| Cb.224.3: IF (B.41/2 OR B.41/3) THEN m ELSE o.                                    |   |                |           |         |
| Cb.224.4: IF ("UL service request") THEN m else n/a.                              |   |                |           |         |
| Cb.224.5: IF B.41/1 THEN m ELSE n/a.  |   |                |           |         |
| Cb.224.6: IF (B.41/1 OR B.41/2) THEN m ELSE n/a.                                  |   |                |           |         |
| Cb.224.7: IF (B.224/15=1) THEN o.   |   |                |           |         |
| Cb.224.8: IF B.31/3 THEN m ELSE n/a.  |   |                |           |         |
| Cb.224.9: IF (B.41/1 AND "UL service request") THEN m else n/a (UGS supported).   |   |                |           |         |
| Cb.224.10: IF (B.41/2 AND "UL service request") THEN m else n/a (rtPS supported). |   |                |           |         |
| Comments: n/a status means here: not used.  |   |                |           |         |

**Table B.225: DSA-REQ and DSA-RSP TLV for Packet Convergence sublayer:  
packet classification rule parameter**

| Item   | Parameter                                   | Reference           | Status    | Support |
|--|---|---------------------|-----------|---------|
| 1  | Packet Classification Rule                  | [4] 11.13.19.3.4    | Cb.225,6  |         |
| 2  | Classifier Rule Priority                    | [4] 11.13.19.3.4.1  | Cb.225,6  |         |
| 3  | IP Type of Service/DSCP                     | [4] 11.13.19.3.4.2  | Cb.225,1, |         |
| 4  | Protocol                                    | [4] 11.13.19.3.4.3  | Cb.225,1  |         |
| 5  | IP Masked Source Address                    | [4] 11.13.19.3.4.4  | Cb.225,1  |         |
| 6  | IP Masked Destination Address               | [4] 11.13.19.3.4.5  | Cb.225,1  |         |
| 7  | Protocol Source Port Range                  | [4] 11.13.19.3.4.6  | Cb.225,1  |         |
| 8  | Protocol destination Port Range             | [4] 11.13.19.3.4.7  | Cb.225,1  |         |
| 9  | Ethernet Destination MAC Address            | [4] 11.13.19.3.4.8  | Cb.225,2  |         |
| 10   | Ethernet Source MAC Address                 | [4] 11.13.19.3.4.9  | Cb.225,2  |         |
| 11   | Ethertype/IEEE 802.2 SAP [17]               | [4] 11.13.19.3.4.10 | Cb.225,2  |         |
| 12   | IEEE 802.1D [18] User_Priority              | [4] 11.13.19.3.4.11 | Cb.225,3  |         |
| 13   | IEEE 802.1Q VLAN_ID [13]                    | [4] 11.13.19.3.4.12 | Cb.225,3  |         |
| 14   | Associated Payload Header Suppression Index | [4] 11.13.19.3.4.13 | Cb.225,5  |         |
| 15   | Vendor Specific Classifier Parameters       | [4] 11.13.19.3.4.15 | o         |         |
| 16   | Payload Header Suppression Rule             | [4] 11.13.19.3.7    | Cb.225,4  |         |
| 17   | Payload Header Suppression Index            | [4] 11.13.19.3.7.1  | Cb.225,4  |         |
| 18   | Payload Header Suppression Field            | [4] 11.13.19.3.7.2  | Cb.225,4  |         |
| 19   | Payload Header Suppression Mask             | [4] 11.13.19.3.7.3  | Cb.225,4  |         |
| 20   | Payload Header Suppression Size             | [4] 11.13.19.3.7.4  | Cb.225,4  |         |
| 21   | Payload Header Suppression Verification     | [4] 11.13.19.3.7.5  | Cb.225,4  |         |
| 22   | Vendor Specific PHS Parameters              | [4] 11.13.19.3.7.6  | Cb.225,5  |         |
| 23   | Packet classification rule index            | [4] 11.13.19.3.4.14 | Cb.225,6  |         |
| 24   | HMAC tuple                                  | [4] 6.3.2.3.10      | m         |         |
| Cb.225,1: IF B.26/1 or B.26/2 or B.26/5 or B.26/6 or B.26/7 or B.26/8 THEN o ELSE n/a. |   |                     |           |         |
| Cb.225,2: IF B.26/3 THEN o ELSE n/a.   |   |                     |           |         |
| Cb.225,3: IF B.26/4 THEN o ELSE n/a.   |   |                     |           |         |
| Cb.225,4: IF B.207/3 THEN o ELSE n/a.  |   |                     |           |         |
| Cb.225,5: IF B. 207/3 THEN o ELSE n/a.   |   |                     |           |         |
| Cb.225,6: IF uplink service flow THEN m ELSE o.  |   |                     |           |         |
| Comments:  |   |                     |           |         |

**Table B.226: PDU: DSA-RSP**

| Item  | Parameter  | Reference      | Status   | Support |
|---|--|----------------|----------|---------|
| 1   | Management Message type=12                             | [4] 6.3.2.3.11 | m        |         |
| 2   | Transaction ID   | [4] 6.3.2.3.11 | m        |         |
| 3   | Confirmation code                                      | [4] 6.3.2.3.11 | m        |         |
| 4   | ARQ enable   | [4] 11.13.18.1 | Cb.226.1 |         |
| 5   | TLV Encoded Information<br>see next table: DSA-RSP TLV | [4] 6.3.2.3.11 | o        |         |
| Cb.226.1 IF (B.31/3 or B.96/3) THEN m ELSE n/a. |  |                |          |         |
| Comments:                                       |  |                |          |         |

**Table B.227: DSA-RSP parameter families**

| Item      | Parameter  | Reference                      | Status | Support |
|-----------|--|--------------------------------|--------|---------|
| 1         | Service flow parameters<br>See table B.228                   | [4] 6.3.2.3.11<br>[4] 11.13    | m      |         |
| 2         | Convergence sub layer parameter encodings<br>See table B.225 | [4] 6.3.2.3.11<br>[4] 11.13.21 | m      |         |
| Comments: |  |                                |        |         |

Table B.228: DSA-RSP TLV for Service flow parameters

| Item   | Parameter   | Reference      | Status   | Support |
|--|---|----------------|----------|---------|
| 1  | Service flow identifier - SFID                    | [4] 11.13.1    | m        |         |
| 2  | CID   | [4] 11.13.2    | m        |         |
| 3  | Service class name                                | [4] 11.13.3    | o        |         |
| 4  | QOS parameter set type                            | [4] 11.13.4    | m        |         |
| 5  | Traffic priority                                  | [4] 11.13.5    | Cb.228.1 |         |
| 6  | Maximum sustained traffic rate                    | [4] 11.13.6    | m        |         |
| 7  | Maximum traffic burst                             | [4] 11.13.7    | o        |         |
| 8  | Minimum reserved traffic rate                     | [4] 11.13.8    | Cb.228.2 |         |
| 9  | Minimum tolerable traffic rate                    | [4] 11.13.9    | o        |         |
| 10   | Vendor specific QOS parameters                    | [4] 11.13.10   | o        |         |
| 11   | Uplink Grant scheduling type                      | [4] 11.13.11   | Cb.228.3 |         |
| 12   | Request/transmission policy                       | [4] 11.13.12   | m        |         |
| 13   | Tolerated jitter                                  | [4] 11.13.13   | Cb.228.4 |         |
| 14   | Maximum latency                                   | [4] 11.13.14   | Cb.228.5 |         |
| 15   | Fixed length versus variable length SDU indicator | [4] 11.13.15   | m        |         |
| 16   | SDU size  | [4] 11.13.16   | Cb.228.6 |         |
| 17   | Target SAID                                       | [4] 11.13.17   | m        |         |
| 18   | ARQ enable  | [4] 11.13.18.1 | m        |         |
| 19   | ARQ_WINDOW_SIZE                                   | [4] 11.13.18.2 | Cb.228.7 |         |
| 20   | ARQ_TX_delay                                      | [4] 11.13.18.3 | Cb.228.7 |         |
| 21   | ARQ_RX_delay                                      | [4] 11.13.18.3 | Cb.228.7 |         |
| 22   | ARQ_BLOCK_LIFETIME                                | [4] 11.13.18.4 | Cb.228.7 |         |
| 23   | ARQ_SYNC_LOSS_TIMEOUT                             | [4] 11.13.18.5 | Cb.228.7 |         |
| 24   | ARQ_DELIVER_IN_ORDER                              | [4] 11.13.18.6 | Cb.228.7 |         |
| 25   | ARQ_RX_PURGE_TIMEOUT                              | [4] 11.13.18.7 | Cb.228.7 |         |
| 26   | ARQ_BLOCK_SIZE                                    | [4] 11.13.18.8 | Cb.228.7 |         |
| 27   | Unsolicited Grant Interval                        | [4] 11.13.20   | Cb.228.8 |         |
| 28   | Unsolicited Polling Interval                      | [4] 11.13.21   | Cb.228.9 |         |
| 29   | FSN size  | [4] 11.13.22   | o        |         |
| 30   | CS specification                                  | [4] 11.13.19.1 | m        |         |
| Cb.228.1: IF (B.41/3 or B.41/4) THEN m ELSE n/a.                                 |   |                |          |         |
| Cb.228.2: IF (B.41/2 OR B.41/3) THEN m ELSE o.                                   |   |                |          |         |
| Cb.228.3: IF ("UL service request") THEN m else n/a.                             |   |                |          |         |
| Cb.228.4: IF B.41/1 THEN m ELSE n/a.   |   |                |          |         |
| Cb.228.5: IF (B.41/1 or B.41/2) THEN m ELSE n/a.                                 |   |                |          |         |
| Cb.228.6: IF (B.224/15=1) THEN o.  |   |                |          |         |
| Cb.228.7: IF B.31/3 THEN m ELSE n/a.   |   |                |          |         |
| Cb.228.8: IF (B.41/1 AND "UL service request") THEN m else n/a (UGS supported).  |   |                |          |         |
| Cb.228.9: IF (B.41/2 AND "UL service request") THEN m else n/a (rtPS supported). |   |                |          |         |
| Comments: n/a status means here: not used.                                       |   |                |          |         |

Table B.229: DSA-RSP TLV for Service flow parameters

| Item      | Parameter  | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | HMAC tuple | [4] 6.3.2.3.11 | m      |         |
| Comments: |            |                |        |         |

Table B.230: PDU: DSA-ACK

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



Table B.231: DSA-ACK TLV

| Item      | Parameter  | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | HMAC tuple | [4] 6.3.2.3.12 | m      |         |
| Comments: |            |                |        |         |

## B.7.1.1.24 DSC-REQ, DSC-RSP and DSC-ACK messages

Table B.232: PDU: DSC-REQ

| Item      | Parameter  | Reference      | Status | Support |
|-----------|--|----------------|--------|---------|
| 1         | Management Message type=14                             | [4] 6.3.2.3.13 | m      |         |
| 2         | Transaction ID   | [4] 6.3.2.3.13 | m      |         |
| 3         | TLV Encoded Information<br>see next table: DSC-REQ TLV | [4] 6.3.2.3.13 | m      |         |
| Comments: |  |                |        |         |

Table B.233: DSC-REQ parameter families

| Item      | Parameter   | Reference                   | Status | Support |
|-----------|---|-----------------------------|--------|---------|
| 1         | Service flow parameters See table B.234                     | [4] 6.3.2.3.13<br>[4] 11.13 | m      |         |
| 2         | Classifier DSC action                                       | [4] 11.13.19.3.2            |        |         |
| 3         | Convergence sublayer parameter encodings<br>See table B.225 | [4] 11.13.19                |        |         |
| 4         | HMAC tuple  | [4] 6.3.2.3.13              | m      |         |
| Comments: |   |                             |        |         |

Table B.234: DSC-REQ TLV for Service flow parameters

| Item   | Parameter   | Reference      | Status   | Support |
|--|---|----------------|----------|---------|
| 1  | Service flow identifier - SFID                    | [4] 11.13.1    | m        |         |
| 2  | CID   | [4] 11.13.2    | Cb.234.1 |         |
| 3  | Service class name                                | [4] 11.13.3    | o        |         |
| 4  | QOS parameter set type                            | [4] 11.13.4    | m        |         |
| 5  | Traffic priority                                  | [4] 11.13.5    | Cb.234.2 |         |
| 6  | Maximum sustained traffic rate                    | [4] 11.13.6    | m        |         |
| 7  | Maximum traffic burst                             | [4] 11.13.7    | o        |         |
| 8  | Minimum reserved traffic rate                     | [4] 11.13.8    | Cb.234.3 |         |
| 9  | Minimum tolerable traffic rate                    | [4] 11.13.9    | o        |         |
| 10   | Vendor specific QOS parameters                    | [4] 11.13.10   | o        |         |
| 11   | Uplink Grant scheduling type                      | [4] 11.13.11   | X        |         |
| 12   | Request/transmission policy                       | [4] 11.13.12   | X        |         |
| 13   | Tolerated jitter                                  | [4] 11.13.13   | Cb.234.4 |         |
| 14   | Maximum latency                                   | [4] 11.13.14   | Cb.234.5 |         |
| 15   | Fixed length versus variable length SDU indicator | [4] 11.13.15   | X        |         |
| 16   | SDU size  | [4] 11.13.16   | X        |         |
| 17   | Target SAID                                       | [4] 11.13.17   | m        |         |
| 18   | ARQ enable  | [4] 11.13.18.1 | X        |         |
| 19   | ARQ_WINDOW_SIZE                                   | [4] 11.13.18.2 | Cb.234.6 |         |
| 20   | ARQ_TX_delay                                      | [4] 11.13.18.3 | X        |         |
| 21   | ARQ_RX_delay                                      | [4] 11.13.18.3 | X        |         |
| 22   | ARQ_BLOCK_LIFETIME                                | [4] 11.13.18.4 | X        |         |
| 23   | ARQ_SYNC_LOSS_TIMEOUT                             | [4] 11.13.18.5 | X        |         |
| 24   | ARQ_DELIVER_IN_ORDER                              | [4] 11.13.18.6 | X        |         |
| 25   | ARQ_PURGE_TIMEOUT                                 | [4] 11.13.18.7 | X        |         |
| 26   | ARQ_BLOCK_SIZE                                    | [4] 11.13.18.8 | X        |         |
| 27   | Unsolicited Grant Interval                        | [4] 11.13.20   | Cb.234.7 |         |
| 28   | Unsolicited Polling Interval                      | [4] 11.13.21   | Cb.234.8 |         |
| 29   | CS specification                                  | [4] 11.13.19.1 | x        |         |
| Cb.234.1: IF B.2/2 THEN m ELSE x   |   |                |          |         |
| Cb.234.2: IF (B.41/3 OR B.41/4) THEN m ELSE n/a.                                 |   |                |          |         |
| Cb.234.3: IF (B.41/2 OR B.41/3) THEN o ELSE m.                                   |   |                |          |         |
| Cb.234.4 IF B.41/1 THEN m ELSE n/a.  |   |                |          |         |
| Cb.234.5: IF (B.41/1 or B.41/2) THEN m ELSE n/a.                                 |   |                |          |         |
| Cb.234.6: IF B.31/3 THEN m ELSE n/a.   |   |                |          |         |
| Cb.234.7: IF (B.41/1 AND "UL service request") THEN m else n/a (UGS supported).  |   |                |          |         |
| Cb.234.8: IF (B.41/2 AND "UL service request") THEN m else n/a (rtPS supported). |   |                |          |         |
| Comments:  |   |                |          |         |

Table B.235: PDU: DSC-RSP

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

Table B.236: DSC-RSP parameter families

| Item      | Parameter                                | Reference                | Status | Support |
|-----------|--|--------------------------|--------|---------|
| 1         | Service flow parameters. See table B.237 | [4] 6.3.2.3.14, 11.13    | o      |         |
| 2         | Convergence sublayer parameter encodings | [4] 6.3.2.3.14, 11.13.21 | o      |         |
| Comments: |  |                          |        |         |

Table B.237: DSC-RSP TLV for Service flow parameters

| Item   | Parameter   | Reference      | Status   | Support |
|--|---|----------------|----------|---------|
| 1  | Service flow identifier - SFID                    | [4] 11.13.1    | m        |         |
| 2  | CID   | [4] 11.13.2    | m        |         |
| 3  | Service class name                                | [4] 11.13.3    | o        |         |
| 4  | QOS parameter set type                            | [4] 11.13.4    | m        |         |
| 5  | Traffic priority                                  | [4] 11.13.5    | Cb.234.1 |         |
| 6  | Maximum sustained traffic rate                    | [4] 11.13.6    | m        |         |
| 7  | Maximum traffic burst                             | [4] 11.13.7    | o        |         |
| 8  | Minimum reserved traffic rate                     | [4] 11.13.8    | Cb.234.2 |         |
| 9  | Minimum tolerable traffic rate                    | [4] 11.13.9    | o        |         |
| 10   | Vendor specific QOS parameters                    | [4] 11.13.10   | o        |         |
| 11   | Uplink Grant scheduling type                      | [4] 11.13.11   | X        |         |
| 12   | Request/transmission policy                       | [4] 11.13.12   | X        |         |
| 13   | Tolerated jitter                                  | [4] 11.13.13   | Cb.234.3 |         |
| 14   | Maximum latency                                   | [4] 11.13.14   | Cb.234.4 |         |
| 15   | Fixed length versus variable length SDU indicator | [4] 11.13.15   | X        |         |
| 16   | SDU size  | [4] 11.13.16   | X        |         |
| 17   | Target SAID                                       | [4] 11.13.17   | m        |         |
| 18   | ARQ enable  | [4] 11.13.18.1 | X        |         |
| 19   | ARQ_WINDOW_SIZE                                   | [4] 11.13.18.2 | Cb.234.5 |         |
| 20   | ARQ_TX_delay                                      | [4] 11.13.18.3 | X        |         |
| 21   | ARQ_RX_delay                                      | [4] 11.13.18.3 | X        |         |
| 22   | ARQ_BLOCK_LIFETIME                                | [4] 11.13.18.4 | X        |         |
| 23   | ARQ_SYNC_LOSS_TIMEOUT                             | [4] 11.13.18.5 | X        |         |
| 24   | ARQ_DELIVER_IN_ORDER                              | [4] 11.13.18.6 | X        |         |
| 25   | ARQ_PURGE_TIMEOUT                                 | [4] 11.13.18.7 | X        |         |
| 26   | ARQ_BLOCK_SIZE                                    | [4] 11.13.18.8 | X        |         |
| 27   | Unsolicited Grant Interval                        | [4] 11.13.20   | Cb.234.6 |         |
| 28   | Unsolicited Polling Interval                      | [4] 11.13.21   | Cb.234.7 |         |
| 29   | CS specification                                  | [4] 11.13.19.1 | x        |         |
| Cb.234.1: IF (B.41/3 OR B.41/4) THEN m ELSE n/a.                                 |   |                |          |         |
| Cb.234.2: IF (57/2 AND (B.41/2 OR B.41/3)) THEN o ELSE m.                        |   |                |          |         |
| Cb.234.3: IF B.41/1 THEN m ELSE n/a.   |   |                |          |         |
| Cb.234.4: IF (B.41/1 or B.41/2) THEN m ELSE n/a.                                 |   |                |          |         |
| Cb.234.5: IF B.31/3 THEN m ELSE n/a.   |   |                |          |         |
| Cb.234.6: IF (B.41/1 AND "UL service request") THEN m else n/a (UGS supported).  |   |                |          |         |
| Cb.234.7: IF (B.41/2 AND "UL service request") THEN m else n/a (rtPS supported). |   |                |          |         |
| Comments:  |   |                |          |         |

Table B.238: DSC-RSP TLV

| Item      | Parameter  | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | HMAC tuple | [4] 6.3.2.3.14 | m      |         |
| Comments: |            |                |        |         |

Table B.239: PDU: DSC-ACK

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

Table B.240: DSC-ACK TLV

| Item      | Parameter  | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | HMAC tuple | [4] 6.3.2.3.15 | m      |         |
| Comments: |            |                |        |         |

## B.7.1.1.25 DSD-REQ and DSD-RSP messages

Table B.241: PDU: DSD-REQ

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

Table B.242: DSD-REQ TLV

| Item      | Parameter  | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | HMAC tuple | [4] 6.3.2.3.16 | m      |         |
| Comments: |            |                |        |         |

Table B.243: PDU: DSD-RSP

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

Table B.244: DSD-RSP TLV

| Item      | Parameter  | Reference      | Status | Support |
|-----------|------------|----------------|--------|---------|
| 1         | HMAC tuple | [4] 6.3.2.3.17 | m      |         |
| Comments: |            |                |        |         |

## B.7.1.2 Additional fields of MAC PDUs in MESH topology

Void.

## B.8 Parameters and timers

Table B.245: MS Timers MAC layer - PMP

| Item | Timer name | Reference | Status   | Support | Value                |           |
|------|------------|-----------|----------|---------|----------------------|-----------|
|      | MAC layer  |           |          |         | Allowed range        | Supported |
| 1    | T1         | [4] 10.1  | m        |         | < 5 DCD interval     |           |
| 2    | T2         | [4] 10.1  | m        |         | < 5 ranging interval |           |
| 3    | T3         | [4] 10.1  | m        |         | < 200 ms             |           |
| 4    | T4         | [4] 10.1  | m        |         | < 35 s               |           |
| 5    | T6         | [4] 10.1  | m        |         | < 3 s                |           |
| 6    | T7         | [4] 10.1  | m        |         | < 1 s                |           |
| 7    | T8         | [4] 10.1  | m        |         | < 300 ms             |           |
| 8    | T10        | [4] 10.1  | m        |         | < 3 s                |           |
| 9    | T12        | [4] 10.1  | m        |         | < 5 UCD interval     |           |
| 10   | T14        | [4] 10.1  | m        |         | < 200 ms             |           |
| 11   | T18        | [4] 10.1  | m        |         | < 300 ms or T9       |           |
| 12   | T20        | [4] 10.1  | m        |         | > 2 ms               |           |
| 13   | T21        | [4] 10.1  | m        |         | < 11 s               |           |
| 14   | T22        | [4] 10.1  | Cb.245.1 |         | < 500 ms             |           |
| 15   | T26        | [4] 10.1  | m        |         | 10 ms - 200 ms       |           |
| 16   | T28        | [4] 10.1  | m        |         | 200 ms - 1 min       |           |
| 17   | T29        | [4] 10.1  | m        |         | 200 ms - 30 s        |           |
| 18   | T30        | [4] 10.1  | m        |         | 200 ms - 200 ms      |           |

Cb.245.1: IF B.31/3 THEN m ELSE n/a.

Comments:

Table B.246: Privacy (PKM) Related Timers

| Item | Timer name                          | Reference          | Status | Support | Value         |           |
|------|-------------------------------------|--------------------|--------|---------|---------------|-----------|
|      |                                     |                    |        |         | Allowed range | Supported |
| 1    | AK Lifetime (PKM)                   | [4] 10.2, [4] 10.2 | m      |         | Cb.246.1      |           |
| 2    | TEK Lifetime (PKM)                  | [4] 10.2, [4] 10.2 | m      |         | Cb.246.2      |           |
| 3    | Authorize Wait Timeout (PKM)        | [4] 10.2           | m      |         | 2 - 30 s      |           |
| 4    | Reauthorize Wait Timeout (PKM)      | [4] 10.2           | m      |         | 2 - 30 s      |           |
| 5    | Authorization Grace Time (PKM)      | [4] 10.2           | m      |         | Cb.246.3      |           |
| 6    | Operational Wait Timeout (PKM)      | [4] 10.2           | m      |         | 1 - 10 s      |           |
| 7    | Rekey Wait Timeout (PKM)            | [4] 10.2           | m      |         | 1 - 10 s      |           |
| 8    | TEK Grace Time (PKM)                | [4] 10.2           | m      |         | Cb.246.4      |           |
| 9    | Authorize Reject Wait Timeout (PKM) | [4] 10.2           | m      |         | 10 - 600 s    |           |

Cb.246.1: IF (test mode) THEN 5 mn ELSE 1 day..70 days.  
 Cb.246.2: IF (test mode) THEN 3 mn ELSE 30 mn..7 days.  
 Cb.246.3: IF (test mode) THEN 60 s ELSE 5 mn..35 days.  
 Cb.246.4: IF (test mode) THEN 60 s ELSE 5 mn..3,5 days.

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

Table B.247:Counters

| Item | Timer name                   | Reference | Status   | Support | Value |         |      |           |
|------|------------------------------|-----------|----------|---------|-------|---------|------|-----------|
|      |                              |           |          |         | Min.  | Default | Max. | Supported |
| 1    | Contention Ranging Retries   | [4] 10.1  | Cb.247.1 |         | 16    | -       | -    |           |
| 2    | Invited Ranging Retries      | [4] 10.1  | m        |         | 16    | -       | -    |           |
| 3    | Request Retries              | [4] 10.1  | Cb.247.1 |         | 16    | -       | -    |           |
| 4    | Registration Request Retries | [4] 10.1  | Cb.247.1 |         | 3     | -       | -    |           |
| 5    | DSx Request Retries          | [4] 10.1  | m        |         | -     | 3       | -    |           |
| 6    | DSx Response Retries         | [4] 10.1  | m        |         | -     | 3       | -    |           |
| 7    | TFTP Request Retries         | [4] 10.1  | Cb.247.1 |         | 3     | -       | -    |           |
| 8    | TFTP Download Retries        | [4] 10.1  | Cb.247.1 |         | 3     | -       | -    |           |
| 9    | Time of Day Retries          | [4] 10.1  | Cb.247.1 |         | 3     | -       | -    |           |
| 10   | Ranging Correction Retries   | [4] 10.1  | m        |         | -     | 16      | -    |           |
| 11   | SBC Request Retries          | [4] 10.1  | Cb.247.1 |         | 3     | 3       | 16   |           |
| 12   | TFTP-CLPT Retries            | [4] 10.1  | Cb.247.1 |         | 3     | 3       | 16   |           |

Cb.247.1: IF B.2/1 THEN m ELSE n/a.

Comments:

---

## History

| <b>Document history</b> |                |             |
|-------------------------|----------------|-------------|
| V1.1.1                  | September 2007 | Publication |
|                         |                |             |
|                         |                |             |
|                         |                |             |
|                         |                |             |