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Date Submitted	2007-11-13
Source(s)	<p>Sassan Ahmadi (sassan.ahmadi@intel.com), Kamran Etemad (kamran.etemad@intel.com), and Jose P Puthenkulam (jose.p.puthenkulam@intel.com), Intel Corporation</p> <p>Mo-Han Fong (mhfong@nortel.com) and Sang-Youb Kim (sangyoub@nortel.com), Nortel</p> <p>Mark Cudak (Mark.Cudak@motorola.com), Motorola</p> <p>Hokyu Choi (choihk@samsung.com), Jung Je Son (jungje.son@samsung.com), Jaeweon Cho (jaeweon.cho@samsung.com), Samsung Electronics</p> <p>Yanhong Wang (wangyanhong@huawei.com), Jianmin Lu (lujianmin@huawei.com) Huawei</p> <p>Kim Olszewski (kolszewski@zteusa.com), Sean Cai (scai@zteusa.com), Jerry Chow (jchow@zteusa.com), ZTE USA</p> <p>Hongqyun Qu (qu.hongqyun@zte.com.cn), Xu Ling (xu.ling@zte.com.cn) ZTE Corporation</p> <p>Xiaolu Dong (dongxiaolu@mail.ritt.com.cn), Du Ying (duying@mail.ritt.com.cn), CATR</p> <p>Zhigang Yan (yanzhigang@chinamobile.com), Xiao Shanpeng (xiaoshanpeng@chinamobile.com), CMCC</p> <p>Shiqiang Suo (suoshiqiang@datangmobile.cn), Datang Mobile</p> <p>Jin Sam Kwak (samji@lge.com), Kiseon Ryu (ksryu@lge.com), HanGyu Cho (hgcho@lge.com), Ronny (Yong-Ho) Kim (ronnykim@lge.com), Minseok Oh (minoh@lge.com), LG Electronics Inc</p> <p>Kevin Power (kevin.power@uk.fujitsu.com), Sunil Vadgama (sunil.vadgama@uk.fujitsu.com), Fujitsu, UK</p> <p>Keiichi Nakatsugawa (nakatsugawa@jp.fujitsu.com), Fujitsu, Japan Hua Zhou (zhouhua@cn.fujitsu.com), Fujitsu, China</p> <p>Richard Li (richard929@itri.org.tw), ITRI, Taiwan</p>

Sungcheol Chang (scchang@etri.re.kr), ETRI, Korea

Bongho Kim (bhkim@posdata-usa.com), Jungnam Yun (jnyun@posdata-usa.com),
Posdata, USA

Louay Jalloul (jalloul@beceem.com), Frank Zhou (fzhou@beceem.com), Beceem
Communications

Yuefeng Zhou(Yuefeng.Zhou@EU.NEC.COM), NEC

Dave Maez (dmaez@navini.com), Herbert Ruck (hruck@navini.com), Navini Networks

Gokhan Karmaz (gkorkmaz@arraycomm.com), Arraycomm

Re:	Call for Contributions on IEEE 802.16m System Description Document ToC 802.16m-07_040
Abstract	Proposed ToC for the IEEE 802.16m System Description Document
Purpose	Discussion and Approval
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1 Scope

2 References

3 Definition, Symbols, Abbreviation

4 Abstract

5 Overall Network Architecture (informative)

<Editors Note: Refer to WiMAX Forum Network Working Group Specifications in this section>

6 IEEE 802.16m System Reference Model

<Editors Note: This section describes system reference model in for those functions introduced in the 802.16m air interface>

7 IEEE 802.16m Top Level System State Diagrams

<Editors Note: To capture only the top level states of the mobile stations, base stations like for example: Initialization/DL Scan, Active State, Sleep Mode, Idle Mode etc. Detailed feature specific state diagrams will be captured elsewhere in the respective sections.>

8 IEEE 802.16m Air-Interface Protocol Structure

9 Convergence Sub-Layer (CS)

9.1 Data Plane Functions

9.1.1 Packet Header Compression

9.1.2 Packet Classification

9.1.3 CS PDU Construction

10 MAC Common Part Sub-layer

10.1 Resource Control and Management Functions

10.1.1 System Configuration Management

10.1.2 Unicast Control Plane Functions

10.1.2.1 Network Entry Management

10.1.2.2 Connection Management Mobility Management

10.1.2.3 Idle Mode Management

10.1.2.4 Location Management

10.1.2.5 Security Management

10.1.3 Multicast and Broadcast Service Control Plane Functions

10.1.3.1 Multicast and Broadcast Service Session Management

10.1.3.2 Security Management

10.1.4 Radio Resource Management (RRM)

10.1.5 Routing (New for relay)

10.1.6 Multi-carrier Support (New)

10.1.7 Self-Configuration Procedures (New)

10.2 Medium Access Control Functions

10.2.1 Control Plane Functions

10.2.1.1 Sleep Mode Management

10.2.1.2 Data Forwarding (New for relay)

10.2.1.3 QoS Control

10.2.1.4 Physical Layer Control Functions

10.2.1.4.1 Ranging

10.2.1.4.2 Link Adaptation

10.2.1.4.2.1 H-ARQ

10.2.1.4.2.2 Power Control

10.2.1.4.2.3 Adaptive Modulation and Coding

10.2.1.4.3 Interference Management

10.2.1.5 Logical Control Channels

10.2.1.6 Multi-Radio Coexistence and Coordination Mechanisms (New)

10.2.1.7 Scheduling and Resource Multiplexing Functions

10.2.2 Data Plane Functions

10.2.2.1 ARQ Functions

10.2.2.1.1 Duplicate Detection and Sequencing

10.2.2.2 MAC PDU Formation

10.2.2.3 MAC Headers and Sub-headers

10.2.2.4 SDU Fragmentation and Packing

10.3 MAC Management Messages

11 Security Sub-layer

11.1 Data plane security functions and protocols

11.1.1 Privacy and integrity

11.1.2 Confidentiality support for user data

11.2 Control plane security functions and protocols

11.2.1 Authentication

11.2.2 Privacy and integrity

11.2.2.1 User location privacy support

11.2.2.2 Confidentiality support for control signalling

11.2.3 Key Management

12 Physical Layer

12.1 Multiple Access Method

12.2 Duplexing Modes

12.3 OFDMA Numerology

12.4 Frame Structure

12.5 Channel Coding and Modulation

12.6 Multi-Antenna Techniques

12.6.1 Coding for Multi-Antennas

12.6.1.1 Single/Multi-Codeword to Layer Mapping

12.6.1.2 Layer to Antenna Mapping

12.6.2 Single user MIMO/Beamforming

12.6.3 Multi-user MIMO (New)/Beamforming

12.6.4 MIMO/Beamforming Mode Adaptation

12.7 Physical Layer Procedures

12.7.1 Measurement and Reporting

12.7.2 System Acquisition

12.7.3 Link Adaptation

12.7.3.1 Adaptive Modulation and Coding

12.7.3.2 Power control

12.7.4 H-ARQ Procedures

13 RF Requirements

13.1 Out of Band Emissions

13.2 Spectral mask for mobile station

13.3 Spectral mask for the base station

14 Deployment Scenarios

14.1 IEEE 802.16e and 802.16m Mixed System Operation

14.2 IEEE 802.16m only System Operation

Appendix A1 Feasibility Studies for New Features

A1.1 Scenario and Feasibility for Relay Operation

A1.2 Scenario and Feasibility for Self Organization Network Operation

A1.3 Scenario and Feasibility for Multi-carrier Operation

A1.4 Scenario and Feasibility for Multi-radio coexistence and coordination mechanisms

Appendix A2 Performance Evaluation and Verification