

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	<b>Comments on the ToC of SDD</b>	
Date Submitted	2007-11-07	
Source(s)	Yih Guang Jan, Yang-Han Lee, Hsien-Wei Tseng, Ming-Hsueh Chuang, Tamkang University (TKU), Taiwan	yihjan@yahoo.com yhlee@ee.tku.edu.tw
	Chih-Wei Su, Chun-Yen Hsu, Tsung-Yu Tsai Institute for Information Industry (III), Taiwan	cwsu@nmi.iii.org.tw hcy@nmi.iii.org.tw tyt@nmi.iii.org.tw
Re:	[IEEE 802.16m-07/040]–Call for Contributions on Project 802.16m System Description Document (SDD)	
Abstract	This document contains proposed text for the table of content of system description document (SDD). Specifically, hybrid ARQ (HARQ), handover (HO), multicast/broadcast service (MBS) and Multi-In Multi-Out (MIMO) issues that should be described in SDD are identified.	
Purpose	For 802.16m discussion and adoption	
Notice	<i>This document does not represent the agreed views of the IEEE 802.16 Working Group or any of its subgroups.</i> It represents only the views of the participants listed in the “Source(s)” field above. It is offered as a basis for discussion. It is not binding on the contributor(s), who reserve(s) the right to add, amend or withdraw material contained herein.	
Release	The contributor grants a free, irrevocable license to the IEEE to incorporate material contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE’s name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE’s sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.	
Patent Policy	The contributor is familiar with the IEEE-SA Patent Policy and Procedures: < <a href="http://standards.ieee.org/guides/bylaws/sect6-7.html#6">http://standards.ieee.org/guides/bylaws/sect6-7.html#6</a> > and < <a href="http://standards.ieee.org/guides/opman/sect6.html#6.3">http://standards.ieee.org/guides/opman/sect6.html#6.3</a> >. Further information is located at < <a href="http://standards.ieee.org/board/pat/pat-material.html">http://standards.ieee.org/board/pat/pat-material.html</a> > and < <a href="http://standards.ieee.org/board/pat">http://standards.ieee.org/board/pat</a> >.	

# Comments on the ToC of SDD

*Yih Guang Jan, Yang-Han Lee, Hsien-Wei Tseng, Ming-Hsueh Chuang,  
Tamkang University (TKU), Taiwan*

*Chih-Wei Su, Chun-Yen Hsu, Tsung-Yu Tsai  
Institute for Information Industry (III), Taiwan*

The proposed table of content of system description document (SDD) is listed below. Specifically, hybrid ARQ (HARQ) handover (HO), multicast/broadcast service (MBS) and Multi-In Multi-Out (MIMO) issues that should be described in SDD are identified. Other issues that should be described in SDD are opened for other contributors.

## Table of Contents

1. Overview
  - 1.1 Scope
    - 1.1.1 Interpretation
  - 1.2 Purpose
  - 1.3 Frequency bands
    - 1.3.1 Frequencies below 6 GHz
    - 1.3.2 License-exempt frequencies below 6 GHz
    - 1.3.3 Air interface nomenclature and PHY compliance
  - 1.4 Reference models
  - 1.5 Managed objects
2. References
3. Definitions
4. Abbreviations and acronyms
5. Service-specific CS
  - 5.1 CS service definition
  - 5.2 ATM CS
  - 5.3 Packet CS
  - 5.4 Generic Packet Convergence Sublayer (GPCS)
6. MAC common part sublayer
  - 6.1 Point-to-multipoint (PMP)
  - 6.2 Data/Control plane
    - 6.2.1 Addressing and connections
      - 6.2.1.1 Point-to-multipoint (PMP)
    - 6.2.2 MPDU formats

1 6.2.3 Construction and transmission of MPDUs

2 6.2.4 Scheduling services

3 6.2.5 Bandwidth allocation and request mechanisms

4 6.2.6 Quality of Service (QoS)

5 6.2.7 ARQ mechanism

6 6.2.8 MAC support for HARQ

7 6.2.8.1 Subpacket generation

8 6.3.8.2 DL/UL ACK/NAK signaling

9 6.2.8.2.1 HARQ for unicast connections

10 6.2.8.2.2 HARQ for multicast connections

11 6.3.8.3 HARQ parameter signaling

12 6.3.8.4 Multi-channel retransmission scheme

13 6.2.9 Multicast and broadcast transport connections

14 6.2.10 MAC support of PHY

15 6.2.11 Contention resolution

16 6.2.12 Ranging

17 6.2.13 Network entry and initialization

18 6.2.14 Procedures for shared frequency band usage

19 6.2.15 Sleep mode for mobility-supporting MS

20 6.2.16 MAC HO procedures

21 6.2.16.1 Network topology acquisition

22 6.2.16.2 HO process

23 6.2.16.2.1 HO classes

24 6.3.22.3 Macro diversity handover (MDHO) and fast BS switching

25 6.2.17 MS idle mode (optional)

26 6.2.18 Enhanced Multicast and broadcast service (MBS)

27 6.2.18.1 Single-BS Access

28 6.2.18.1.1 Establishment and maintenance of enhanced multicast and broadcast services

29 6.2.18.1.1.1 EMBS channel reselection delay and interruption times

30 6.2.18.1.2 Power saving operation

31 6.2.18.2 Multi-BS Access

32 6.2.18.2.1 Establishment and maintenance of enhanced multicast and broadcast services

33 6.2.18.2.1.1 EMBS channel reselection delay and interruption times

34 6.2.18.2.2 Performance enhancement with macro diversity

35 6.2.18.2.3 Power saving operation

36 6.2.18.2.4 Enhanced Multicast and broadcast zone (EMBS\_zone)

37 6.2.18.2.4.1 Mixture of MBS\_Zone and EMBS\_Zone

38 6.2.18.2.5 Synchronization between BSs

39 6.2.19 MIHF support

40 6.2.20 Location Based Services

41 7. Security sublayer

1 8. Physical layer (PHY)

2 8.1 WirelessMAN-OFDMA PHY

3 8.1.1 Introduction

4 8.1.2 OFDMA symbol description, symbol parameters and transmitted signal

5 8.1.3 OFDMA basic terms definition

6 8.1.4 Frame structure

7 8.1.5 Map message fields and IEs

8 8.1.6 OFDMA subcarrier allocations

9 8.1.7 OFDMA ranging

10 8.1.8 Space-time coding (STC) (optional)

11 8.1.9 Channel coding

12 8.1.10 Control mechanisms

13 8.1.11 Channel quality measurements

14 8.1.12 Transmitter requirements

15 8.1.13 Receiver requirements

16 8.1.14 Frequency control requirements

17 8.1.15 Optional HARQ support

18 8.2 WirelessHUMAN specific components

19 8.2.1 Channelization

20 8.2.2 Tx spectral mask

21 9. Configuration

22 10. Parameters and constants

23 11. System profile

24  
25 Annex  
26