

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	<b>Proposed text for 802.16m Requirements – Section 5.0 General Requirements</b>	
Date Submitted	<b>2007-02-23</b>	
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Re:	Call for Contributions on Requirements for P802.16m Advanced Air Interface IEEE 802.16m-07/004r1, 01/31/07	
Abstract	This document modifies General Requirements section in the current baseline document, 80216m-07_002.	
Purpose	For discussion and approval by TGM	
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## Section 5.0 General Requirements

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### 5.0 General Requirements

#### 5.1 Legacy Support

IEEE 802.16m is based on the IEEE Standard 802.16 WirelessMAN-OFDMA specification.

IEEE 802.16m provides continuing support and inter-operable for legacy WirelessMAN-OFDMA equipment. This continuing support shall be limited to only a “harmonized sub-set” of IEEE 802.16e OFDMA features. This harmonized sub-set is captured by the WiMAX Forum™ definition of OFDMA mobile system profiles [1]. These WiMAX mobile system profiles shall serve as the IEEE 802.16e reference system.

A legacy IEEE 802.16e terminal, compliant with the IEEE 802.16e reference system, should be able to operate with a new 16m BS with no degradation of performance.

A new IEEE 802.16m terminal should be able to operate with a IEEE 802.16e BS, compliant with the IEEE 802.16e reference system, at a level of performance that is no worse than the IEEE 802.16e terminal.

The IEEE802.16m should enable the graceful update and evolution of infrastructure from the IEEE 802.16e system to minimize the cost of platform migration.

#### 5.2 Complexity

PHY/MAC should enable a variety of hardware platforms with different performance/complexity requirements. However, it is required to minimize complexity of the architecture and protocols and to avoid excessive complexity of systems and interoperability of access networks. IEEE802.16m should also to enable to support low cost device with total cost of ownership.

#### 5.3 Services

End users anticipate new services, new features, and new devices for IMT-Advanced. For example, HDTV plasma screens will be popular for notebook type of devices. Real-time gaming or Real-time video streaming service over high definition screens will be a typical service in the future. High priority E-commerce, telemetric, Broadcast/Multicast for TV, news, and advertisement over the handheld will be popular services as well.

IEEE 802.16m shall be flexible in order to support required services from ITU-R and to ensure QoS levels for different services with secure and reliable security.

A list of services that IEEE 802.16m shall support is as following:

- VoIP

- IPTV

- Real-time gaming

- Real-time high quality video streaming

Internet-like Asynchronous Service

- Fast interactive sessions
- High priority E-commerce

Large file exchanges

Multimedia conferencing

Multicast Broadcast for TV, news, or advertisement optimized for local area and wide area

Trust based service such as built in VPN encryption

MS position locating support and location based service