

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >
Title	<b>TGm Legacy Support Ad Hoc output (as revised by the task group)</b>
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Re:	
Abstract	
Purpose	Proposed text for IEEE 802.16m Requirements Text, Section 5.1 Legacy Support. Working group to decide by between specified options and adopt.
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## Legacy Support

Mark Cudak  
Legacy Support Ad Hoc Chair

### *Proposed Section 3.0 definitions supporting Section 5.1 text:*

*The definitions below will replace the definitions on page 7, line 26-43, page 8 lines 1-9 and page 8 lines 18-33:*

WirelessMAN-OFDMA Reference System	A system compliant with a subset of the WirelessMAN-OFDMA capabilities specified by IEEE 802.16-2004 and amended by IEEE 802.16e-2005 and IEEE 802.16Cor2/D3, where the subset is defined by <u>WiMAX Forum Mobile System Profile, Release 1.0 (Revision 1.4.0: 2007-05-02)</u> , excluding specific frequency ranges specified in the section 4.1.1.2 (Band Class Index)
Legacy Mobile Station (MS)	A mobile station compliant with the WirelessMAN-OFDMA Reference System
Legacy Base Station (BS)	A base station compliant with the WirelessMAN-OFDMA Reference System.

***Proposed Text for Section 5.1 Legacy Support replacing existing text.***

IEEE 802.16m shall provide continuing support and interoperability for legacy WirelessMAN-OFDMA equipment, including base stations and mobile stations. Specifically, the features, functions and protocol procedures enabled in IEEE 802.16m shall support the features, functions and protocol procedures employed by WirelessMAN-OFDMA legacy equipment. IEEE 802.16m shall provide the ability to turn-off legacy support.

This continuing support shall be limited to only a “harmonized sub-set” of WirelessMAN-OFDMA features, functions and protocol procedures. This harmonized sub-set is captured by the WiMAX Forum Mobile System Profile, Release 1.0 (Revision 1.4.0: 2007-05-02) [1]. The features, functions and protocol procedures specified by WiMAX Forum Mobile System Profile shall serve as the WirelessMAN-OFDMA Reference System (see definitions).

The following are backward compatibility requirements:

An IEEE 802.16m MS shall be able to operate with a Legacy BS, at a level of performance equivalent to that of a Legacy MS.

Systems based on IEEE 802.16m and the Wireless-OFDMA Reference System shall be able to operate on the same RF carrier, with the same channel bandwidth; and should be able to operate on the same RF carrier with different channel bandwidths.

An IEEE 802.16m BS shall support a mix of IEEE 802.16m and Legacy MSs when both are operating on the same RF carrier. The performance of such a mix should improve with the fraction of IEEE 802.16m MSs attached to the BS.

An IEEE 802.16m BS shall support seamless handover of a Legacy MS to and from Legacy BS

An IEEE 802.16m BS shall be able to support a Legacy MS while also supporting IEEE 802.16m MSs, at a level of performance equivalent of what a Legacy BS provides to a Legacy MS when operating on the same RF carrier.