Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**TGm Legacy Support Ad Hoc output**
Date Submitted	**2007-05-09**
Source(s)	Mark Cudak (Chair) Mark.Cudak@motorola.com Motorola
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:

Accept all unbracketed text. Decide whether to include the bracketed text in the WirelessMAN-OFDMA Reference System definition:

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 WiMAX Forum Mobile System Profile, Release 1.0 (Revision 1.4.0: 2007-05-02). [,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.

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Proposed Text for Section 5.1 Legacy Support

Select one of the following two options:

Option 1: (14)

[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.].

Option 2: (22)

[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]

Select one of the following two options linking the body text to the definitions:

Option 1:

[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 WirelesMAN-OFDMA Reference System (see definitions).]

Option 2:

[]

Select one of the following three options on backward compatibility:

Option 1:

[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.

An IEEE 802.16m BS shall support a mix of IEEE 802.16m and Legacy MSs. The performance of such an IEEE 802.16m system should be proportional to 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

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Option 2:

[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. 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

]

Option 3:

[The following are backward compatibility requirements when operating on the same RF carrier as the WirelessOFDM Reference System:

> 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. 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

]

Decide whether to include the following text on performance:

[All functional and performance requirements in Section 6 and 7 shall be met by IEEE 802.16m without compromising backward compatibility as defined in this section.]