Project	**IEEE 802.16 Broadband Wireless Access Working Group** <**http://ieee802.org/16**>
Title	**Section 5 - IEEE 802.16m Requirements on Legacy support**
Date Submitted	**2007-02-23**
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Re:	Call for Contributions on Requirements for P802.16m , 01/30/07
Abstract	This contribution provides the legacy support requirements of advanced air interface for the IEEE 802.16m.
Purpose	For discussion and approval by TGM
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IEEE 802.16m Requirements on Legacy support

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0**1. Background**

As identified in the 802.16m PAR, 802.16m shall meet the cellular layer requirements of IMT-Advanced next generation mobile networks while providing continuing support for legacy WirelessMAN-OFDMA equipment . Regarding the legacy support for IEEE 802.16m, tradeoff performance and/or capability enhancements should be considered to meet the requirements of ITU-R, .
For legacy support, IEEE 802.16e backward compatible bandwidth allocation is proposed.

0**2. Proposed text change**

[Change the text of 5.1 Legacy Support in 80216m-07_002, as follows]

05.1 Legacy Support

IEEE 802.16m is based on the IEEE Standard 802.16 WirelessMAN-OFDMA specification. The amendment provides continuing support for legacy subscriber stations. In order for IEEE 802.16m specification to support legacy subscriber stations, a method to guarantee backward compatibility shall be provided, while satisfying ITU-R requirements. 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 profile is defined, for purposes of this document as the *802.16e reference system* Up to 20MHz within the spectrum band(s), where the IEEE 802.16m might be deployed, shall be IEEE 802.16e backward compatible for legacy IEEE 802.16 terminal support.

An legacyIEEE 802.16e terminal, compliant with the IEEE 802.16e reference, shall be able to operate with an new IEEE 802.16m Base Station with no degradation of performance.

An new IEEE 802.16m terminal shall be able to operate with an IEEE 802.16e Base Station, compliant with the IEEE 802.16e reference, at a level of performance that is no worse than the an IEEE 802.16e terminal.

[Definitions used in the backward compatibility levels are as follows:]
[Editor's Note: Move Definitions to the definition part (Section 3.0) of the document]
Definitions

- IEEE 802.16e Terminal: compliant with the IEEE 802.16 WirelessMAN-OFDMA specification specified by IEEE 802.16-2004 and amended by IEEE 802.16e-2005

- IEEE 802.16e Base Station: compliant with the IEEE 802.16 WirelessMAN-OFDMA specification specified by IEEE 802.16-2004 and amended by IEEE 802.16e-2005

- IEEE 802.16m Terminal: compliant with the IEEE 802.16 WirelessMAN-OFDMA

specification specified by IEEE 802.16-2004 and amended by IEEE 802.16e-2005 and IEEE 802.16m

- IEEE 802.16m Base Station: compliant with the IEEE 802.16 WirelessMAN-OFDMA specification specified by IEEE 802.16-2004 and amended by IEEE 802.16e-2005 and IEEE 802.16m

References

[1] IEEE C802.16m-07/002: Draft IEEE 802.16m Requirements, January 2007.

[2] IEEE 802.16m PAR

[3] Recommendation ITU-R M.1645: Framework and overall objectives of the future development of IMT-2000 and systems beyond IMT-2000, January 2003.

[4] ITU-R Document 8F/TEMP/495-E: Draft Guidelines for Evaluation of Radio Transmission Technologies for IMT-Advanced, January 2007.

[5] ITU-R Document 8F/TEMP/496-E: Draft [Report on] Requirements Related to Technical System Performance for IMT-Advanced Radio Interface(s), January 2007.