Project	**IEEE 802.16 Broadband Wireless Access Working Group** <http://ieee802.org/16>	
Title	**Table 1 Modifications to Clarify IEEE Std 802.16 System Variants**	
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Re:	IEEE 802.16 Working Group Letter Ballot #26	
Abstract	Table 1 was designed to provide a top-level overview of multiple variants of 802.16 systems. It served its purpose when it was introduced in 802.16a. However, since then, IEEE Std 802.16 has been growing with amendments and revisions There is a clear need to update the Table 1 to accommodate these more recent 802.16 developments and to form a foundation for the addition new specifications in projects such as P802.16h, P802.16j, and P802.16m. This contribution proposes such updates to Table 1.	
Purpose	To be discussed by the 802.16 Maintenance Task Group during WG Letter Ballot #26 comment resolution, for adoption into P802.16Rev2/D2.	
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Table 1 Modifications to Clarify IEEE Std 802.16 System Variants

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Introduction

Contribution IEEE C802.16m-07/079 ("Proposed edits to Draft P802.16m Requirements (C802.16m-07/076r2) regarding Backward Compatibility and Profiles") discussed problematic maintenance issues that have arisen with the development of amendments and revisions to IEEE Std 802.16. That contribution proposed a style for the 802.16m amendment, but it presupposed that the format of the base standard would be refined during the Rev2 development to form an appropriate basis for previous and future developments. This contribution proposes to address those concerns through edits to Table 1.

Table 1 was designed to provide a top-level overview of multiple variants of IEEE 802.16 systems. It served its purpose when it was introduced in IEEE 802.16a. However, since then, IEEE Std 802.16 has been growing.with amendments and revisions. There is a clear need to update Table 1 to accommodate these more recent 802.16 developments and to form a foundation for the addition of new specifications in projects such as P802.16h, P802.16j, and P802.16m. This contribution proposes such updates to Table 1.

Proposed Table 1 Updates and Motivation

We propose the following updates to Table 1:

1. Change the column name "options" to "System Features", and change the contents of the column to the references to the corresponding subclauses in Clause 12, which defines sets of system features to be used in typical implementation cases.

2. Divide the WirelessMAN-OFDM™ entry into two entries:

   - Fixed WirelessMAN-OFDM™, to represente fixed systems, and
   - WirelessMAN-OFDM™ , to represent fixed and mobile systems originating in IEEE 802.16e.

3. split the WirelessMAN-OFDMA entry into four entries:

   - Fixed WirelessMAN-OFDMA, to represent fixed systems,
   - WirelessMAN-OFDMA TDD Rel. 1r1, to represent fixed and mobile systems prior to 802.16Rev2
   - WirelessMAN-OFDMA TDD Rel. 1r2, to represent fixed and mobile systems per 802.16Rev2
   - WirelessMAN-OFDMA FDD Rel. 1r2, to represent fixed and mobile systems per 802.16Rev2

The motivations of the proposed updates to Table 1 are:

a. to clearly delineate the variants of IEEE Std 802.16 and the associated feature sets and versions;

b. to ensure that each new variant of the standard is provided with a static designation indicative of its name and release number, ensuring that support for that variant is continued indefinitely in future versions of the standard but with allowance for the naming of maintenance updates to the variant and its designation;

c. to provide extendibility allowing IEEE Std 802.16 to evolve to accommodate new future developments while ensuring that compliant systems can remain compliant., For example, for IEEE 802.16j, a new entry WirelessMAN-OFDMA MMR Rel. 1 can be added to Table 1, and a corresponding subclause in Clause 12 can be added to list the set of MMR system features. Similarly, for 802.16m, new entries such as WirelessMAN-OFDMA TDD Rel. 2 and corresponding subclauses in Clause 12. can be added.

Please also note that the corresponding subclauses in Clause 12 for the newly added Table 1 entries are not included in this contribution.

Suggested Changes to P802.16Rev2/D1, subclause 1.3.4

In P802.16Rev2/D1, page 2, line 40, update the beginning of subclause 1.3.4, including Table 1, by the following material, where the new text is marked by blue and underlined, and the deleted text is marked by red with strikethrough.

1.3.4 Air interface variants and nomenclature

Table 1 summarizes the nomenclature for the various air interface variants in this standard.

Table 1 — Air Interface Variants and Nomenclature

Designation	Applicability	PHY Specification	~~Options~~ System Features	Duplexing alternative
WirelessMAN-SC™ Rel. 1	10 – 66 GHz	8.1	12.1	TDD FDD
WirelessMAN-SCa™	licensed bands below 11 GHz	8.2	~~AAS (6.3.7.6)~~ ~~ARQ (6.3.4)~~ ~~STC (8.2.1.4.3)~~ ~~mobile~~ 12.2	TDD FDD
Fixed WirelessMAN-OFDM™	licensed bands below 11 GHz	8.3	~~AAS (6.3.7.6)~~ ~~ARQ (6.3.4)~~ ~~Mesh (6.3.6.6)~~ ~~STC (8.3.8)~~ ~~mobile~~	TDD FDD

			12.3	
WirelessMAN-OFDM™ Rel. 1	licensed bands below 11 GHz	8.3	~~AAS (6.3.7.6)~~ ~~ARQ (6.3.4)~~ ~~Mesh (6.3.6.6)~~ ~~STC (8.3.8)~~ ~~mobile~~ 12.5 (??)	TDD FDD
Fixed WirelessMAN-OFDMA	licensed bands below 11 GHz	8.4	~~AAS (6.3.7.6)~~ ~~ARQ (6.3.4)~~ ~~HARQ (6.3.17)~~ ~~STC (8.4.8)~~ ~~mobile~~ 12.4	TDD FDD
WirelessMAN-OFDMA TDD Rel. 1r1	licensed bands below 11 GHz	8.4	~~AAS (6.3.7.6)~~ ~~ARQ (6.3.4)~~ ~~Mesh (6.3.6.6)~~ ~~STC (8.4.8)~~ ~~mobile~~ 12.6	TDD ~~FDD~~
WirelessMAN-OFDMA TDD Rel. 1r2	licensed bands below 11 GHz	8.4	~~AAS (6.3.7.6)~~ ~~ARQ (6.3.4)~~ ~~Mesh (6.3.6.6)~~ ~~STC (8.4.8)~~ ~~mobile~~ 12.7	TDD ~~FDD~~
WirelessMAN-OFDMA FDD Rel. 1r2	licensed bands	8.4	~~AAS (6.3.7.6)~~ ~~ARQ (6.3.4)~~ ~~Mesh (6.3.6.6)~~ ~~STC (8.4.8)~~ ~~mobile~~ 12.8	~~TDD~~ FDD
Fixed WirelessHUMAN™ Rel. 1	license-exempt bands below 11 GHz	[8.2, 8.3, or 8.4] and 8.5	~~AAS (6.3.7.6)~~ ~~ARQ (6.3.4)~~ ~~Mesh (6.3.6.6)~~ ~~(with 8.3 only)~~ ~~STC (8.2.1.4.3, 8.3.8, 8.4.8)~~ 12.9	TDD