Project	**IEEE 802.16 Broadband Wireless Access Working Group** <http://ieee802.org/16>	
Title	**[Title of Contribution; e.g., IEEE 802.16 Document Submission Template, Rev. 9]**	
Date Submitted	**2007-11-05**	
Source(s)	John Humbert Sprint	Voice: +1 816-210-9611 E-mail: John.J.Humbert @ sprint.com *<http://standards.ieee.org/faqs/affiliationFAQ.html>
Re:	Proposed Modification to IEEE 802.16m-037r1	
Abstract	This document proposes changes to the modeling scenarios in the 802.16 EVM	
Purpose	Adopt this contribution to modify section 2.3	
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Proposed Modifications to IEEE 802.16m-07-037R1 section 2.3

John Humbert
Sprint

Purpose:

From the table in section 2.3 it is unclear if the SRD performance numbers must be met using the baseline scenario, baseline + Macro Cell, or just the Macro Cell scenario. To clarify the situation this proposed text change makes the Urban Macrocell optional and adds information needed to simulation FDD systems.

This is consistent with the way that the absolute numbers were derived in the SRD.

It also places an emphasis on optimizing system performance for larger cell sizes and higher mobility speeds.

Other updates to the NGMN simulation scenario have been made based on some of more recent activities within NGMN.

Proposed Change:

[Editors note: replace section 2.3 with the following]

The following table summarizes the test environments and associated assumptions and parameters that are required for system level simulations. For purposes of FDD system evaluation~~, a **TBD**~~ the FDD test scenario shall be used. Proponents are required to present performance results for both mandatory test scenarios defined in Table 1.

Scenario/ Parameters	**Baseline Configuration (Calibration & SRD)**	**NGMN Configuration**	**~~Urban Macrocell~~FDD Test Configutration**
Requirement	**Mandatory**	**Optional ***	**Mandatory for FDD proposals**
Site-to-Site Distance	1.5 km	0.5 km	1.5 km
Carrier Frequency	2.5 GHz	2.5 GHz	2.5 GHz
Operating Bandwidth	10 MHz for TDD	10 MHz for TDD	~~10 MHz for TDD / 5~~ 10 MHz per uplink and downlink for FDD

BS Height	32 m	32 m	32 m
BS Tx Power per sector	46 dBm	46 dBm	46 dBm TDD 43 dBm FDD
MS Tx Power	23 dBm	23 dBm	23 dBm
MS Height	1.5 m	1.5 m	1.5 m
Penetration Loss	10 dB	20 dB	10 dB
Path Loss Model	Loss (dB) = $130.62+37.6\log_{10}(R)$ (R in km) **	Loss (dB) = $130.62+37.6\log_{10}(R)$ (R in km) **	Loss (dB) = $130.62+37.6\log_{10}(R)$ (R in km) **~~Refer to Section 3.2.3.1~~
Lognormal Shadowing Standard Deviation	8 dB	8 dB	8 dB
Correlation Distance for Shadowing	50m	50m	50m
Mobility	0-120 km/hr	3 km/hr	0-120 km/hr
Channel Mix	ITU Ped B 3 km/hr – 60% ITU Veh A 30 km/hr – 30% ITU Veh A 120 km/hr – 10%	~~ITU Ped B~~SCM-C 3 km/hr only case All others ITU Ped B 3 km/hr – 60% ITU Veh A 30 km/hr – 30% ITU Veh A 120 km/hr – 10%	ITU Ped B 3 km/hr – 60% ITU Veh A 30 km/hr – 30% ITU Veh A 120 km/hr – 10%~~TBD~~
Spatial Channel Model	ITU with spatial correlation (Refer to Section **Error! Reference source not found.**)	~~ITU with spatial correlation (Refer to Section 3.2.9)~~SCM for 3 km/hr only case All others ITU with spatial correlation (Refer to Section **Error! Reference source not found.**)	ITU with spatial correlation (Refer to Section **Error! Reference source not found.**)~~Urban Macrocell CDL (Refer to Table 9 in Section 3.2.5.1) with spatial correlation (Appendix A)~~
EVM	~~[~~**30 dB**~~]~~	N/A	~~[~~**30 dB**~~]~~

Table 1: Test Scenarios

[Editors Note: add the Urban Macrocell column the table in appendix J]

Scenario/ Parameters	Urban Macrocell
Requirement	~~**Mandatory**~~**Optional**
Site-to-Site Distance	1 km
Carrier Frequency	2.5 GHz
Operating Bandwidth	10 MHz for TDD / 5 MHz per uplink and downlink for FDD
BS Height	32 m
BS Tx Power per sector	46 dBm TDD 43 dBm FDD
MS Tx Power	23 dBm
MS Height	1.5 m
Penetration Loss	10 dB
Path Loss Model	Refer to Section 3.2.3.1
Lognormal Shadowing Standard Deviation	8 dB
Correlation Distance for Shadowing	50m
Mobility	0-120 km/hr
Channel Mix	TBD
Spatial Channel Model	Urban Macrocell CDL (Refer to **Error! Reference source not found.** in Section **Error! Reference source not found.**) with spatial correlation (Appendix A)
EVM	**[30 dB]**