Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**	
Title	**[Comments and changes to Requirements Section 6]**	
Date Submitted	**[2007-02-23]**	
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Re:	In response to the "Call for Contributions on Requirements for P802.16m -Advanced Air Interface" issued on 2007-01-29	
Abstract	[Comments and suggested changes to document 80216m-07_002.pdf section 6.1 Peak Data Rate]	
Purpose	[For consideration by the Requirements Ad hoc]	
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Comments and changes to Requirements Section 6

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06.1 Peak Data Rate – Original Text

State of the art modulation, coding, scheduling and multiplexing should be employed to achieve higher spectral efficiency at a reasonable complexity

Additional transmit and receive antennas may be considered but should not be required of subscriber devices. Size and power considerations continue to dictate that no more than two transmit and receive antennas be required of hand-held devices.

[The 802.16 m TG should include enhancements to the 802.16 MIMO and AAS modes within the scope of the project for the explicit purpose of increasing the capacity, aggregate link rates and spectral efficiency]

[Peak useful data rates up to 100 Mbit/sec for mobiles users]

[Peak useful data rates up to 1 Gb/s for stationary users]

[Interference Management/Avoidance]

Comment remove brackets from following target peak data rates. The 100 Mb/s and 1Gb/s are rates mentioned in M.1645 and are useful targets for IMT-Advanced.

Peak useful data rates up to 100 Mbit/sec for mobiles users

Peak useful data rates up to 1 Gb/s for stationary users

Add the following qualifying statement regarding 1Gb/s

The standard should allow modulation modes that allow stationary users to achieve 1 Gb/s. The standard should not preclude a single user from obtaining the entire aggregate bitrate/capacity of a BS in order to meet this requirement.

Comment: Antenna elements are not the major cost items in MIMO systems rather it is the RF chains. We should limit the number of RF chains in the handset rather then the antenna elements. Change the paragraph:

"Additional transmit and receive antennas may be considered but should not be required of subscriber devices. Size and power considerations continue to dictate that no more than two transmit and receive antennas be required of hand-held devices."

To

"… dictate that no more than two *RF chains* be required of hand-held devices. The standard should allow and specify the efficient training of AAS/MIMO systems to enable the optimum set of BS and subscriber station antenna elements to be discovered."

Comment: All we have in this section is "[Interference Management/Avoidance]" expand this to read:

The standard shall provide for the development of cross-layer (PHY/MAC) methods and techniques that enable

the cooperation among BSs and relays, specifically, the sharing of information between BSs for the purpose of mitigating self interference.