IEEE 802.16 Working Group on Broadband Wireless Access

http://WirelessMAN.org

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Howard Frazier, Chair
IEEE 802.3 Ethernet in the First Mile Study Group

Dear Howard:

Congratulations on the success of last night's Ethernet in the First Mile (EFM) Tutorial. Thank you for a clear and informative evening.

I have discussed your PAR and the tutorial presentation with 802.16's MAC teams. We could like to register the following comments:

Comment 1:

We are concerned that the PAR Scope statement fails to include the development of point-to-multipoint (P2M) MAC technology for use in passive optical networks (PONs), described in the tutorial as a Study Group Objective. The Scope (along with the Title) appears unnecessarily restrictive in using the phrase "MAC parameters and minimal augmentation of the MAC operation."

A slide in the tutorial described the PON upstream control in rather simple terms ("utilize existing PAUSE control frame or other control messages.") It seems likely to us that a practical implementation would entail more sophisticated protocols. We are concerned that a decision to limit your alternatives so dramatically would handicap the developers of the protocol.

As you know, point-to-multipoint systems have been studied by many standards bodies. Your PAR, for instance, recognizes the relevance of DOCSIS in Item 12. We believe that an approach akin to DOCSIS would be outside the current PAR scope statement.

Of course, 802.16 has spent the past two years developing a point-to-multipoint MAC for similar access requirements. We believe it would also be applicable to your situation. It would provide outstanding bandwidth efficiency, link-layer encryption capability, and opportunities for Quality of Service implementation. Given the PON's very high-bandwidth physical layer, it is not clear to us that you would wish to take advantage of these capabilities. However, looking toward a future in which even the fiber bandwidth may sometime be occupied, we encourage you to have a close look at this option.

Suggested Remedy to Comment 1:

In the scope statement, change "Define 802.3 Media Access Control (MAC) parameters and minimal augmentation of the MAC operation" to "Define Media Access Control (MAC) operation"

In the title, change "Media Access Control Parameters" to "Media Access Control Operation."

Comment 2:

Item 12 of the PAR answers the question "Are you aware of other standards or projects with a similar scope?" Your answer does not include IEEE 802.16. We believe this is an important oversight. I appreciate your suggestion in the tutorial that IEEE-SA expects a Sponsor to handle internal coordination. However, the question does not concern coordination but awareness. As you now, the PAR will be read not only by the Standards Board but also by participants and outside observers. Some of these may be unaware of 802.16 or of your awareness of 802.16. It would be helpful for all readers to know what you know.

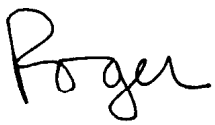
Suggested Remedy to Comment 2:

Change the list in the Item 12 response to "including T1E1.4, ETSI TM6, IEEE 802.16, DOCSIS, and FSAN."

We appreciate your desire to stick close to Ethernet and your goal of not over-taxing your packets with excessive protocol translation. However, Ethernet may not always be the ideal solution in non-LAN architectures. We can assure you that the IEEE 802.16 MAC would not stress your packets; on the contrary, we can offer them a comfortable ride, with prompt scheduled delivery. They would arrive on-time and refreshed.

Thanks for the outstanding work of your Study Group, and I wish you all due success in bringing to market an important standard which will significantly advance the public good.

Best regards,



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cc: IEEE 802 SEC