

7 November 2012



To: Roger B. Marks  
Chair, IEEE 802.16 Working Group on Broadband Wireless Access

Subject: Response to Liaison Statement on Small Cell Backhaul

Dear Dr. Marks,

The WiMAX Forum acknowledges your statement of 20 September entitled “IEEE 802.16 Activity regarding Small Cell Backhaul.” We appreciate this timely notification and are deeply interested in the topic. Of course, Mobile WiMAX operators, like other wireless providers, are in need of standardized wireless backhaul solutions, and we agree that the project under discussion could well serve those purposes. Furthermore, the WiMAX Forum intends to apply itself also to optimizing the WiMAX specifications so as to support providers of small cell backhaul technology. The P802.16r project is an ideal opportunity for IEEE 802.16 to enhance the WirelessMAN-OFDMA air interface to optimize its applicability for small cell backhaul applications. For both of these reasons, we appreciate having been included in the draft PAR under the category of “Stakeholders for the Standard.”

We have taken note of the draft PAR scope language referring to “Enhancements to the Convergence Sublayer specifications ... as necessary for support of Carrier Ethernet backhaul requirements.” We appreciate this intent and believe that Carrier Ethernet 2.0 support is an essential characteristic for any successful small cell backhaul solution. In fact, the WiMAX Forum has recently initiated activities toward its full support for Standardized Wireless Carrier Ethernet. WiMAX technology can support Carrier Ethernet transport and serve as the only standard method of providing such support using wireless connectivity. We have initiated an effort to ensure that the WiMAX network specifications are fully supportive of Carrier Ethernet 2.0 requirements for critical applications. We believe that standardized Wireless Carrier Ethernet 2.0 will enable a major expansion in the applicability of Carrier Ethernet to scenarios in which wired Ethernet connectivity is unavailable. We envision a truly distributed backhaul opportunity, allowing wireless access providers to locate the cells wherever user demand exists for capacity, independent of wired backhaul availability. Furthermore, we envision the opportunity to extend Ethernet connectivity to nomadic facilities that cannot be readily served by other means.

During its meeting the week of 15 October in Sofia, Bulgaria, the WiMAX Forum has taken steps to initiate a Stage 1 requirements specification on “WiMAX Forum Requirements for Carrier Ethernet Transport.” We plan to keep you informed regarding our progress.

We do appreciate the opportunity to comment on your draft P802.16r PAR. At this time, we would like to convey the following observations:

(1) We believe it would be helpful to ensure that the new functionality added in this amendment is intended to apply to a new set of functionality for small cell backhaul applications, not necessarily as an alteration of previous functionality sets that describe, for example, fully mobile applications. Some, but not all, of the new functionality may be applicable to the mobile environment. Likewise, some aspects of the baseline standard that are relevant to mobile applications may be unnecessary for small cell backhaul. Therefore, we suggest adding a sentence to the end of subclause 5.2b of the draft PAR: “The functionalities required for small cell backhaul support, including new functionalities but not necessarily all those included the baseline standard, will be specified explicitly.”

(2) In subclause 5.2b of the draft PAR, we suggest adding the word “optional” prior to “4x4 MIMO.” This will make it clear that 4x4 should not be presumed to be a mandatory aspect of the standard.

Sincerely,

Chungwoo Hwang  
Chair, WiMAX Forum Service Provider Working Group

cc: Rich Hawkins, Senior Director, Technology