Project	**IEEE 802.16 Broadband Wireless Access Working Group**
Title	**Minority report – on deficiencies in SysReq document, revision 6.**
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Re:	In response to Call for Proposals for the BWA PHY layer from Sep 22, 1999.
Abstract	We explain the deficiencies (in our view) of the SysReq document, revision 6, due to which we opposed to its acceptance.
Purpose	
Notice	
Release	
IEEE Patent Policy	

Minority report – on deficiencies in SysReq document, revision 6.

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This document details the arguments due to which the authors objected to the approval of 80216s0-99/05r6.

In our view, the system requirement document does not emphasize enough certain aspects, which eventually will lead to wrong biases in the selection process and in the standard development.

One such example is the issue of target markets. The SysReq document does not recognize the telecommuter and SOHO markets as important ones. These assumptions have direct impact on the propagation channel models, as the residents of those additional markets do not typically live in high-rise buildings with direct line of sight. In addition, the SysReqs emphasize the synchronous traffic issues while minorizing the data oriented issues. For example, the requirement for bridging support says “MAY support bridged LAN services, whether directly or indirectly”. We think that this sentence is far too weak, given the market trend towards data oriented services.

Another example of the failure to recognize the importance of the data traffic is the way how the need for large uplink capacity is justified. In particular, great emphasis is given to the DAV (digital audio and video) distribution, while failing to mention the case of data servers sitting at the Subscriber Terminal side.

The excessive emphasis on the DAV services is manifested also in the “protocol stack reference model” (Figure 4-1), where DAV traffic may bypass the MAC layer. The MAC layer is a resource allocation mechanism, which can accommodate prioritized traffic (e.g. DAV) as one of its features, and no type of traffic should be described as bypassing it. In our view, the DAV TC layer should be on top of MAC and not access directly the PMD.

The “4. Protocols” part of the SysReq document says “Note that the function of the MAC layer is not to provide error correction by retransmission, or automatic repeat request (ARQ). In the 802 model, those functions if necessary, are provided by the LLC layer”. On the other hand, in 802.11, for example, which is a part of the 802 family, it is recognized that the wireless medium, due to it’s reliability problems, justifies bringing the retransmission mechanisms and ARQ into the MAC layer.

Another issue not mentioned even cursorily is the need (or at least preference) to support, due to regulatory and cost reasons, both FDD, TDD and subscriber-side half-duplex FDD.

We hope that the group considers these issues significant enough to justify another round of the System Requirements document refinement.