

Project	IEEE 802.20 Working Group on Mobile Broadband Wireless Access < http://grouper.ieee.org/groups/802/20/ >	
Title	Hank Eilts comments to the System Requirement Document (802.20 – PD-07r1)	
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Abstract	This document summarizes the points I tried to make in the 802.20 Plenary meeting on Tuesday, 14-Nov_2006	
Purpose	The comments were to stimulate discussion and present my views. This document is to record my comments.	
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Hank Eilts' Comments on Requirements Document

1. We have a PAR requirement to support vehicle mobility classes up to 250 km/hr. However, the SRD specifies hard requirements only up to 120 km/hr and asks for “graceful degradation” beyond that. [section 4.1.1 and table 4-1, page 11] Graceful degradation is undefined and means whatever a reader wants it to mean. This has led to a total disregard for the PAR requirement in the evaluation criteria document. *Remedy: define hard spectral efficiency numbers for 200 km/hr and 250 km/hr mobility classes.*
2. Section 4.1.4 Mobility [page 12] says essentially nothing. “support different rates of mobility from pedestrian (3km/hr) to high vehicular speeds (250 km/hr).” What does support mean? Presently it only means “be able to transmit some data for”.
3. Section 4.1.6 page 12 begins: “The AI shall support peak per-user data rates in excess of the values shown in Table 4-3. These peak data rate targets are independent of channel conditions, traffic loading, and system architecture.”
 - Are the data rates hard requirements (*shall support ...in excess of the values shown*) or goals (*These peak data rate targets. . .*)? This introduction is self contradictory.
 - *These peak data rate targets are independent of channel conditions, traffic loading, and system architecture.* Do we believe we can achieve these peak rates for a sole user in a 250 km/hr channel? (18 Mbits/sec @ 5 MHz BW) -- NO
 - The argument was made that the statement does not mean what it appears to say. The document should stand on its own and not require explanation by the document's creators.

Conclusion: We should define hard performance minima for 250 km./hr mobility. The effect of not doing so is that there are deficiencies in the evaluation criteria. Currently, the lack of 250 km/hr requirements means that there is no evaluation requirement for 250 km/hr performance.