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Title	Proposed text for P802.16m Requirements Document -- Section 8	
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Abstract	Proposed draft text for 802.16m Requirements Document -- Section 8	
Purpose	Incorporate into the draft-802.16m Requirements Document	
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Alcatel-Lucent 16m team

8.0 Deployment-related requirements

8.1 Legacy Support

8.2 Spectrum Requirements

Channel bandwidths

At least the following channel bandwidths should be supported: 1.25, 2.5, 3.5, 5, 7, 8.75, 10, 14, 20, 28, 40, 56, 100 MHz. Bandwidths above 20 MHz should be optional for the terminals.

For channel-bandwidths larger than those currently supported in the “dot16” standard [2], [3], both scaled-up and multi-carrier solutions should be considered.

Channel bandwidth flexibility

16m should offer better frequency assignment support by allowing better granularity. This would facilitate an optimized utilization of variable spectrum block sizes. Optimization/adaptation of channel bandwidth should also utilize the OFDMA capability to switch off channel-edge sub-carriers.

8.3 System Architecture

BS Cell size

A wide range of cell radii from tens of meters up to tens of Kilometers should be supported.

The focus shall be on cellular infrastructure deployments with typical cells sizes of 100 meters to several Kilometers.

Architecture

The 802.16m amendment should support, and be optimized for, an All IP and Ethernet architecture. It should support the various flavors of IP and Ethernet architecture: One-node and two nodes Radio Access Network (RAN) architecture. The architectures must cover a wide range of deployment scenarios, including macro, micro and femto environments, as well as both out-door and in-building applications.

The 802.16m amendment shall provide a protocol-independent packet convergence sublayer that supports multiple protocols over 802.16m air interface.

Furthermore, where feasible and not excessively complex, in order to maximize system performance, both inter-BS diversity and simplex (no soft hand-off, but with fast cell switching capability) options should be supported.

The 802.16m amendment should be able to support advanced Macro Diversity techniques such as Network MIMO, if practical ways can be devised to incorporate them.

The 802.16m amendment shall support all the Network Control and Management Services (NCMS) network elements and procedures described in the IEEE 802.16g amendment.

Support for Multi-hop Relay

Support for scaled-up Multi-hop Relay devices should be included in the 16m architecture.

8.4 System Migration