IEEE 802.16.1 Call for Contributions on Specific Open Technical Issues in "Air Interface for Fixed Broadband Wireless Access Systems"

Deadline: 30 October 2000

The IEEE 802.16 Working Group on Broadband Wireless Access is conducting a review of Document IEEE 802.16.1-00/01r4, entitled "Air Interface for Fixed Broadband Wireless Access Systems." The intent of this review is to finalize the document for Working Group Letter Ballot following 802.16's Session #10 (6-10 November 2000). For details of the review, see the Call for Comments (IEEE 802.16.1-00/05).

In the meantime, several technical issues remain open: Convergence Sublayers and PHY Minimum Performance Requirements. Task Group 802.16.1 requests input to address these issues, which are itemized below.

Please note that the review document will not be available until 29 September 2000. However, a previous version (IEEE 802.16.1-00/01r2) is available.

Contributions will be considered only if submitted using Revision 8 or higher of the 802.16 Document Submission Template <http://ieee802.org/16/docs/802_16_template.doc>. Submissions will be considered non-confidential and will be posted, as soon as possible following receipt, for public access on the 802.16 Web Site.

Email your contribution to the 802.16.1 Task Group Chair, Roger Marks <marks@nist.gov>, for receipt by the deadline of 30 October 2000. Copy Convergence Sublayer contributions to MAC Chair Carl Eklund <carl.eklund@nokia.com>. Copy PHY Minimum Performance Requirements contributions to PHY Chair Jay Klein <jay@ensemblecom.com>.

Convergence Sublayer Annex

The specific proposal contribution procedure calls out the development of the Convergence Sub-layer Process above the core MAC. These Convergence Sub-layer Processes encapsulate the higher-layer bearer traffic core MAC protocol. A separate Convergence Sub-layer is defined for each bearer traffic type.

Each submission should specify the Convergence Sub-layer Process for a single bearer traffic type. The format of the submission should be as an Annex to the current version of the air interface standards. Each submission should include content organized from the following outline.

1. Title Page
2. Specific Definitions, Acronyms, and Abbreviations
3. References
4. MAC Service Definition
4.1 Compatibility with the current MSAP definitions
5. Message Formats
6. Convergence Sub-layer Process Operation (which may include):
6.1 Mapping from the Sub-layer to the core MAC protocol
6.2 Classification for QoS/Connection Assignment
6.3 Payload Suppression Techniques
6.4 Peer-to-peer Signaling
7. Additional Parameters and Constants
8. Normative Information (e.g., Ethernet bridging)

The following contributions are expected. Other contributions are encouraged.

- IP
- Ethernet/802.3
- ATM

Convergence Sub-layer comments (rather than full contributions) may be submitted to the individuals listed below.

- IP – Carl Eklund (carl.eklund@nokia.com)
- Ethernet/802.3 – Glen Sater (g.sater@motorola.com)
- ATM – Ken Stanwood (ken@ensemblecom.com)

PHY Minimum Performance Requirements

Specific contributions are required for the following minimum performance specifications of the Physical Layer. Other issues may also be addressed and are encouraged. Contributions should include formal technical justification for parameters proposed as requirements.

Transmitter/Receiver Characteristics	Comments
Transmitter characteristics	Each item must be addressed for both the base station and subscriber station
Output power	Max. output level at antenna, dynamic range, accuracy, and AM tolerance
Phase noise	Max. integrated phase noise requirement or phase noise mask
Tx symbol timing accuracy	
Tx RF frequency range and accuracy	
Spectral mask (out-of-band)	
Spectral mask (in-band)	
Filter distortion	Group delay variation and amplitude ripple
Adjacent channel interference	
Co-channel interference	
Spurious emissions	Unwanted conducted emissions and radiated emissions
CPE Channel Switching Time	For TDD and FSDD operation
Tx / Rx Carrier Switching Time	For TDD and FSDD operation
Off to On Carrier Switching Time	For TDD and FSDD operation
On to Off Carrier Release Time	For TDD and FSDD operation
Special Co-Location Requirements	
Expected channel impairments	
Propagation channel model	Expected multipath delay spread, time-variability, and amplitude levels
Rain fade model	

Receiver Characteristics	Each item must be addressed for both the base station and subscriber station
Blocking Characteristics	
Spurious Response Rejection	
Intermodulation Response Rejection	
Unwanted Conducted Emissions	
Unwanted Radiated Emissions	
Received Signal Strength Indication	
Special Co-Location Requirements - Receiver	
Transmitter/Receiver Performance	
Modulation Accuracy	
Receiver Performance	
Nominal Error Rates	
Static Reference Sensitivity Performance	
Dynamic Reference Sensitivity Performance	
Reference Interference Performance	
CPE receiver performance for synchronization acquisition	