

Task Group Review of IEEE 802.16ab-01/01
IEEE 802.16 Task Groups 3 and 4
PHY and MAC Layers for IEEE P802.16a/P802.16b
Deadline: 3 July 2001

Task Groups 3 and 4 of the IEEE 802.16 Working Group on Broadband Wireless Access are currently defining the PHY and MAC layers for a broadband wireless access network specification for frequencies from 2-11 GHz. The specification is based on submitted contributions, with refinement to follow. At Session #12, Task Group 3 (which addresses licensed bands) agreed to include both single-carrier and OFDM physical layers. At Session #13, Task Group 3 and Task Group 4 (which addresses license-exempt bands) agreed to produce a unified draft and selected baseline material to be incorporated. The two groups planned a joint editorial session to produce the unified Working Document. Following this meeting of 7-8 June 2001, the unified Working Document was published as [IEEE 802.16ab-01/01](#).

The Task Groups are now seeking to refine this Working Document in preparation for submission in a Working Group Letter Ballot, planned for September 2001. This Task Group Review invites comments for consideration at Session #14 (9-13 July 2001 in Portland, Oregon, USA).

Commenters are encouraged to be thorough and concise. Comments must identify specific problems and should propose specific changes to correct them. Comments regarding the changes to the overall structure of the document or regarding a higher level of integration among the various options are welcome. In addition, comments on the following topics are particularly encouraged:

For the Single Carrier PHY:

- Minimum RF Performance Requirements and Compliance for Base Station and CPE (Capture Range, Power Level, Sensitivity, Frequency stability, etc.)
- Detailed Frame Structure, both Downlink and Uplink
- Service Access Point (SAP) definition & Issues
- RF & Modulation Parameters (Carrier Offset, Ranging, etc)
- Robustness against Partial Band Interference
- Adaptive Antennas

For the OFDM PHY:

- Consolidation of OFDM and OFDMA
- Consolidation of coding
- Specifics of TDD and FDD operation
- Preamble design
- Ranging
- Performance Analysis:

- FFT vs. BW
- Coding scenarios vs. traffic
- Spectral masks
- Channel estimation
- PHY impacts on registration (which PHY capabilities need to be registered)
- Power Control
- Advanced antenna techniques
- Pilots—fixed and moving
- Guard band timing
- Evaluation techniques

For the MAC

- ARQ simulation and performance
- ARQ state machine
- Power control
- Support for advanced antennae technologies
- Ease of installation support
- Dynamic Frequency Selection
- Co-existence in License Exempt bands

Submission of Comments:

Notes and instructions:

- **Commentary 1.1** <<http://ieee802.org/16/docs/Commentary.html>> serves as the comment preparation and submission tool. This standalone application, available for Windows and MacOS, includes instructions.
- In “Letter Ballot Number,” enter “TG3&4 Review”. The “Vote” field will be ignored.
- Under “Document under Review,” enter “802.16ab-01/01”.
- If it is necessary to support comments with details that cannot be accommodated in the text-based format, then the voter should contribute a document for publication on the IEEE 802.16 web site following the 802.16 Submission Instructions <<http://ieee802.org/16/submit.html>>. Documents should be submitted at least five days before the close of the ballot to provide time for the document to be numbered and posted. The ballot comment may then refer specifically to the posted document by number.
- Please take note of the IEEE 802.16 Patent Policy. Note that “anyone, whether participating in IEEE 802.16 or not, should notify the Chair of any patents (granted or under application, and regardless of the assignee or the patent nationality) that may cover technology that is under consideration by or has been approved by IEEE 802.16.”
- Comments will be posted to the 802.16 Web Site.