

**CALL FOR COMMENTS and IMPROVEMENTS TO
PHYSICAL LAYER SPECIFICATIONS
IEEE 802.16a - Session #14 Deadline: 6 July 2001**

Task Group 3 of the IEEE 802.16 Working Group on Broadband Wireless Access is currently defining the PHY protocols for a broadband wireless access network specification for frequencies from 2 through 11 GHz. The specification will be based on submitted contributions, with increasing detail required as the process progresses. Mergers and improvements are encouraged, with refinement to follow.

At session #12, the Task Group agreed to produce a Standard incorporating both Single Carrier and OFDM physical layers. At session #13, the Task Group approved baseline text for each of these PHY specifications. The Single Carrier PHY is described in Document IEEE 802.16.3c-01/58r2 (< http://www.ieee802.org/16/tg3/contrib/802163c-01_58r2.pdf>). The OFDM PHY is described in Document IEEE 802.16.3c-01/59r2 (<http://ieee802.org/16/tg3/contrib/802163c-01_59r2.pdf>)

The task group is now looking to improve these specifications in preparation for submitting it for a Working Group Letter Ballot following Session #15.

This Call invites both comments on and contributions for suggested improvements to the cited physical layer specifications.

Detailed instructions for submitting comments electronically follow. Commenters are encouraged to be thorough and concise in their comments. At session #14, the Task Group will consider each and every comment with discussion and vote.

Contributions should be detailed and pointed. Any suggested changes to the current documents MUST be accompanied by the specific textual revisions that would be required in the specific document. These suggested textual revisions should be in the same form as a comment, but are to be submitted as part of the contribution. In particular, recommendations on how to merge all or part of the two PHYs, suggested changes to the physical layer parameters that have been specified or proposed changes to the overall structure of the document are welcome and encouraged. Specific technical areas of interest are:

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
- 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

Contributors will be granted time on the agenda for presentation and discussion. The Task Group may modify the physical layer specifications by a 75% majority vote.

Submission of Contributions:

Contributions MUST be submitted using Revision 8.2 or higher of the 802.16 Document Submission Template <http://ieee802.org/16/docs/802_16_template.doc>. This template requires a cover page and narrative. Any accompanying presentations are required to be submitted using Revision 8.2 or higher of the 802.16 Presentation Submission Template. Contributions will be considered non-confidential and will be posted as soon as possible following receipt, for public access on the 802.16 Web Site <<http://ieee802.org/16>>.

Email contributions, for receipt by the **deadline of 6 July 2001**, to each of the following:

802.16 Chair, Roger Marks, r.b.marks@ieee.org

802.16 TG3 Chair Brian Kiernan, brian.kiernan@interdigital.com

802.16 TG3 Secretary Dean Chang, dchang@apertonet.com

Contributions on the Single Carrier PHY should also be sent to the Single Carrier PHY Editor, Anader Benyamin-Seeyar, abenyami@harris.com

Contributions on the OFDM PHY should also be sent to the OFDM Editor, Nico Van Waes, nico.Vanwaes@nokia.com

Submission of Comments:

The draft specifications are open for comments regarding specific textual or graphical insertions, deletions or changes to any part of the document. Detailed instructions for submitting comments are given below. The instructions MUST be followed or comments will be respectfully rejected by the editors and will not be entered into the comment database. For a rejected comment to be considered, the commenter receiving a rejection MUST resubmit the comment(s) using the instructions found below:

***Each comment on the document MUST use the comment submittal form found at: <<http://ieee802.org/16/sub11/commentform.txt>>. The form is ASCII text-based (DOS

text with CR/LF at the end of each line), and accommodates one "edit request." It is filled-out with a short example.

***Commenters MUST replace the example text with their own information.

***Commenters MUST NOT delete or change the delimiters which are surrounded by square brackets ([]), as these are needed to automatically import the submitted comment forms into a database.

***Commenters SHOULD wrap/fold each line at 80 columns or less. The only exception is for a table or other format that cannot be rendered in 80 columns).

***Commenters MUST fill out all of the fields, which are:

-Last Name

-First Name

-Starting page number

-Starting line number

-"T" or "E": Technical (content-related) or Editorial (typos, grammar, etc.)

-A detailed description of the proposed edit

-A reason for the edit

***The commenter MUST send the comments directly to the TG3 email reflector (<mailto:stds-802-16-3@ieee.org>). This allows other participants to see, and prepare for, all of the comments and perhaps avoid overlapping comments.

***The prefix "TG3 draft COMMENT:" and the document number (802.16.3c-01/58 or 01/59) MUST appear on the subject line of the message. This allows participants to easily recognize COMMENTS for a specific document in their in-box, and non-participants to conveniently skip-over COMMENT messages.

***Each email message MUST NOT contain attachments such as MS-Word files, text files, Visio files, etc. The reflector will automatically reject messages with attachments.

***Each email message MUST contain at least one comment form in the message body.

***An email message MAY contain more than one filled-out comment form in the body of a message. Commenters are encouraged to use this option by building up all comments in one text file so they can be reviewed, submitted and processed in one batch. It should be convenient for commenters to copy-and-paste comment forms (with their name already filled in) into one file while generating their comments.

***If multiple comment forms are sent in one message, each comment form MUST contain all of the fields filled out as required (see above), including the commenter's name.

***Comments regarding graphics, figures, drawings, equations and tables MUST be fully described in text form. If such graphic-oriented comments cannot be rendered or described in text form, the commenter may submit a document using the IEEE 802.16 template, http://ieee802.org/16/docs/802_16_template.doc>. The document must be addressed to marks@nist.gov, with a copy to the TG3 Chair, Brian Kiernan at brian.kiernan@interdigital.com

The editors will gather all of the proposed changes (comments) and integrate them into the documents and publish them as new drafts for Task Group review.