

Project	IEEE 802.16 Broadband Wireless Access Working Group		
Title	<b>802.16 Session #2 Meeting Minutes for the System Requirements Task Group [Unapproved]</b>		
Date Submitted	1999-08-20 (Revision 0) 1999-10-23 (Revision 1): Attachment 2 (Attendance) added		
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Re:	Meeting of the 802.16 Systems Requirements Task Group in Denver, CO, August 4-6, 1999		
Abstract	Discusses resolution of items at Session #2, including contributions, document comments, formation of new Ad Hoc groups, and new meeting schedules.		
Purpose	To distribute information on the resolution of major issues and work items from 802.16 Session #2.		
Notice	This document has been prepared to assist the IEEE P802.16. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.		
Release	The contributor acknowledges and accepts that this contribution may be made publicly available by 802.16.		

## **802.16 Session #2 Meeting Minutes for the System Requirements Task Group**

*David Jarrett*

*Vice Chair, System Requirements Task Group*

### **Introduction**

This report captures the meeting minutes from IEEE 802.16 Session #2 in Denver, CO, August 4-6, 1999. This was a meeting of the Systems Requirements Task Group to continue work on the Systems Requirements Document.

### **Meeting Opening**

The meeting began with a review of the agenda by group Chair George Fishel. A motion to approve agenda was unanimously accepted. The agenda is in Attachment A.

### **Contributions**

802.16sc-99/28 by Arun Arunachalam, Nortel Networks

This contribution pertained to the Call for Contributions for QoS information, and was adapted from ITU-R draft Recommendation M.1079 for IMT-2000 (3G Wireless). It proposes QoS class definitions, parameters, and specifications independent of others such as those for ATM and IP.

There was some discussion that although there is some agreement on the framework offered by the contribution, the specific numbers were not appropriate for our BWA system (they are from 3G wireless). An ad-hoc group was chartered to recommend specific values that 802.16 BWA systems should support for BER, delay, etc. This group will also discuss what the QoS classes should be. Jim Mollenaur will chair this committee. There was no opposition to forming this ad hoc group.

### **System Requirements Document Comments**

As of 10:30 AM August 4, there were 95 comments, 42 of which came after the deadline. All have been entered into a Microsoft Access database, and entered into the new draft document. A snapshot of the document with the on-time comments (version 3) was posted on the web page as 12:00PM Monday (August 2). The next working draft will be version 4 (IEEE 802.16s0-99/4), available within the next few weeks.

The database has the following codes for the resolution of each:

Unresolved (default value)

Accepted

Accepted – modified

Accepted – duplicate

Conferred to group (ad hoc groups to resolve issues not resolvable in the meeting)

Conferred to editor

Rejected

Before the next Systems Requirements meeting, the editor will convert the document to FrameMaker format. This implies that the editor will also take on the burden of translating Microsoft drawings to FrameMaker format, to relieve the burden from group participants and 802 editors. The contribution submission template will not change from Microsoft Word format.

In the following, proposed changes will be denoted by Page number and Line number as referenced to Draft 2 of the document (802.16s0-99/2), and the person proposing the change.

Chair asked if objections to taking comments unresolved from Draft 2/Meeting #1 in order they appear in the document. After some discussion, accepted with no objections.

P1L24, J. Costa: Motion to change references to “802.16 network” to “802.16 system,” with condition that this be global. For procedural correctness, editor added motion to perform the global change. Both unanimously accepted.

P1L16, B. Petry: Motion to accept new wording as proposed by editor, with additions from the floor. Accepted unanimously.

P1L20, B. Petry: Motion by the editor to 1) add definitions of “requirements” words, and to denote these words in ALL CAPS throughout the text. Accepted unanimously. It is noted that there will need to be review of whether the current words in the text fitting these definitions are appropriate (e.g., whether text saying “shall” was originally meant to imply a requirement).

P4L28, R. Sanders: Motion to remove all of 28-29, and not accept change proposed by R. Sanders. Friendly amendment to only delete original sentence (28-29); accepted. Motion accepted unanimously. Second motion to not accept R. Sanders proposal; friendly amendment to only strike the first sentence of R. Sanders proposal accepted. Motion accepted unanimously. Motion to not accept second sentence in R. Sanders proposal. After some discussion, accepted with 15 for, 2 against, 0 abstained - >75% majority.

P4L24, I. Frigui: Motion to reject the proposal; 2 for, 13 against, 2 abstained – failed. Motion to accept original proposal accepted with no opposition and 3 abstentions.

P4L41, R. Sanders: No motion to accept, so rejected.

P4L9, C. Shirali: Rejected unanimously.

P4L33, R. Arefi: Accepted unanimously.

P4L36, S. Marin: Motion to accept comment, modified to remove items in parentheses. Friendly amendment to also remove “not mobile” accepted by motioner. Accepted (with one opposition).

P5L9, R. Sanders: Friendly amendment to replace “64 kbps – 2 Mbps” to “< 2 Mbps” accepted by motioner. Overall accepted (with two opposers).

P4L32, D. Arnstein: Friendly amendment to add the word “access” within “802.16 network.” Another friendly amendment to remove “a closed,” accepted. Overall motion accepted unanimously.

P6L14, R. Sanders: 2 for, 16 opposed, 1 abstain. Rejected.

P6L16, I. Frigui: 8 for, 11 against. Motion fails.

P6L36, R. Sanders: Friendly amendment to add “Voice Telephony over ATM (VTOA)” accepted by motioner. Friendly amendment to change “two” to “many” accepted by motioner. Accepted unanimously.

P6L23, I. Frigui, G. Robinson: Accepted unanimously.

P6L27, S. Marin: 3 for, 16 against. Rejected.

P6L39, R. Sanders: Accepted with no opposition.

P6L24, D. Arnstein: Moot based on P6L23.

P6L44, D. Arnsetin: Accepted with one against.

P6L44, S. Marin: Accepted with no opposition.

P7L2, R. Sanders: Accepted with no opposition.

P8L38, R. Sanders: Rejected.

P9L6-30, van Waes: Friendly amendments to delete first paragraph, first sentence of second paragraph, and word “Therefore” accepted. Modified motion accepted unanimously.

P9L29 Marin and Sanders: Moot based on result of P6L6-30.

P10L23, Frigui: Accepted with no opposition.

P11L12, S. Marin: Motion to accept comment with brackets included, signifying that still to be resolved later. Friendly amendment to change to “The terminology association between base station, subscriber terminal, customer premises equipment needs to be clarified” accepted. 8 for, 8 against. Chair breaks tie and decides to leave it as modified.

P11L12, R. Arefi: Motion rejected.

P11L19, D. Arnstein: Accepted with no opposition.

P11L18, Duhamel: Friendly amendment to take out references to availability numbers accepted. Friendly amendment to add references to the rain models accepted. Modified motion rejected.

P12L14, S. Marin: Accepted with no opposition.

P12L18, S. Marin: Friendly amendment to say “Frequency independent” accepted by motioner. Modified proposal accepted unanimously.

P12L29, R. Duhamel: Rejected.

P13L1, R. Duhamel: Rejected.

P13L2, S. Marin: 10 for, 6 against. Less than 75%; Rejected.

P13L3, S. Marin: 8 for, 9 against. Rejected.

P13L3, F. Chitayat: Friendly amendments to change “may include” to “must not preclude” accepted by motioners. 15 for, 1 against, 1 abstain. Accepted.

P13L9, R. Sanders: Modified to add words “or reflectors” to above, accepted unanimously.

P13L26, G. Fishel: Friendly amendment to remove “that would be described” accepted. Modified motion accepted unanimously.

P13L28, F. Chitayat: Accepted unanimously.

P14L7, S. Marin: Rejected (no second).

P15L4, I. Frigui: Friendly amendment to change the word “new” to “additional” accepted. Second friendly amendment instead to in previous sentence delete “three” and then delete the sentence in question, accepted. Accepted unanimously.

P15L17, R. Sanders: Rejected, no second.

P16L1, R. Sanders: Accepted with no opposition.

P16L8, R. Sanders: 6 for, 10 against. Rejected.

P16L9, B. Petry: Add “not” between “is to” – editorial.

P16L43, S. Marin: Tabled. Editor will move tabled items to a section at the end of the document for tabled items.

P13L33, R. Sanders: Motion to reject accepted unanimously.

P14L16, R. Sanders: Accepted as editorial.

P17L4, J. Mollenauer: Amended to delete after the first two sentences accepted.

P17L9, I. Frigui: Moot by P17L4.

P17L13, I. Frigui: Moot by P17L4.

P17L19, R. Sanders: No motion, rejected.

P17L26, S. Marin: Whole sentence deleted with no objection.

P17L29, S. Marin: Amendment to change to “Radio Link Availability” accepted. Amendment to change “Radio Link” to “Propagation” accepted. Back to “Radio Link.” Overall motion accepted.

P17L31a, R. Sanders: Friendly amendment to change to “or below their maximum acceptable” accepted. Also amendment to change “rates” to “ratios” accepted. 10 for, 4 against – fails with < 75%.

P17L31b, R. Sanders: Rejected with no supporters (13 against, 5 abstain).

P18L2, S. Marin: Motion to table accepted.

P18L4, S. Marin: Rejected unanimously.

P18L37, R. Duhamel: Conferred to Class of Service QoS group.

P18L41, I. Frigui: Accepted unanimously.

P19L2-4, R. Sanders: Motion to confer to Class of Service QoS group accepted.

P19L30-31, R. Sanders: Accepted without opposition.

P10L33, I. Frigui: Accepted without opposition.

P10L36, J. Mollenauer: Proposed to confer this issue to Class of Service QoS group accepted.

P20L27, R. Sanders: No motion; rejected.

Motion to confer all comments in Section 6 to Class of Service QoS group accepted unanimously. Will send comments on the overall 802.16 reflector, marked with “QoS” in the subject line.

P23L19, R. Sanders: Accepted with no opposition.

P23L22, R. Sanders: Rejected, no second to motion.

P23L35, D. Arnstein: 8 for, 5 against, 3 abstain. Failed with < 75%.

P24L14, T. Frigui: Rejected, no second to motion.

P25L8, R. Sanders: Rejected, no motion.

P25L22, I. Frigui: Rejected, no motion.

P25L24, M. Goldhammer: Amendment to change “are” to “hardware shall be” accepted. 4 for, 7 against, rejected.

P25L26, C. Chang: Accepted with no opposition.

P25L26, Sanders: Moot from above.

P25L31, C. Chang: Accepted with no opposition.

P25L26, D. Jarrett: Moot from C. Chang resolutions.

P25L35, M. Goldhammer: Rejected unanimously.

P25L35, D. Jarrett: Moot from resolution of P25L35 above.

P1L35, T. Mascioli: 8 for, 4 against, 2 abstain. Considered as technical and therefore fails with < 75%.

P5L6, T. Mascioli: Rejected with no motion.

P6L11, T. Mascioli: Moot from resolution of P6L16 above.

P6L24, T. Mascioli: Moot from resolution of P6L23 above.

P6L30, D. Jarrett: Accepted.

P6L37, D. Jarrett: Accepted with no opposition.

P7L5, D. Jarrett: Accepted with no opposition.

P7L14, T. Mascioli: Amendment to only remove bullet on Power accepted. Modified motion has 14 for, 0 against, 4 abstain. Accepted.

P8L2, T. Mascioli: 7 for, 10 against, fails.

P8L6, D. Jarrett: Amendment to delete after first sentence accepted. Modified motion has 17 for, 0 against, 3 abstain. Accepted.

P8L29, D. Jarrett: Accepted with no opposition.

P8L31, T. Mascioli: Moot from resolution of P8L29 above.

P11L12, D. Jarrett: Amendment to change “possibly” to “generally” accepted. Accepted with no opposition.

P11L18, T. Mascioli: Motioned with amendment to remove word “Accepted” at the beginning of the sentence. Accepted unanimously.

P12L26&30, D. Shafer: 14 for, 4 against, 0 abstain. Accepted.

P17L1, T. Mascioli: Accepted with no opposition.

P17L5, T. Mascioli: Amendment accepted to replace first sentence with “802.16 network carriers are expected to provide the peak capacity from 2 to 155 Mbps to an STS sufficiently close to the BTS.” 13 for, 0 against, 2 abstain. Changed motion accepted.

P17L6, T. Mascioli: Amendment to change to add “The 802.16 MAC protocol should allow the upper range of delivered bandwidth to scale beyond 155 Mbps” accepted. Changed motion accepted unanimously.

P17L32, D. Jarrett: Accepted with no opposition.

P18L2, D. Jarrett: Accepted with no opposition.

P18L25, B. Myers: Accepted with no opposition.

P20L15, T. Mascioli: Amendment accepted to change in sentence before bullets, “must be chosen” to “should be addressed by the MAC and PHY protocols.” Chair accepted request to un-bundle the list of bullets and consider them individually. Motion to call the question; 10 for, 2 against, question is called. Motion to accept the changed sentence, 13 for, 1 against; accepted.

- Bullet 1 – 2 for, 11 against, 3 abstain; failed.
- Bullet 2 – failed with none for.
- Bullet 3 – failed with none for.
- Bullet 4 – Changed “Type” to “Types;” accepted unanimously.
- Bullet 5 – failed with none for.
- Bullet 6 – failed with none for.
- Bullet 7 – failed with none for.
- Bullet 8 – Amended to say “Fade rate characteristics of the channel” accepted. 6 for, 8 against, 3 abstain; failed.
- Bullet 9 – Failed with none for.

P22L14, D. Jarrett: Conferred to QoS group.

P23L12, T. Mascioli: 3 for, 5 against, 8 abstain. Failed.

P23L31, P. Guillemette: 2 for, 10 against, 2 abstain. Failed

P23L30, P. Guillemette: Accepted with no opposition.

P23L35, P. Guillemette: 10 for, 3 against, 3 abstain; passes.

P24L7, P. Guillemette: Accepted.

P24L17, P. Guillemette: Motion withdrawn.

P24L38, P. Guillemette: Accepted with no opposition.

P25L6, D. Jarrett: Accepted with no opposition.

P26L1, B. Myers: Amendment to put text into unresolved issues section of the document accepted. Accepted with no opposition.

P32L18, A. Arunachalam: Conferred to QoS group.

## **Closing Items**

Will charter ad hoc groups to address

- Vocabulary/Terminology

Next Systems Requirements meetings

- Will hold a meeting of the QoS ad hoc group during Boulder meeting (Session #3).
- Will hold a meeting of the newly-chartered Vocabulary Ad Hoc group during the Boulder meeting.
- Will hold a full meeting of Systems Requirements group at the Boulder meeting (prior to closing plenary) to review the work of the ad hoc committees.



## Attachment A – Session #2 Agenda

**IEEE 802.16**  
**Broadband Wireless Access**  
**Tentative Agenda for Systems Requirements Task Group**  
August 3, 1999  
George Fishel (Chairman)  
Communication Consulting Services  
10 Bretz Circle  
Shermans Dale PA 17090  
Phone: 717-582-2507  
Fax: 717-582-363  
Email: [grfishel@pa.net](mailto:grfishel@pa.net)

### Wednesday, August 4, 1:00 PM

- 1.1 Introduction of members present*
- 1.2 Request for volunteer to serve as secretary for this meeting Sign-in book*
- 1.3 Legal Notices*
- 1.4 Presentation:*
  - 1.4.1 802.16sc-99/28 Quality of Service (QoS) classes for BWA (Arun Arunachalam, 99/07/22)*
  - 1.4.2 Additional presentation time as needed*
- 1.5 Afternoon Break (15 min.)*
- 1.6 Comment Resolution, Document 802.16s0-99/2, 802.16 Broadband Wireless Access System Requirements (Brian Petry, Editor, 99/07/15)*

### Wednesday, August 4, 5:00 to 7:00 PM, Dinner Break

- 1.7 Continuation of Comment Resolution, Document 802.16s0-99/2*
- 1.8 Meeting adjourn for the day approximately 9:00 PM*

### Thursday, August 5, 8:30 AM

- 1.9 Continuation of Comment Resolution, Document 802.16s0-99/2*
- 1.10 Morning break, 10:30 AM (15 min.)*
- 1.11 Continuation of Comment Resolution, Document 802.16s0-99/2*

**Thursday, August 5, 12:30 PM to 1:30 PM, Lunch**

*1.12 Continuation of Comment Resolution, Document 802.16s0-99/2*

*1.13 Afternoon Break, 3:30 PM (15 min.)*

*1.14 Continuation of Comment Resolution, Document 802.16s0-99/2*

**Thursday, August 5, 5:30 to 7:30 PM, Dinner Break**

*1.15 Continuation of Comment Resolution, Document 802.16s0-99/2*

*1.16 Meeting adjourn for the day at 9:00 PM*

**Friday, August 6, 8:30 AM**

*1.17 Continuation of Comment Resolution, Document 802.16s0-99/2*

*1.18 Morning Break, 10:30 AM (15 min.)*

*1.19 Continuation of Comment Resolution, Document 802.16s0-99/2*

*1.20 Set time and date for next meeting*

*1.21 Meeting conclusion approximately 1:00 PM*

## Attachment B – Session #2 Attendance

A total of 33 people attended this meeting. Those who received participation credit for having registered and attended at least 75% attendance were:

Don Arnstein  
Arun V. Arunachalam  
Paolo Baldo  
Thomas R. Bilotta  
Ken Lazaris-Brunner  
Skyler W. Child  
Jose M. Costa  
Robert Duhamel  
George Fishel  
Robert Foster  
Steven H. Gardner  
Phil Guillemette  
David Jarrett  
Brian G Kiernan  
Thomas J. Kolze  
Roger Marks  
James F. Mollenauer  
Brian Petry  
Gene Robinson  
David Schafer  
Chet Shirali  
Karl Stambaugh  
Nico Van Waes  
Subir Varma  
Jung Yee

The following registered but attended at less than 75% of the time:

Bruce Currivan  
Baya Hatim  
Steve Jasper  
Doug Lochie  
Andrew Sundelin  
Jeffrey Weaver

The following attended part of the meeting (less than 75%) but did not register and did not pay the \$30 registration fee:

Jerry Michael Grimm  
Tom Williams