DRAFT

Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**IEEE 802.16.3 Session #7 Minutes**
Date Submitted	**2000-05-26 (Revision 1: 2000-06-29)**
Source	Dean Chang, 802.16.3 Secretary Voice: 408 719-9977 Aperto Networks, Inc. Fax: 408 719-9970 1637 S. Main Street mailto: dchang@apertonet.com Milpitas CA 95035
Re:	IEEE 802.16.3 Session #7 (Gaithersburg, Maryland, May 1-5, 2000)
Abstract	Meeting Minutes
Purpose	Review and Approval
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Minutes of 802.16.3 Session #7
A task group of IEEE 802.16
Gaithersburg, Maryland
1-5 May, 2000

Call to order
8:15am, May 2, 2000 call to order by Brian Kiernan, task group chairman.

Agenda for the week
Brian discussed the agenda for the week.

Motion A, Paul Struhsaker, 2nd by Brian Petry, to accept the agenda as it stands.

Discussion on Motion A
The group needed to determine the interest level in both 802.16.3 and the WirelessHUMAN group. Some people wanted the group to review documents for both, others wanted 802.16.3 to move forward and focus on completing a standard without any delay reviewing the discussions in the WirelessHUMAN group. By show of hands about 40% were interested in both groups.

Amendment to Motion A – Marianna Goldhammer to have a joint review of the requirements for the WirelessHUMAN group. Approved by Paul but not by Brian. Amendment not accepted.

Motion 1 did not pass.

Motion B, Demosthenes Kostas, 2nd by Ed Doherty to keep the 802.16.3 and WirelessHUMAN meetings common until the groups feel that they need to split. Motion passes by unanimous voice vote.

WirelessHUMAN
Durga Satapathy, chairman of the WirelessHUMAN study group, presented the various goals and objectives for the WirelessHUMAN study group. There was a call for contributions to determine if there is a need to recommend the development of a standard in the unlicensed bands, specifically the UNII band. In addition, representatives from WirelessHUMAN will have a joint meeting with 802.11 next week to introduce the WirelessHUMAN study group.

ADAMAS Project

Panos Dallas,pdal@intracom.gr from Intracom gave a short presentation (Document IEEE 802.16.3p-00/04) on the ADAMAS Project.

ADAMAS is a Project cofunded by EC within the 5th IST Framework and in the area of Mobile, Satellite and Personal Communications (Key Action 4).

ADAMAS consortium members are: Intracom, Runcom, Lucent Technologies Netherlands, CRL, OTE, NCUA, ETH Zurich.

Features

- ➢ Adaptive OFDM P-MP outdoor broadband fixed wireless access system
- ➢ PHY and DLC layer adaptivity
  - • 64 Kbps - 34 Mbps
- ➢ Two modes of operation will be tackled
  - • Unlicensed (5.8 GHz)
  - • Licensed (10.5 GHz)
- ➢ DTDMA/TDD
- ➢ The range of frequencies where OFDM has advantages

ADAMAS main focus on the areas of Poor LOS (5.8 GHz) and LOS areas (10.5 GHz).

Currently, although the applications related to the broadcasting and symmetric services have a number of common parts, e.g. OFDM, they have been developed independently.
Hence there is a need to develop modules that could be used in different systems and simultaneously have the capability to adapt the bit rate according to the channel conditions.
Consequently, ADAMAS targets to develop unified adaptive techniques that could be applied in a variety of applications, maximizing the achievable bit rate.

Contribution 802.16.3-00/03 – Template for Development process

This was presented by Brian Kiernan as a template development plan for this standard. At this time, it was presented with comments to be brought up on Thursday's meeting. A few people were concerned with the 802.16.1 approach that seems to be causing a delay for the standard.

Contribution 802.16.3c00/00 – Etiquette

This was presented by David Trinkwon on behalf of Avi Freedman. This contribution proposes that the group should develop an etiquette for this area rather than a strict standard. The primary reasons is that it is not feasible to have one standard that meets all requirements. This will also allow the process to move forward quickly.

Functional Specification Review

Meeting called to order by chair, George Fishel at 1:00pm, May 2, 2000.
The purpose of these meetings is to review the comments to the Functional Requirements (Document IEEE 802.16.3-00/02r1).

Comment Review

Motion 1 Brian Petry Change the following comments from editorial to technical, 2nd by Dean Chang. Comment Numbers are as follows - 90,94,95,96,106,70,77,78
Vote 22-2, motion passes.

Motion 2 Brian Petry – Motion to Accept all 38 comments currently marked editorial into the document. Valentine Rhodes 2nd.
Vote 25-5, motion passes.

Motion 3 Brian Petry – Motion to pull up the 38 comments that are editorial 2nd by Paul Struhsaker.
Unanimously passed.

Motion 4 David Trinkwon Motion to review document as presented line by line 2nd by Malik Audeh. Motion passes unanimous voice vote.

Motion 5 Brian Petry 2nd Marianna Goldhammer to accept comment number 109.
Amendment to Motion 5 David Trinkwon to amend comment 109, which is the title, to delete the word "interoperability" 2nd by Demos Kostas. Vote 8-9, Amendment fails.
Vote on Motion 5 – 15-3, Motion passes.

Motion 6 Durga Satapathy to accept comment 110 2nd by Carl Bushue.
Amendment Demos Kostas to add "ATM" in front of the word "cell."
Vote 8- 21, motion fails.

Comment #5, fails due to no support.

Motion 7 Demos Kostas to accept comment 79. 2nd by Valentine Rhodes second
Amendment Valentine– leave (telephone
Amendment by David to
Amendment from "supports" to "provides"
Call the question – Roger Durand 2nd by Chet Shirali

Vote on adding the sentence " The BWA system provides transport capabilities that in turn can support a wide range of services (e.g. data, voice and video)."
Vote – 25-5, Motion carries.

Motion 8 Leif Jansson, 2nd Marianna Goldhammer – addresses comments #39, #20, #51 and others Delete sentence " The BWA system is intended to provide packet data."
Amendment – David Trinkwon
Amendment – Roger Hammonds – to shorten the sentence.

Add "The BWA system provides transport capabilities that can support a wide range of packet-based services (e.g. data, voice and video)"
Vote: Passes Unanimous voice vote.

Motion 9 David Trinkwon, 2nd Marianna Goldhammer - comment #117
After friendly amendments, sentence is now" to residential, Small and Medium Enterprise (SME), Small Office/Home Office (SOHO) and tele-commuter end-user locations."
Amendment to add back the work "locations"
Vote: 18-2, motion passes.

Motion 10 to amend Nico van Waes , 2nd Demos Kostas to amend motion 9 to eliminate "and tele-comuter end user locations" from Motion 9
Call the question Demos Kostas, 2nd Brian Kiernan
Vote 15-12, Motion passes.

Comment #80 declined.

Motion 11 Demos Kostas, Marianna Goldhammer to address comment #81.
Call the question Brian Petry 2nd by Chet Sharali

Vote: Favor 2, Opposed 13. Motion fails.

Motion 12 by Mika Kasslin 2nd by Nico van Waes Comment #52
Vote 14-0

Comment #82 withdrawn.

Motion 13 by David Trinkwon comment #118 no second rejected.

Motion 14 by Muya Wachira to address comment #151 no second, rejected.

Motion 15 by Muya Wachira, 2nd Demos Kostas to address comment #150.
Amendment by Brian Petry to add "will"
Amendment by Demos Kostas add "based systems"
Vote 10-2. Accepted as modified.

Motion 16 by Demos Kostas comment #83 rejected due to no second.

Motion 17 by Demos Kostas 2nd by David Trinkwon comment #84.
Call the question Dean Chang, 2nd by Chet Sharali
Vote Favor 1-9, motion fails

Motion 18 by Demos Kostas comment #86 modified comment accepted as an editorial.

Motion 19 by Demos Kostas comment #87 modified to change a comment in the diagram. No second, motion rejected.

Motion 20 by David Trinkwon comment #8 to change "markets" to "services." No 2nd , motion fails

Motion 21 by David Trinkwon comment #7, no 2nd motion fails.

Motion 22 by Leif Jansson comment #40 2nd by Demos Kostas
Amendment to add Fiber Access Networks by David Trinkwon
Vote 8-15, motion fails.

Comment #88 withdrawn.

5/3/00 Meeting Called to order at 8:00am by Brian Kiernan

Motion 23 Leif Jansson, 2nd by David Trinkwon comment #41
Vote – Unanimous voice pass

Motion 24 Mika Kasslin 2nd David Trinkwon comment #53
Vote – voice 0 for, all against

Motion 25 David Trinkwon, 2nd by Marianna Goldhammer to add paragraph comment #119
Favor unanimous voice vote.

Motion 26 Marianna Goldhammer 2nd David Trinkwon comment #21 and #120 respectively.
Vote 15-16, comment is rejected

Motion 27 David Trinkwon, 2nd Marianna Goldhammer comment #120 to add a chapter on traffic modeling and call for contributions for this document
Vote 27-1, motion passes.

Motion 28 comment #153
Unanimous voice vote in favor

Motion 29 David Trinkwon, 2nd Nico van Waes comment #121
Vote 25-3, motion passes.

Motion 30 Accepted without rejection for comment #9

Motion 31 David Trinkwon, 2nd Adnan Abu-Dayya comment #122
Vote Favor 4-14, motion fails.

Motion 32 Mika Kasslin, 2nd Marianna Goldhammer comment #54
Amendment to strike the entire sentence associated with comment #54
Vote unanimous voice in favor.

Muya Wachira comment #155 was modified by comment #54 and accepted.

Motion 33 Muya Wachira 2nd David Trinkwon comment #156
Amendment – Remove the entire sentence.
Vote – Unanimous voice in favor.

Motion 34 Mika Kasslin 2nd Niko van Waes comment #56
Vote – 12-1, motion passes

Motion 35 Muya Wachuria 2nd Adnan Abu-Dayya comment #157
Vote 5-12 Motion fails

Comment #123 removed by request of the author David Trinkwon

Comment #158 made with no objections.

Motion 36 by Adnan Abu-Dayya 2nd by Muya Wachuria comment #2
Vote unanimous voice in favor, motion passes.

Motion 37 by David Trinkwon, 2nd by Niko van Waes comment #124
Vote unanimous voice in favor.

Motion 38 by Mika Kasslin 2nd by Niko van Waes proposal to replace figure 2-1 with a different graphic
comments #57, #58.

Motion 39 by Brian Kiernan 2nd by Dave Ribner to table motion comment #38 until the
Vote Favor voice all except 1, opposed 1, motion passes.

Motion 40 by Muya Wachura comment #160, no objections, change made.

Motion 41 by Mika Kasslin, 2nd by Niko van Waes to comment #59 to delete all comments regarding antenna
discussion, in addition, this rejects comment #127, #126, #162.
Amendment by Brian Petry to retain the first sentence of the deletion.
Vote 22-1, motion carries.

Motion 42 David Trinkwon, 2nd by Brian Kiernan to comment #125
Vote – unanimous voice vote, motion passes.

David Trinkwon to comment #128 Approved by voice vote.

Comment #60 withdrawn by author Mika Kasslin.
David Trinkwon comment #129, accepted.

Comment #91 Demos Kostas accepted as an editorial change.

Comment #90 Accepted as editorial.

Motion 43 Muya Wachuria, 2nd by Mika Kasslin to Comment #163

Motion 44 Brian Petry, 2nd Marianna Goldhammer – motion to amend motion 43 to delete the entire section 2.1 to an ad hoc group for review. This defers the following comments: #91, 62,130,92,165,167,13 and 12. Amendment to motion 44 Brian Petry, to amend motion 44 to temporarily delete section 2.1 but keep the text to be modified by someone else, plus suspend all discussion in this section.
Vote 19-9, motion passes.

May 3, 2000 Wednesday Afternoon Meeting

The meeting was called to order by Brian Kiernan at 1:00pm.

Motion 45 by Demos Kostas, 2nd by David Trinkwon to comment #93
Amendment by David Trinkwon accepted by Demos
Vote 13-3, motion passes.

Motion 46 by David Trinkwon, 2nd Marianna Goldhammer – Added "to multiplex traffic to and from multiple subscriber stations"
Amendment –

Motion 47 Niko van Waes, 2nd by Brian Petry, to modify motion 46 as edited. Also eliminated a few comments
Vote 9-3, motion passes.

Motion 48 by 48 David Trinkwon, 2nd by Marianna Goldhammer - to delete lines 25-31.
Amendment to take out all "shoulds, musts, and some"
Vote 16-1, motion passes.

Motion 49 by Anader Benyamin-Seeyar (Authored by Demos Kostas), no 2nd to comment #96, motion fails.

Motion 50 by Marianna Goldhammer, 2nd David Trinkwon comment #24
Amendment by Ander Benyamin-Seeyar to eliminate some text to make it more concise.
Vote 21-0, motion passes.

Comment #97 approved unanimously.

Motion 51 by Niko van Waes, 2nd David Trinkwon comment #75
Vote unanimous voice vote.
Motion 52 – Demos Kostas, no 2nd , comment #12 dies

Motion 53 by Demos Kostas, authored by Avi Freedman, 2nd Adnan Abu-Dayya - Comment #14
Amendment to change from "mainly" to "primarily"
Vote 9-13, motion fails.

Comment #15 withdrawn due to no support.

Motion 54 Marianna Goldhammer authored by Demos Kostas, 2nd by David Trinkwon – comment #98. Also deletes some overlapping comments.
Amended with some edits.

Vote 21-0, motion passes.

Motion 55 by Niko van Waes authored by Mika Kasslin, 2nd by Brian Petry - comment #66.
Amendment – delete everything except the top sentence.
Amendment By David Trinkwon, 2nd Niko van Waes by to move the section line 11-14 in Motion 55 to the QoS section in comment #66
Vote on amendment 18-0, amendment passes.
Vote on Motion 19-1, motion passes.

Motion 56 by Marianna Goldhammer, 2nd by David Trinkwon, comment #30
Amendment to move this to the QoS section, accepted.
Vote 2-7 motion fails, entire section is deleted.

Motion 57 Mary Condie authored by Demos Kostas**,** 2nd by Anader Benyamin-Seeyar by comment #100.
Vote 5-13 motion fails.

Motion 58 by David Trinkwon, 2nd by Marianna Goldhammer - comment #133.

Motion 59 by Brian Petry to 2nd by Niko van Waes – to amend motion 58 to delete this entire section where this comment would go.
Vote 4-10, motion fails.
Amendment to change "may" to "must" accepted.
Vote on motion 58 12-2, motion passes.

Motion 60 by David Trinkwon authored by Demos Kostas, 2nd Anader Benyamin-Seeyar - comment #102, plus expanded to a few more lines.
Amendment – the next two paragraphs are quoted as well from the same references.
Vote15-0, motion passes.

Motion 61 by David Trinkwon authored by Demos Kostas, 2nd by Marianna Goldhammer comment #101.
Amendment to delete the entire subsection by Brian Petry – accepted.
Vote: 0-15, motion fails.

Motion 62 by Marianna Goldhammer, 2nd by Brian Petry comments #31, 17, 134.
Vote Unanimous by voice vote, motion passes

Motion 63 by Marianna Goldhammer, 2nd by David Trinkwon comments #32
Vote Unanimous voice vote, motion passes.

Motion 64 by David Trinkwon, 2nd by Marianna Goldhammer, comment #135.
Vote Unanimous voice vote, motion passes.

Motion 65 by Brian Petry authored by Demos Kostas, 2nd Marianna Goldhammer comment #103 plus changing "can" to "should"
Amendment "either MAC protocols or a sub layer"
Vote 13-4, motion passes.

Motion 66 by Brian Petry authored by Demos Kostas, 2nd David Trinkwon – comment #104
Amendment some edits.
Vote Unanimous voice vote, motion passes.

Comment #69 is accepted as an editorial comment
Comment #105 is accepted as an editorial comment

Comment #3 was withdrawn by the author.

Motion 67 by Adnum Abu-dayya, 2nd by David Trinkwon comment #4 and #44
Vote unanimous voice vote, motion passes

Motion 68 by David Trinkwon, 2nd by Marianna Goldhammer - comment #136
Amendment to make minor edits accepted.
Vote unanimous voice vote, motion passes.

Motion 69 by Demos Kostas, 2nd by David Trinkwon –comment #106
Vote 1-16 motion fails.

Motion 70 by David Trinkwon, 2nd Marianna Goldhammer by comment #170a with a change for to "peak data rate" rather than "peak capacity"
Vote voice vote majority said to make the change.

Motion 71 by David Trinkwon, 2nd Muya Wachira comment #144, #170B
Amendment up to 10 Mbps
Vote 10-3, motion passes.

Motion 72 by David Trinkwon, 2nd Demos Kostas for comment #137
Vote 0-Many – motion fails.

Motion 73 by Marianna Goldhammer, 2nd David Trinkwon for comment editorial.
Vote Unanimous by voice, motion passes.

Motion 74 by Niko van Waes, 2nd by Brian Petry to allow Brian Petry to make editorial comments to this document before it is posted to the web server.
Vote Unanimous by voice vote, motion passes.

Ending Motions

Motions 75-78 address how the group should proceed in moving forward with this document.

Motion 75 by Brian Petry, 2nd by Brian Kiernan to authorize update of the requirements appendix.
Vote Unanimous by voice vote, motion passes.

Motion 76 by Brian Petry, 2nd by Niko van Waes, to carry over unresolved comments at the next meeting
Vote Unanimous by voice vote, motion passes.

Motion 77 by Brian Petry, 2nd by David Trinkwon, Issue a new call-for-comments up to the section (5.2) where we left off.
Vote Unanimous by voice vote, motion passes.

Motion 78 by Brian Petry, 2nd by to issue a call for contributions that are relevant (listed below) that have been issued by the task group.

- Reference model
- Voice services including the QoS section
- Internet Protocol Service Properties
- Contributions on traffic models and market segments

May 4, 2000 Brian Kiernan called the meeting to order at 8:15am.

Motion 79 by Brian Kiernan to approve 99.99% link availability 2nd Paul Struhsaker by Mika Kasslin, 2nd by comment #70, #172
Vote Unanimous voice.

Motion 80 by Brian Petry to approve comment #171 as editorial.
Motion passes with no objections.

Motion 81 by David Trinkwon, 2nd by comment #138 as editorial.
Motion passes with no objections

Motion 82 by Brian Kiernan authored by Mika Kasslin, 2nd by Anader Benyamin-Seeyar comment #72.
Amendment to move the sentence up in the document.
Vote Unanimous voice in favor, motion carries.

Motion 83 by David Trinkwon, 2nd by Anader Benyamin-Seeyar, to change the BER to 10e-6 in accordance with ITU FWA XXX recommendations or better, for comment #139.

Amendment to radio link data performance rather than MAC to PHY.
Amendment to change "shall and 10e-4" to "should" is rejected.
Amendment "a better ber may be required for video or data" is rejected.
Vote 25-2, motion passes.

Motion 84 by Leif Jansson, 2nd by Brian Kiernan , for comment #45
Vote Unanimous voice in favor, motion passes.

Motion 85 by Marianna Goldhammer, 2nd Anader Benyamin-Seeyar, for comment #37.
Amendment to move, delete information from here and consider it in the QoS section plus David Trinkwon's jitter spec into the QoS section.
Amendment to delete the entire section 5.6 – Declined.
Vote Unanimous voice in favor, motion passes.

The chair, George Fishel, will form a QoS adhoc group that will review the QoS section of this document. A proposal to do this will be published by George. This affects comments #145 and #37

Motion 86 by David Trinkwon comment #140, accepted as an editorial comment
Motion passes

Motion 87 by Niko van Waes, 2nd by Anader Benyamin-Seeyar. For comment #73.
Amendment to keep radio range – accepted.
Amendment to add a range up to 30km. – accepted.
Amendment to change range from 1-50km – accepted.
Amendment to change upper limit of the range to 2-50km – accepted.
Amendment to change add upper limit from 2-50km.
Amendment to change range to up to 50 km.
Vote Voice all yes, except one in opposition.

Motion 88 by David Trinkwon, 2nd by Brian Petry for comment #141 with the addition of radio range up to 50 km.
Amendment to get rid of "width of sectors and anything in parenthesis" – Accepted
Amendment to eliminate the adaptive array.
Vote 10-10, chairman votes against. Motion fails.

Meeting adjourned at 10:00am on May 4, 2000.

IEEE 802.3 Task Group Meeting

May 4, 2000 – Brian Kiernan called the meeting at 10:30 am

Brian discussed the fact that this group will have a difficult time getting to a standard. One major reason is due to the fact that a number of the vendors already have products.

ETSI Process

To review different models, we had presentation from Marianna Goldhammer to show how ETSI makes decisions in their standard process. This group starts with a table of contents with a number of assumptions and then resolves these issues. ETSI needs to almost achieve a 100% consensus in order for the process to move forward. Rather than just accepting proposals, maybe this group could define some high level requirements and then ask for proposals to speed up the process.

Option 1 Proposals only – used by 802.1

Option 2 Start with a set of requirements and create a table of contents for a standard – used by ETSI.

Option 3 Hybrid of the two proposals

There is a general sense that a hybrid approach would work in this area.

Meeting adjourned at 11:35am.