

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	IEEE 802.16 TG3 Session #12 Minutes	
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Re:	IEEE 802.16 TG3 Session #12 (Hilton Head Island, South Carolina, US, Mar 12-16, 2001)	
Abstract		
Purpose	To record the meeting events	
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**Minutes of 802.16 TG3 Session #12
A Task Group of IEEE 802.16
Hilton Head Island, South Carolina, US
12-16 March, 2001**

Call to order

Brian Kiernan called the meeting to order at 4:05 pm, March 12, 2001.

Agenda for the week

Brian discussed the agenda for the week.

Time was added to allow for a discussion with an FCC representative at 3:30pm FCC meeting.

The group was chartered to develop a list of items to discuss with Mr. Knapp and provide them to Brian Kiernan by the end of the day.

Through a straw poll, the group decided to stop the plenary meeting to meet with Mr. Knapp from the FCC. The agenda was changed to reflect the addition of the meeting with the FCC representative.

Agenda as modified was approved by unanimous voice vote.

Meeting minutes from session #11 were passed by unanimous voice vote.

Traffic Models

Rick Baugh gave a quick status of the traffic model in document 30r1.

Channel Model

An update was made to the channel model by Vinko Erceg in document 29r1.

ETSI HiperMAN

Demos Kostas presented an update to last meeting from ETSI HiperMAN. The group formed an ETSI BRAN requirements Ad Hoc and nominated Demos as the chair, to develop a response to the table in document 802.16.3c-01/35. This group will meet together at 8:30pm tonight.

PHY Evaluation Criteria

Anader stated that the criteria remained the same as specified after the last meeting.

Meeting adjourned at 5:30pm, March 12, 2001.

Call to Order

Brian Kiernan called the meeting to order at 8:05am on Tuesday March 13, 2001.

PHY Proposals

The number of complete PHY contributions was reduced from 3 to 2 prior to presentation. Each proposal was allotted 3 hours of presentation time. Each draft was presented by a number of people that contributed to the draft document.

Contributions 802.16.3c-01/31 and 802.16.3c-01/32 were merged into a single contribution now labeled **802.16.3c-01/31r2 PHY Layer System Proposal for Sub 11 GHz BWA Having SC-FDE and OFDM Modes**. (John Langley, David Falconer, David Shani, Moshe Ran, Vacit Arat, Eran Gerson, Demos Kostas, Micheal Yang, Todd Carothers, Anader Benyamin-Seeyar, Remi Chayer, Juan-Carlos Zuniga, Malik Audeh, Frederick Enns, Bob Furniss, Joe Hakim, Subir Varma, Dean Chang, Brian Eidson, Yoav Hebron, J-P Devieux, Sirikat Lek Ariyavisitakul, David Fisher, Paul Struhsaker, Russel McKown, Garik Markarian, David Williams, Igor Perlitch, Ed Kevork, Ray Anderson, Robert Malkemes, Allen Klein.). This presentation was held from 8:15am – 11:00am.

Contribution 801.16.3c-01/33r2 OFDM proposal for the IEEE 802.16a PHY draft standard (Garik Markarian, Dave Williams, Vincente Quilez, Phil Kelly, Bernard Aboussouan, Randall Schwartz, Dale Branlund, Amir Sarajedini, Huanchun Ye, Naftaly Chayat, Marianna Goldhammer, Tal Kaitz, Michael Stewart, Gregory Caso, Avi Freedman, Eric Jacobsen, Val Rhodes, Ron McCallister, John Liebetreu, Steven Smith, Fernando Lopez de Victoria, Jim Nadeau, Jacob Jorgensen, Ken Pierce, Subbu Ponnaswamy, Nico van Waes, Jori Arrakoski, Mika Kasslin, Yonatan Manor, Anish Tolia, Hikmet Sari, Burcak Beser, Chao-Chun Wang, Val Liva, Zion Hadad, Yossi Segal, Itzik Kitroser, Olivier Seller, Bob Ward, Chet Shirali, Menashe Shahar, Keith Doucet, Baruch Buskila, Shawn Taylor, Lei Wang, Brian Gieschen, Gordon Antonello, Arthur Wang, Don Leimer, Adam Efron.) This presentation was held from 11:15-12:15pm and 1:30pm-3:30 pm.

A straw pool was taken regarding how many people support either proposal. Roughly half the group supported contribution 31 and the other half contribution 33.

The meeting was adjourned at 3:15pm, Tuesday March 13, 2001.

Call to Order

Brian Kiernan called the meeting to order at 5:00pm, Tuesday March 13, 2001.

At this time, there was considerable discussion about the possibility of merging the two proposals. This discussion resulted in the following motion.

Motion 1 Remi Chayer - There will be a single standard, 802.16a, that will consist of one MAC and two PHYs (one single carrier and one multicarrier) that is based on the two proposals, presented on March 13, 2001, 2nd Demos Kostas.

This motion was tabled until the next morning because a number of people were missing from the meeting.

The meeting was adjourned at 5:55pm, Tuesday, March 13, 2001.

Call to Order

Brian Kiernan called the meeting to order at 8:00am, Wednesday, March 14, 2001.

The group discussed Motion 1 that had been tabled the evening before.

Motion to Amend - Naftali Chayat to change Motion 1 “that will consist of one MAC and one PHY (multicarrier modulation)” 2nd Lei Wang

Call the question by Zion Hadad 2nd by Marianna Goldhammer

Question is called.

Motion to Amend Vote carries – 23-22

Motion 1 as Amended

There will be a single standard, 802.16a, that will consist of one MAC and one PHY (multicarrier modulation) that is based on the two proposals, presented on March 13, 2001.

Motion 2 Naftali Chayat – to table motion 1 until after all presentations prior to the vote – 2nd Eric Jacobsen

Motion 2 carries 24-14-2.

PHY Contributions

The following contributions were reviewed:

Contribution 802.16.3c-01/39 Analysis and calculations of re-use factors and ranges for OFDMA in comparison to TDMA systems (Avi Freedman, Zion Hadad, and Dan Haimov, 01/03/08)

Contribution 802.16.3c-01/44 Spectral Mask and Preliminary Field Trials of a COFDM Modem (Jonathan Labs, Yvon Belec, J. Pierre Lamoureux, Stephan Leclerc, Rainer Ullmann, Donovan Young, Xiaode Yu 01/03/09)

Contribution 802.16.3c-01/46 Analysis of PHY waveform Peak to Mean Ratio and Impact on RF Amplification (Paul Struhsaker, Kirk Griffin, 01/03/09) Contribution 802.16.3c-01/48 Simulated BER of OFDM Bob Ward

Contribution 802.16.3c-01/42 802.16a PHY Proposals - Proposed Improvements and Mergers (David Trinkwon, 01/03/08)

Contribution 802.16.3c-01/43 IEEE 802.16 TG3: Possible Strategies for the development of the PHY layer (Zion Hadad, 01/03/09)

Contribution 802.16.3c-01/50 An Operator’s Perspective (Tony Klinkert, 01/03/14)

Motion 1

Motion 1 was brought up for a vote.

The question was called by Anader Benyamin-Seeyar 2nd Joe Hakim

Call the question carries 33-17

Motion 1 as Amended fails 22-31

Naftali Chayat presented a proposal to merge the contributions.

Brian to develop a few options because it is obvious that both “camps” have almost the same number of votes.
Break for lunch and be back by 12:30pm-1:45pm

Motion 3 Nico van Waes - Create one standard with one MAC and two separate PHYs. One PHY using 802163c-01/32 (Single Carrier) as baseline and one PHY using 802163c-01/33r2 (Multicarrier) as baseline. 2nd Demos Kostas.

Clarifications to Motion 3

Task group has not yet accepted the proposals – Can continue to be work upon by the proposing groups.
The two PHYs would be independent with TBD convergence layers to work with the common MAC.
Call the question Anader Benyamin-Seeyar, 2nd Moshe Ran.

The question is called 36-11.

Motion 3 passes 50-3-5.

Coexistence

Phil Whitehead gave an overview of coexistence issues and developed a proposal to begin a study group to study coexistence issues in the 2-11 GHz frequency bands. The task group generally supported the proposal.

MAC

Subir Varma presented a status on TG3 MAC efforts. The group reviewed 6 different contributions with a heavy emphasis on ARQ.

Support for packing and concatenation was added to the TG1 MAC.

Type field was added to the MAC header and it was added to the TG1 MAC

Certain elements of TG1 MAC were moved to the PHY because they were specific to TG1 – can change the definition of the time base.

4 ARQ proposals were reviewed. The goal is to consolidate these proposals together to have a common ARQ scheme to this group. This effort is not going well and there may be a vote required within TG3 to determine this.

Vladimir Yanover discussed a concern that the TG4 and TG3 groups are going in separate directions. The common MAC group needs to resolve this.

The meeting was adjourned at 5:30pm, March 14, 2001.

Call to Order

Brian Kiernan called the meeting to order at 8:10am, Thursday March 15, 2001.

MAC

Subir Varma reviewed a number of decisions the MAC group made regarding ARQ. It was indicated that the MAC groups have resolved their ARQ issues and no vote will be required.

PHY Contributions

The following contributions were reviewed.

Contribution 802.16.3c-01/41 System Characteristics and Evaluation Criteria for the TG3 Air Interface Standard (David Trinkwon, 01/03/08)

Motion 4 David Trinkwon – That TG3 utilize the key system characteristics proposed in Doc IEEE 802.16.3c-01/41 as a reference for ongoing PHY and MAC development, 2nd by Demos Kostas.

Motion 4 carries 12-2-3.

The meeting was adjourned at 11:40am, March 15, 2001.

Call to Order

Brian Kiernan called the meeting to order at 1:35pm.

Channel Model Adhoc Update

David Trinkwon gave an update on the channel model Adhoc. There were a number of comments that are still under review of the Adhoc group.

MAC Update

The MAC group is moving towards developing a document in draft standard form. A number of areas have been designated to various people with the goal of completing an initial draft within a one-month timeframe.

Table of Contents

Introduction

ARQ

Advanced Packing

MAC-PHY Interface

Timing

Distance/Time Ranging

MAP IE Definition

Relevance of MPA Message

Power Control

Ease of Installation Support in MAC

Vladimir Yanover was selected editor of the MAC draft specification.

Motion 5 David Trinkwon TG3 adopts this table of contents MAC portion of the 802.16a air interface standard, 2nd Anader Benyamin-Seeyar.

Motion 5 carries 28-0-0

The details are in document 802.16.3-01/12.

PHY

2001-03-12

IEEE 802.16.3-01/10

Two editors were selected for each group Anader Benyamin-Seeyar for Single Carrier and Nico van Waes for OFDM.

Anader Benyamin-Seeyar presented a draft version of table of contents.

Motion 5 David Trinkwon - TG3 adopts this Table of contents PHY portion of the 802.16a air interface standard 2nd Nico van Waes.

Motion 5 34-0-0

The details are in document 802.16.3-01/13.

ETSI BRAN

Marianna Goldhammer presented the requirements for the ETSI HiperMAN specification. A letter was developed as a response to a letter from ETSI BRAN providing an IEEE assessment to the HiperMAN requirements recently published in last meeting.

Motion 6 Demos Kostas To forward this letter to the working group 2nd Marianna Goldhammer
Motion 6 passes by unanimous voice vote.

Meeting was adjourned at 3:00pm, March 15, 2001.