(Unconfirmed Minutes)
IEEE P802.3bn EPoC PHY Task Force
November 13-15, 2012,
San Antonio, TX
Chair: Mark Laubach
Recording Secretary: Victor Hou

Tuesday, Nov. 13, 2012

Chair Mark Laubach called meeting to order at 9:01 AM CST.

Chair said that Victor Hou has volunteered to be Recording Secretary.

Chair began to show agenda slide package:
http://www.ieee802.org/3/bn/public/nov12/agenda_01b_1112.pdf

Introductions were taken of people around the room.

Chair moved on to review and approval of the unconfirmed minutes from the October meeting in Hangzhou, China. He commented there were 63 first time attendees, 86 attendees total, and 14 presentations.

Chair asked if there are any comments or suggested changes to the minutes. None were heard.

MOTION #1

> Motion to approve revised minutes from 28-29 October Hangzhou meeting with permission for Chair to revise attendee names and affiliations as needed.

> Moved: Marek Hajduczenia
> Seconded: Jorge Salinger
> Approved by voice vote with no opposition.

The confirmed minutes can be found at
http://www.ieee802.org/3/bn/public/oct12/confirmed_minutes_01_1012.pdf

Chair covered Task Force Decorum slides. Chair asked if anyone requests to take photographs. There were no requests. Chair asked if there are any members of the press. No one identified himself as a member of the press.

Chair stated goals for the meeting:

- Reports from ad hoc committees
- Presentations
- Timeline adoption
- Straw polls and motions

Chair covered the Ground Rules slides:

- Based upon 802.3 rules
- Foundation is Roberts' Rules of Order
- Anyone in room may speak
- Anyone in the room may vote

Chair covered the four slides related to IEEE 802 patent policy. Chair asked if anyone was not familiar with slides. Seeing no hands, Chair said it is assumed that the attendees have read them and are familiar.

Chair read the Call for Potentially Essential Patents slide. Chair said that if this applies, see him at the break. He asked, "Does anyone want to stand up now and make a declaration?" No one made any declarations.

Chair covered the Attendance slide but announced that a physical sign-up sheet would be passed around also.

Chair covered Task Force Review slides covering:

- PAR, 5 criteria, objectives
- P802.3bn timeline ("aggressive")
- PAR dates (in the PAR):
- Sponsor: 11/2013
- RevCom: 8/2014
- 8 technical motions passed in Geneva

Ad hoc committees: RF spectrum, Evaluation Criteria and Requirements, PHY Link, Channel Model

The Chair moved to review and approval of the agenda. There were requests for moving of presentation slots based on availability, and there was discussion of scheduling of time for ad hoc groups to be able to meet. The agenda was modified based on discussion.

MOTION #2

Motion to approve Agenda.

Move: Jorge Salinger
Second: Ed Mallette
Passed by voice vote with no objection.

The approved agenda is reflected in
http://www.ieee802.org/3/bn/public/nov12/agenda_01b_1112.pdf

Mr. Salinger asked the Chair about a liaison to CableLabs. Chair said that he suggested to Curtis Knittle (CableLabs) that he talk to David Law. The Chair also suggested that Mr. Schmitt (CableLabs) should talk to David Law.

Ad Hoc Reports

- Steve Shellhammer presented status of Evaluation Criteria and Requirements ad hoc (revised version http://www.ieee802.org/3/bn/public/nov12/shellhammer_01a_1112.pdf).
- Mr. Shellhammer presents the RF-Spectrum Ad Hoc update (revised version http://www.ieee802.org/3/bn/public/nov12/shellhammer_02a_1112.pdf)
- Duane Remein presented report for Channel Model ad hoc (http://www.ieee802.org/3/bn/public/nov12/remein_02_1112.pdf).

Break was taken at 10:13 AM (close Tuesday AM1 session).

Meeting resumed at 10:32 AM.

Various persons stated that the meeting room was much too cold. The issue was reported and eventually handled.

- Ed Boyd presented the report of the PHY Link Ad Hoc (http://www.ieee802.org/3/bn/public/nov12/boyd_03_1112.pdf).

Presentation: PHY Link Up
Presenter: Avi Kliger (Broadcom)
See: http://www.ieee802.org/3/bn/public/nov12/kliger_01_1112.pdf

Presentation: PHY Control Channel and PHY Initialization Procedures
Presenter: Nicola Varanese (Qualcomm)
See: http://www.ieee802.org/3/bn/public/nov12/varanese_01_1112.pdf

Break at 12:33 PM for lunch (close Tuesday AM2).

Meeting resumed at 1:45 PM

Presentation: IEEE P802.3bn Architecture
Presenter: David Law (HP)
See: http://www.ieee802.org/3/bn/public/nov12/law_01a_1112.pdf

Presentation: Further Details on TDD
Presenter: Andrea Garavaglia (Qualcomm)
See: http://www.ieee802.org/3/bn/public/nov12/garavaglia_02b_1112.pdf

Presentation: EPOC Upstream Mapping
Presenter: Ed Boyd (Broadcom)
See: http://www.ieee802.org/3/bn/public/nov12/boyd_01_1112.pdf

A break was taken at 3:27 PM (close Tuesday PM1).

Meeting resumed at 3:45 PM

Presentation: Bonding at PHY-Layer of N× DFT Blocks
Presenter: Dave Barr (Entropic)
See: http://www.ieee802.org/3/bn/public/nov12/barr_01_1112.pdf

Presentation: On the Complexity of 192 MHz channels
Presenter: Avi Kliger (Broadcom)
See: http://www.ieee802.org/3/bn/public/nov12/barr_01_1112.pdf

Presentation: Channel Bonding Sub-Layer
Presenter: Steve Shellhammer (Qualcomm)
See: http://www.ieee802.org/3/bn/public/nov12/shellhammer_03b_1112.pdf

Task force recessed at 5:54 PM (end of Tuesday PM2).

The RF Spectrum ad hoc met for a brief period of time after the recess of the Task Force session.

It was announced that the PHY Link ad hoc would be held at 8 AM Wednesday before the Task Force resumes.

Wednesday, Nov. 14, 2012

Task force meeting resumed at 8:58 AM.

Chair reminded attendees of online attendance and the sign-up book. Chair reminded attendees of the social at 6:30 PM.

It was decided to hold an Evaluation Criteria ad hoc meeting at 8 AM on Thursday before the Task Force meeting.

The Chair also announced that he received a late request for presentation—20 minutes—regarding Energy Efficient Ethernet (EEE). He said that it will be decided if there will be time for this presentation after other scheduled presentations are made.

Presentation: EPOC PHY and MAC Proposal
Presenter: Marek Hajduczenia (ZTE)
See: http://www.ieee802.org/3/bn/public/nov12/hajduczenia_02_1112.pdf

Presentation: 802.3bn Bright House Networks per-node SNR Downstream Characterization
Presenter: Ed Mallette (Bright House Networks)
See: http://www.ieee802.org/3/bn/public/nov12/mallette_01a_1112.pdf

Presentation: Initial Deployment and Growth Scenarios
Presenter: Jorge Salinger (Comcast), Matt Schmitt (CableLabs)
See: http://www.ieee802.org/3/bn/public/nov12/salinger_01a_1112.pdf

Break was taken at 10:43 AM (close Wednesday AM1).

Session resumed at 11:04 AM

Presentation: Motivations for Investigating Multiple MCS for EPoC
Presenter: Jorge Salinger (Comcast), Matt Schmitt (CableLabs)
See: http://www.ieee802.org/3/bn/public/nov12/schmitt_01a_1112.pdf

Presentation: Choices of Modulation Profiles for EPoC
Presenter: Eugene Dai (Cox)
See: http://www.ieee802.org/3/bn/public/nov12/dai_01a_1112.pdf

The session adjourned for lunch at 12:45 PM (close Wednesday AM2).

The meeting resumed at 1:50 PM.

Presentation: Multiple Downstream Profile Implications
Presenter: Ed Boyd (Broadcom)
See: http://www.ieee802.org/3/bn/public/nov12/boyd_02_1112.pdf

The presentation Feature Matrix and Specification Impact was not presented in interest of time.

Presentation: Adaptive Modulation and Coding
Presenter: Andrea Garavaglia (Qualcomm)
See: http://www.ieee802.org/3/bn/public/nov12/garavaglia_01a_1112.pdf

Presentation: Homeworx Lessons: What can we learn from the first deployment of OFDMA on HFC?
Presenter: Hal Roberts (Calix)
See: http://www.ieee802.org/3/bn/public/nov12/roberts_01b_1112.pdf

The contributions MAC Efficiency Issues (Marek Hajduczenia) and Efficiency (Duane Remein) were not presented in the interest of time.

The contribution OFDM Numerology (Christian Pietsch, Juan Montojo) was not presented; the authors voluntarily relinquished the time slot.

Session ended at 4:57 PM (close Wednesday PM session, the minutes note no break in the afternoon). Session recessed until tomorrow morning.

The Channel Model ad hoc met after the close of the recess of the Task Force session.

It was announced that the Evaluation Criteria and Requirements ad hoc would be held at 8 AM Thursday morning.

Thursday, Nov. 15, 2012

Session resumed at 9:03 AM. Chair said to not bother with on-line attendance for the meeting since the on-line attendance would not record until the 802.3 plenary session in the afternoon. The attendance book was still passed around.

Per the agenda, the Chair introduced the topic of Timeline Adoption. There is a pro forma requirement that each TF presents in the closing 802.3 plenary. So, each meeting, it is reviewed.

There was much discussion about the timeline and ability to meet it.

The Chair said that he intended to present the timeline this afternoon during the 802.3 closing plenary. He said that no motion is needed. The Chair acknowledged "head nodding consensus" in the room for presenting the timeline.

Discussion moved to the Consensus Challenge Items slide.

Mr. Hajduczenia said that "multiple modulation profiles" ought to be added to the list of consensus challenge items.

Mr. Salinger volunteered to run the Multiple Modulation Profile (MMP) ad hoc.

Chair reiterated the principle--if an ad hoc exists, try to bring a contribution to the ad hoc first instead of the whole TF first.

Some comments were made that there should not be an MMP ad hoc since MMP is not yet an agreement. (It is noted that the chartering of the MMP ad hoc was announced by the Chair after the meeting via email on November 19.)

Further edits were made to the Consensus Challenge Item list by the Chair based on discussion.

The agenda moved to straw polls and motions.

Alan Brown then raised a point of order. He asked if there is time for Mr. Hajduczenia's EEE presentation. The Chair said there was and then gave Mr. Hajduczenia the floor.

Presentation: Power Saving Objective for EPOC
Presenter: Marek Hajduczenia (ZTE)
See: http://www.ieee802.org/3/bn/public/nov12/mallette_01a_1112.pdf

There was a session break at 9:55 AM. (End Thursday AM1)

The session resumed at 10:14 AM.

Chair said because group is doing decision-making and recording of attendance, please sign the green attendance book.

Straw Polls and Motions

Discussion began on the issue of TDD and a second Task Force track covering TDD.   Mr. Shellhammer had volunteered to chair the TDD track.

Chair explained that a sub-Task Force (TF) is like an ad hoc, but any motions are still done by the TF as a whole. A sub-TF owns one or more clauses of the specification; the TDD sub-TF would own the MPCP clause.

Chair said that if the group wants to follow that approach, there are mechanisms in place to do it. This is only a TF decision and requires no approval from 802.3 WG.

Mr. Salinger presents a slide:

- There is a clear demand for a TDD mode in EPoC
- There is an approach on how [*sic*] introduce TDD mode in EPoC
- A parallel TDD track would avoid delay of the PHY development.

Mr. Salinger puts up a slide with proposed motion:

"Create a TDD Track to develop a TDD baseline proposal and draft standard text, based on the presentation law_01a_1112

Moved by: Jorge Salinger

Seconded by: Marek Hajduczenia"

After discussion and rewording, the following was the motion text:

MOTION #3

"Ask Chair to charter two sub-Task Force groups: PHY (FDD and TDD) and TDD Protocol. TDD sub-Task Force based on presentation law_01a_1112.pdf."

Moved: Jorge Salinger
Seconded: Marek Hajduczenia

Chair ruled Procedural Motion > 50%
Yes: 41; No: 3; Abstain: 8
Motion carried.

Chair asked if there are any other motions to bring up. Mr. Shellhammer said there are some based on straw poll results within ad hoc group discussions.

Based on a straw poll, the following wording of a motion (Motion #4) was presented:

MOTION #4

"The standard shall support a downstream data rate of at least 1.6 Gb/s at the MAC/PLS service interface, in a 192-MHz OFDM channel, in baseline-channel conditions.

Moved: Jorge Salinger
Seconded: John Ulm

Motion ruled technical (>= 75%) by the Chair"

There was much discussion on the following topics regarding the motion:

- What does "baseline" mean?
- Possibly rounding down to 1.5 Gbps rather than 1.6 Gbps
- Wording to clarify FDD vs. TDD

The motion eventually takes this form: "The standard shall support a downstream data rate of at least 1.6 Gb/s at the MAC/PLS service interface, in a 192-MHz OFDM channel when active, in baseline channel conditions."

MOTION #5

To call the question [on Motion 4]

Moved: Sanjay Kasturia
Seconded: Purva Rajkotia

Chair ruled Procedural Motion > 50%
Yes: 16; No: 17; Abstain: 14
Motion to call the question did not carry.

Further discussion regarding wording and other topics ensued. After further discussion, Motion #4 took this form:

MOTION #4 (final text)

"The standard shall support a downstream data rate when transmitting of at least 1.6 Gb/s at the MAC/PLS service interface, in a 192-MHz OFDM channel, in baseline channel conditions."

Motion ruled technical (>= 75%) by the Chair
Yes: 31; No: 13; Abstain: 1
Motion did not carry.

Mr. Shellhammer continued to another straw poll summary taken during an ad hoc.   Based on the straw poll, the text for Motion 6 was proposed:

MOTION #6

"The MAC/PLS date rate shall scale linearly with the number of OFDM channels, in baseline channel conditions.

Moved: Jorge Salinger
Second: Sanjay Kasturia

Motion ruled technical (>= 75%) by the Chair"

The motion text was discussed at length.   After a friendly amendment was accepted, the motion took the form: "The MAC/PLS date rate shall scale linearly with the number of OFDM channels, in the same baseline channel conditions."

After additional discussion including comments from three persons that the motion should be dropped, Motion #6 took the following form:

MOTION #6 (final text)

"The MAC/PLS date rate shall scale linearly with the number of OFDM channels, in the same baseline channel conditions in each channel."

Moved: Jorge Salinger
Seconded: Sanjay Kasturia

Motion ruled technical (>= 75%) by the Chair
Yes: 27; No: 9; Abstain: 6
Motion carried.

Immediately after the count, Mr. Kolze asked the Chair for a roll call recount.   The Chair said there was no means to do a roll call when everyone votes. Mr. Kolze asked for his request for a roll call recount to be noted in the minutes.

Mr. Kasturia made a comment that someone has wasted enough time on this topic in addition to all his requests for rewording.

Mr. Kolze objected to the comment and requested that his objection be recorded in the minutes.

The Chair said that making comments about who is or is not wasting time is not an area to get into.

There was another technical motion to take up, but the Chair wanted to get straw polls for future meeting done.

Next meetings:

- Interim: Jan 18-21, 2013, Phoenix, AZ
- Plenary: March 17-22, 2013, Orlando, FL

Straw poll results:

- I will attend the January interim: 27
- I probably will attend the January interim: 5
- I probably will not attend the January interim: 3
- I will not attend an January interim: 0

- I will attend the March plenary: 35
- I probably will attend the March plenary: 7
- I probably will not attend the March plenary: 1
- I will not attend an March plenary: 0

Discussion resumed on anther motion. The following was the text for proposed Motion 7:

MOTION #7

"Move that the P802.3bn EPoC TF adds the following objective: Define Energy Efficient Ethernet operation."

Moved by: Marek Hajduczenia
Seconded by: Ed Boyd

After a small amount of discussion, a motion was made to call the question:

MOTION #8

Call the question [on Motion #7]

Moved: Ed Mallette
Seconded: Kevin Noll

Chair ruled Procedural > 50%
Yes: 36; No: 1
Motion carried.

Thus, Motion #7 was then voted on.

MOTION #7 (final text)

"Move that the P802.3bn EPoC TF adds [*sic*] the following objective: Define Energy Efficient Ethernet operation."

Moved: Marek Hajduczenia
Seconded: Ed Boyd

Motion ruled technical (>= 75%) by the Chair
Yes: 33; No: 8; Abstain: 4
Motion carried.

MOTION #9

Motion to adjourn.

Moved: Ed Boyd
Second: Ed Mallette

Approved by voice vote with no objection.

IEEE P802.3bn TF meeting adjourned at approximately 12 noon.

Meeting Attendance

The following represents the meeting attendance as initialed in the attendance binder that was passed around the meeting each day.

Lastname	Firstname	Affiliation	Tue	Wed	Thu
Allard	Michel	Cogeco Cable	X	X	X
Arunarthi	Venkat	Cortina Systems	X	X	X
Barr	David	Entropic Communications	X	X	
Bevilacqua	John	Comcast	X	X	X
Boyd	Ed	Broadcom	X	X	X
Brophy	Tim	Cisco	X	X	X
Brown	Alan	Aurora Networks	X	X	X
Chang	Xin	Huawei		X	
Dai	Eugene	Cox	X	X	X
Daisuke	Umeda	Sumitomo Electric Industries	X	X	X
Darling	Mike	Shaw Cable	X	X	X
Dickinson	John	Bright House Networks	X	X	X
ElBakoury	Hesham	Huawei	X	X	X
Emmendorfer	Michael	ARRIS	X	X	
Garavaglia	Andrea	Qualcomm	X	X	X
Goswami	Sanjay	Broadcom	X	X	X
Guangseng	Wu	Huawei	X	X	X
Hajduczenia	Marek	ZTE Corp	X	X	X
Hanna	Charaf	ST Microelectronics	X	X	X
Homsey	John	CTDI	X	X	
Hou	Victor	Broadcom	X	X	X
Howald	Robert	Motorola Mobility	X	X	
Jain	Rajeev	Qualcomm	X	X	X
Jones	Doug	Comcast	X	X	
Kasturia	Sanjay	Qualcomm	X	X	X
Kinnard	Brian	Commscope	X	X	X

Lastname	Firstname	Affiliation	Tue	Wed	Thu
Kliger	Avi	Broadcom	X	X	X
Knittle	Curtis	CableLabs	X	X	X
Ko	Dylan	Qualcomm	X	X	X
Kolze	Tom	Broadcom	X	X	X
Laubach	Mark	Broadcom	X	X	X
Law	David	HP	X		
Li	Wen	Finisar	X		
Lin	Rujian	Shanghai Luster Teraband Photonics	X	X	X
Liu	Alex	Qualcomm	X	X	X
Mallette	Edwin	Bright House Networks	X	X	X
Montojo	Juan	Qualcomm	X	X	X
Montreuil	Leo	Broadcom	X	X	X
Ng	Lup	Cortina Systems	X	X	X
Nikolich	Paul	802 Chair/YASBBV			X
Noll	Kevin	Time Warner Cable	X	X	X
Peters	Michael	Sumitomo	X	X	X
Pietsch	Christian	Qualcomm	X	X	X
Powell	Bill	Alcatel-Lucent	X	X	X
Prodan	Rich	Broadcom		X	X
Rahman	Saifur	Comcast	X	X	X
Rajkotia	Purva	Qualcomm	X	X	X
Remein	Duane	Huawei	X	X	X
Roberts	Hal	CALIX	X	X	X
Salinger	Jorge	Comcast	X	X	X
Schmitt	Matt	CableLabs	X	X	X
Shellhammer	Steve	Qualcomm	X	X	X
Shen	BZ	Broadcom	X	X	X
Solomon	Joe	Comcast	X	X	X
Staniec	Thomas	Cohere Networks	X	X	X

Lastname	Firstname	Affiliation	Tue	Wed	Thu
Sundaresan	Karthik	CableLabs	X	X	X
Suzuki	Ken-Ich	NTT	X	X	X
Tajima	Akio	NEC	X		
Ulm	John	Motorola Mobility	X	X	X
Varanese	Nicola	Qualcomm	X	X	X
Wall	Bill	Cisco	X	X	
Wolff	Peter	Titan Photonics	X	X	
Zimmerman	George	CME Consulting			X