

**(Approved 9/10/14)**  
**IEEE P802.3bn EPoC PHY Task Force**  
**July 15-16, 2014**  
**San Diego, California, USA**  
**Chair: Mark Laubach**  
**Recording Secretary: Duane Remein**

---

## Summary:

The P802.3bn EPoC PHY Task Force met for two days during the IEEE 802 plenary in San Diego, California, USA. A total of 7 presentations were reviewed and 7 technical motions were passed. A summary of decisions can be viewed at [decisions](#). A comment resolution session was held for Task Force Draft D0.6. Creating Draft D1.0 was authorized. The [Work Items](#) document was updated.

## Tuesday, 15 July 2014

9:00 AM      The Chair called the meeting to order and the group held introductions.

### Motion #1

Move to: Motion to approve minutes as amended from May 14-16 2014, Norfolk Virginia, USA meeting:  
[unconfirmed minutes 3bn 01a 0514.pdf](#).

Moved: Leo Montreuil      Second: Duane Remein  
Procedural (>50%)      Motion passed by voice without opposition

## Opening.

### Agenda and general information

9:15 AM      The Chair made a call for potentially essential patents. There was no response.  
The chair gave his opening presentation including a brief review of the timeline and the proposed presentation schedule for this meeting.

### Motion #2

Move to: Move to approve the Agenda.

Moved: Victor Hou      Second: Duane Remein  
Procedural (>50%)      Motion passed by voice without opposition

## Presentations and Reports

[Work Item and Socialization Conference Calls](#) Mark Laubach      Broadcom

The chair reviewed the weekly Work Item and Socialization conference calls activity since the last meeting.

[Editors Report](#)      Duane Remein      Huawei

Statistical summary of comments received against Draft 0.6.

[Work Item Review](#)      The chair reviewed the work item list with the Task Force.

[New CNU Notification](#)      Duane Remein      Huawei

This presentation discussed possible methods to coordinate discovery of a new CNU between the PHY and upper layers.

11:20 AM      Recessed for lunch  
1:30 PM      Reconvened

[Updates to Upstream Framing proposal](#) Avi Kliger, Leo Montreuil (presenter)      Broadcom  
This presentation provided an updated proposal for the OFDMA Frame and upstream Superframe with an alternative to incorporate the PHY Discovery and Fine Ranging window in an expanded Probe symbol.

[Feasibility of Simple Superframe Structure for EPoC Upstream](#)  
Jin Zhang      Marvell  
This presentation proposed a static Superframe structure in which the PHY Discovery was coincident with the PHY Link spectrum and the Fine Ranging was coincident with the Probe symbols.

[Updated Resource Block structure](#) Avi Kliger, Leo Montreuil (presenter)      Broadcom  
This presentation provided updates to the proposal given in Norfolk on upstream pilot structure.

[Protection Region for Exclusion Bands for EPoC upstream](#)  
Jin Zhang      Marvell  
This presentation proposed adding lower modulation guard band areas adjacent to band edges.

[From Control Multiplexer to Gearbox, How Do We Meet MPCP Jitter Requirement?](#)  
Jin Zhang      Marvell  
This presentation illustrated several issues regarding MPCP, data detector, gearbox and PMA bit mapping to the Superframe regarding jitter in 1D to 2D mapping between upper layers (MPCP) and PCS/PMA.

5:10 PM      Started comment resolution, Chair passed to Duane Remein.  
6:05 PM      Recessed for the day

## Wednesday July 16<sup>th</sup> 2014

9:15 AM      Reconvened; Duane Remein acting chair, resumed comment resolution  
12:05 PM      Recessed for Lunch  
1:30 PM      Reconvened, continued comment resolution  
2:15 PM      Concluded comment resolution, Mark Laubach resumed as Chair

[Downstream Frequency Interleaving Update](#) Rich Prodan      Broadcom  
This presentation proposed an updated method for doing frequency interleaving in the downstream direction. The benefit of this method is that it is more easily calculated and implemented resulting in a lower cost solution.

### Motion #3

Move to: Accept the MDIO interface for assigned CNU\_ID as described in [remein\\_3bn\\_02\\_0714.pdf](#) slides 7 & 9 except create only one register set (CNU\_ID, flag, Range & MAC address) and incorporate into the draft.

Moved: Duane Remein      Second: Saifur Rahman  
For: 9      Against: 0      Abstain: 0  
Technical (>= 75%)      Motion Passed

#### **Motion #4**

Move to: Adopt Resource Block (RB) sizes of 1 subcarrier by 8 symbols and 1 subcarrier by 16 symbols as described in slide 3 of "[kliger 3bn 02b 0714.pdf](#)". The 1 subcarrier x 12 symbol RB mode will not be adopted. Instruct the Editors to include in the next draft. Instruct Editors to remove 4 subcarrier RB and 8 subcarrier RB modes from the next draft.

Moved: Leo Montreuil      Second: Duane Remein  
For: 11      Against: 0      Abstain: 0  
Technical ( $\geq 75\%$ )      Motion Passed

#### **Motion #5**

Move to: Adopt Burst rules in slide 5 and Pilots rules in slide 6 and Pilot Type definition in slide 4 of "[kliger 3bn 02b 0714.pdf](#)". Instruct the Editors to include in the next draft.

Moved: Leo Montreuil      Second: Victor Hou  
For: 13      Against: 0      Abstain: 0  
Technical ( $\geq 75\%$ )      Motion Passed

#### **Motion #6**

Move to: Adopt the upstream OFDMA Frame and Superframe structure as shown in slide 16 of "[kliger 3bn 01 0714.pdf](#)" where PHY Discovery Window and Fine Ranging Window of size 128 subcarriers by 4 symbols and Probe share a common area using all subcarriers with a duration of 5 or 6 symbol. Multiple Discovery or Fine Ranging responses may occupy symbol periods at different frequencies. Instruct the Editors to include in the next draft.

Moved: Leo Montreuil      Second: Duane Remein  
For: 12      Against: 0      Abstain: 0  
Technical ( $\geq 75\%$ )      Motion Passed

#### **Motion #7**

Move to: Add figures to the draft showing Start and Stop Burst Markers in slides 9 and 11 of "[kliger 3bn 02b 0714.pdf](#)".

Moved: Leo Montreuil      Second: John Ulm  
For: 11      Against: 0      Abstain: 1  
Technical ( $\geq 75\%$ )      Motion Passed

#### **Motion #8**

Move to: Authorize the Editors to create Draft 1.0 from Draft 0.6 by incorporating approved baseline and comment resolution material from the July 2014 meeting as recorded in [Draft 0.6 Comments Approved Responses](#).

Moved: Duane Remein      Second: Leo Montreuil  
For: 14      Against: 0      Abstain: 0  
Technical ( $\geq 75\%$ )      Motion Passed

#### **Motion #9**

Move to: Instruct the Editors to create registers in Clause 45 to specify CNU upstream pre-equalizer coefficients as two 16 bit registers per subcarrier Clause 101.4.3.12.1.  
Note for a description see Draft 0.6, Page 143, Line 36.

Moved: Duane Remein      Second: Hesham ElBakoury  
For: 12      Against: 0      Abstain: 0  
Technical ( $\geq 75\%$ )      Motion Passed

**Timeline update:** the chair reviewed the Task Force timeline.

**Motion #10**

Move to: Adopt the proposed Task Force timeline update as presented in [agenda 3bn 01 0714.pdf](#).

Moved: Eugene Dai                      Second: Tom Kolze  
For: 14                      Against: 0                      Abstain: 0  
Technical (>= 75%)                      Motion Passed

The [Work Items for July 2014 document](#) was updated to indicate “volunteers” for items as well as designated those items that were passed to the Editors for draft text creation.

**Meeting Polls** the chair polled the Task Force on future meeting attendance.

**Motion #11**

Move to Adjourn

Moved: Duane Remein                      Second: Tom Kolze  
For:                      Against:                      Abstain:  
Procedural (>50%)                      Motion passed by voice without opposition

5:43 PM                      The Chair adjourned the meeting.

## Meeting Attendance

The following represents the attendance for the formal portion of this interim meeting as initialed in the attendance binder that was passed around the meeting each day. 21 individuals indicated their attendance for this meeting. If an attendee indicated an affiliation in addition to or different from their Employer for this meeting, it is noted. Task Force business was concluded on Wednesday afternoon, there was no meeting on Thursday morning.

<u>Lastname</u>	<u>Firstname</u>	<u>Employer</u>	<u>Affiliation (If Different)</u>	<u>Tue</u>	<u>Wed</u>	<u>Thu</u>
Dai	Eugene	Cox		X	X	
Darling	Mike	Shaw Cable		X	X	
Dickinson	John	Bright House Networks		X	X	
ElBakoury	Hesham	Huawei		X	X	
Hajduczenia	Marek	Bright House Networks		X		
Hou	Victor	Broadcom		X	X	
Kim	Soo	IEEE	IEEE-SA	X		
Knittle	Curtis	CableLabs		X	X	
Kolze	Tom	Broadcom		X	X	
Kramer	Glen	Broadcom		X		
Laubach	Mark	Broadcom		X	X	
Montreuil	Leo	Broadcom		X	X	
Nikolich	Paul	802 Chair/YASBBV			X	
Peters	Michael	Sumitomo		X	X	
Prodan	Rich	Broadcom		X	X	
Rahman	Saifur	Comcast		X	X	
Remein	Duane	Huawei		X	X	
Shellhammer	Steve	Qualcomm		X	X	
Shen	BZ	Broadcom			X	
Ulm	John	Arris		X	X	
Zhang	Jin	Marvell Semiconductor		X	X	