

(Approved 5/14/2014)
IEEE P802.3bn EPoC PHY Task Force
March 18-20, 2014
Beijing, China
Chair: Mark Laubach
Recording Secretary: Steve Shellhammer, Duane Remein

Summary:

The P802.3bn EPoC PHY Task Force met for two and one half days during the IEEE 802 plenary in Beijing, China. A total of 8 presentations were reviewed and 3 technical motions were passed. A summary of decisions can be viewed at [decisions](#) and [baseline proposals](#). Additionally, a comment resolution session was held for Task Force Draft D0.4.

Tuesday, 18 January 2014

9:04 AM The Chair called the meeting to order. Introductions were held and each participant declared their employer and affiliation.

Motion# 1

Motion to approve minutes as amended from 22-24 January 2014, Indian Wells, California, USA meeting: [unconfirmed minutes 3bn 01a 0114.pdf](#)

Moved: Duane Remein

Second: Steve Shellhammer

Procedural (>50%)

Passed by Voice without opposition

The Chair covered the [Meeting Agenda](#) presentation, which included meeting decorum, ground rules, IEEE Structure, and IEEE Patent policy.

The chair made a call for patents. No responses were received.

The Chair reviewed the Attendance tool & book (which was distributed).

Motion# 2

Move to approve the Agenda as amended for this meeting, and to include Shellhammer presentation Tuesday afternoon.

Moved: Duane Remein

Second: Richard Prodan

Procedural (>50%)

Passed by Voice without opposition

Reports:

The Chair gave a brief overview of the [Work Item Socialization Conference Calls Opening Report](#). Duane Remein reviewed the [Opening report: Editors](#).

Presentations:

10:50 AM Steve Shellhammer assumed the role of Chair while Mark presented.

Mark Laubach [Upstream PHY Block Diagram Baseline Proposal](#) **Broadcom**
[laubach_3bn_02_0314.pdf](#)
[laubach_3bn_02_0314.vsd](#)

A review of updated upstream PHY block diagram for baseline proposal.

11:10 AM Mark Laubach resumed as Chair.

Leo Montreuil [EPoC Burst Marker Proposal for EPoC 802.3bn \(rev 01b\)](#) **Broadcom**
Avi Kliger (presenter)
Richard Prodan

Review of updated burst marker analysis and proposal for adoption of the 4x6 Burst Marker.

Jin Zhang [Considerations on US Burst Marker Performance and Design \(rev 01a\)](#) **Marvell**

Review of additional burst marker analysis.

12:15 PM recessed for Lunch. Meeting resumed at 1:55 PM.

Avi Kliger [Upstream Framing: Adding Probes and PHY Discovery to Upstream Transmissions](#) **Broadcom**
Yitshak Ohana
Ryan Hirth

Review of Super Frame approach for organizing upstream to support wide band probes, PHY Discovery, Fine Ranging and Resource Blocks.

Avi Kliger [Upstream FEC Structure](#) **Broadcom**
Richard Prodan

A review of the tradeoff and considerations for upstream FEC information word, parity word, and CRC-40 ordering that have been discussed since the last meeting. Presentation conclusion: there is no need to change the existing baseline text.

Ed Boyd [Upstream Data Detector](#) **Xingtera**
Duane Remein (presenter) **Huawei**

Presented an approach for performing data detection and mapping data to resource blocks.

Ryan Hirth [MPCP Timing in EPoC \(rev 01a\)](#) **Broadcom**
Avi Kliger
Richard Prodan

Presented an approach for performing data detection and mapping data to resource blocks.

6:04 PM Recessed until Wednesday Morning, 9:00 AM.

Wednesday, 19 March 2014

9:00 AM The Chair called the meeting to order.

Started comment resolution

9:04 AM Duane Remain assumed the role as Chair for Comment Resolution

11:57 AM Recessed for Lunch.

1:04 PM The Task Force resumed.

Comment Resolution paused to permit one presentation.

2:20 PM Mark Laubach resume role of Chair.

Steve Shellhammer

[Carrier Frequency Offset and Initial PLC Acquisition](#)

Qualcomm

Presented consideration that will impact PPM requirements for CLT and CNU clock sources.

3:00 PM Duane Remain assumed the role as Chair for Comment Resolution

3:00 PM Comment Resolution resumed.

4:42 PM Comment Resolution concluded.

4:45 PM Mark Laubach resumed Chair.

Thursday, 20 March 2014

9:12 AM The Chair called the meeting to order.

Motion# 3

Adopt the Upstream PHY Block Diagram for Clause 100 as presented in [laubach_3bn_02_0314.vsd](#) and [laubach_3bn_02_0314.pdf](#) as a baseline figure. Editors to place in Clause 100.1.5.2, Figure 100-2, for 10GPASS-XR-D and move Figure 100-1, to Clause 100.1.5.1 for 100GPASS-XR-D. Rationalize PHY Link block in Figure 100-1 as illustrated in new Figure 100-2.

Moved: Avi Kliger

Second: Duane Remein

For: 14

Against: 0

Abstain: 0

Technical (>= 75%)

Motion Passed

Motion# 4

Move to adopt as baseline the 4x6 Burst Marker as described in Slide 6 in [montreuil_3bn_01b_0314.pdf](#) with normative mapping into Resource Blocks using S0 as an example is shown on slides 8-10 and additional defined parameters include:

- Stop marker is the complement of "B" & "N" Start Marker pattern
- Sequence "B" boosted by a factor of 2 in power (3.01 dB)
- S0 and its orthogonal circular shifts can be used by the Burst Marker to carry other information.

Moved: Avi Kliger
Second: Rich Prodan
For: 13
Against: 0
Abstain: 1
Technical ($\geq 75\%$)
Motion Passed

Motion# 5

Move to accept in bulk the comment resolutions for all Editorial comments as recorded in [8023bn Draft 0.4 Comment Proposed Responses 140307.pdf](#). Authorize the Editors to create Draft 0.5 from Draft 0.4 by incorporating approved baseline and comment resolution material from the March 2014 meeting as recorded in [Draft 0.4 Comments Approved Responses.pdf](#).

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

Motion# 6

Move to: Direct the Chair for formally thank Saif Rahman and Joe Solomon for their editor work on Clause 100.

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

The Task Force discussed the timeline and the Chair noted that he will slip the timeline by one plenary cycle.

The Chair polled the group on future meetings.

The group revisited Avi Kliger's presentation [kliger_3bn_01_0314.pdf](#). There was a great deal of discussion on how to refine the proposal, including such concepts as: overlap PHY Discovery SC with US PHY Link, Narrowing US PHY Link (i.e., fewer SC), using probe symbols for US Fine Ranging and other refinements.

The group discussed meeting overlap with NGEPON ad hoc. It was clear that most participants would like to attend both groups and would appreciate if they were not scheduled to overlap, especially during plenary meetings.

Motion# 7

Adjourn

Moved: Duane Remein

Second: Ryan Hirth

Motion passed by voice without opposition.

11:45 The Task Force was adjourned

Meeting Attendance

The following represents the meeting attendance 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 has an affiliation in addition to or different from their Employer for this meeting, it should be so noted.

| <u>Lastname</u> | <u>Firstname</u> | <u>Employer</u> | <u>Affiliation (If Different)</u> | <u>Tue</u> | <u>Wed</u> | <u>Thu</u> |
|-----------------|------------------|------------------------------------|---------------------------------------|------------|------------|------------|
| Agata | Haoki | KDDI | | | X | X |
| Dai | Eugene | Cox | | | X | X |
| ElBakoury | Hesham | Huawei | | X | X | X |
| Frazier | Howard | Broadcom | | | X | |
| Guangseng | Wu | Huawei | | X | | |
| Hirth | Ryan | Broadcom | | X | X | X |
| Kliger | Avi | Broadcom | | X | X | X |
| Knittle | Curtis | CableLabs | | X | X | X |
| Laubach | Mark | Broadcom | | X | X | X |
| Li | Rick | Cortina Systems | | | X | |
| Lin | Rujian | Shanghai Luster Teraband Photonics | | X | X | X |
| Liquan | Yuan | ZTE Corp | | | X | X |
| Malette | Edwin | Bright House Networks | | | X | X |
| Powell | Bill | Alcatel-Lucent | | X | X | X |
| Prodan | Rich | Broadcom | | X | X | X |
| Remein | Duane | Huawei | | X | X | X |
| Salinger | Jorge | Comcast | | | X | |
| Shellhammer | Steve | Qualcomm | | X | | X |
| Zhang | Jin | Marvell Semiconductor | | X | X | X |
| Zhao | Cui | Academy of Broadcast Services | | X | X | X |
| Zhao | Yuping | Peking University | | X | | |