

IEEE P802.3bn EPoC PHY Task Force Opening Report

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**IEEE 802.3 Working Group
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Orlando, Florida, USA**

Reflector and Web

- **Email**
 - stds-802-3-epoc@listserv.ieee.org
- **Web Page**
 - <http://www.ieee802.org/3/bn>
 - Note: includes ad hoc committee areas
- **Private Area**
 - <http://www.ieee802.org/3/bn/private>
 - **No draft content as of this time**

IEEE P802.3bn EPoC PHY Documents

- **PAR**

- http://www.ieee802.org/3/bn/P802_3bn_PAR_300812_approved.pdf

- **5 Criteria**

- http://www.ieee802.org/3/bn/EPoC_5Criteria_200712_approved.pdf

- **Objectives** (updated 11/15/13)

- http://www.ieee802.org/3/bn/EPoC_objectives_update_1115.pdf

Activities Since November Plenary

- Task Force interim meeting 22-25 January 2013, Phoenix, AZ
 - 56 attendees
 - 20 presentations, sub group meetings
 - 7 technical motions approved, 17 total
 - 0 base line proposal selections to date
- **Many ad hoc committee conference calls**
 - <http://www.ieee802.org/3/bn/public/>
- **Chartered TDD sub-Task Force**
 - Charter on next page
 - Parallel track on Wednesday morning
 - TF will meet as PHY sub-Task Force when TDD sub-Task Force is meeting
- **Chartered Multiple-Modulation Profile (MMP) ad hoc committee**
 - Short term charter to facilitate consensus
- May “hibernate” one or two ad hoc committees at this meeting

TDD Sub-Task Force

- Charter date: 12/4/12
- Creating: Sub-Task Force name: TDD
- Sub-Task Force chair: Steve Shellhammer
- Charter
 - Continue work as started in [law_01a_1112.pdf](#)
 - Contribute recommendations to Task Force for approval:
 - Minimal augmentation to MPCP “logic” to support TDD operation mode for EPoC PHY
 - Communicate “operational needs” to PHY sub-Task Force and Task Force
 - E.g. delay and delay variation tolerances, CLT downstream transmitter control, etc.
 - Maintain approved MPCP clause amendments

Technical Motions Approved to Date

#	Motion Text	Motion #
1	Study support for configurable power saving mechanism for EPoC interface(s), technical details for further study.	5
2	Adopt OFDM for downstream EPoC PHY.	6
3	Adopt OFDMA for upstream EPoC PHY.	7
4	Adopt LDPC for downstream inner code. There is no decision on outer code at this time.	8
5	Support exclusion of one or more OFDM subcarriers.	10
6	Support multiple downstream modulations orders up to 4096QAM, support multiple upstream modulation orders up to 1024QAM.	11
7	In the downstream use OFDM channels of 192 MHz with OFDM sampling frequency of integer multiples of 10.24 MHz.	12
8	The standard shall support the ability for higher capacity by combining multiple 192 MHz OFDM channels.	14

Decision history at: <http://www.ieee802.org/3/bn/public/decisions/decisions.html>

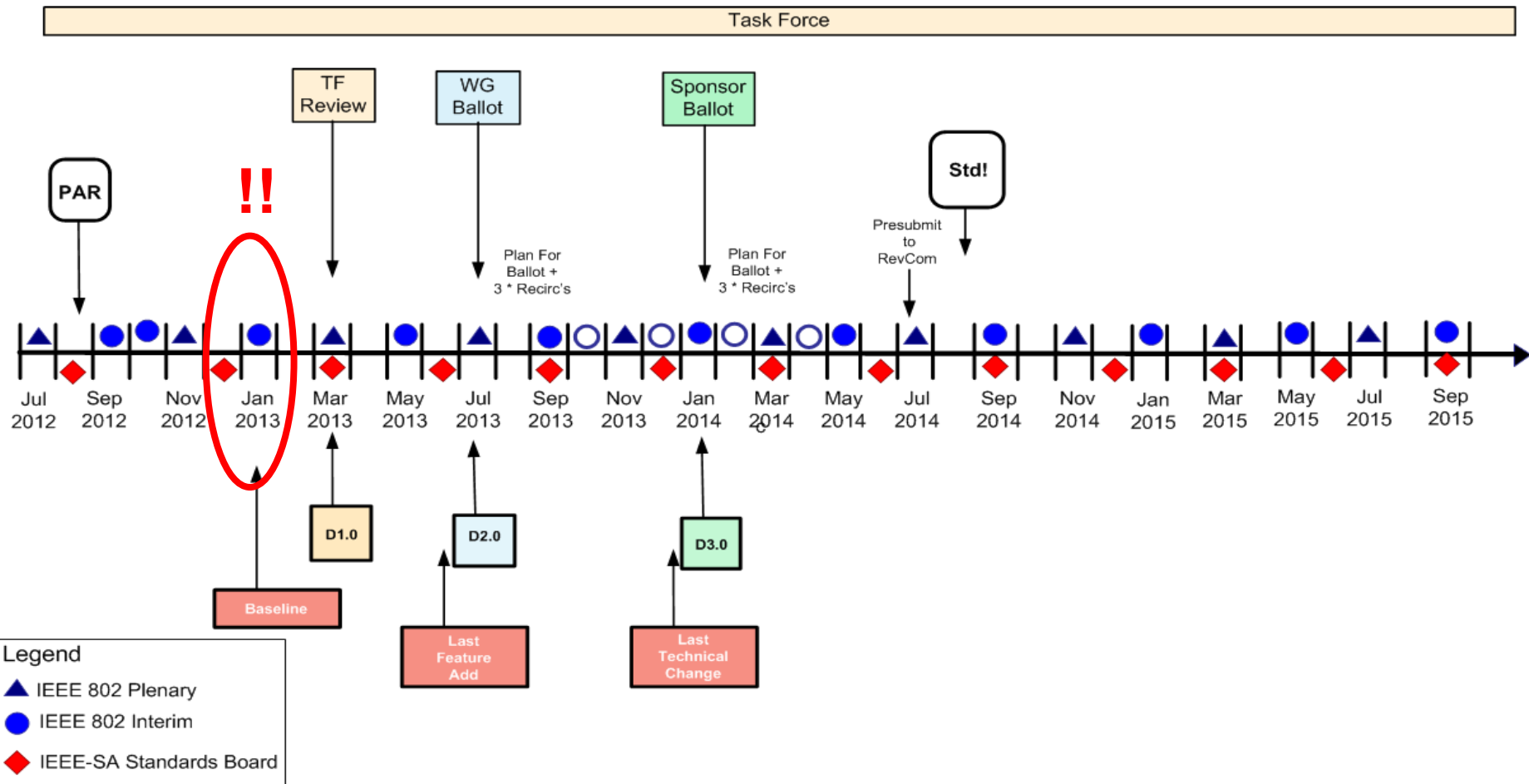
Technical Motions Approved to Date

#	Motion Text
11	The downstream PHY Link Channel shall use a fixed modulation order of 16 QAM to carry PHY Link information
12	A CNU shall auto-detect the CP size and sub-carrier spacing of the downstream PHY Link Channel.
13	The downstream PHY Link Channel shall use the same CP size and symbol duration as the data channel.
14	Exclusion sub-bands can be on the lower portion of the OFDM channel, the upper OFDM channel, or within the OFDM channel.
15	Adopt the DS Channel model parameter list shown in howald_01a_0113.pdf slides 3-7 as baseline starting point for the Node +4 topology.
16	Use gravaglia_02a_0113 as a starting point for development of a TDD baseline.
17	The standard shall define two downstream subcarrier spacings: 25 kHz and 50 kHz

Decision history at: <http://www.ieee802.org/3/bn/public/decisions/decisions.html>

Task Force Timeline (aggressive)

- 0 Baseline selections to date



Plan for this Week

- Meet two and half days:
 - Tue, 8A to 8P (reports, sub-groups, presentations)
 - Wed, 8A to 6P (sub-groups, presentations)
 - Thu, 8A to Noon (timeline, straw polls, motions)
- Agenda / Goals
 - Call for Focus on work plan, prioritization, baseline focus
 - Editors intro on baseline “ready” material, clause outlines
 - 35 presentation requests, 6 sub-group reports
 - Anticipating many technical decisions and potential for one or two baseline selection decisions
 - Update Task Force Timeline
 - “Call for Topics” for next meeting
 - One liaison response

Agenda – Tuesday

(draft, subject to TF approval)

Tuesday, 19 March - Start of IEEE P802.3bn Task Force Meeting			Length	Time
Mark Laubach	Broadcom	Agenda and General Information	1:00	8:00 AM
Steve Shellhammer	Qualcomm	Open report: TDD Sub-Task Force	0:15	9:00 AM
Duane Remain	Huawei	Open report: Channel Model ad hoc	0:15	9:15 AM
Steve Shellhammer, Guangsheng Wu	Qualcomm, Huawei	Open report: Evaluation Criteria and Requirements ad hoc	0:15	9:30 AM
Jorge Salinger	Comcast	Open report: MMP ad hoc	0:15	9:45 AM
Ed Boyd	Broadcom	Open report: PHY Link ad hoc	0:15	10:00 AM
Steve Shellhammer	Qualcomm	Open report: RF Spectrum ad hoc	0:15	10:15 AM
Break			0:15	10:30 AM
Mark Laubach	Broadcom	Work Plan and Baseline Checklist Going Forward	0:30	10:45 AM
Duane Remein	Huawei	Care and Feeding of Editors - What your editors expect from a baseline proposal	0:20	11:15 AM
Marek Hajduczenia	ZTE	EPoC PCS structure	0:30	11:35 AM
Saif Rahman	Comcast	PMD structure	0:10	12:05 PM
Duane Remein	Huawei	MPCP clause outline	0:10	12:15 PM
Lunch			1:00	12:25 PM
Howard Frazier	Broadcom	Management registers and MIB objects	0:20	1:25 PM
Christian Pietsch, Avi Kliger	Qualcomm, Broadcom	EPoC Downstream Pilot Proposal	0:45	1:45 PM
Avi Kliger, Christian Pietsch	Broadcom, Qualcomm	EPoC Upstream Pilot Proposal	0:45	2:30 PM
Ed Boyd, Avi Kliger	Broadcom, Qualcomm	Upstream Burst Markers	0:30	3:15 PM
Nicola Varanese, Juan Montojo	Qualcomm	Markers for MMP in Burst Mode	1:00	3:45 PM
Ed Boyd, Juan Montojo	Broadcom, Qualcomm	Upstream MMP	0:30	4:45 PM
break			0:15	5:15 PM
Marek Hajduczenia, Andrea Garavaglia	ZTE, Qualcomm	Data Rate Adaptation	1:00	5:30 PM
Marek Hajduczenia	ZTE	Power-Saving Mechanism for EPoC	0:35	6:30 PM
Marek Hajduczenia, Motoyuki Takizawa	ZTE, Fujitsu	Power-Saving Mechanisms in IEEE Std 1904.1 (SIEPON)	0:35	7:05 PM
Break for Day - Recess IEEE TF meeting until 8AM Wednesday				7:40 PM

Agenda – Wednesday

(draft, subject to TF approval)

Wednesday, 20 March - Start of TDD sub-Task Force Track			Length	Time
Steve Shellhammer, Andrea Garavaglia	Qualcomm	TDD Open Items and Checklist	0:30	8:00 AM
Andrea Garavaglia, Patrick Stupar	Qualcomm	Summary Presentation for TDD MPCP Enhancements	0:45	8:30 AM
discussion			2:00	9:15 AM
Break return to main track			0:15	11:15 AM

Agenda – Wednesday

(draft, subject to TF approval)

Wednesday, 20 March - Start of PHY sub-Task Force / Main Track			Length	Time
Marek Hajduczenia	ZTE	64b/66b Line Code	0:30	8:00 AM
PHY Link ad hoc	start		0:00	8:30 AM
Avi Kliger, Nicola Varanese	Broadcom, Qualcomm	PHY Link Channel	0:45	8:30 AM
Ed Boyd, Marek Hajduczenia	Broadcom, ZTE	Broadcast LLID and Discovery	0:30	9:15 AM
break			0:15	9:45 AM
Avi Kliger	Broadcom	Horizontal vs Vertical Preamble Detection	0:30	10:00 AM
Ed Boyd	Broadcom	PHY Config Switchover	0:30	10:30 AM
ad hoc closing	discussion		0:30	11:00 AM
Channel Model ad hoc	start		0:00	11:30 AM
Duane Remain	Huawei	Channel Model ad hoc opening	0:10	11:30 AM
Rob Howald, Duane Remein	Motorola, Huawei	Baseline Channel Model	0:45	11:40 AM
lunch			1:00	12:25 PM
Rob Howald, Duane Remein	Motorola, Huawei	Illustrative Channel Models	0:45	1:25 PM
Keiji Tanaka	KDDI	Cable network situation in Japan and Requirements for EPoC	0:15	2:10 PM
ad hoc closing	discussion		0:15	2:25 PM
break			0:15	2:40 PM
Edwin Mallette	Brighthouse Networks	EPoC and CNU Generations	0:20	2:55 PM
<multiple authors>	<multiple affiliations>	Downstream FEC Evaluation Requirements	0:30	3:15 PM
Syed Rahman	Huawei	Wideband Channel Estimation in Upstream EPoC	0:45	3:45 PM
Christian Pietsch, Nicola Varanese, Avi Kliger, Ed Boyd	Qualcomm, Broadcom	PHY related EPoC Motions	0:30	4:30 PM
Steve Shellhammer, Patrick Stupar, Hesham ElBakoury, Duane Remein	Qualcomm, Huawei	Responses to Feedback on Channel Bonding Proposal	0:45	5:00 PM
Break for Day at 6PM for 802 Social - Recess IEEE Task Force meeting until 8AM Thursday			0:00	5:45 PM

Agenda – Thursday

(draft, subject to TF approval)

Thursday, March 21			Length	Time
Sub-Group Closing Reports, their Polls and Motions				
Steve Shellhammer	Qualcomm	TDD Sub-Task Force	0:30	8:00 AM
Mark Laubach	Broadcom	Main / PHY Sub-Task Force	0:30	8:30 AM
Duane Remain	Huawei	Channel Model ad hoc	0:30	9:00 AM
Steve Shellhammer	Qualcomm	Eval Criteria and Requirements ad hoc	0:05	9:30 AM
Jorge Salinger	Comcast	MMP ad hoc	0:30	9:35 AM
Ed Boyd	Broadcom	PHY Link ad hoc	0:30	10:05 AM
Steve Shellhammer	Qualcomm	RF Spectrum ad hoc	0:30	10:35 AM
Planning Updates, Liaison response, other business, closing				
Mark Laubach	Broadcom	Work Plan / Time Line update (must do)	0:30	11:05 AM
Mark Laubach	Broadcom	Liaison response	0:15	11:35 AM
Mark Laubach	Broadcom	Other business	0:15	11:50 AM
Mark Laubach	Broadcom	Closing	0:15	12:05 PM
Adjourn - by 12Noon - Hard Stop				12:20 PM

Thank You!