

Chief Editor's opening report

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IEEE P802.3bs Task Force, Dallas TX, USA, November 2015

Editorial team

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- Chief Editor and Editor for Clauses FM, 00, 1, 4, 30, 45, 78, 116, A, 4A, 31B, 93A, 120B, 120C

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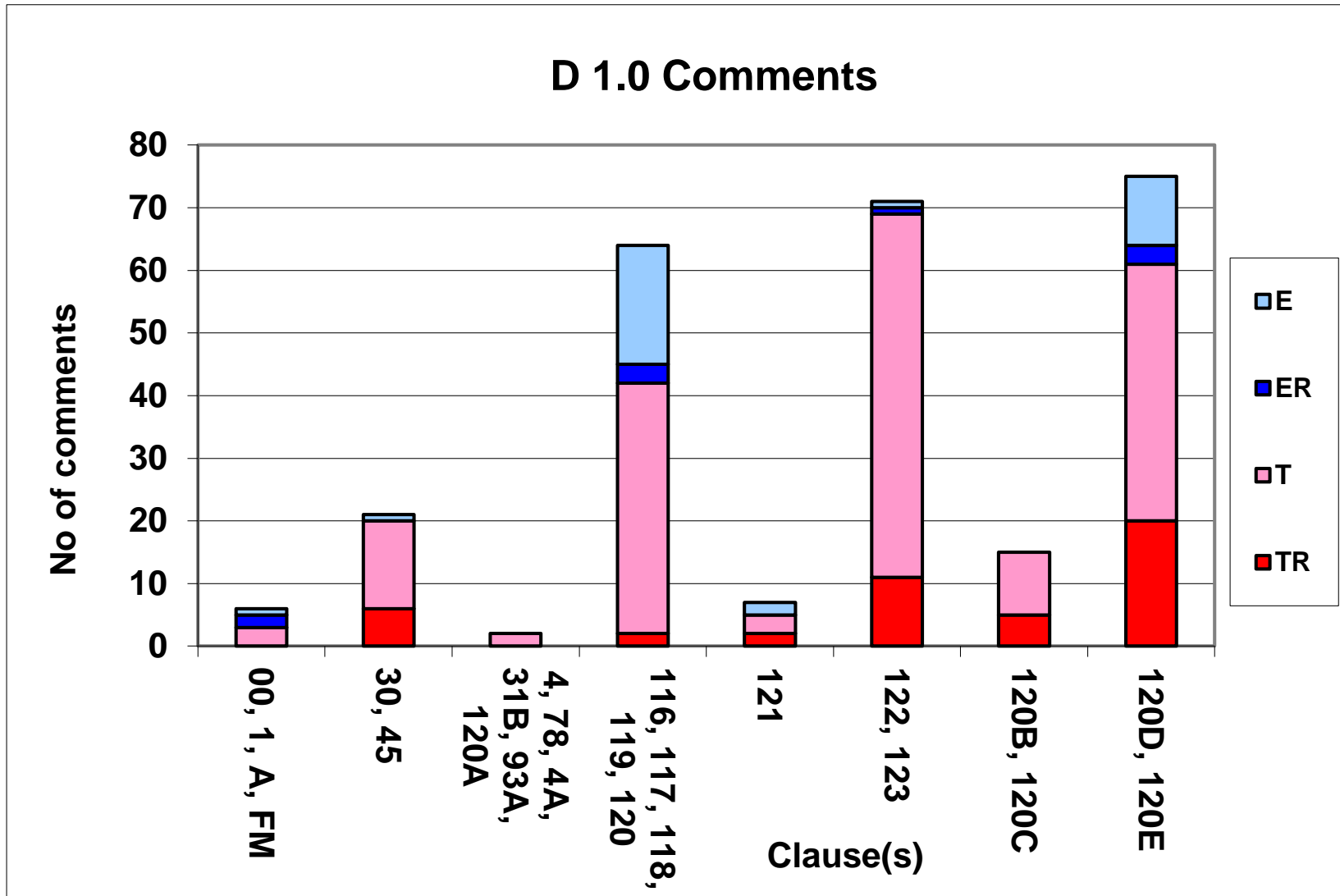
Status

P802.3bs D1.0 Task Force review

- Opened 18 September 2015, closed 18 October 2015
- 30 day comment period
- 261 comments received (including 15 late and 13 “empty”)
- Thanks to those who commented
- Proposed responses posted

Description	Clause(s)	TR	T	ER	E	Total
Front matter, Intro	00, 1, A, FM		3	2	1	6
Management	30, 45	6	14		1	21
Misc	4, 78, 4A, 31B, 93A, 120A		2			2
Intro, RS, PCS, PMA	116, 117, 118, 119, 120	2	40	3	19	64
MMF PMD	121	2	3		2	7
SMFPMDs	122, 123	11	58	1	1	71
CDAUI-16	120B, 120C	5	10			15
CDAUI-8	120D, 120E	20	41	3	11	75
Total comments		46	171	9	35	261

Comment distribution



Meeting goals

Resolve comments against Draft 1.0

- Comment resolution agenda in later slides
- Any presentations associated with comments will be reviewed during comment resolution session
- T and TRs will be treated with same status, no signoff is required
- E and ERs will be treated with same status, no signoff is required

Editors have identified non-controversial comments as candidates for a bucket motion. These comments will not be reviewed individually, but will be resolved as proposed via a single motion.

The initial list of comments for the bucket motion is on slide 14 (also marked “Bucket” in comments file, please review this and ask for a comment to be taken off the list if you don’t agree with the proposed response.

Comment resolution

- The comments on the following slides will be resolved in sessions of the P802.3bs Task Force starting on 9 Nov.
 - Page 7 in Task Force on Monday afternoon
 - Page 8 in Logic track on Tuesday and Wednesday
 - Pages 9 &10 in Optical track on Tuesday and Wednesday
 - Pages 11 &12 in Electrical track on Tuesday and Wednesday
 - Page 13 in Task Force on Thursday morning
- The order in which the comments are reviewed and the schedule are **subject to change**
- Comments bracketed together with [] cover a common topic
 - Where a comment number is coloured blue it contains the proposed response for the group of comments
- Comments with underline (e.g., 300) have associated hyperlinked presentations.

Comments across clauses (18 comments) target Monday pm

- 30, 31, [[198](#), 222] BER, FLR
- 126 PHY names
- 204, 12, 20, 21, 22, 24, 4, 5, 7, 8 CRU corner frequency
- [[86](#), 182, 14] Annex A
- 244 Precoder
- Presentation of maki

Clause 45 (16 comments) target Monday pm

- [[145](#), 100, 101, 147] FEC symbol error counter
- [[146](#), 193, 194, 148, 195, 149, 197] CDAUI-n
- [98, 99, 196] Recommended CTLE
- 102 Wording
- 105 Fast wake

Clause 119 (15 comments) Logic track

- 131
- [[28](#), 27, 114, 154]
- 155, [[25](#), 113, 156], 157, 163
- 37, 162
- 115
- 165

Clause 120 (20 comments) Logic track

- [[87](#), 167], 168
- 170, 172, 90, 171, 118
- 119, 238, 173, 174, 175, 120
- 235, 236, [[56](#), 92, 237]

CDXS

Forming PCS lanes

AMs

Clarification

Bypass indication

hi_ber

Overview

Interfaces

Functions

Patterns

Clause 121 (7 comments) Optics track

- 68, 176
- 71, 69, 70
- 179
- 72

Functional

Measurements

MDI

Hazard

Clauses 122, 123 (66 comments) Optics track

- 219, [73, 180], 218
 - 221, 34, 225
 - 35, 258, 228, 230, 229, 257, 83
 - 142, 137, 227, 255
 - lecheminant
 - [32, 143, 3, 231, 9]
 - [144, 132, 133, 138], 232
 - 220, 253
 - 75, [33, 140, 80, 81], [84, 233], traverso, 85
 - 177, 141, 136, 139, 181, 254, 256
 - 134, 78, 76, 245, 77, 247, 246, 248, 249, 250
 - 135, 74, [226, 251], [79, 252]
 - 178
 - 223, 224, 82, 6
- Table 122-6
- Table 123-7
- Table 123-8
- Eye mask
- TDP
- Rx 3 dB
- Stressed Rx sens.
- RIN
- Budget
- Reflections
- Patterns
- Definitions
- MDI
- 123.2 to 123.6

Annex 120B (11 comments) Electrical track

- 107, 59
- [60, 259, 93], [61, 260], [62, 261]
- 58, 125

Introduction

BER

Shutdown

Annex 120C (4 comments) Electrical track

- 239
- 240
- 189, 190

BER

EH, EW

Adaptive

Annexes 120D, 120E common (6 comments) Electrical track

- 186, 187, 188 ILD
- 49, [[124](#), 52] EEE

Annex 120D specific (18 comments) Electrical track

- 10, 11, 40, 41, 42 Intro
- 43, 94, [[95](#), 44], [45](#), 47 Transmitter
- [[50](#), 96], 51, 57, 13, [53](#) Receiver
- 55 Feedback

Annex 120E specific (36 comments) Electrical track

- 15, 16, [mazzini](#) Intro
- 243, 183, 200, 202 Transmitter
- [17, 199], 201, 242, [[18](#), 241], [19, 203], 209 Transition time
- 205, 206, [[207](#), 64], [[208](#), 23], 65, 217 Receiver
- [[191](#), 185], 192 Adaptive
- 210, [[184](#), 66], 216, 67, 213, 211, 212, [[1](#), 214] Measurements

Clauses 1, 78 (4 comments) target Thursday am

- 128, 127 Definitions
- [97, 122] EEE

Clause 116 (4 comments) target Thursday am

- 2 Wording
- 234 Service interface defns
- 152, 130 Delay

Comments for bucket motion (33 comments)

- 29 Other drafts
- 38, 46, 48, 54, 88, 121 Editorial
- 39, 63, 108, 109, 112, 123, 159, 160, 215 Wording
- 110, 111, 161 Clarification
- 129, 158, 164 Figures
- 103, 104, 106, 150 Clause 45
- 151 Clause 116
- 26, 166 Clause 119
- 169, [[89](#), 117], 91 Clause 120

Open questions for PCS and PMA

- How are the PCS lanes formed from the FEC code words?
 - Does this affect the assumption of blind bit-multiplexing in the PMA?
- Use FEC metrics for defining hi_ber threshold?
- PCS sublayer delay constraints and skew values are TBD or “magenta”
- 400G AM fields are TBD
- What criteria should be used for AM lock?
- PMA generated test patterns
 - Best guess included in the draft
- MMD Device Numbering
 - Can we reduce to three maximum PMA instances per end since there is no stand alone FEC separate from the PCS?
 - How does CDXS affect MMD device numbering?

Open questions for 400GBASE-SR16

- BER requirement given RS(544,514,10) FEC and sharing of the BER budget with electrical interfaces.
- Adoption of RS(544,514,10) FEC increases the signaling rate from 25.78125 GBd for 100GBASE-SR4 to 26.5625 GBd. What changes are needed to the specification to account for this?

Open questions for 400GBASE-DR4/FR8/LR8

- Definition of OMA for a PAM4 modulation format
 - Are two definitions needed, one for inner and the other for outer?
 - Alternatively, is it better to define only outer OMA and control inner eye uniformity via a penalty?
- Definition of ER for a PAM4 modulation format
- TDP (Transmitter and Dispersion Penalty) is used to control transmitter eye quality and spectral characteristics for single-mode PMDs such as 100GBASE-LR4.
 - How will this be done for a PAM4 transmitter in 400GBASE-DR4/FR8/LR8?
 - What should the specification for the reference receiver be?
- Stressed receiver sensitivity
 - How should the stressed signal be generated?
 - How should the amount of stress in each sub-eye be controlled?
- Reflection budget
 - What reflection levels and penalty budget are needed?
- For 400GBASE-DR4
 - What are the MDI requirements?

Open questions for CDAUI-16

Chip-to-chip and chip-to-module

- BER requirement is TBD
- Adoption of RS(544,514,10) FEC increases the signaling rate from 25.78125 GBd for CAUI-4 to 26.5625 GBd. What changes are needed to the specification to account for this?

Chip-to-module

- CDAUI-16 will need a 16 way connector instead of a 4 way connector. Are there any changes required to the specification to account for this?
- Annex 83E for CAUI-4 chip-to-module requires that the host provides a “recommended CTLE peaking value”. There was some discussion before the baseline was adopted as to whether this would also be required for CDAUI-16.

Open questions for CDAUI-8

- COM parameter TBDs
- Is there a need to restrict the probability of a burst continuing to be below 0.75?

Thanks!