Chief Editor’s report

Pete Anslow, Ciena, P802.3bs Chief Editor

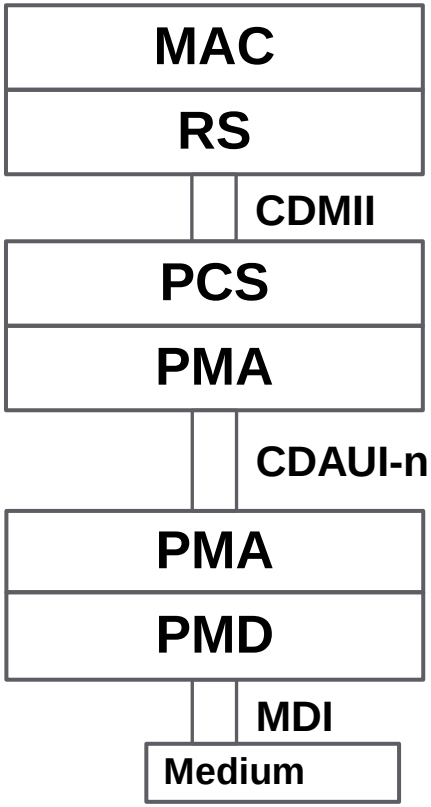
IEEE P802.3bs Task Force, Waikoloa HI, July 2015

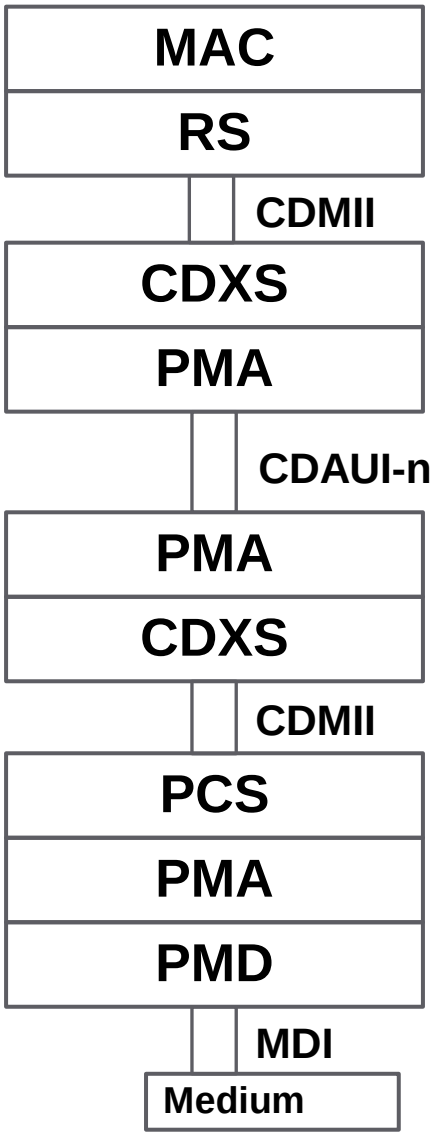
Introduction

The following slides contain:

- the proposed structure for the P802.3bs 400 Gb/s Ethernet draft amendment
- list of editors for adopted baselines
- a list of open questions for adopted baselines

Adopted stack





When PCS functions and CDXS functions do not match

New clauses

Clause	Content	Baseline
116	Introduction to 400 Gb/s networks	
117	RS and MII for 400 Gb/s operation	
118	CDMII extender (includes CDXS)	Baseline adopted
119	PCS including FEC	Need baseline
120	PMA	Need baseline
121	400GBASE-SR16	Baseline adopted
122	PMD clause for 500 m objective	Need baseline
123	PMD clause for 2 km objective*	Need baseline
124	400GBASE-LR8*	Baseline adopted
120A	Partitioning examples (informative)	
120B	CDAUI-16 chip-to-chip (normative)	Baseline adopted
120C	CDAUI-16 chip-to-module (normative)	Baseline adopted
120D	CDAUI-8 chip-to-chip (normative)	Baseline adopted
120E	CDAUI-8 chip-to-module (normative)	Baseline adopted

* If the baseline adopted for the 2 km objective is 8 x 50G PAM4, then Clause 123 will cover both 400GBASE-FR4 and 400GBASE-LR4.

Amended clauses

Clause	Change	
1	Add new references, definitions, abbreviations	
4	Add 400G parameters to Table 4-2	
30	Add new management objects / attributes	
45	Add new registers / bits	
78	Add new EEE PHYs	Baseline adopted
Annex A	Add any new bibliography entries	
Annex 4A	Add / modify note to Table 4A-2	
Annex 31B	Add 400G PAUSE information	
Annex 93A	Modify Table 93A-2	

Editorial team (for adopted baselines)

Pete Anslow, Ciena

- Chief Editor and Editor for Clauses 00, 1, 4, 30, 45, 78, A, 4A, 31B, 93A, 116, 118

Mark Gustlin, Xilinx

- Editor for Clause 117

Jonathan King, Finisar

- Editor for Clause 121

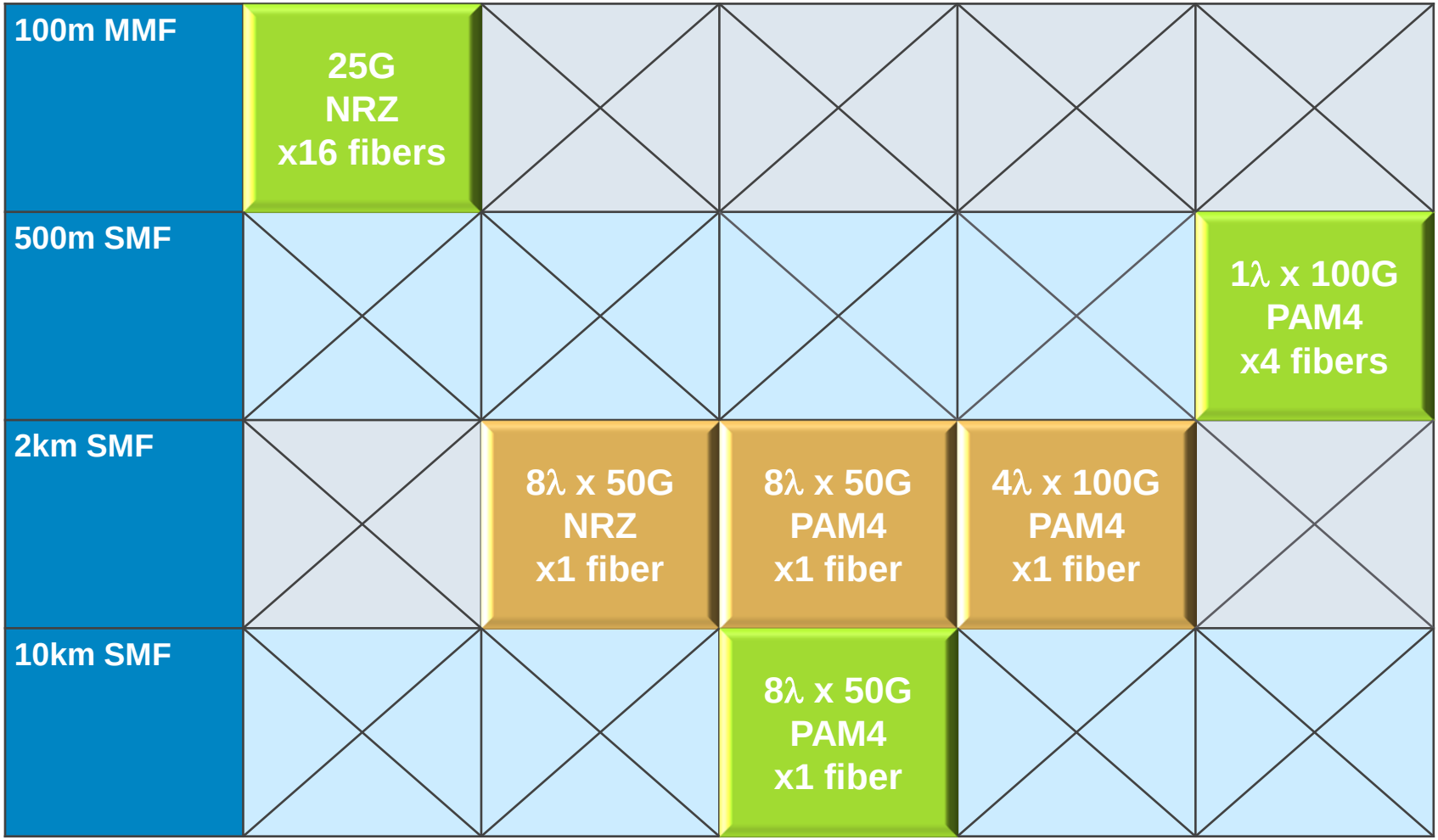
Andre Szczepanek, Inphi

- Editor for Annexs 120D, 120E

Peter Stassar, Huawei

- Editor for Clause 124

Remaining PMD choice



Selected

To be determined

"x1 fibers" uses 2 fibers total (1 in each direction)
"x4 fibers" uses 8 fibers total (4 in each direction)
"x16 fibers" uses 32 fibers total (16 in each direction)

Open questions for CDAUI-16 chip-to-chip

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

Open questions for CDAUI-16 chip-to-module

- BER requirement is TBD
- Adoption of RS(544,514,10) FEC increases the signalling rate from 25.78125 GBd for CAUI-4 to 26.5625 GBd. What changes are needed to the specification to account for this?
- 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 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 signalling 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-LR8

- Definition of OMA for a PAM4 modulation format
  - Two definitions, one for inner and the other for outer?
- 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-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?

Thanks!