

COORNING

PMD Selection and Straw Polls

Steve Swanson
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Several PMDs have been proposed

- The following PMDs have been proposed
 - VCSEL + OM3 @ 850nm
 - VCSEL + OM3 @ 980nm
 - VCSEL + GI-POF @ 850nm
 - VCSEL + GI-POF @ 980nm
 - SiP + OM3 @ 1310nm
 - SiP + GI-POF @ 1310nm
- Data rates
 - 2.5, 5, 10 and 25G, 40m, 4 in-line connectors (objective)
 - 2.5, 5, 10 and 25G, 15m, 4 in-line connectors
 - 50G, 15m, 2 in-line connectors (objective)
- Decisions must be made in the Task Force
 - A proposal for selection is included
 - A series of straw polls is proposed to ascertain consensus

If we select them all a minimum of 28 PMDs










- 2.5GBASE-AU-G-850-40-4
- 5GBASE-AU-G-850-40-4
- 10GBASE-AU-G-850-40-4
- 25GBASE-AU-G-850-40-4
- 50GBASE-AU-G-850-15-2
- 2.5GBASE-AU-G-980-40-4
- 5GBASE-AU-G-980-40-4
- 10GBASE-AU-G-980-40-4
- 25GBASE-AU-G-980-40-4
- 50GBASE-AU-G-980-15-2
- 2.5GBASE-AU-GSiP-1300-40-4
- 5GBASE-AU-GSiP-1300-40-4
- 10GBASE-AU-GSiP-1300-40-4
- 25GBASE-AU-GSiP-1300-40-4
- 50GBASE-AU-GSiP-1300-15-2
- 2.5GBASE-AU-P-850-15-4
- 5GBASE-AU-P-850-15-4
- 10GBASE-AU-P-850-15-4
- 25GBASE-AU-P-850-15-4
- 2.5GBASE-AU-P-980-15-4
- 5GBASE-AU-P-980-15-4
- 10GBASE-AU-P-980-15-4
- 25GBASE-AU-P-980-15-4
- 2.5GBASE-AU-PSiP-1300-40-4
- 5GBASE-AU-PSiP-1300-40-4
- 10GBASE-AU-PSiP-1300-40-4
- 25GBASE-AU-PSiP-1300-40-4
- 50GBASE-AU-PSiP-1300-15-2

28 PMDs is not a Standard

- Too many PMDs
 - **delays our standard**
 - complicates the project
 - fragments the market
 - fragments development efforts across the supply chain
- We need to develop baseline text for the PMD and move the Standard forward to a WG ballot
- In my opinion, only one PMD is technically complete today
 - others need additional technical work and more time

My View

- Only one PMD type is technically complete
- Others could be but more time is needed

CSD	850/980nm VCSEL and OM3	850/980nm VCSEL and GI-POF	1300 SiP and OM3/GIPOF
Broad market			
Technical feasibility			
Economic feasibility			

- When voting on the straw polls, please ask yourself
 - Do I want to delay the project?

Recommendation

- Select 850/980nm VCSEL and OM3 today
 - It is the only technically complete PMD
- Continue to work on GI-POF and SiP
 - Potentially add new PMDs at later date
- Other possible options
 - Form MSA and if market develops, add to IEEE Standard
 - This has been done in the past, leading to the addition of FR as an example
 - Spin off into new project

Straw Poll #1

Straw Poll #1

I will support x number of PMDs for each data rate:

- a) 1**
- b) 2**
- c) 3**
- d) More than 3**

Results:

- a)**
- b)**
- c)**
- d)**

Straw Poll #2

Straw Poll #2 Chicago rules

Technical feasibility has been demonstrated for PMDs at $\leq 10\text{G}$ supporting 40m links with 4 in-line connectors for:

- a) Short wavelength VCSEL on GI-POF
- b) Short wavelength VCSEL on OM3
- c) Long wavelength SiP on OM3
- d) Long wavelength SiP on GI-POF

Results:

- a)
- b)
- c)
- d)

Straw Poll #3

Straw Poll #3 Chicago rules

Technical feasibility has been demonstrated for PMDs at $\leq 25\text{G}$ supporting 40m links with 4 in-line connectors for:

- a) Short wavelength VCSEL on GI-POF**
- b) Short wavelength VCSEL on OM3**
- c) Long wavelength SiP on OM3**
- d) Long wavelength SiP on GI-POF**

Results:

- a)**
- b)**
- c)**
- d)**

Straw Poll #4

Straw Poll #4 Chicago rules

Technical feasibility has been demonstrated for PMDs at $\leq 50\text{G}$ supporting 15m links with 2 in-line connectors for:

- a) Short wavelength VCSEL on GI-POF**
- b) Short wavelength VCSEL on OM3**
- c) Long wavelength SiP on OM3**
- d) Long wavelength SiP on GI-POF**

Results:

- a)**
- b)**
- c)**
- d)**

Straw Poll #5

Straw Poll #5 Chicago rules

Economic feasibility has been demonstrated for PMDs at $\leq 10\text{G}$ supporting 40m links with 4 in-line connectors for:

- a) Short wavelength VCSEL on GI-POF**
- b) Short wavelength VCSEL on OM3**
- c) Long wavelength SiP on OM3**
- d) Long wavelength SiP on GI-POF**

Results:

- a)**
- b)**
- c)**
- d)**

Straw Poll #6

Straw Poll #6 Chicago rules

Economic feasibility has been demonstrated for PMDs at $\leq 25\text{G}$ supporting 40m links with 4 in-line connectors for:

- a) Short wavelength VCSEL on GI-POF**
- b) Short wavelength VCSEL on OM3**
- c) Long wavelength SiP on OM3**
- d) Long wavelength SiP on GI-POF**

Results:

- a)**
- b)**
- c)**
- d)**

Straw Poll #7

Straw Poll #7 Chicago rules

Economic feasibility has been demonstrated for PMDs at $\leq 50G$ supporting 15m links with 2 in-line connectors for:

- a) Short wavelength VCSEL on GI-POF**
- b) Short wavelength VCSEL on OM3**
- c) Long wavelength SiP on OM3**
- d) Long wavelength SiP on GI-POF**

Results:

- a)**
- b)**
- c)**
- d)**

Straw Poll #8

Straw Poll #8

Chicago rules

I will support a PMD based on the following:

- a) 2.5, 5, 10 and 25G at 40m with 4 in-line connectors**
- b) 2.5, 5, 10 and 25G at 15m with 4 in-line connectors**
- c) 50G, 15m, 2 in-line connectors**

Results:

- a)**
- b)**
- c)**

Straw Poll #9

Straw Poll #9

I will support a PMD based on the following wavelength:

- a) 850nm**
- b) 980nm**
- c) 1310nm**
- d) No preference**

Results:

- a)**
- b)**
- c)**
- d)**

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