PMD matrix status report

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IEEE 802.3cz Multigigabit Optical Automotive Ethernet Interim Task Force

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PMD option matrix for comparison

Action items
Complete the list of PMD options and comparison items

Straw poll #1

March 16th 2021

Do I need more information and discussion including completing the discussion points (presented by Ruben) for the PMD option matrix (proposed by Ogura and Kurata)?

- A: I need more discussion based on the PMD matrix and comparison points (29)
- B: I would add additional comparison items to the matrix (8)
- C: I would add additional options to the matrix (9)
- D: I don't need the discussion and I am ready to select the PMD now (16)

Description	unit	VCSEL+ OM3	VCSEL+ POF	VCSEL+ OM3	Si-photonics +OM2,3,4	Si-photonics +Optimized MMF
Nominal wavelength	nm	850	850	980 (Steve)	1310	1310
Fiber Type		OM3	POF	OM3	OM2,OM3,OM4	1310nm-optimized MMF (Informative)
Bandwidth	MHz・km	2000 Laser launch	To be specified	950 Laser launch	500 OFL	2000 (informative) Laser launch
Attenuation	dB/km	3.5	To be specified	2.0	1.5	1.5 (informative)

Comparison items (2021/4/2)

- Add list comparison items according to a presentation of Ruben (perezaranda_3cz_01d_0321_pmd_comparison)
- 15m objectives tentatively added for discussion

Description	unit	VCSEL+ OM3	VCSEL+ POF	VCSEL+ OM3	VCSEL+ POF	Si-photonics +OM2,3	Si-photonics +POF
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Fiber Type		OM3	POF	OM3	POF	OM2,OM3	POF
Bandwidth	MHz・km	2000 Laser launch	To be specified	950 Laser launch	To be specified	500 OFL	To be specified

Comparison items

PMD options and comparison items

Description	unit	VCSEL+ OM3	VCSEL+ POF	VCSEL+ OM3	VCSEL+ POF	Si-photonics +OM2,3	Si-photonics +POF
Nominal wavelength	nm	850	850	980	980	1310	1310
Fiber Type		OM3	POF	OM3	POF	OM2,OM3	POF
Bandwidth	MHz・km	2000 Laser launch	To be specified	950 Laser launch	To be specified	500 OFL	To be specified
[Objectives]							
2.5,5,10,25G Over 40m + 4 Inline connectors							
2.5,5,10,25G Over 15m + 4 Inline connectors							
50G over 15m + 2 inline connectors							

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continued

Description	unit	VCSEL+ OM3	VCSEL+ POF	VCSEL+ OM3	VCSEL+ POF	Si-photonics +OM2,3	Si-photonics +POF
Feasibility							
Link budget							
Reliability							
Relative cost							
Industry support							