Moving Forward in IEEE 802.3cz

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Motivation

- At the January 18 IEEE 802.3cz meeting, a motion was made to merge “swanson_3cz_02c_030821_AUTO_MDI_Baseline.pdf” into P802.3cz/D1.3 as per comment #173 on D1.2

Mover: Robert Grow

Seconder: Natalie Wienckowski

Results:

Yes: 37 No: 13 Abstain: 6 (74%)

The motion failed (2 more positive votes or 1 less negative vote and the motion would have passed)

There was Broad Support from the TF

- **Summary**
  - Yes votes from 37 individuals with 27 different affiliations
  - Yes votes from 4 of 5 individuals affiliated with OEMs
  - Yes votes from individuals affiliated with PHY chip manufacturers, optical device manufacturers, Tier 1 and Tier 2 suppliers as well as others

- **OEM Affiliations**
  - BMW
  - Ford Motor Company
  - General Motors
  - Volkswagen AG
  - Volvo

- **Tier 1 & 2 Supplier Affiliations**
  - Adamant Namiki Precision Jewel
  - AT&T
  - Broadcom
  - CommScope
  - Corning
  - Finisar
  - Furukawa Electric
  - Futurewei
  - HAT Labs
  - Huawei
  - HPE

- **Tier 1 & 2 Supplier Affiliations**
  - Inneos
  - Keysight
  - KDPOF
  - Malicoat Networking Solutions
  - Marvell
  - MD Elektronik
  - Megachips
  - OFS
  - POF Promotion
  - Prysmian
  - Sumitomo
  - TRUMPF Photonic Components

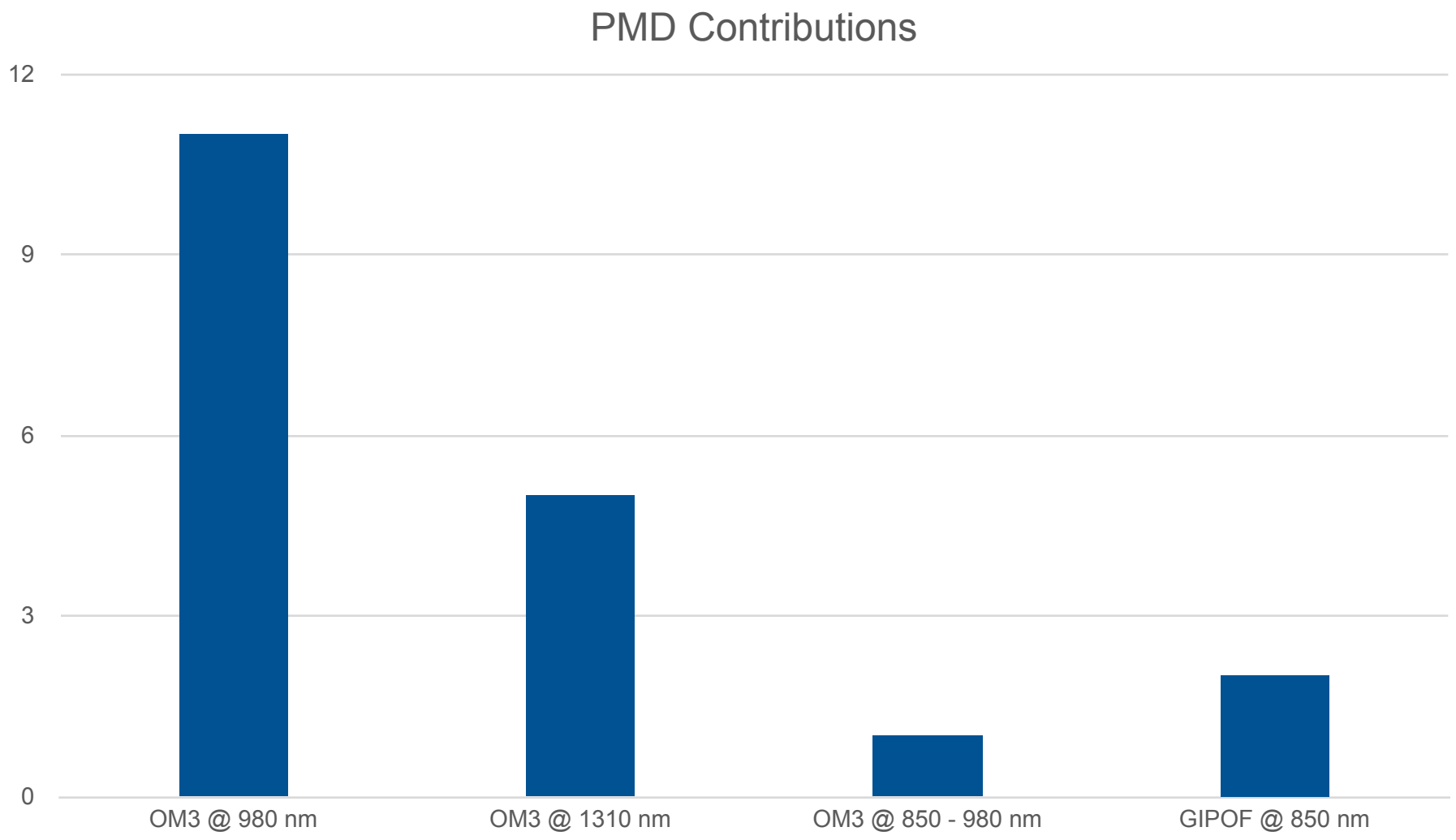
Background

- Four PMD proposals differentiated by medium and wavelength have been considered by IEEE 802.3cz
  - 980 nm on graded-index OM3 Glass optical fiber
  - 850-980 nm on graded-index OM3 Glass optical fiber
  - 1310 nm on graded-index OM3 Glass optical fiber
  - 850 nm on graded-index Plastic optical fiber

Review of PMD proposals

- 980 nm on graded-index OM3 Glass optical fiber
  - Broad support in the TF
  - Meets all objectives
  - Large body of work has been presented to the TF
  - Ready now
- 1310 nm on OM3 fiber
  - Proposed in addition to 980nm OM3 at 10G and 25G
  - Lacks broad support in the TF
  - Does not support all objectives
  - Does not meet all CSDs
- 850-980 nm on graded-index OM3 Glass optical fiber
  - Current limits in 850nm VCSEL devices provide marginal reliability, severely impacting the link-budget
  - Broadband photodiode data for automotive environments has not been presented
  - Extra complexity of test and qualification
- 850 nm on graded-index Plastic optical fiber
  - Is on a significantly different timeline than glass PMDs
  - Cable/fiber samples are not available for independent testing
  - Does not support all objectives
  - Does not meet all CSDs

Contributions supporting the various PMD proposals



There is broad support for moving this project forward

- While 4 PMD proposals have been considered, only one has attained broad support in the IEEE 802.3cz TF
- Straw polls indicate that continuing to consider PMDs other than 980 nm on OM3 will significantly delay getting to WG ballot
- The IEEE 802.3cz TF Chair noted his responsibility to produce a draft standard, recommended practice, or guideline in a reasonable amount of time for review and approval by the WG
- January 20 802.3 WG discussion on P802.3cz status indicates a willingness for the 802.3 WG to take action if the TF fails to make progress

Recommendation supporting IEEE 802.3cz

- Revisit the January 18 motion in the IEEE 802.3cz TF meeting today
  - Further delay in the TF results in a lost opportunity for IEEE, the automotive industry and optics supporting these applications
  - Still allows comments in TF and subsequent WG ballot

Motion

Move to adopt PMD, MDI and Media baseline text proposal of slides 6 – 12 of https://www.ieee802.org/3/cz/public/3_aug_2021/swanson_3cz_02c_030821_AUTO_MDI_Baseline.pdf

Moved: Natalie Wienckowski

Seconded: Steve Swanson

Technical 75%

Results:

Y:

N:

A:

Thanks for your attention