Nomenclature Update

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Changes from '02' in this color

Nomenclature

- Goal: Agree on the nomenclature to enable effective communication

Adopted in May 2016

- Definitions:
  - 50GBASE, 50GBASE-R
  - 50GBASE-KR, 100GBASE-KR2, 200GBASE-KR4
  - 50GBASE-CR, 100GBASE-CR2, 200GBASE-CR4
  - 50GBASE-SR, 100GBASE-SR2, 200GBASE-SR4
  - 50GAUI, 50GMII
- Abbreviations:
  - 50GAUI
  - 50GMII

More for consideration

- Need a definition for the:
  - 50GBASE-FR
    - "IEEE 802.3 Physical Layer specification for 50 Gb/s using 50GBASE-R encoding and 4-level pulse amplitude modulation over one lane on single-mode fiber, with reach up to at least 2 km. (See IEEE Std 802.3, Clause TBD.)"
  - 50GBASE-LR
    - "IEEE 802.3 Physical Layer specification for 50 Gb/s using 50GBASE-R encoding and 4-level pulse amplitude modulation over one lane on single-mode fiber, with reach up to at least 10 km. (See IEEE Std 802.3, Clause TBD.)"
  - 100GBASE-DR2
    - "IEEE 802.3 Physical Layer specification for 50 Gb/s using 50GBASE-R encoding and 4-level pulse amplitude modulation over two lanes of single-mode fiber, with reach up to at least 500 m. (See IEEE Std 802.3, Clause TBD.)"

Fun with AUIs!

- In this Task Force, there are several different types of AUI due to differing signaling rates, FEC choices and lane widths
- Considerations:
  - AUI nomenclature traditionally has been mAUI-N, where m = PHY speed in Roman or Arabic numerals and N = number of Lanes
  - Need a way to distinguish them from each other
  - Keep terms used in the IEEE Std 802.3-2015 as they are.
- Could append letters, such as:
  - A/B/C, i.e. 50GAUI-2A, 50GAUI-2B
  - N for new rate
  - S/F for slower and faster
  - N/P for NRZ or PAM4
  - Z because it is awesome! ☺

P802.3cd AUI rates and lane widths under consideration

Class	Lane Rate	FEC	Basis derived from	Provisional Name*
100 Gb/s	25.78G per lane	RS-FEC(528) or no FEC	CAUI-4 (=)	CAUI-4 (=)
100 Gb/s	26.56G per lane	RS-FEC(544)	CDAUI-16	100GAUI-4
100 Gb/s	53.125G per lane	RS-FEC(544)	CDAUI-8	100GAUI-2
50 Gb/s	25.78G per lane	no FEC	CAUI-4	50GAUI-2A
50 Gb/s	26.56G per lane	RS-FEC(544)	CDAUI-16	50GAUI-2B
50 Gb/s	53.125G per lane	RS-FEC(544)	CDAUI-8	50GAUI-1

* In the absence of an adopted nomenclature, recommend that the TF use these terms for now to facilitate clear communication until terms are formally adopted.

- There are contributions this week that may use different terms. Ask for clarification from the author, if necessary.

Future Looking

- Tracking the developments on
  - 100 Gb/s 2km SMF
  - 100 Gb/s PSMF
  - AUIs
- Adjust the definition for "100 Gb/s over MMF" to reflect the adopted baseline proposal.

THANKS!

IEEE-SA Standards Style Manual Guidance

- Guidance from IEEE-SA is as follows
- 10.6.3:
  - "Each definition should be a brief, self-contained description of the term in question and shall not contain any other information, such as requirements or elaborative text. The term should not be used in its own definition."
- 10.7
  - "Acronyms and abbreviations can be used to save time and space in the document."
- B.1
  - "a) New terms and definitions included in IEEE standards should be written in plain English using clear and concise descriptions. Terms themselves should not be used in their own definitions."
  - "b) Needless customization should be avoided so that definitions have as broad an application as appropriate. Definitions that are too specific should be avoided."
  - "c) New definitions that serve to add a new definition to an existing term(s) of the same name should be different enough from the other term(s) so as to justify the addition. Having more than two or three acceptable definitions for any term is discouraged."