Nomenclature Debate

IEEE P802.3bs Task Force

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Introduction

• This is a debate of preference!
• Proponents stated motivation to change the name-
  – Clarity of both written and verbal communication
  – Future Proofing
What is the debate?

- The “debate” is not to change from Roman to Arabic nomenclature –
- The ACTUAL “debate” is to change terms – Example: “CDAUI” to “400GAUI”

So what?

- Terms are defined in 802.3 – not numbers
Terminology

• Terms are defined in “1.4 Definitions”

• For example –

  – Per P802.3by D3.2: 1.4.77a 25 Gigabit Attachment Unit Interface (25GAUI): A physical instantiation of the PMA service interface to extend the connection between 25 Gb/s capable PMAs over one lane, used for chip-to-chip or chip-to-module interconnections. (See IEEE Std 802.3, Annex 109A and Annex 109B.)

  – Per P802.3bs D1.5: 1.4.72h 400 Gb/s Attachment Unit Interface (CDAUI-n): A physical instantiation of the PMA service interface to extend the connection between 400 Gb/s capable PMAs over n lanes, used for chip-to-chip or chip-to-module interconnections. Two widths of CDAUI-n are defined: a sixteen-lane version (CDAUI-16), and an eight-lane version (CDAUI-8). (See IEEE Std 802.3, Annex 120B and Annex 120C for CDAUI-16, or Annex 120D and Annex 120E for CDAUI-8.)
Outside of IEEE

- Terminology will always be explained or defined in such literature
- Using Arabic numbers will not negate the need to define the name of the interface

### Ethernet Interfaces and Nomenclature

<table>
<thead>
<tr>
<th>Electrical Interface</th>
<th>Backplane</th>
<th>Twinax Cable</th>
<th>Twisted Pairs</th>
<th>MMF</th>
<th>Parallel SMF</th>
<th>2km SMF</th>
<th>10km SMF</th>
<th>40km SMF</th>
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Gray Text = IEEE Standard  
Red Text = In Standardization  
Green Text = Under consideration in IEEE  
Blue Text = Non-IEEE standard but complies to IEEE electrical interfaces
Future Proofing

• It was stated
  – Future proofing
    • Set the precedent for the future rates which may not have “easy” Roman numeral terms
    • 25 Gb/s Ethernet faced this challenge already (XXVAUI did not impress)

• This claim is misleading
  – A “precedent” to use Arabic numbers instead of Roman numbers has already been set as noted above
  – Every Task Force makes the decisions about its own project, i.e. a future higher speed task force will determine the nomenclature used for a future higher speed
Moving Forward

• Given recent start of 200GbE - Minimal impact to the choice to use “CCAUI” or “200Gxxx” at this point

• 802.3 May Interim Task Force Straw Poll #3 –
  – A consistent nomenclature (e.g. CCMII / CDMII or 200GMII / 400GMII, CCAUI / CDAUI or 200GAUI / 400GAUI, etc) should be selected for implementation in IEEE P802.3bs. Results (y/n/a): 55/1/0

• What is lost if the Task Force moves away from current 400GbE terminology?
Consequences

• People reviewing development of the interface will not find prior material using “400GAUI”

• History Perspective – “CDAUI”
  – The industry anticipated the use of CDAUI prior to its adoption - first use found during SG / TF Plenary / Interim meetings was May 2013 – 1st Study Group Meeting
  – Over course of SG / TF F2F meetings – 1432 Instances in 207 documents
Consequences of “400GAUI”

• Market confusion caused by familiarity with “CDAUI”
  – Industry articles
  – Presentations to industry trade shows / conferences
  – Industry videos
  – Press releases
  – Industry newsletters
  – Industry analysts updates

• Company literature will need updated (data sheets, product overviews, presentations, roadmaps)

• Other industry organizations use of CDAUI for development of related specifications