IEEE 802.3
Opening Plenary Report

IEEE 802.3
400 Gb/s Ethernet Study Group

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IEEE 802 July 2013 Plenary
Request for Formation of Study Group (as per Mar ‘13 Plenary Motion)

• Move the IEEE 802.3 Working Group authorizes the formation of a study group for “400 Gb/s Ethernet.”
Reflector and Web

- To subscribe to the 400G reflector, send an email to:
  
  ListServ@ieee.org

  with the following in the body of the message (do not include “<>”):
  
  subscribe stds-802-3-400G <yourfirstname> <yourlastname>
  
  end

- Send 400G reflector messages to:
  
  STDS-802-3-400G@listserv.ieee.org

- Task Force web page URL:
  
  http://www.ieee802.org/3/400GSG/index.html

- Ad hoc area URL:
  
Activities Since Mar 2013 Plenary

• May 17 – 1st Study Group meeting
  – Thanks to Ethernet Alliance for hosting
  – Victoria, BC, Canada
  – 95 Attendees
  – 16 Presentations (Thanks to all contributors!)
    • Level Setting
    • Objectives Presentations / discussions
      – General Objectives
      – PMD Types
    • Formation of “Logic” Ad hoc (Charter: Evaluate 400GbE architecture implementations to make recommendations regarding possible objectives.)
      – Straw Polls (See Next Page)
• 2 Logic Ad Hoc Phone Conferences
May Interim Straw Polls Summary

- Interest in PMD Objectives (#2 (Room Count 86), #5)

<table>
<thead>
<tr>
<th>PMD</th>
<th>Chicago Rules (#2)*</th>
<th>Choose 1 (#5)</th>
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<tbody>
<tr>
<td>400 GbE Backplane</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>400 GbE Twin-Ax</td>
<td>15</td>
<td>2</td>
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<tr>
<td>400 GbE MMF</td>
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<td>400 GbE SMF</td>
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<td>49</td>
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<tr>
<td>No PMDs</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

- Are you interested in multi-rate support (backward compatibility from 400GE to 100GE and/or 40GE):
  
  Results (y/n):  50 / 10

- I believe that FEC should be an integral part of the 400GbE architecture
  
  Results (y/n/undecided)  44 / 1 / 27
Goals for the meeting week

• Hear presentations (22) related to Objectives and 5 Criteria
• Develop consensus on PAR / Objectives
• Update on Time Sync Activities  
  – Wed @ 11am
• Potential liaison to TIA on single-mode connector return loss (see next slide).
• Lay the ground work for the next meeting
Harmonizing Singlemode Connection Return Loss

• There is a need to harmonize single-mode connection return loss spec of TIA (26 dB) with that of ISO/IEC (35 dB).

• For 400 Gb/s and higher Ethernet rates, MPI Noise resulting from Return Loss will be a key source of performance impairment.

• The state of the art today comfortably achieves 35+ dB.

• Therefore, it is prudent for us to take the initiative of recommending to the TIA to consider such harmonization.

• Reference: bhatt_400_01_0713.pdf.
Thank You!