IEEE 802.3
Opening Plenary Report

IEEE 802.3
400 Gb/s Ethernet Study Group

John D’Ambrosia, Dell
Dallas, TX, USA
IEEE 802 Nov 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:
  \textit{ListServ@ieee.org}
  
  with the following in the body of the message (do not include “<>”):
  \texttt{subscribe stds-802-3-400G <yourfirstname> <yourlastname> end}

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

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

- Ad hoc area URL:
  \texttt{http://www.ieee802.org/3/400GSG/public/adhoc/index.shtml}
Activities Since July 2013 Plenary

• IEEE 802.3 September Interim, York, UK
• Logic Ad hoc
• Applications Ad hoc
  – 01-Oct
  – 30-Oct
Sept Interim Summary

• 90 Attendees
• 14 Technical Presentations
• Summary
  – New Objective adopted – new interfaces
    • Motion: Move that the 400Gb/s Study Group adopt the following objective: “Support optional 400Gb/s Attachment Unit Interfaces for chip-to-chip and chip-to-module applications”.
    • Results (all, room count 66): Y: 57 N: 0 A: 5
  – Approved Informal communication to ITU-T SG15
  – Group recognizes need to focus on objectives
  – Other Issues: BER, Reach Objectives
• Thanks to ADVA and John Messenger
## Overview of Stated Reach Needs

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# Sept 2013 Straw Polls

## Straw Polls #4 and #5

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## Straw Polls #6 and #7

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<td>0</td>
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<td>10km</td>
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<td>34</td>
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<td>10km &lt; x &lt; 40km</td>
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<td>1</td>
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<td>40km</td>
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<td>11</td>
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<td>Undecided</td>
<td>10</td>
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Sept-13 Interim Straw Poll #8 (Chicago Rules)

• I would support an objective that reads “Define a 400Gb/s PHY for operation up to at least X of MMF” wherein X is:
  a) a distance less than 30m
  b) 30m
  c) a distance between 30m and 100m
  d) 100m
  e) a distance between 100m and 200m
  f) 200m
  g) a distance greater than 200m
  h) undecided

• Results (All)
• a) 0   b) 3   c) 2   d) 25   e) 2   f) 1   g) 0   h) 42
Sept-13 Interim Straw Poll #9 (Chicago Rules)

- I would support an objective that provides 400Gb/s operation over:
  a) at least 100m over OM-Y MMF and at least 100m over OM4
  b) about 200m over OM-Y MMF and at least 100m over OM4
  c) about 200m over OM-Y MMF and at least 30m over OM4
  d) at least 200m over OM-Y MMF
  e) at least 300m over OM-Y MMF
  f) none of the above
  g) Undecided

- Results (All):
  a) 8  b) 6  c) 1  d) 1  e) 1  f) 2  g) 53
Logic Ad hoc

• The 400 Gb/s Ethernet Study Group Logic Ad hoc:
  – Held 1 meeting on October 23rd
  – Previously opportunity on October 1st was cancelled due to lack of presentation requests

• Reviewed 3 presentations:
  – A 400GbE PCS Option – Mark Gustlin
  – 400GbE PCS Direct Coding Analysis - Haoyu Song
  – Error performance objective for 400GbE – Pete Anslow
Applications Ad hoc Activities

• 09-Oct Conference Call
  – Webex / Teleconference hosted by Hugh Barrass, Cisco. Thanks!
  – 4 Technical Presentations
    • Objectives to Support Cloud Scale Data Center Design, Booth / Issenhuth
    • Ethernet Deployment from an Optical Module Perspective, Murray
    • Early Market PMD Types for Core Router to Transport Interconnect, Moorwood
    • Objective Considerations: Given Today’s Data Center Environment, D’Ambrosia / Law

• 30-Oct Conference Call
  – Webex / Teleconference hosted by Hugh Barrass, Cisco. Thanks!
  – 1 Technical Presentation
    • Breakout Functionality: D’Ambrosia
Goals for the meeting week

- Hear presentations (20) related to Objectives and 5 Criteria
- Develop consensus on Objectives
- Lay the ground work for the next meeting
Thank You!