# IEEE 802.3
# Opening Plenary Report

IEEE 802.3
400 Gb/s Ethernet Study Group

John D’Ambrosia, Dell
Geneva, Switzerland
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:

  ***http://www.ieee802.org/3/400GSG/public/adhoc/index.shtml***

# 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)

| PMD | Chicago Rules (#2)* | Choose 1 (#5) |
|---|---|---|
| 400 GbE Backplane | 25 | 2 |
| 400 GbE Twin-Ax | 15 | 2 |
| 400 GbE MMF | 39 | 9 |
| 400 GbE SMF | 62 | 49 |
| No PMDs | 2 | 0 |

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

  Results (y/n): 50 / 10

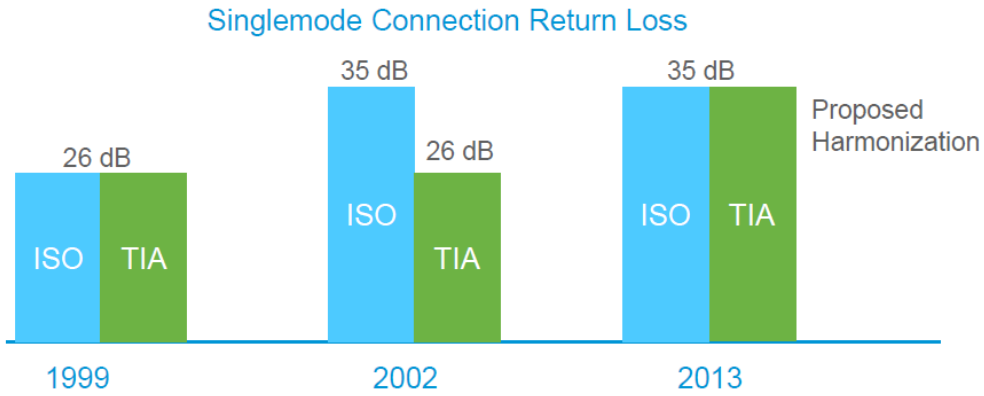
- I believe that FEC should be an integral part of the 400GbE architecture

  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!