


IEEE 802.3
Higher Speed Study Group
Closing Plenary Report

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IEEE 802.3 HSSG Organization

- Study Group Chair:
 - John D'Ambrosia (jdambrosia@force10networks.com)
- Web Master
 - Frank Chang (ychang@vitesse.com)

- “Reach” Ad Hoc Chair
 - Andy Moorwood (amoorwood@extremenetworks.com)
- “Fiber Optic” Ad Hoc Chair
 - Dan Dove (dan.dove@hp.com)

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Plans For the Week

- Hear Presentations (Thanks to all contributors!)
 - 27 technical presentations
 - Objectives
 - MAC rates
 - PMD Needs
 - Critters

- Build consensus on Objectives

- Respond to liaison letters
 - OIF
 - ITU-T SG15

Accomplishments

- Heard 2 Ad Hoc Reports
- 27 Presentations
- “Guidance” regarding use of surveys
- Consensus Building
 - Adopted 6 Objectives
- Responded to 2 liaison letters.

Presentations (1 / 3)

Mike Bennett	HSSG Objectives: The End Users` View
George Young	Objectives for Service Provider Shared Transport of 802.3 Higher Speed Ethernet
Arne Alping	Higher Speed Ethernet - A telecom system vendors view
Joel Goergen, Subi Krishnamurthy	The Impact of Scalable HSSG from Systems Perspective
Dan Dove	HSSG Goals and Objectives -System Vendors' Perspective
Mike Steinberger	Cray High Speed Interconnect Requirements
Jan Peeters	HSSG Considerations
Menachem Abraham	Objectives Discussion – (i) MAC Data Rate Considerations (ii) Long Haul objective
Howard Frazier	Update on APL
Brad Booth	MAC Rate
Med Belhadj	Feasibility of a 100G MAC
Drew Perkins, Ted Sprague	Higher Speed Ethernet Requirements

Presentations (2 / 3)

Chris DiMinico	Telecommunications Infrastructure Standard for Data Centers, ANSI/TIA-942
Piers Dawe, David Cunningham	The 10G Ethernet Link Model
Alessandro Barberi	Cisco 10GbE Historical Ethernet PMD adoption rates
Joel Goergen	PMD Objectives: 10KM to 40KM PMD
Petar Pepeljugoski	MMF PMD for Short Distances in Data Center and High Performance Computing Environments
Jack Jewell, Mike Dudek	Short-Reach on Paralle MMF for Low-Cost Higher-Speed Ethernet
Steve Swanson	Some Ideas for a Cost Effective OM3 PMD for HS Ethernet
Jim Tatum	Optical Components for 100 Gbps
Chris Cole	100Gb Transceiver Technical & Economic Feasibility Work in Progress
Shinji Nishimura	PMD architecture with skew compensation mechanism for parallel link

Presentations (3 / 3)

Steve Trowbridge Maarten Vissers	Overhead Efficiency Analysis of Multi-Lane Alternatives
Marcus Duelk, Peter Winzer	Polarization Mode Dispersion Aspects for Parallel and Serial PHY
Marcus Duelk, Peter Winzer	DQPSK Format for Serial PHY
Chris DiMinico George Zimmerman	Feasibility of a 100 Gbps copper interconnect.
Mark Gustlin	100G Ten Bit Interface Proposal

Straw Poll #3 (September Interim)

- Support the following as objectives:
 - Support full-duplex operation only.
 - Preserve the 802.3/Ethernet frame format at the MAC Client service interface.
 - Preserve minimum and maximum FrameSize of current 802.3 Std.

- Yes - 46
- No - 0

Straw Poll – SG

- I do not support adding more than one MAC rate
 - Yes - 76
 - No – 5

- Note – At time of straw poll approximately 100 people were present

Straw Poll (Chicago Rules) - SG

- I do not support a MAC Rate of _____.
 - a. 40 Gb/s - 89
 - b. 80 Gb/s - 84
 - c. 120 Gb/s - 45
 - d. 100 Gb/s - 3

- Note – At time of straw poll 104 people were present

Straw Poll - SG

- I support a MAC Rate of 100 Gb/s
 - Yes - 76
 - No - 2
 - Undecided – 24

- Note – At the time of the Straw Poll there were 107 present in the room

Straw Poll #4 (Chicago Rules) - SG

- I do not support a reach objective of _____.
 - a) At least 100 to 300 m over MMF
 - b) At least 2 to 10 Km over SMF
 - c) At least 40 Km over SMF

- Results
 - a) At least 100 to 300 m over MMF - 4
 - b) At least 2 to 10 Km over SMF - 0
 - c) At least 40 Km over SMF - 9

 - Note – At time of straw poll approximately 100 people were present

Straw Poll #5 (Chicago Rules) - SG

I do support a reach objective of _____.

- a) At least 100 to 300 m over MMF
- b) At least 2 to 10 Km over SMF
- c) At least 40 Km over SMF

■ Results

- a) At least 100 to 300 m over MMF - 64
- b) At least 2 to 10 Km over SMF - 80
- c) At least 40 Km over SMF - 50

□ Note – At time of straw poll approximately 100 people were present

Straw Poll #6 - SG

- I do not support an objective for a PMD for long-haul or ultra long haul applications.
 - a) yes
 - b) no

- Results
 - a) yes – 44
 - B) no – 8

- Note – At time of straw poll approximately 100 people were present

Objectives Motions (SG Motions, 1/2)

- Move that the HSSG adopt as an objective: Support full-duplex operation only. [Passed](#) (All: 73 / 0 / 4)
- Move that the HSSG adopt as an objective: Preserve the 802.3 / Ethernet frame format at the MAC Client service interface. [Passed](#) (All: 76 / 0 / 4)
- Move that the HSSG adopt as an objective: Preserve minimum and maximum FrameSize of current 802.3 Std. [Passed](#) (All: 74 / 0 / 4)
- Move that the HSSG adopt as an objective: Support a speed of 100 Gb/s at the MAC/PLS interface. [Passed](#) (All: 67 / 9 / 14, 802.3: 26 / 4 / 11)

PMD Objectives Motions (SG Motions, 2/2)

- Motion 5 – The HSSG adopt an objective of: Support at least 10km on SMF. Passed (All: 86 / 0 / 4, 802.3: 40 / 0 / 4)
- Motion 6 - Move to amend Motion 5 to : "The HSSG adopt two objectives: Support at least 10km on SMF; Support at least 100m on OM3 MMF. Failed (All: 24/37/25, 802.3 Voters: 17/16/12)
- The HSSG adopt an objective of: Support at least 100m on OM3 MMF. Passed (All: 61 / 3 / 27, 802.3: 33 / 2 / 13)

Liaison Letters

■ OIF

- ❑ Notification of development of 25 Gb/s electrical interface for chip-to-chip and backplane applications
- ❑ Draft response in goergen_03_1106
- ❑ Draft response approved by SG (All: 77/0/3)

■ ITU-T SG15

- ❑ Offer of assistance to HSSG
- ❑ Draft response addressed in nowell_01_1106
- ❑ Draft response approved by SG (All: 74/0/5)

Motion

- Move that 802.3 approve and forward the liaison letter (goergen_03_1106) with appropriate edits by the Chair (or his appointed agent), to the OIF.
- Procedural (>50%)
- Moved by: John D'Ambrosia
- Second: Brad Booth
- 802.3 Voters (Y/N/A): approved by voice vote
- Motion Passes

Motion

- Move that 802.3 approve and forward the liaison letter (nowell_01_1106) with appropriate edits by the Chair (or his appointed agent), to the ITU-T SG15.
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- 802.3 Voters (Y/N/A): approved by voice vote
- Motion Passes

Meetings Related Motions / Straw Poll (SG)

- Motion - The HSSG will meet the week of January 16 – 19, 2007 at the IEEE 802.3 Interim Meeting being held at Monterey, CA. [Passed](#) (All:79/0/12).
- Motion - The HSSG will meet the week of May 28-31, 2007 at the IEEE 802.3 Interim Meeting being hosted by the ITU in Geneva. [Passed](#) (All: 76/0/18).
- Straw Poll - I would be interested in attending an HSSG Interim meeting in September 2007 in Korea and would like 802.3 to further explore this with ETRI and Samsung (All: 43/18).

Motion (SG Motion)

- Move that:
 - The HSSG requests that IEEE 802.3 extend the Higher Speed Study Group.

- Moved by – Jeff Lynch
- Second by – Joel Goergen

- Procedural (>50%)

- All Yes - 84 No – 2 Abstain - 6

- Motion Passes

Motion

- Move that the HSSG requests that IEEE 802.3 extend the Higher Speed Study Group.
- (>50%)
- Moved by John D'Ambrosia on behalf of the Study Group
- Seconded by : N / A
- 802.3 Voters (Y/N/A): 56 / 1 / 1
- Motion Passes

Next Meetings

- January 2007 Interim
 - January 16 – 19
 - Monterey, CA
 - Hilton Garden Inn

- March 2007 Plenary
 - March 11 -16, 2007
 - Orlando, FL
 - Caribe Royale

- April 2007 Interim - ?



Thank You!

