

IEEE 802.3z

Gigabit Task Force

Vancouver, BC
11-November-1996

Agenda

1. Welcome and introductions
2. Select recording secretary
3. P802.3z status report
4. Email reflector and web/ftp site
5. Standards development timeline
6. Review HSSG objectives & PAR
7. Distribution of Documents
8. Technical presentations
 - a. Track I System/Repeater/MAC/GMII/PCS
 - b. Track II Long Haul Copper
 - c. Track III Short Haul Copper/Optics/PMA
 - d. Track IV User Requirements
9. Organization of Sub-Task Forces
10. AOB
11. Plans for next meeting
12. Approve minutes of September meeting
13. Adjourn

P802.3z status report

- 802.3 WG approved P802.3z PAR on 14-Mar-96
- 802 Exec approved P802.3z PAR on 14-Mar-96
- NESCOM approved P802.3z PAR on 19-Jun-96
- IEEE Standards Board approved P802.3z PAR on 20-Jun-96
- Task Force held first meeting on 9-July-96
 - Elected H. Frazier, Chair and H. Johnson, Editor-In-Chief
- Task Force held second meeting on 9-Sept-96 in CdA, ID
- Established voting rules
 - All those present at the time a vote is taken may vote, if they feel qualified to do so
 - > 50% majority required for procedural motions
 - >= 75% majority required for technical motions

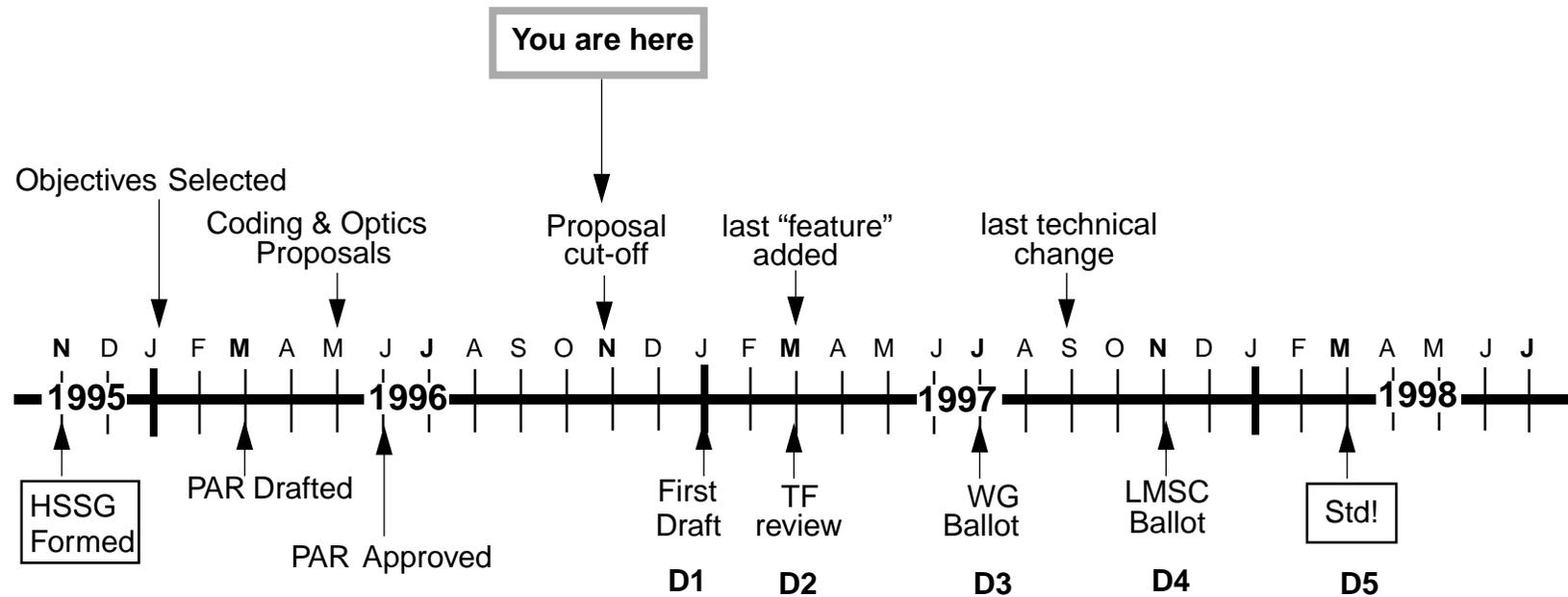
E-mail reflector

- The IEEE has set up a reflector for this task force:
stds-802-3-hssg@mail.ieee.org
- There are currently ~550 names/addresses on the reflector
- The reflector can be used for announcements, comments, discussions, or dissemination of information related to the work of this task force
- The reflector should not be used for recruiting, advertising, soliciting, flaming, or whining
- To be added to the reflector, send an E-mail containing the following line:
subscribe stds-802-3-hssg <your email address>
- to
majordomo@mail.ieee.org
- Subscriptions are on an individual basis only
No proxy requests or reflectors will be subscribed

Web/FTP site

- The IEEE has established a web/ftp site for our use:
 - ftp://stdsbbs.ieee.org/pub/802_main/802.3/gigabit
- We will archive drafts, minutes, and technical presentations on this site
 - Format for drafts is Postscript or PDF
 - Format for minutes is ASCII text
 - Format for presentations is ASCII text or PDF
- The “802.3” and “gigabit” directories will always contain a file called “MEETING.TXT” which will contain information about the next meeting schedule and arrangements
- Please send requests for uploads to this site to:
 - spa-admin@mail.ieee.org

Standards development timeline



Objectives

1. Speed of 1000 Mb/s at the MAC/PLS service interface
2. Use 802.3/Ethernet frame format
3. Meet 802 FR, with the possible exception of Hamming Distance
4. Simple forwarding between 1000, 100, 10
5. Preserve min and max FrameSize of current 802.3 Std
6. Full and Half Duplex operation
7. Support star-wired topologies
8. Use CSMA/CD access method w/ support for at least 1 repeater/collision domain
9. Support Fiber media and if possible copper media
10. Use ANSI Fiber Channel FC-1 and FC-0 as basis for work
11. Provide a family of Physical Layer specifications which support a link distance of:
 - a. At least 25 m on copper (100 m preferred)
 - b. At least 500 on multimode fiber
 - c. At least 3 km on single mode fiber**
12. Support maximum collision domain diameter of 200m
13. Support media selected from ISO/IEC 11801
14. Adopt flow control based on 802.3x
15. Include a specification for an optional Media Independent Interface

Track I - System/Repeater/MAC/GMII/PCS

■ System/Repeater/MAC

- | | | |
|--------------------------------------------|-----------------|----|
| 1. Architectural Overview | Howard Johnson | 20 |
| 2. Full Duplex Repeater - Update | Bernard Daines | 45 |
| 3. Flow Control for Gigabit Ethernet | Henry Hsiaw | 20 |
| 4. 802.3x Flow Control | Rich Seifert | 20 |
| 5. Asymmetric Flow Control | Bill Bunch | 20 |
| 6. Implications of Asymmetric Flow Control | Paul Woodruff | 20 |
| 7. Enhanced CSMA/CD | Moti Weizman | 30 |
| 8. Carrier Extension Proposal - Review | Howard Frazier | 15 |
| 9. Gigabit Repeater Bit Budget - Update | Stephen Haddock | 30 |
| 10. Packet Bursting Proposal | Mohan Kalkunte | 45 |
| 11. Pascal for Packet Bursting | Mart Molle | 20 |
| 12. Programmable IPGs | Jayant Kadambi | 30 |

5:15

■ GMII

- | | | |
|-------------------------------------------------|------------|----|
| 1. Gigabit Media Independent Interface - Update | Bob Grow | 45 |
| 2. GMII Timing and Electrical Specification | Asif Iqbal | 45 |

1:30

■ PCS

- | | | |
|--------------------------------------------------|-------------------|----|
| 1. PCS for 8B10B PHYs - Review and Update | Howard Johnson | 20 |
| 2. 8B/10B PCS - Update | Rich Taborek | 20 |
| 3. Preamble Replacement | Linda Chen | 10 |
| 4. Impact of Packet Bursting on GMII and PCS | Howard Frazier | 20 |
| 5. Easier method of *standardizing* link startup | Bill Bunch | 15 |
| 6. Simple Signalling Proposal | Igor Zhovnirovsky | 45 |
| 7. Link Startup | Wen-Tsung Tang | 20 |

2:30

Track II - Long Haul Copper PHY

■ Cable Characteristics

- | | | |
|-----------------------------------------------------|-----------------|----|
| 1. Worst case NEXT models | Chris Di Minico | 20 |
| 2. Susceptibility measurements for Category 5 cable | Steve Methley | 20 |
| 3. Cat 5+ Recertification Proposal | Roger Billings | 20 |

1:00

■ Long Haul Copper PHY Proposals

- | | | |
|----------------------------------------------------------|----------------|----|
| 1. 1GbT Horizontal Copper PHY Proposal | Roger Billings | 30 |
| 2. 100 m Cat 5 UTP links for gigabit data transmission | Niels Dervedde | 30 |
| 3. QAM-based solutions for 1Gb/s FDX on 4 pairs of UTP-5 | Henry Samueli | 30 |
| 4. A Continuous-time Analog PHY for UTP-5 | Barry Hagglund | 40 |
| 5. Discussion of PAM 3x3 Coding Scheme | Kamran Azadet | 45 |
| 6. PAM 3x3 PCS | Kelly Coffey | 20 |
| 7. 100BASE-T to 1000BASE-T: Scaling issues and solutions | Sailesh Rao | 45 |

4:00

Track III - PMA/Short Haul Copper PMD/Optical PMD

■ PMA

1. PMA sublayer Bob Rumer 15

■ Short Haul Copper PMD

1. Short Copper Links for Gigabit Haluk Aytac 15
2. Gigabit CMOS PHY for Short Haul Copper Sanjay Desai 15
3. Short Haul Copper issues and NEXT measurements Bhavesh Patel 15
4. Short haul copper proposal Ed Grivna 15

■ Optical PMD

1. Review and Update of Optical proposals Jonathan Thatcher 10
2. Review of Optical PMD proposal David Cunningham 15
3. Modal noise results:50 MMF and 1300 nm lasers David Cunningham 15
4. Dispersion limited link lengths for SW and LW David Cunningham 20
5. Some RML results: Theory and Experiment David Cunningham 20
6. Review of Optical PMD Specifications Del Hanson 20
7. Lower Cost Transceiver Solution Vince Melendy 20
8. Optical Choices Bill Reysen 25
9. Recommended Changes to Optical PMD Joint Proposal Paul Kolesar 20
10. Support for 1300 nm solution Schelto van Doorn 10
11. Update on the Small Form Factor Optical Interface Tad Szostak 15

3:10

Track IV - User Requirements

1. Fiber Optic Cabling Survey results
2. A User's View of Gigabit Ethernet
3. Gigabit Survey - Results, Analysis, Proposals

Chris Di Minico 20
Bob Fink 15
Rich Gardner 30

1:05

Organization of Sub-Task Forces

- Proposal for Sub-Task Force organization
 - MAC
 - Repeater
 - GMII
 - PCS/Link Configuration
 - PMA/Optical PMD/Short Cu PMD

Plans for next meeting

- Late January, 1997
- Three days, organized by Sub Task Force
 - Volunteers?

- Distribution of first drafts of P802.3z!