

IEEE 802.3, HSSG - 10 Gig MINUTES
Study Group Interim Meeting
September 27 - 29, 1999
York, England

Prepared by:
Thomas Mathey

The meeting convened at about 9:10 AM, September 27, 1999. Jonathan Thatcher, High Speed Study Group Chair, opened the meeting with a presentation of the agenda, now available at the IEEE web site http://grouper.ieee.org/groups/802/3/10G_study/public/sept99/index.html.

Jonathan had a special "Thanks to 3COM and David Law" for presenting this meeting in the historic town of York.

The priority objective for this week is to finalize the PAR and 5 Criteria. These documents need to be sent to the 802 executive committee at the November Plenary.

Jonathan then volunteered Thomas Mathey to act as recording secretary for the meeting and went on to:
review the agenda,

Bob Grow moved to approve the agenda and got an unanimously approval via voice vote

review the IEEE web site and E-Mail reflector
see: <http://grouper.ieee.org/groups/802/3/>

request a Patent Policy pitch from the 802.3 Chair Geoff Thompson as follows: (text copied/cribbed directly from the very excellent Merrimack minutes):

Geoff Thompson, described the IEEE patent policy, and requested that all holders of patents related to the work of the study group become familiar with the policy and submit letters if appropriate. He also informed the group of the 802.3 policy to also request letters for patent applications. A description of the policy and example letters can be found at the IEEE web site (<http://grouper.ieee.org/groups/802/3/patent.html>).

review the
Requirements for Working Group Voting Membership
Attendance Book and policy for mis-signing
Future Meetings
Objectives for this week
Short Term and Long Term Schedule
Request For Presentations
Remaining Business
Closing Discussions

After introductions were made, Jonathan did a review of the existing PAR and 5 Criteria and emphasized that this is a review with no "on-the-fly-edits" at this time.

Using the 802.3z PAR as a starting point, several items were noted for revision, such as no repeater. Howard Frazer pointed out that the "Title, Purpose, and Scope" were very important as this is what the public sees.

Using the 802.3z 5 Criteria as a starting point, each of the 5 points was reviewed for what content was required (new, delete, revise, enhance).

Monday, break from 10:37 am to 11:08 am.

Presentations

32 min.	Broad Market Potential for 10GbE - Update	139K	Nan Chen	Nortel Networks
12 min.	10 Gigabit Ethernet Market	50K	Howard Frazier	Cisco
37 min.	10GE Link Design for Scrambled Encode	230K	David Martin	Nortel Networks

Monday, break from 12:34 pm to 1:54 pm.

36min.	10GbE Implementation Architectures	42K	Roy Bynum	MCI Worldcom
62 min.	SONET Technology Primer	861K	Gary Nicholl	Cisco
12 min.	Two Physical Layers for 10 Gigabit Ethernet	20K	Howard Frazier	Cisco
? min.	Possible WAN PHY Objectives	141K	Iain Verigin	PMC-Sierra
12 min.	Packet Interface Standardization	17K	Scott Lowrey	Network Elements

Monday, meeting closes at 5:36 pm.

Tuesday, meeting opens at 9:00 am.

42 min.	XGMII Proposal	31K	Fabrice Verplanken	IBM
3 min.	Cabling Survey Ad Hoc	9K	Bruce Tolley	3Com
60 min.	10Gig MII update	88K	Howard Frazier	Cisco

Tuesday, break from 10:57 am to 11:19 am.

40 min.	LAN and WAN Rate 10 GigE	181K	Paul Bottorff	Nortel Networks
14 min.	Economic Feasibility	87K	David Martin	Nortel Networks

Tuesday, break from 12:24 pm to 1:40 pm.

7 min.	Autonegotiation	43K	Rich Taborek	
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Motion Madness, starts on Tuesday at 1:48 pm.

Howard Frazer does a review of the HSSG Objectives, and Jonathan Thatcher does a review of the 5 criteria for new people. Each spends a few minutes.

Motion #1

Move to adopt as objectives (a slide with the following text)

1. Speed of 10.000 Gb/s at the MAC/PLS service interface
2. Define two families of PHYs
 - A. A LAN PHY, operating at a data rate of 10.000 Gb/s
 - B. A WAN PHY, operating at a data rate which is compatible with the payload rate of OC-192c/SDH VC-4-64c
2. Define a mechanism to adapt the MAC/PLS data rate to the data rate of the WAN PHY

Moved: Howard Frazer Second: Paul Bottorff Technical, requires greater than 75%
Howard speaks to his objectives and answers questions for 30 minutes

Discussion:

JT two PHYs means two families with possible multiple PMDs within each family (results in edit of slide)
Kim, offers a not friendly amendment, Motion 1A

Motion 1A, not friendly

Move to define one or more PHYs operating at a data rate of 10.000 Gb/s

Moved: Kim Second: Mike Salzman Technical, requires greater than 75%

Discussion:

MS there are other ways to do a WAN PHY, and not enough presentations

WT speaks against this amendment, we now have a current compromise

Vote: Yes 3 No 92 A 15 Fails

Discussion: (back to main motion, #1)

BT note that this does not require SONET

BQ there is ambiguity on where line data rate is measured and what is included

HF the ambiguity is on purpose, we need more presentations to flush out the details

WT OK

JT speaks in favor, this breaks a dead-lock and is a best compromise.

there is no down side to this and provides sufficient space and wiggle room to accomplish our business

NC in favor, we can communicate with WAN directly

HF the reason for two is because there is NO consensus for one

GT I have a strong ambivalence

history has shown that only one phy has survived

objective can be modified with 75% vote

Motion 1B, not friendly

Move to change define to consider

Moved: Nowell Second: Mike Dukek Technical, requires greater than 75%

Vote: Yes 28 No 57 A 17 Fails

Discussion: (back to main motion, #1)

TD Call the question

Vote: Yes 101 No 0 A 8 Pass

This objective replaces last objective of sheet 1 of 2

Specific note from chair: 0 people do not understand this

Motion #2

Move to: on HSSG sheet 2 of 2, strike the words "a family of" from the link length objective and remove "a link distance" and replace with "link distances".

Moved: Fred Weniger Second: Brad Booth Technical, requires greater than 75%

Vote: passes unanimously via voice vote

Motion #3

Move to: add as a HSSG objective to support Auto-Negotiation

Moved: Rich Taborek Second: Tom Dineen Technical, requires greater than 75%

Vote: Yes No A Fails

Discussion:

GT there are some compelling reasons to have this
may challenge the WAN PHY

JT if this motion fails, the chair will still allow/encourage presentations on Auto-Negotiation

Vote: Yes 16 No 72 A 20 Fails

Chairman moves that we change the agenda and go on to the PAR and 5 Criteria, our priority #1.

Motion #4

Move to: Accept draft Criteria #1, Broad Market Potential

Moved: Howard Frazer Second: Tom Dineen Technical, requires greater than 75%

Discussion:

some minor tweaks to text, editor has license to match 802, 802.3, and supplement requirements

Vote: Yes 93 No 0 A 0 Passes

Motion #5

Move to: Accept draft Criteria #2, Compatibility with IEEE Standard 802.3

Moved: Bob Grow Second: Tom Dineen Technical, requires greater than 75%

Discussion:

some minor tweaks to text

Vote: Yes 93 No 0 A 0 Passes

Motion #6

Move to: Accept draft Criteria #3, Distinct Identity

Moved: Bill Quackenbush Second: Tom Dineen Technical, requires greater than 75%

Discussion:

some minor tweaks to text

Vote: Yes 97 No 0 A 0 Passes

Motion #7

Move to: Accept draft Criteria #4, Technical Feasibility

Moved: Walter Thirion Second: Rich Taborek Technical, requires greater than 75%

Discussion:

we do not (at the start of this project) fully meet this criteria

Vote: Yes 77 No 0 A 4 Passes

Motion #8

Move to: Accept draft Criteria #5, Economic Feasibility

Moved: Tom Dineen Second: Hon Wan Chen Technical, requires greater than 75%

Discussion:

we do not (at the start of this project) fully meet this criteria

Vote: Yes 80 No 0 A 1 Passes

Motion #un-numbered

Move to: For the PAR, leave the rest to the administrative hacks like Geoff Thompson

Moved: Second: Technical, requires greater than 75%

Discussion:

Vote: passed by voice vote

Misc. Discussion:

completion date for standard

Motion #9

Move to: Approve PAR

Moved: Bob Grow Second: Tom Dineen Technical, requires greater than 75%

Vote: Yes 71 No 0 A 0

Motion #10

Move that HSSG request that the 802.3 chair distribute the draft PAR and 5 Criteria to the 802 exec for 30 day preview in anticipation of request for approval at the Nov 1999 802 plenary meeting.

Moved: David Law Second: Howard Frazer Technical, requires greater than 75%

Vote: Yes 73 No 0 A 0

Tuesday, meeting closes at 6:00 pm.

Wednesday, meeting opens at 9:15 am.

Presentations

15 min.	MAC Pascal, Pacing Mechanism		Tom Mathey	Independent
18 min.	10 Gb/s serial, Low Cost Technology	438K	Jens Fiedler	Infineon
20 min.	10GE SerDes with GE Topology	294K	Henning Lysdal	GIGA
8 min.	Specifying Optical Modulation Amplitude	316K	Mark Donhowe	
30 min.	10 Gigabit Ethernet Link Model	137K	Del Hanson	HP
15 min.	Link Modeling	32K	Rich Taborek	
20 min.	The 10 Gb Ethernet, Single Mode Lasers	146K	David Dolfi	
30 min.	Updates to MB810	1081K	Dae Young Kim	Chungnam Nat'l Univ

Wednesday, break from 12:10 pm to 1:40 pm.

Reports from the Ad Hoc groups

Shimon Muller

MAC, Mgnt, Interfaces

no "hot button" issues, just need to do the work

what is the granularity of the the MAC Hold pacing mechanism

MI interface: data path width vs IPG size, expand vs shrink the IPG

serial interface is a new request

for mgnt, not a lot of input yet

Rich Taborek

PHY-PMD Evaluation Criteria

posted to reflector (? web site)

Discussions

Jonathan Thatcher

We, both the group and the chairman, need more lead time for presentation in both soft and hard copy. While not wanting an absolute requirement, we want to publish an agenda 1 week ahead. We want to have presentations available on the web site no later than the Wednesday before the meeting. Thus see action item for Howard Frazer.

Geoff Thompson

Closing comments

Wednesday, meeting closes at 2:30 pm.

Action Items for Jonathan Thatcher

1. Place meeting notice for the January meeting, hosted by Shawn Rogers of TI, on the web site and send out e-mail.
2. 5 Criteria, item 5, Economic Feasibility
Chair to request presentations on use of Link Agg. vs 10 Gig for economic feasibility.
3. Find a liaison to the TIA/FO groups, (?? SONET group(s) ??)
4. Request presentations (including WAN) to support 5 Criteria, #5: Economic Feasibility
5. Blue book on web site
6. Rename and/or add to name PMD to better reflect on the needed architecture
7. Tutorial review for presentation at November Plenary
- 8.

Action Items for Howard Frazer

1. A new rule (including policy, mechanism, and guide lines) for presentations to cover both soft and hard copy availability.

Cheat Sheet for names:

BQ	Bill Quackenbush
BT	Bruce Trolly
GT	Geoff Thompson
HF	Howard Frazer
JT	Jonathan Thatcher
MS	Mike Salzman
NC	Nan Che
RT	Rich Taborek
TD	Tom Dineen
WT	Walter Thirion