IEEE P802.3ae – 10 Gigabit Ethernet Minutes
Task Force Plenary Meeting
July 10th – 12th, 2001
Portland, OR.

Prepared by: Jeff Warren

Administrative

The meeting convened at 8:32 am, July 10, 2001. Jonathan Thatcher, the 10 GE Task Force chairman, opened the meeting with a discussion of the agenda.

The agenda was reviewed and modified. A motion to approve the agenda passed by acclamation (Moved by Roy Bynum). Jonathan then reviewed all the administrative items such as reflector and web locations, membership, voting, future meeting locations, call for patents and sign-in rules.

The hot ticket items for this meeting are in Clause 52 "Serial PMD" where the majority of D3.1 ballot comments are focused. Additionally there are a few open TR comments on Technical Feasibility.

The IEEE802.3ae standards time line targets a 1Q02 completion date for the final standard. At this point in time the 10GbE standards effort is 78 % complete assuming a 3/02 completion date.

Some important links:
- Agenda = http://grouper.ieee.org/groups/802/3/ae/public/jul01/agenda_0701.pdf
- E-mail Reflector = http://grouper.ieee.org/groups/802/3/10G_study/email/thrd1.html
- Voting Rules = www.ieee802.org/3/rules/member.html
- Typical Plenary Meeting = www.ieee802.org/3/plenary.html
- 802.3ae 5 Criteria = www.ieee802.org/3/ae/criteria.pdf
- 802.3ae PAR = www.ieee802.org/3/rules/member.html
- 802.3 Presentation Policy = www.ieee802.org/3/public/presentproc.html
- Current 10GbE Draft Standard = http://www.ieee802.org/3/ae/private/index.html
- 802.3 Patent Policy www.ieee802.org/3/patent.html

The P802.3ae 10-Gigabit Ethernet Task Force meeting was adjourned on July 12th, 2001 at approximately 12:10pm

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Goals & Accomplishments for this Meeting

This meeting was dedicated to the resolution of D3.1 ballot comments. There were a number of breakout meetings where each clause editor dealt with their individual ballot comments, both the technical and editorial comments. The lions share (66 %) of these comments were balloted against clause 52, the clause which specifies the Serial PMD's. At the conclusion of this meeting nearly all technical comments were satisfactorily resolved, some will carry over to the next balloting cycle.

The issue of XAUI Technical Feasibility was discussed and the results of some XAUI interoperability testing were presented. This was not a XAUI compliance test it was however a good indication that running the XAUI link (channel) across a passive back-plane is "doable" even beyond the standards recommend maximum distance. The chairman, Jonathan Thatcher removed his TR comment dealing with XAUI Technical Feasibility.

The issue of PMD Technical Feasibility was also discussed; in fact Vipul Bhatt chaired a breakout ad-hoc meeting. A total of 57 people participated. The group is targeting September for a set of PMD interoperability demonstrations to be completed. A demonstration definition was agreed upon and the group agreed that at a minimum interoperability between at least two vendors for each PMD type would be demonstrated. Most implementations have a PMA so this demo is at the PMA interfacing level. September 4th is the target for closure on the TR comments dealing with Technical Feasibility. Both the UNH and 10 GEA volunteered to perform the testing. There were a lot of companies that volunteered to participate in the testing. For each PMD type there is a coordinator. Initially there were no 1550-nm volunteers, however by the end of this meeting three stepped forward; they are Agere, Intel, and Lucent. Tim Warland from Nortel was coerced to coordinator this testing effort.

An motion requesting authorization from IEEE 802.3 to request that the P802 LMSC Executive Committee grant conditional approval to forward P802.3ae to Sponsor ballot upon re-circulation and satisfying the conditions of LMSC Rules Procedure 10 failed by two votes. There were a lot of concerns w.r.t. Technical Feasibility not being achieved yet. Only 1 of 4 PMD's has been demonstrated to work, i.e. the 1310nm Serial PMD. The significance of this motion failing is that now there's no chance for Sponsor balloting to begin prior to the November 2001 Plenary meeting. Additionally due to schedule coordination with LMSC and the potential need for additional re-circulation's during the Sponsor ballot period the completion of P802.3ae by March 2002 could be in jeopardy.

A straw poll was conducted to gauge the interest of working on higher speed Ethernet. There was zero support to begin working on a higher speed Ethernet standard in this calendar year. However 50 % of the committee agreed that next year is an appropriate time frame to begin this effort. The speeds to consider next are 40G, 100G, or 160G (stay linked to SONET speeds).
- ❑ 40G   count = 53
- ❑ 100G   count = 18

❑   160G   count = 4

A systems vendor reported on some system level testing they conducted with five 1310nm Serial PMD transceivers, two of which are claiming to be compliant to the current draft standard. The cleanest eyes have minimum amplitude. All measurements did on the Agilent 8100 system. Bottom line 24-hour traffic test, lasers A, B, C, and E had no CRC errors. The speed of these devices was LAN (10.3G) using 64/66 encoding. DFB lasers were used in all cases. Two connectors used in the cable plant. Ran chassis to chassis. This looks like technical feasibility has been proven for 1310 nm Serial, however our chairman disputed this point. One of the five modules was run over 20 km with no problems. All XSBI based parts.

By the end of this meeting nearly all comments were resolved with just a few to be carried over to the next balloting cycle.

Outline for these Minutes

Future IEEE Meetings

Month	Days	Year	Meeting Type	City	State/Country
September	1st half	2001	Interim	Copenhagen	Denmark
November	12th – 16th	2001	Plenary	Austin	Texas
January	TBD	2002	Interim	TBD	TBD

There's a link to the next meeting location: http://www.ieee802.org/3/interims/copenhagen.html
This September interim meeting shall be held at the Copenhagen, Denmark Airport Hilton hotel during the week of September 24th. In addition to 802.3ae 10GE other IEEE groups shall be meeting during at this venue, they are 802.3ah EFM, 802.1 HILI, and 802.3ag Maintenance. The 802.3ae 10GE committee shall met all day on Thursday 9/27/01 and Friday 9/28/01.

IEEE P802.3ae Objectives

➢ Preserve the 802.3/Ethernet frame format at the MAC Client service interface.
➢ Meet 802 Functional Requirements, with the possible exception of Hamming Distance.
➢ Preserve minimum and maximum FrameSize of current 802.3 Std.
➢ Support full-duplex operation only.
➢ Support star-wired local area networks using point-to-point links and structured cabling topologies.
➢ Specify an optional Media Independent Interface (MII).
➢ Support proposed standard P802.3ad (Link Aggregation)
➢ Support a speed of 10.000 Gb/s at the MAC/PLS service interface
➢ Define two families of PHYs
  - A LAN PHY, operating at a data rate of 10.000 Gb/s
  - A WAN PHY, operating at a data rate compatible with the payload rate of OC-192c/SDH VC-4-64c
➢ Define a mechanism to adapt the MAC/PLS data rate to the data rate of the WAN PHY
➢ Provide Physical Layer specifications which support link distances of:
  - At least 65 meters over MMF**
  - At least 300 meters over installed MMF*
  - At least 2 km over SMF
  - At least 10 km over SMF
  - At least 40 km over SMF

> LEGEND:
> * Installed = all MMF specified in 802.3z (62.5 micron 160/500 MHz*km FDDI-grade is the worst case).
> ** Implies that the solution is cost optimized for this distance.

➢ Support fiber media selected from the second edition of ISO/IEC 11801 (802.3 to work with SC25/WG3 to develop appropriate specifications for any new fiber media).

P802.3ae Contacts

> For the latest list of key P802.3ae contacts please reference the IEEE P802.3ae 10Gb/s Ethernet Task Force Chairs and Editors web page located at http://grouper.ieee.org/groups/802/3/contacts.html this web page is maintained by David Law.

Name	P802.3ae Standards Title	e-mail
Jonathan Thatcher	P802.3ae Task Force Chair	jonathan@worldwidepackets.com
Stephen Haddock	Vice Chair	shaddock@extremenetworks.com
Brad Booth	Task Force Chief Editor	bradley.booth@intel.com
Walt Thirion	PMD Track Chair	wthirion@jatotech.com
Ben Brown	Logic Track Chair	bbrown@amcc.com
Jeff Warren	Task Force Secretary	jwarren@extremenetworks.com
Shimon Muller	Clause 1, 2, 4, 6, 22, 31, 31B and 35 Editor	Shimon.Muller@Eng.Sun.Com
David Law	Clause 30 (Management) Editor	David_Law@3Com.com
Ed Turner	Clause 44 (MDC/MDIO) Editor	Edward_Turner@3Com.com
Brad Booth	Clause 45 (intro) Editor	bradley.booth@intel.com
Bob Grow	Clause 46 (XGMII) Editor	Bob.Grow@Intel.com
Dawson Kesling	Clause 47 (XAUI) Editor	Dawson.w.kesling@intel.com
Rich Taborek	Clause 48 (8B/10B PCS/PMA) Editor	rtaborek@Nserial.com
Rhett Brikovskis	Clause 48 (8b/10b PCS/PMA) Co-Editor	rhett@lanterncom.com
Pat Thaler	Clause 49 (64b/66b PCS) Editor	Pat_Thaler@Agilent.com
Tom Alexander	Clause 50 (WIS) Editor	tom_alexander@pmc-sierra.com
Juan Pineda	Clause 50 (WIS) Co-Editor	juan@bravidacorp.com
Justin Chang	Clause 51 (Serial PMA) Editor	justin@quaketech.com
David Kabal	Clause 52 (Serial PMDs) Editor	dkabal@PICOLIGHT.COM
Paul Bottorff	Clause 53 (WWDM PMA) Editor	pbottorf@nortelnetworks.com
Eric Grann	Clause 54 (WWDM PMD) Editor	Grann@blazenp.com
Bill Lane	Technical Writer	bill_lane@ieee.org

Agenda

- ❑ 8:30 Welcome and Introductions, Jonathan Thatcher (15 min)
- ❑ 8:45 Review / Approve Agenda
- ❑ 8:50 Chairs Introductory Comments
    - o Call for Patents
    - o Schedule Review
    - o Sponsor Ballot
    - o Meeting Objectives
- ❑ 9:10 Editor's Report, Brad Booth
- ❑ 9:20 Announcement of / update on September interim meeting, Bob Grow (5)
- ❑ 9:25 Liaison Reports
    - o 10GFC Liaison Report, Rich Taborek
    - o TR-42, Chris Diminico (Letter on unused allocation)
    - o TIA FO-2.2.1 Liaison Report (MMF development); Michael J. Hackert, Chair TIA FO
    - o ITU Letter, Jonathan
- ❑ 10:00 Break
- ❑ 10:20 Ad Hoc Reports
    - o Ben Brown: Test Pattern
    - o Piers Dawe: Serial PMD
    - o Vipul Bhatt: Equalization Closure
    - o Vipul Bhatt: PMD Tech Feasibility Planning
- ❑ 11:30 Presentations
    - o OTN Digital Wrapper; Roy Bynum
- ❑ 12:00 Lunch

1:00 through Wednesday…. Breakouts

Thursday -- Closing Session 802.3ae
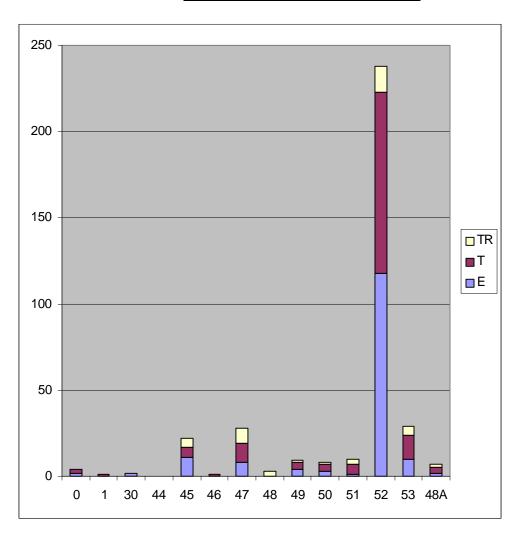
- ❑ 8:30 Presentations
    - o Technical Feasibility of Selected 802.3ae PMDs; Jeff Cain (Cisco)
    - o 10GEA XAUI Interoperability; John D'Ambrosia (20)
    - o 10GBASE-SX4. Technical Feasibility; Bill Wiedemann (Blaze)
- ❑ 9:30 Track/Clause Reports & Motion Madness
    - ❑ New Business / Other Motions
    - ❑ Approve Minutes Meeting
- ❑ Adjourn

Meeting Room Breakout Details

Room	IEEE 802.3ae Meeting Map		Eugene	Salmon
	Salon			
	I	**H**		
	100	50	25	25
Tues 8:30a - 12:00	**General Session**			
12:00	**Lunch**			
1:00p - 6:30p	**0, 1, 44, 46, 48, 49, 50, 51**	**52**	**47,53**	
Wed 8:30a - noon	**52**		**47, 53**	**RSV**
12:00	**Lunch**			
1:00p - 9:00p	**52**		**RSV**	**RSV**
Thurs 8:30a - 12:00	**Closing Session**			
12:00	**Lunch**			

The "official" minutes for the individual sub-clause breakout meeting above can be found in the comment database.

Distribution of D3.1 Comments

Motions

Motion # 1   General Session Motion

Description: Move to accept modified text on Power Down optional feature that is clearly specified in the comment resolution database.

Motion Type: Technical 75 % required

Moved By: Piers Dawe

Seconded By: J

Results: All Attendees   Y 43   N 8   A 22   **84 %**
                  802.3 members   Y 38   N 6   A 17   **86 %**

Time: 10:35am   07/12/01
                           P/F: **Passes**

Motion # 2   General Session Motion
Description: Move to authorize the Clause 52 Editor to resolve all editorial comments.
Motion Type: Procedural 50 % required
Moved By: David Kabal
Seconded By: Brad Booth
Results: All Attendees   Acclimation   <mark>100 %</mark>
Time: 11:08 am   07/12/01
P/F: **Passes**

Motion # 3   General Session Motion
Description: Motion dealing with the un-allocated margin. Impacts a lot of tables, see Eric Grann's exact motion wording in the comment database.
Motion Type: Technical 75 % required
Moved By: Eric Grann
Seconded By: Steve Swanson
Results: All Attendees   Acclimation   <mark>100 %</mark>
Time: 11:15 am   07/12/01
P/F: **Passes**

Motion # 4   General Session Motion
Description: Move that IEEE P802.3ae TF affirm the resolution of all comments on IEEE P802.3ae/D3.1 as approved during the individual tracks, and that the editors are directed to create D3.2 for 802.3 Working Group re-circulation ballot and comment.
Motion Type: Procedural 50 % required
Moved By: Brad Booth
Seconded By: Ben Brown
Results: All Attendees   Acclimation   <mark>100 %</mark>
Time: 11:19 am   07/12/01
P/F: **Passes**

Motion # 5   General Session Motion
Description: The 802.3ae TF agrees that XAUI is technically feasible. We have used the following criteria in this determination.
- Demonstrated interoperability between multiple vendors with BER EE-12 and PCB length greater than 20 inches a credible path to full compliance has been shown.
Motion Type: Technical 75 % required
Moved By: Dawson Kesling
Seconded By: John D'Ambrosia
Results: All Attendees   Acclimation   <mark>100 %</mark>
Time: 11:33 am   07/12/01
P/F: **Passes**

Jonathan removed his TR comment against XAUI.

Motion # 6   General Session Motion

Description: The IEEE P802.3ae TF requests authorization from IEEE 802.3 to conduct re-circulation ballots as necessary to resolve the comments received during the Working Group ballot process. The TF further requests IEEE 802.3 to request that the P802 LMSC Executive Committee grant conditional approval to forward P802.3ae to Sponsor ballot upon re-circulation and satisfying the conditions of LMSC Rules Procedure 10.

Motion Type: Technical 75 % required

Moved By: Stephen Haddock

Seconded By: Ben Brown

Results: All Attendees   Y 52   N 20   A   **72 %**

                        802.3ae   Y 46   N 17   A 14   **73 %**

Time: 11:41 am   07/12/01

P/F: **Failed**

A Successful Sponsor ballot is likely after the September meeting if there are no new technical comments on the re-circulation that will happen just after the September 2001 meeting. If this is the case then we must get 802.3 and 802.3ae to give conditional approval for this Sponsor Ballot. There were a lot of concerns w.r.t. Technical Feasibility not being achieved yet. Only 1 of 4 PMD's have been demonstrated to work, i.e. the 1310nm Serial PMD.

Motion # 7   General Session Motion
Description: The IEEE P802.3ae TF requests authorization from IEEE 802.3 to conduct re-circulation ballots as necessary to resolve the comments received during the Working Group ballot process.

Motion Type: Technical 75 % required

Moved By: Stephen Haddock

Seconded By: Ben Brown

Results: All Attendees   Y 90   N 0   A 5   **100 %**

                        802.3 voters   Y 74   N 0   A 4   **100 %**

Time: 11:55 am   07/12/01

P/F: **Passes**

Straw Poll
At this point Jonathan asked a few questions:
- **This calendar year start working on higher speed Ethernet (no support for this)**
- **Next calendar year 2002 (50 % in favor of this starting point).**
- **The speeds to consider next are 40G, 100G, or 160G (stay linked to SONET speeds).**
  - ❑ **40   count = 53**
  - ❑ **100   count = 18**
  - ❑ **160   count = 4**

Straw Poll:
Is the definition of Technical Feasibility correct?

> **DEFINITION:** "To demonstrate a BER-12 over the rated distance; shown to be interoperable between PMD's of at least two vendors for each PMD type. Path to full

compliance is explained credibly. PMA feasibility demo is implicit here. By September 17th, 2001."

Yes: 92
No: 0
Abstain: 11

General Presentations & Minutes

1. **Opening Business (Jonathan Thatcher)**
   http://grouper.ieee.org/groups/802/3/ae/public/jul01/intro_0701.pdf

Typical introductory material, please reference the presentation for details. Jonathan pointed out that there is a comment and presentation that appears to be out of order since new features have been cut off.

Jonathan brought up the subject of Technical Feasibility. He put the wording up that we all agreed upon last year, i.e. "10 Gb/s Ethernet technology will be demonstrated during the course of the project, prior to the completion of the sponsor ballot.". Jonathan submitted several comments to D3.0 on technical feasibility so that this committee must (some day) deal with the obligation of technical feasibility. To date we have not seen any concrete information on this subject, so come July we'll start the process to see if the committee agrees we've met this PAR requirement. If nothing else this is a wake up call to the suppliers of 10 GbE technology that they need to address this topic and in the very near future. There were a number of comments from the floor about the vagueness of criteria to be used to prove technical feasibility.

2. **Working GroupBallot Summary (Brad Booth)**
   Presentation not on the web

Brad reported there are 293 voters in the pool and 231 submitted a ballot. A total of 169 approved 19 disapproval and ?? abstained. The return rates were 78.74 %, approval rate 89.89 % and abstain rate was 18.61 %. These were all acceptable levels. A total of 362 comments were made with 44 Technical Required and 157 Technical that leaves 161 Editorial comments. Brad discussed the comment generation tool. Brad stressed the significant amount of work being in the area of the Serial PMD, then clauses 53, 47, and 45. Next there is work to be done on the PICS and Signal Detect.

3. **Copenhagen, Denmark (Bob Grow)**
   Presentation not on the web

This was a very brief presentation to assure the group that the September 2001 Interim is still going to happen in Copenhagen. There is going to be an IEEE 802.3ae set of meetings from Wednesday afternoon through Friday, also a social event on Wednesday evening. The Hilton Copenhagen Airport ($275/night) will host all the meetings.

4. 10GFC Update (Rich Taborek)
http://grouper.ieee.org/groups/802/3/ae/public/jul01/taborek_1_0701.pdf

Rich said draft 1.1 is in letter ballot. www.t11.org The comment period ends in July 2001. There are no major technical changes. This group is adding FC specific requirements to the 10 GbE standard. There is strong support in FC that if and when they move forward with new higher speed products they will go from 2 Gbps products to 10 Gbps products. The most likely hood for implementations of this technology in FC is switch to switch port (i.e. E_Ports). This standard is approximately 3 months behind the 802.3ae committee. Class 1M (higher power levels) for laser safety are being addressed. XENPAK, XGP, 300-pin and 200-pin MSA's are being considered. Looks like XENPAK is gaining in popularity.

5. TR-42 (Chris Diminico)
Presentation not on the web

Chris reported that a TIA TR-42 spec would change to re-apportion unallocated margins. This would allow for additional "Connector Insertion Loss", this impacts both 1 and 10 GE. This will be a maintenance activity for 1 GE standard and a modification to the current 10 GE draft standard.

6. TIA 2.2.1 Liaison Report (Mike Hackert)
http://grouper.ieee.org/groups/802/3/ae/public/jul01/hackert_1_0701.pdf

Mr. Hackert notified the group that their Next Generation 50 um fiber (200 MHz km) recommendation is complete. The formalization process is well underway. The FOTP 220 and 203 are written. These recommendations achieve an optimum balance between fiber and transceiver properties. They are now in the "work the standards" process. Mike felt that the TIA and IEC standards process can be "worked" in time so that our standard can reference the required publications by the March 2002 time frame, it will be very close. All of the technical issues with the FOTP 220 spec are resolved. The spec on the fiber is a so-called floating mask. During the course of evaluating Risk they evaluated over 40k-transceiver fiber combinations (fiber profiles and transmitter launches). Swanson and Kolesar have made D3.1 comments to factor in this FO-2.2.1 work. FOTP 220 should be published by Jan 2002. Mike asked for input on the next generation of Ethernet (40 or 100 Gbps Ethernet). The group congratulated Mike and his group for keeping to the time line he outlined over 1.5 years ago.

At this point Jonathan asked a few questions:
1. This calendar year start working on higher speed Ethernet (none)
2. Next calendar year 2002 (50 %).
3. The speeds to consider next are 40G, 100G, or 160G (stay linked to SONET speeds).
   - ❏ 40   count = 53
   - ❏ 100   count = 18
   - ❏ 160   count = 4

7. **ITU-T SG15 Letter (Jonathan Thatcher)**
   [Presentation not on the web]

This letter amounted to a comment against our 802.3ae standard dealing with OMA 'vs' Extinction Ratio, and use of Spectral Width. The main issue deals with more complex outside plant engineering will now be required. They challenge our triple trade off model. Jonathan gave this issues to the Clause 52 group for resolution. No technical comment was submitted however Jonathan wants to treat this letter as if it is a formal letter ballot comment.

8. **Serial Jitter+ Test Pattern Ad-hoc (Ben Brown)**
   http://grouper.ieee.org/groups/802/3/ae/public/jul01/brown_1_0701.pdf

Group is focused on both a square wave and pseudo-random frame is agreed upon. Changes to the WAN pattern have been looked at over the last few months. Just recently agreed to a new pattern, will go up on the web soon. This pattern is 2 SONET frames long. The new test signal structure was shown. John Ewen has provided LAN seed values. This week the new WAN test methodology needs to go into the draft and to resolve the values of the J1 byte. The group also needs to focus on the BER measurement for WAN pattern and one more item to be closed is the testing on the 4 LAN patterns. There has been very little experience with loading these patterns into a BERT tester; we need more progress here too. A 16 bit error register in the PCS is used to get accurate BER counts for high (absolute value) BER calculations.

9. **Serial PMD Ad-hoc (Piers Dawe)**
   http://grouper.ieee.org/groups/802/3/ae/public/jul01/dawe_1_0701.pdf

Technical feasibility is the main issue. Minor issues include spectral width measurement standard (more appropriate to MM lasers) and this issue hasn't changed in the last two months. The Calculation of dispersion penalty at 1310nm is being debated. Close the try of spec being written, it is a equipment level spec. There has been some refinements to the rise time. Piers flashed up a long-long list of minor issues. There is concern that not enough testing results are available to verify the jitter specs this group has written. There is a need for an Optical Return Loss (ORL) spec, review by cable experts is needed. The serial ad-hoc also needs to reconcile 1310 nm serial link attenuation this week. Bottom line is that most of the clause is stable, still some details and test procedures need to be verified prior to conclusion of the standard.

10. **Equalization Closure (Vipul Bhatt)**
    [Presentation not on the web]

Vipul has discontinued this ad-hoc on Equalization due to lack of participation. The effort may re-surface in one year.

11. PMD Tech Feasibility Planning (Vipul Bhatt)
http://grouper.ieee.org/groups/802/3/ae/public/jul01/bhatt_1_0701.pdf

The first planning meeting was held yesterday, 57 people participated. The group is targeting September for PMD interoperability demonstration completion. The group came up with a demonstration definition and will show that there is interoperability between at least two vendors for each PMD type. Most implementations have a PMA so this demo is at the PMA interfacing level. September 4th is the target for closure on the TR comments dealing with Technical Feasibility. Both the UNH and 10 GEA volunteered to perform the testing. There were a lot of companies that volunteered to participate in the testing. For each PMD type there is a coordinator. The bad news is that for 1550 nm there are no volunteers. (NOTE: Three companies stepped forward by the end of the meeting, see Jonathan's update item # 16 below).

Straw Poll: Is the definition of Technical Feasibility correct?
> **DEFINITION:** "To demonstrate a BER-12 over the rated distance; shown to be interoperable between PMD's of at least two vendors for each PMD type. Path to full compliance is explained credibly. PMA feasibility demo is implicit here. By September 17th, 2001."
> **Yes:**   **92**
> **No:**   **0**
> **Abstain: 11**

12. OTN Digital Wrapper (Roy Bynum)
http://grouper.ieee.org/groups/802/3/ae/public/jul01/bynum_1_0701.pdf

Roy's pitch deals with the recent move from the 100 ppm to 20-ppm tolerance on the WAN PHY clock. Roy claims the 10 GE committee has not considered the issue of synchronization. Transmitters are clock independent of the receivers. The receivers only sync up on the received data character/frame stream level. Normal operations use Loop Timing for OTN. Initial POS implementations (1996 time frame) were not stable, switched to "loop timing" and/or Primary Reference Source (PRS) and became stable. The 10GbaseW is interfaced to OTN as an OC192, it will be a "client" on that isosynchronous network. Several committee members disputed some of Roy's calculations dealing with IPG idle octet compensation. Roy agreed that his calculations were for an extremely remote case, not likely to occur. Roy has a Clause 50 proposal to cover his concerns.

Roy's Conclusion Chart:

- ❑ Optical DWDM service support for 10GbE WAN PHY does not require a transmission clock tolerance of +/- 20PPM. For OTN Digital Wrapper, having a +/-20PPM clock is inadequate.
- ❑ OTN Digital Wrapper G.gfp can not properly support the 10GbE LAN PHY.
- ❑ Deployment of a new infrastructure is not required to support 10GbE WAN PHY and upgrade of existing infrastructure to support +/-100PPM clocking is minimal.

Customer and Service Provider Support For 10GbE Does Not Require A New Infrastructure And Does Not Require ITU-T OTN.

A comment from the floor is that OTN does not require synchronization.

13. Demonstrating Technical Feasibility for 10Gbase-SX4 (Bill Wiedemann)
http://grouper.ieee.org/groups/802/3/ae/public/jul01/wiedemann_1_0701.pdf

Bill's showed a working XAUI part. This part has been available for over four months now. Bill proposed a new definition for a reasonable technology demonstration. There a multiple systems vendors designing these parts into their systems. It is included in Fibre Channel and is part of the OIF PMD set. It is available in several form factors, all the popular industry form factors, e.g. XENPAC, XGP pluggables. This was the most widely supported PMD going into the July 2000 meeting (one year ago). A vote of 75 % is required to get this PMD into the standard. There is a voting block of greater than 25 % in the committee that would block this PMD from inclusion in the 802.3ae standard. There is a current belief that inclusion may disrupt the schedule and or IEEE process. Blaze is willing to come forward with technical feasibility for this 10Gbase-SX4 PMD. Additionally Blaze has produced a draft (clause text) for this option and this will be posted to the IEEE Web page, it has no formal standing in the current 802.3ae standard. The 802.3 chairman stated his opinion on the addition of this new clause into the standard; specifically he would require a new 30-day Working Group ballot. This solution meets 100 meters over FDDI fiber, and 300 meters over 50 micron fiber. From a current Optics Objective point of view the only PMD this solution could replace is the current 850nm Serial PMD.

14. PMD Results (Jeff Cain)
http://grouper.ieee.org/groups/802/3/ae/public/jul01/cain_1_0701.pdf

System level testing performed at Cisco, will show Tx, and traffic results. The testing was done with 5 transceivers, two of which are claiming to be compliant to the draft standard. The cleanest eyes have minimum amplitude. All measurements did on the Agilent 8100 system. Bottom line 24-hour traffic test, lasers ABC&E had no CRC errors. All this data is 1310nm Serial. The speed of these devices was LAN (10.3G) using 64/66. DFB lasers were used. Two connectors used in the cable plant. Ran chassis to chassis. This looks like technical feasibility has been proven for 1310 nm Serial, however our chairman disputed this point. One of the five modules was run over 20 km with no problems. All XSBI based parts.

15. 10GEA XAUI InterOperability (John D'Ambrosia)

http://grouper.ieee.org/groups/802/3/ae/public/jul01/dambrosia_1_0701.pdf

This is a presentation from work sponsored by the 10 GEA and testing hosted by UNH-IOL. The companies that participated were Blaze, Mindspeed, TI, Tyco, and Velio. They provided product and the testing was performed at UNH in July 2001. These products were cabled to a Tyco test board. They validated that a BER of 10EE-12 was achieved. Total trace lengths of 15 inches and 27 inches were used. At both lengths there were zero errors observed after a 5 minute testing period. The testing was a success. This was not a XAUI compliance test it was however a good indication that running the XAUI link (channel) across a passive back-plane is "doable" even beyond the standards recommend maximum distance.

16. Feasibility Update (Jonathan)

Presentation not on the web

This is an update to Vipul's presentation. The change is in the area of 1550 Serial – Agere; Intel; Lucent; Nortel Coordinator (pro-tem): Tim Warland. Also Jonathan stated all companies need to get permission from their corresponding corporations to participate in this testing.

17. Editors Reports (Brad Booth)

Presentation not on the web (Brad Booth)
http://grouper.ieee.org/groups/802/3/ae/public/jul01/turner_1_0701.pdf
http://grouper.ieee.org/groups/802/3/ae/public/jul01/kesling_2_0701.pdf
http://grouper.ieee.org/groups/802/3/ae/public/jul01/lynskey_1_0701.pdf
http://grouper.ieee.org/groups/802/3/ae/public/jul01/alexander_1_0701.pdf
http://grouper.ieee.org/groups/802/3/ae/public/jul01/kabal_1_0701.pdf

Brad did a fast overview of the week's progress. An additional 18 comments were added during the course of the week. The D3.2 comment executable will add ballot capability. There were many low volume clauses and just one very high volume clause, e.g. Clause 52. Generation of D3.2 for conditional approval for Sponsor Ballot. D3.2 opens in August and close those comments during the 9/01 interim. D4.0 will come out of the interim and is the basis for the Sponsor Ballot. Note: all comments are uploaded to the IEEE Web page as soon as they are available from the various editors. Several folks asked for these comments to be uploaded sooner, by Thursday of the week before a meeting. The various clause editors with TR's submitted against their respective clauses all reported on the resolution to these TR comments. Special thanks were given to the XAUI people who put in a strong contributions.
- ❑ In all cases each clause editor was able to close their TR comments, except the XAUI clause.
  - ❑ Four remaining TR's in XAUI clause are: Differential Return Loss, Random Jitter, CM Loopback is now option for some configurations
- ❑ Most clauses are in clean-up mode, in great shape!
- ❑ Return Loss, and Compliance Channel shall be dealt with by the 9/01 meeting.

- Power Down (an optional feature) came back up again by Piers Dawe (comment # 72 against clause 45) and since this comment needs to be dealt with at the Task Force level it came up in front of the full committee on Thursday morning. This function is useful for power down to save energy, diagnostics for thermal profiling, etc.
- Comment 365 was brought forward to the 802.3ae plenary for a call for information. Deals with making 1550nm Serial PMD's cost effective. The committee requested a resubmit for this comment. The group reviewed G.652 and sees no justification for moving forward on this comment.