

Unapproved Minutes  
IEEE 802.3ba Task Force Interim Meeting  
September 21 - 24, 2009  
Chicago, IL USA

**Prepared by: George Oulundsen, Steve Trowbridge, Farhad Shafai, David Chalupsky**

Meeting convened at 9:05 am, Monday, Sept 21, 2009.

Agenda & General Information

By – John D’Ambrosia

See – agenda\_01\_0909.pdf

- Introductions – Everyone introduced themselves and stated their affiliation.
- Chair asked if there were any reporters in the room. No one responded. Chair reminded everyone that photographs or recordings are not allowed without permission.
- Chair appointed Steve Trowbridge secretary until Task Force secretary arrived.
- Motion to approve the agenda
  - Motion moved to accept the agenda by Steve Trowbridge, 2<sup>nd</sup> by Mark Gustlin.
  - Meeting agenda was approved by voice vote without objection.
- Motion to approve the July Plenary minutes
  - The following changes were noted:
    - Per Pete Anslow
      - Bottom of Page 3 – “anslow\_0709.pdf” should be “anslow\_04\_0709.pdf”
      - Bottom of Page 7 – “diminico\_02\_079.pdf” should be “diminico\_02\_0709.pdf”
      - Middle of Page 9 – “Cu SubTask Force tbbbbbbbo reconvene at 8:00am” should be “Cu SubTask Force to reconvene at 8:00am”
    - Per Rob Koenen
      - Was present for meeting on Tuesday, Wednesday, and Thursday
  - Motion moved to accept minutes with noted changes by Anslow and Koenen by Pete Anslow, 2<sup>nd</sup> by Ilango Ganga.
  - July Plenary Meeting Minutes were approved by voice vote without objection.
- Chair went through his introduction presentation “agenda\_01\_0909.pdf”
- Goals for the week
  - Preparation to go to Sponsor Ballot
  - Closure on Clause 85
  - Syncing up Clause 85 and 86
- Ground Rules
- Review of Task Force objectives
- IEEE Structure, Bylaws & Rules
  - Ryan Latchman read and presented the IEEE Patent Policy slide set.
    - Chair did call for patents. No one identified any patents.
  - Inappropriate Topics for IEEE meetings read to the body by Ryan Latchman.
  - Chair advised the Task Force:

- The IEEE's patent policy is consistent with the ANSI patent policy and is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*;
- Early identification of patent claims which may be essential for the use of standards under development is encouraged;
- There may be Essential Patent Claims of which the IEEE is not aware. Additionally, neither the IEEE, the WG, nor the WG chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.
- Presented Task Force Schedule and Timeline, meeting map and items to be addressed this week.
- Meeting attendance
  - During the Interim Meeting, must use the IEEE-SA Meeting Attendance Tool as it will be the basis of the official attendance record for this meeting.

#### Presentation

Title – Chief Editor's Opening Report  
 By – Ilango Ganga, Intel  
 See – ganga\_01\_0909.pdf

#### Discussion

- Several late comments were received from Brian Misek and Ryan Latchman. There were no objections to considering these comments.

#### Presentation

Title – Logic Sub-Task Force Opening Report  
 By – Mark Gustlin, Cisco  
 See – gustlin\_01\_0909.pdf

#### Presentation

Title – Copper Sub-Task Force Opening Report  
 By – Chris DiMinico, MC Communications  
 See – diminico\_01\_0909.pdf

#### Presentation

Title – Optical Sub-Task Force Opening Report  
 By – Pete Anslow, Nortel  
 See – anslow\_01\_0909.pdf

Chief Editor, Ilango Ganga, chaired the Task Force comment resolution session.

#### Presentation

Title – Combined Tracks Comment Resolution  
 By – Pete Anslow  
 See – anslow\_\_04\_0909.pdf

Break at 10:30am

Reconvened at 10:45am

Combined Tracks comment resolution continued.

Break for lunch at 12:05pm.  
Reconvened at 1:20pm.

Combined Tracks comment resolution continued.

Break at 2:49 PM  
Reconvened at 3:10 PM

Combined Tracks comment resolution continued.

Break at 5:48 PM  
Reconvened on Tuesday, 9/22/09 at 9:00 AM

The Task Force split into three different tracks – Optical, Logic, and Copper.

**Minutes from Logic Sub-Task Force:**

Meeting convened at 9:10am, Sept 22, 2009  
Meeting chaired by Mark Gustlin  
Farhad Shafai volunteered to be recording secretary.

The Chair set the agenda for the meeting.

The Patent Policy slides were reviewed. The chair provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) that the participant believes may be essential for the use of that standard. No one came forward.

Comment review

Meeting break at 10:30am  
Meeting reconvened at 10:50am

Comment review

Meeting break at 12:05pm  
Meeting reconvened at 1:30pm

Comment review

Meeting break at 3:05pm  
Meeting reconvened at approximately 3:20pm

Comment review

Logic sub-task force adjourned at 5:00pm

## Minutes from 802.3ba Copper Sub Task Force

Meeting called to order at 9:00, September 22, 2009, by Chris Di Minico, sub task force Chair

Everyone introduced themselves and stated their affiliation.

The Chair recaps the progress from yesterday's joint session.

**Opening Information:** Chair went through his introductory presentation.

- David Chalupsky was appointed recording secretary.
- Chair reviewed the ground rules.
- 10:56am: Chair read aloud the Patent Policy and made a call for patents. No response to call for patents.
- Chair reviewed the agenda for the sub task force and goals for the meeting. Chair makes a schedule announcement that we will break for dinner relatively early (~5:30-6:30pm) to allow time for continued work after dinner.
- 136 total comments to be resolved against the Copper Track clauses. 107 T/TR/ER to be reviewed in the meeting.

Chair reports status of key items to be resolved for Clause 85:

- Alignment of insertion loss equations of electrical channels (85-14) and (86A-19).
- Alignment of transmit and receive PCB insertion losses in 85A and 86A.
- Alignment of test fixtures insertion losses in 85 and 86A.
- Refinements of interference tolerance test
- Channel insertion loss to crosstalk ratio

Chair reviews (in comment database) comments that were resolved yesterday in joint session (mostly comments against Clause 0 that applied to both CR and PPI)..

Comment 43: adoption of PPI test fixture for CI 85 – resolves many other comments.

10:18: Comment resolution continues with Clause 85.

10:55am Break.

11:06am: reconvene from break. Comment resolution continues.

Comment #2: Significant discussion on the need for pin-level keying of optics vs. passive cable in a QSFP or CXP socket. Using the pin is in conflict with QSFP (SFF-8436). Hosts will need to utilize I2C for module ID anyway, so using "electronic keying" to distinguish optics from cable is not an additional burden. Resolution is that our Table 85-12 (presence pins) will be deleted & note about electronic keying used instead.

12:21pm: break for lunch to reconvene at 1:30p

1:30pm: reconvene. Comment resolution continues with Clause 85.

On review of Comment 234 from Brian Misek, the Chair expresses regret that Brian could not be present at the meeting. "We miss you, Brian."

Significant time devoted to discussion on defining DDJ and other jitter issues.

3:06pm Break ; reconvened at 3:26pm. Comment resolution continues with Clause 85.

5:45pm: Chair calls for dinner break and announces the return time will be 6:45pm.

6:59pm: Meeting reconvenes with work on nAUI (83A/B) comments led by Ryan Lachman

All 83A/B comments have been addressed. There are a few related to HCB loss that will be reviewed again tomorrow for consistency with similar Clause 85 comments.

9:15pm: Copper Track breaks for the evening.

### **802.3ba Copper Sub Task Force, Wednesday, September 23, 2009**

Meeting called to order at 9:00, September 23, 2009, by Chris Di Minico, sub task force Chair

**Opening Information:** Chair went through his introductory presentation.

- Everyone introduced themselves and stated their affiliation.
- The Chair discusses his schedule plan for the day.
- Chair reviewed the ground rules.
- 9:10am: Chair displayed the Patent Policy and made a call for patents. No response to call for patents.

Comment resolution begins at 9:13am with Clause 85.

Related to comment #88, there is significant discussion over the use of linear vs. log scale for graphs. Each Clause 85 graph is reviewed and discussed by the sub-taskforce. All graphs indicated by this comment are changed to linear scale. (Applies to multiple comments.)

10:45am: Chair discusses coordination with Optical track for specific comments; will do this right after Break.

10:49am: Chair calls for break. To resume at 11:05am.

11:10am: reconvene from break.

### **Joint session with Optics track**

Joint session with Optics track to discuss Comment 113, related to mated test fixture losses.

Ali Ghiasi presents additional calculations related to the ghiasi\_01\_0909.pdf presentation given on Monday.

Discussion follows. Consensus on method: that frequency domain limit lines should be replaced with ICN for the mated test fixtures.

Straw poll on the need to maintain single disturber crosstalk spec:

Yes: 4

No: 5

Abstain: 16

No consensus to change, thus single disturber will stay in.

Result is that 85.10.10.3 is deleted and replaced with ICN RMS method & values for RMS NEXT, FEXT, MDNEXT, MDFEXT. See Comment 113.

12:03pm: break for lunch.

1:14pm – reconvene; comments resolution continues with Clause 85.

Related to comment 167: Chair displays material from diminico\_04\_0909.pdf for illustration.

3:00pm: Chair calls 15 minute break.

3:17pm: reconvene; Comment resolution resumes with Clause 85.

4:00pm: most Optical participants leave the room to resume their own track.

Note that the Chair is reviewing all comments, including Editorial, as it had been pointed out that some Editorial comments contain Technical content.

Related to Comment 175:

Straw Poll: do we want to change all Clause 85 equations to GHz: Yes: 4, No: 14.

Discussion: This is too invasive a change at this point. Although labeled an Editorial comment, adopting it would require rewriting many equations in the clause. Potential to revisit in Sponsor Ballot.

Comment withdrawn.

Now that the room is full, back of room cannot hear The Chair speaking.

4:47pm: brief interruption while a microphone is setup for the Chair.

Related to comment 172: Chair reviews healey\_03a\_0709.pdf, page 14, for diagram of link topology, test fixtures, and loss budgets. This diagram is modified in the room by the sub taskforce, to become the diagram that will be incorporated into draft to satisfy this comment. New diagram will be posted as diminico\_05\_0909.pdf.

5:35pm: Chair calls break for dinner, to reconvene at 6:30pm.

6:50pm: reconvene; comment resolution resumes with Clause 85.

9:12pm: Chairs calls for a break

9:25pm: reconvene; comment resolution resumes with Clause 85.

Related to comment 91, Charles Moore presents moore\_01\_0909.pdf as the basis for the receiver interference tolerance test. Extensive review & refinement ensues. Adopted reference to be posted in moore\_01a\_0909.pdf.

Related to comment 57, Adam Healey presents healey\_01\_0909.pdf as the basis for adopting ICN for the channel (since it has already been adopted for the cable assembly). Contribution accepted.

11:39pm: Copper track adjourned.

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### Minutes for Optical Sub-Task Force:

Optics Sub-Task Force convened at 9:00 AM on Tuesday, 9/22/09.

Meeting chaired by Pete Anslow

George Oulundsen volunteered to be recording secretary.

Pete Anslow (Optical Sub-Task Force Chair) reviewed the agenda (see anslow\_02\_0909.pdf) for the Optical Sub-Task Force. Primary objective is to resolve/review comments toward clauses 52, 86, 86A, 87 and 88.

Pete reviewed the IEEE Patent Policy and did a call for patents. There were none.

Pete also reviewed the rules for IEEE meetings and attendees. He reminded everyone to use the IEEE attendance tool to record your attendance for each day.

At 9:10 AM we began comment resolution.

After a review of comments related to CRU used for TDP measurement, Ali Ghiasi presented slides related to the topic.

#### Presentation

Title – Comment #126, 127, 128, 129: Synchronizing CRU BW and Jitter Tolerance for 100GBASELR4/ER4

By – Ali Ghiasi, Broadcom

See – ghiasi\_02\_0909.pdf

#### *Discussion*

- General discussion regarding the bandwidth used for the TDP measurement.

The Optical Sub-Task Force discussed comments related to the SRS test and Andre Szczepanek presented slides related to the topic.

#### Presentation

Title – Comments #46-49: Clause 87 Stressed Receiver Eye

By – Andre Szczepanek, Hsz Consulting / Inphi

See – szczepanek\_02\_0909.pdf

#### *Discussion*

- General discussion on how to do the SRS test.

The Optical Sub-Task Force continued comment resolution.

Break at 10:41 AM

Reconvened at 11:00 AM

The Optical Sub-Task Force continued comment resolution.

After reviewing comments related to de-emphasis the Optical Sub-Task Force reviewed a few presentations related to de-emphasis.

#### Presentation

Title – Comment#96, 131: SR4/SR10 TP2 Mask Failure Due to Over Emphasis

By – Ali Ghiasi, Broadcom

See – ghiasi\_03\_0909.pdf

#### *Discussion*

- General discussion on de-emphasis and over emphasis.

Break for lunch at 12:00 PM

Reconvened at 1:30 PM

The Optical Sub-Task Force continued comment resolution.

After resolving a few comments of an editorial nature, we continued the discussion we were having before lunch regarding de-emphasis.

#### Presentation

Title – Comment #131: TP1 J2 & J9 Constraints on DDJb

By – John Petrilla, Avago

See – petrilla\_01\_0909.pdf

#### *Discussion*

- General discussion on de-emphasis.

#### Presentation

Title – 850nm VCSEL TP2 Dependence From Host Emphasis

By – Jonathan King, Finisar on behalf of Marco Mazzini, Cisco

See – mazzini\_02\_0909.pdf

#### *Discussion*

- General discussion on de-emphasis.

The Optical Sub-Task Force continued comment resolution regarding crosstalk. A presentation was given yesterday (ghiasi\_01\_0909.pdf) on this topic during the Combined Tracks Resolution session (see anslow\_04\_0909.pdf).

Break at 3:00 PM

Reconvened at 3:20 PM

The Optical Sub-Task Force continued comment resolution.

Break at 5:50 PM

Reconvened at 9:00 AM on Wednesday, 9/23/09

The Optical Sub-Task Chair started the meeting (see anslow\_02\_0909.pdf) with a review of yesterday and noted that at some point we need to have some joint discussion and comment resolution with the Copper Sub-Task Force.

The Optical Sub-Task Chair reviewed the IEEE Patent Policy and did a call for patents. No one came forward with any known patents.

The Optical Sub-Task Chair reviewed the remaining comments that need resolution.

The Optical Sub-Task Force continued comment resolution.

Break at 10:22 AM



Reconvened at 10:45 AM

The Optical Sub-Task Force Chair and the Copper Sub-Task Force Chair decided to have a joint session to discuss common comments that need resolution (e.g. HCB-MCB mated loss) at 11:05 AM. The Optical Sub-Task Force will break and join the Copper Sub-Task Force at 11:05 AM.

Break at 10:55 AM

Reconvened with the Copper Sub-Task Force at 11:05 AM

Chris DiMinico, Chair of the Copper Sub-Task Force, chaired the joint session of the Optical and Copper Sub-Task groups.

The two sub-task groups continued comment resolution.

The joint Optical and Copper Sub-Task Force groups break at 12:00 PM for lunch.

The joint Optical and Copper Sub-Task Force groups reconvened at 1:05 PM

See Cu Sub-Task Force minutes for joint sub-task force meeting

The Optical Sub-Task Force reconvened at 4:05 PM.

The Optical Sub-Task Force continued comment resolution taking into account the discussions and resolutions during the joint Optical Sub-Task Force and Copper Sub-Task Force session.

The Optical Sub-Task Force adjourned at 4:40 PM

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The entire 802.3ba Task Force reconvened at 9:10 AM on 9/24/09

The Chair reminded everyone to speak now if they have issues with any of the resolutions to comments.

The Chair presented the IEEE Patent Policy and did a call for patents. No one came forward with any patents.

The meeting was Co-Chaired by the Chief Editor and the Sub-Task Force Chairs - Ilango Ganga, Mark Gustlin, Pete Anslow, and Chris DiMinico, respectively.

Pete Anslow led the comment resolution.

Break at 10:42 AM

Reconvene at 11:06 AM

Comment resolution continues.

At 11:30 AM the comment resolution finished and we continued with the closing reports.

### Presentation

Title – Logic SubTask Force - Closing Report

By – Mark Gustlin, Cisco

See – gustlin\_03\_0909.pdf

*Discussion - none*

### Presentation

Title – Copper SubTask Force - Closing Report

By – Chris DiMinico, MC Communications

See – diminico\_04\_0909.pdf

*Discussion - none*

### Presentation

Title – Optical SubTask Force - Closing Report

By – Pete Anslow, Nortel

See – anslow\_04\_0909.pdf

*Discussion - none*

### Presentation

Title – Chief Editor's Closing Report

By – Ilango Ganga, Intel

See – ganga\_04\_0909.pdf

*Discussion*

- The Chair described how to become a voting member of the sponsor ballot.
- There was some discussion as to when we can and can not make changes before going to sponsor ballot.

### **Motion #1:** Move that the Task Force:

- Accept comment resolutions from D2.2 as recorded in the comment database.
- Directs the IEEE P802.3ba editorial team to generate Draft 2.3, based on Draft 2.2 and the resolution of comments against Draft 2.2.
- Request Working Group Chair to Conduct an IEEE 802.3 WG recirculation ballot for P802.3ba/D2.3.

Moved by Ilango Ganga; Seconded by Mark Gustlin

Technical ( $\geq 75\%$ )

All in the room:

Yes: 37

No: 0

Abstain: 0

- **Motion Passes**

## Future Meetings:

Future Meeting information at:

- <http://ieee802.org/3/interims/index.html>

Nov 2009 IEEE 802 Plenary

- Nov 15 – 20
- Hyatt Regency Atlanta
- Atlanta, GA, USA

Jan 2010 IEEE 802.3 Interim

- To be announced

March 2010 IEEE 802 Plenary

- March 14 - 19
- Caribe Royale Orlando All Suites Resort and Convention Center
- Orlando, FL, USA

Motion to adjourn moved by Hugh Barrass and seconded by Steve Trowbridge;  
Motion passes by voice vote without opposition

Meeting adjourned at 12:00 PM on September 24, 2009.

Attendee List for IEEE 802.3ba Interim Meeting held September 21 – September 24, 2009  
according to the 802.3ba Task Force attendance sheets/books:

IEEE 802.3ba Attendance Sheet - Interim Meeting, Sept. 21-24, 2009, Chicago, IL				9/21	9/22	9/23	9/24
Last Name	First Name	Employer	Affiliation	Mon	Tues	Weds	Thurs
Abbas	Ghani	Ericsson, UK	Ericsson, UK	X	X	X	X
Anderson	Jon	Opnext	Opnext	X	X	X	X
Anslow	Pete	Nortel	Nortel	X	X	X	X
Balasubramanian	Vittal	FCI	FCI	X	X	X	
Barrass	Hugh	Cisco	Cisco	X			X
Bernstein	Gary	Leviton	Leviton	X	X	X	
Booth	Brad	AMCC	AMCC	X	X	X	X
Braun	Ralf-Peter	Deutsche Telekom	Deutsche Telekom	X	X	X	X
Brown	Matt	AMCC	AMCC	X			
Budd	Lloyd	Nexans	Nexans	X		X	X
Chalupsky	David	Intel	Intel	X	X	X	X
D'Ambrosia	John	Force 10 Networks	Force 10 Networks	X	X	X	X
DiMinico	Christopher	MC Communications/LEONI	MC Communications/LEONI	X	X	X	X
Dudek	Mike	Qlogic	Qlogic	X	X	X	X
Dupuis	Mark	Madison Cable	Madison Cable		X	X	
Flatman	Alan	LAN Technologies	LAN Technologies	X	X	X	X
Fromm	Galen	Molex	Molex	X	X	X	X

Ganga	Ilango	Intel	Intel	X	X	X	X
Ghiasi	Ali	Broadcom	Broadcom	X	X	X	X
Goergen	Joel	Force 10 Networks	Force 10 Networks		X	X	X
Green	Larry	Ixia	Ixia	X	X	X	X
Gustlin	Mark	Cisco	Cisco	X	X	X	X
Healey	Adam	LSI	LSI	X		X	X
Ho	Francis	Inphi	Inphi		X	X	X
Jiang	Qiaofeng	Nokia Siemens Network	Nokia Siemens Network	X	X	X	X
King	Jonathan	Finisar Corp.	Finisar Corp.	X	X	X	X
Kipp	Scott	Brocade	Brocade	X	X	X	X
Latchman	Ryan	Gennum	Gennum	X	X	X	X
Law	David	3Com	3Com	X			
Li	Mike	Altera	Altera	X	X	X	X
Maki	Jeffery	Juniper Networks	Juniper Networks	X	X	X	
Mariotti	Carlo	Cisco	Cisco	X	X	X	X
McClay	Phil	Zarlink Semiconductor	Zarlink Semiconductor	X	X	X	X
McGrath	Jim	Cinch Connectors	Cinch Connectors	X	X	X	X
McSorley	Greg	Amphenol	Amphenol	X	X	X	
Moeller	Merrick	Cinch Connectors	Cinch Connectors	X	X	X	X
Moore	Charles	Avago Technologies	Avago Technologies	X	X	X	X
Neer	Jay	Molex	Molex	X	X	X	X
Nicholl	Gary	Cisco	Cisco	X	X		X
Noh	George	Vitesse Semiconductors	Vitesse Semiconductors	X	X	X	X
Ofelt	David	Juniper Networks	Juniper Networks	X	X		X
Oganessyan	Gourgen	Intersil	Intersil	X	X	X	
Ojha	Raj	GigFire Microsystems	GigFire Microsystems	X	X	X	
Oulundsen	George	OFS	OFS	X	X	X	X
Palkert	Tom	Xilinx, Luxtera	Xilinx, Luxtera		X	X	X
Petrilla	John	Avago Technologies	Avago Technologies	X	X	X	X
Pimpinella	Rick	Panduit Corp.	Panduit Corp.	X	X		
Ressl	Mike	Hitachi Cable America	Hitachi Cable America	X	X	X	X
Sambasivan	Sam	AT&T	AT&T	X	X	X	X
Searles	Shawn	Advanced Micro Devices	Advanced Micro Devices		X	X	X
Sela	Oren	Mellanox Technology LTD	Mellanox Technology LTD	X	X	X	X
Serbay	Murat	MergeOptics	MergeOptics	X	X	X	X
Shafai	Farhard	Sarance	Sarance	X	X	X	X
Sharma	Atul	Volex	Volex	X	X	X	
Sparrowhawk	Bryan	Leviton	Leviton	X	X	X	X
Swanson	Steve	Corning	Corning	X	X	X	X
Szczepanek	Andre	HSZ Consulting LTD	Inphi Corp	X	X	X	X
Thiagarajan	Sashi	Ciena	Ciena	X	X	X	
Tracy	Nathan	Tyco Electronics	Tyco Electronics	X	X	X	
Trowbridge	Steve	Alcatel-Lucent	Alcatel-Lucent	X	X	X	X
Vaden	Sterling	SMP	SMP	X	X	X	X

Vrba	Matt	Tellabs	Tellabs	X	X		
Wu	Song	Xilinx	Xilinx	X	X	X	
Young	George	AT&T	AT&T	X	X		X