

Approved Minutes  
IEEE P802.3ap - Backplane Ethernet  
Interim - November 13-14, 2005  
Plenary, November 15 – 17, 2005  
Vancouver, BC

Prepared by  
John D'Ambrosia

Meeting convened at 1:05 pm, November 13, 2005

Agenda / Housekeeping Issues

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- Introductions
- Interim Agenda (agenda\_01\_1105)
  - Approved without objection
- Review of Minutes from September meeting
  - Corrections –
    - Per John D'Ambrosia – “Editor’s report file name incorrect – should be “vandoorn\_01\_0905.pdf”
  - Motion to approve minutes from September meeting with correction noted by John D'Ambrosia
    - Moved by Schelto Van Doorn
    - Seconded by Charles Moore
    - Minutes were Approved by voice vote without objection
- Goals for meeting
  - Respond to comments against IEEE 802.3ap Draft 2.0
  - Approve generation and recirculation of Draft 2.1
- Taskforce rules read to the body by Chair
- IEEE Patent policy read to the body by Chair
- Inappropriate Topics for IEEE meetings read to the body by Chair
- IEEE Project Flow Discussed
- Project Details
  - Approved PAR - <http://standards.ieee.org/board/nes/projects/802-3ap.pdf>
  - 5 Criteria - [http://ieee802.org/3/ap/802\\_3\\_ap\\_5criteria.pdf](http://ieee802.org/3/ap/802_3_ap_5criteria.pdf)
  - Objectives - [http://ieee802.org/3/ap/802\\_3\\_ap\\_objectives.pdf](http://ieee802.org/3/ap/802_3_ap_objectives.pdf)
- Project schedule discussed
  - See agenda\_1\_1105 for Project Timeline

Comment Resolution

Meeting Break at 3:00pm

Meeting Reconvened at 3:22pm

Meeting break for day 5:30pm

Meeting reconvened at 8:35am, Monday, November 14.

Comment resolution continued

Motion to adjourn the interim session.

- Moved by Hugh Barrass
- Seconded by Rich Mellitz
- Motion approved by voice vote without objection

Interim Meeting ended at 10:37am.

Plenary Meeting convened at 8:35am, November 15, 2005

Comment resolution continued

Introductions

Agenda – comment resolution

Motion to add presentations from

Szczepanek – “FEC / CRC-8 Discussion”

Valliappan – “Analysis of FEC Proposal for Backplane Ethernet”

Approved without objection

Motion to approve agenda

Moved Charles Moore

Second – Joel Goergen

Approved by voice vote without objection

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  - Objectives - [http://ieee802.org/3/ap/802\\_3\\_ap\\_objectives.pdf](http://ieee802.org/3/ap/802_3_ap_objectives.pdf)
- Project schedule discussed

- See agenda\_1\_1105 for Project Timeline
- Proposed Interim – Feb 2 - 3

#### Presentation #1

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Title – Editor's Report  
By – Schelto van Doorn  
See – vandoorn\_01\_1105.pdf

#### Comment Resolution

#### Presentation #2

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Title – The Effect of DFE Error Propagation  
By – Cathy Liu  
See – liu\_01\_1105.pdf

#### Discussion

- Optimization of tap coefficients should take error propagation and BER into consideration.
- It does not appear that the inclusion of FEC can make lower performing channels perform acceptably.

#### Presentation #3

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Title – Update on FEC Proposal for 10GbE Backplane Ethernet  
By – Ilango Ganga  
See – ganga\_02\_1105.pdf  
Proposed verbiage is provided in ganga\_01\_1105.pdf

#### Discussion

- Differences in CDR impairments may impact comparison of results to liu\_01\_1105.
- Discussion regarding whether latency and whether it was acceptable for backplane applications.
  - If put into specification, we will need to have a cap value
- Discussion regarding implementations of proposal.

Meeting Break at 10:30am

Meeting reconvened at 10:48am

#### Presentation #4

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Title – Analysis of FEC Proposal for Backplane Ethernet  
By – Magesh Valliappan  
See – valliappan\_01\_1105.pdf

#### Discussion

- Discussion regarding FEC.
  - Use of FEC during Interference Tolerance Testing
    - If FEC is an option it needs to be turned off.
  - Use of FEC should be anticipated as pulling “bad” channels away from the edge. Question regarding what defines a “bad” channel.

- General consensus is that because FEC would be optional, it should not relax any of the constraints on the Tx, Rx, or channel.

Comment Resolution

Ilango Ganga volunteers to be editor for Clause XX if FEC is approved to be included.

Presentation #5

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Title – 802.3ap MTTFPA Calculations  
 By – Andre Szczepanek  
 See – szczepanek\_01\_1105.pdf

Discussion

- Does this motion clearly define that its implementation and use is optional? It is implied by ganga\_01\_1105.

**Motion #1** General Session Motion  
**Description** Move to adopt ganga\_01\_1105, as an optional FEC sublayer, with provisions that Tx / Rx testing is done with FEC off, and that the channel model (Clause 69.3) will not be altered to account for the use of FEC.  
**Type** Technical, 75% or greater required  
**Moved by** Pat Thaler  
**Seconded by** Ilango Ganga  
**Results** All Yes - 25 No - 0 Abstain - 9  
 802.3 Yes - 19 No - 0 Abstain - 6  
**P/F** **Motion Passes**

Meeting break at 2:30pm  
 Meeting reconvened at 2:50pm

Straw Poll

Preferred Way of testing for sensitivity to Transmit equalization resolution

- Option A - Two tests with offset equalization
- Option B – A minimum equalization step size
- Option C – no transmitter sensitivity resolution testing

Chicago Rules Apply

- Option A - 1
- Option B - 9
- Option C – 13

Straw Poll

- Yes / No on Option C
- Yes - 14
- No – 3

Updated text – see moore\_03\_1105.pdf

Discussion Regarding moore\_03\_1105.pdf

- Note - The BREIT test specifications were generated under different assumptions for the transmitter configuration, and will need to be re-evaluated.

**Motion #2**

See Comment #391 response

Presentation #6

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Title – Proposed changes to 802.3ap spec in response to comments: 259, 261, 262(?), 578, 627, 299,576, 121  
By – Charles Moore  
See – moore\_02\_1105.doc

Discussion

- See moore\_03\_1105.doc

**Motion #3**

See Comment #259 response.

Meeting break for day at 5:43pm

Meeting Reconvened at 8:37am, Wednesday, November 16, 2005

Chair asked room if there was any need to see Charles Moore' Channel Ad Hoc Update presentation. It was agreed by all that it was not necessary.

Comment Resolution Continued

Presentation #7

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Title – Simulation Methodology and Data to Verify RX Interference Tolerance  
By – Xiao Ming Gao  
Presented - Rich Mellitz  
See – gao\_01\_1105

Discussion

- Needs to be put in draft that real aggressors from test channels can not be used for receiver testing, as it is not representative of the coupling of the interference mechanism used in the actual test.
- Concern expressed regarding understanding correlation between generated interference in EIT test and crosstalk
- Charles Moore agreed to submit EIT test channel data to the Task Force for further use.
- See moore\_c1\_1105 for initial data of relationship between EIT and crosstalk.

Discussion regarding Comment #137

- Commenter intended that the spirit of this comment was to mean a “successful real world device implementation tested per Annex 69A.

## Presentation #8

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Title – Simulation Methodology and Data to Verify RX Interference Tolerance  
By – Charles Moore  
See – moore\_c1\_1105

### Discussion

- Mellitz / Gao presentation suggested that we need to go back and review this, and did not suggest changing it.
- The Tx in the test set up was optimized for the channel and the receiver
- An Agilent 81134 PRBS generator was used to generate the crosstalk
- Concern expressed regarding conclusions as they relate to ICR values since the 81134 used to generate crosstalk does not use the same transmit characteristics as the transmitter of the victim, which was the conditions of the simulations that drove the informative channel models.

### Discussion regarding Comment #105

- Equations will not reflect PWB material characteristics if Amax equation is just scaled.
- Options B & C presented in Straw Poll could impact complete channel model and would force all aspects to be re-evaluated.

Meeting break at 10:00am

Meeting re-convened at 10:20am

Ali Ghiasi presented test data for 10GBASE-KR transmit test fixture

Meeting break for lunch at 12:09pm.

Meeting reconvened at 1:45pm

Comment Resolution continued

**Motion #4** General Session Motion

**Description** Move that:

- The Task Force grant editorial license to the P802.3ap editors to respond to unresolved editorial comments on D2.0
- Draft 2.0 and the resolution of comments against Draft 2.0 be used as the basis for the generation of Draft 2.1
- The Task Force recirculate Draft 2.1

**Type** Technical, 75% or greater required

**Moved by** Charles Moore

**Seconded by** Andre Szczepanek

**Results** All Yes - 22 No - 0 Abstain - 2

**P/F** **Motion Passes**

Next Interim Meeting – Week of Jan 9

An additional Interim Meeting is to be held Feb. 2/3. Location is likely to be Southern Ca.  
Details to be announced.

Motion to adjourn.

Moved by Schelto van Doorn

Seconded by Rich Mellitz

Motion Passes

Meeting adjourned @ 2:30PM

### Attendees

Joe	Abler		Richard	Mellitz
Don	Alderru		Charles	Moore
Jim	Barnette		Wayne	Mueller
Hugh	Barrass		Gourgen	Oganessyan
Howard	Baumer		Mike	Oltmanns
Brad	Booth		Tom	Palkert
Matt	Brown		Velu	Pillai
Brian	Brunn		Tim	Plunkett
David	Chalupsky		Petre	Popescu
Keith	Conroy		Prakash	Radhakrishnan
Alex	Conta		Maurice	Reintjec
John	D'Ambrosia		Shannon	Sawyer
Chris	Dominico		Ras	Savara
Adrian	Early		k	Seto
Wei	Fu		Gopi	Sirineni
Ilango	Ganga		Myoung Kyu	Sohn
Xiao-Ming	Gao		Andre	Szczepanek
Ali	Ghiasi		Pat	Thaler
Joel	Goergen		Hidehiro	Toyoda
Tom	Gray		Asis	Unkkopadlyy? (TXCC)
Bob	Grow		Gottfried	Ungerboeck
Ziad	Halab		Magesh	Valliappan
Adam	Healey		Schelto	van Doorn
Sammy	Hindi		Brian	Von Herzen
Tatsuya	Kawashimo			
Myles	Kimmitt			
David	Koenen			
Jeff	Lapak			
David	Law			
Worayot	Lertniphorphun			
Cathy	Liu			
Arthur	Marris			
Amir	Mezer			