

# Electrical Interface Ad-hoc Meeting

- Opening/Agenda/Work-items

IEEE P802.3bs 400Gb/s Ethernet Task Force  
22<sup>nd</sup> February 2016

# Opening

- The charter of the Electrical Interface Ad hoc is:
  - Address all issues in relation to the electrical interfaces to ensure progress towards a technically complete draft.
    - *Identify issues or omissions in the draft*
    - *Find consensus now, rather than in comment resolution.*
- Next Ad-hoc Meeting
  - Monday 29<sup>th</sup> February
- Attendees names and affiliations will be taken from the Webex participants list.
  - Please use an e-mail address indicating affiliation when signing in. If you attend via phone only, or if your employer and affiliation are different, please send me an e-mail.

# Patent Policy

- <http://www.ieee802.org/3/patent.html>

# Agenda

Ad-hoc Opening/Agenda	Andre Szczepanek	szczepanek_01_022216_elect
Electrical Ad Hoc Work-Items	Andre Szczepanek	szczepanek_01_022216_elect
R_LM and SNDR proposal	Rajmohan Hegde	hegde_01_022216_elect

# Agenda & Minutes

- Any objections to the Agenda ?
- Any objections to the minutes from the last meeting ?
  - [http://www.ieee802.org/3/bs/public/adhoc/elect/08Feb\\_16/minutes\\_draft\\_08-Feb\\_2016\\_elect.pdf](http://www.ieee802.org/3/bs/public/adhoc/elect/08Feb_16/minutes_draft_08-Feb_2016_elect.pdf)

# Electrical Ad Hoc Work-Items

# Magenta text – 120D (C2C)

- These Magentas received no comments on Draft 1.1
  - The editor will enter comments on D1.2 to turn them black
    - “electrical interconnect of approximately 25 cm in length”
    - COM parameter table values
      - $C_d$  ,  $C_b$
      - $g_{DC}$
      - $F_{z1}$  ,  $F_{z2}$
      - $F_{p1}$  ,  $F_{p2}$
      - $R_{LM}$
      - $N_b$
      - $\eta_o$

# TBD's and magenta text – 120E (C2M)

- The following Magentas and TBDs received no comments on Draft 1.1
  - The editor will enter comments on D1.2 to turn these black
    - The crosstalk generator is calibrated at TP4 with target differential peak-to-peak amplitude of 900 mV and target transition time of 12 ps.
    - Table 120E-3: *ESMW 0.25 UI*
    - The counter propagating crosstalk channels during calibration of the stressed signal are asynchronous with target amplitude of 900 mV peak-to-peak differential and 20% to 80% target transition time of 12 ps
  - The editor intends to enter a comment on D1.2 to turn this TBD to black 12 ps
    - The target pattern generator 20% to 80% transition time in the module stressed input test is TBD ps.



# Magenta text – 120E (C2M)

## ■ Other Magentas

- 120E.3.3.2: *“Even-odd jitter shall be less than or equal to TBD UI regardless of the transmit equalization setting.”*
  - *This TBD is unnecessary here as the Even-Odd jitter value is defined in Tables 120E-6 & 120E-9.*
  - *The editor will enter a comment to change this sentence to :*
    - *“The Even-odd jitter specification shall be met regardless of the transmit equalization setting.”*
- Table 120E-5/120E-8: *“Applied pk-pk sinusoidal jitter Table 88-13”*
  - *This magenta depends on the “Additional Jitter tolerance measurement frequencies” work-item*
  - *The editor will enter a comment to make this black if no alternative frequencies are adopted*

## *Table 120E-6; Table 120E-9 Pattern generator characteristics TBDs*

*The editor will enter a comment to make the following changes :*

- Remove Tables 120E–6, & 120E–9
- Change
  - “Random jitter and bounded uncorrelated jitter are added such that the output of the pattern generator approximates a jitter profile given in Table 120E–6”
  - To: “Random jitter and bounded uncorrelated jitter are added such that the output of the pattern generator approximates the CDAUI-8 C2C Output jitter profile given in Table 120D–1”
- Change
  - “Random jitter and bounded uncorrelated jitter are added such that the output of the pattern generator approximates a jitter profile given in Table 120E–9”
  - To: “Random jitter and bounded uncorrelated jitter are added such that the output of the pattern generator approximates the CDAUI-8 C2C Output jitter profile given in Table 120D–1”

# TBDs deferred by comment resolution

- Additional Jitter tolerance measurement frequencies
  - Still awaiting further presentations/proposals on this subject
- **CRU Bandwidth** : Has associated magenta text in 120E, but also affects other clauses
  - Given no consensus on a global change should the editor enter a comment to change “10MHz” to “10Mhz” in Annex 120E ?

# Issues deferred by comment resolution

- $R_{LM}$  measurement method
- $SNR_{TX}/SNDR$  values
- Allow for use of a module transmitter TXFIR in eye measurement method
- Improvements to 120D (C2C) output Jitter measurement methodology

# Backup

# Participants, Patents, and Duty to Inform

All participants in this meeting have certain obligations under the IEEE-SA Patent Policy.

- **Participants [Note: Quoted text excerpted from IEEE-SA Standards Board Bylaws subclause 6.2]:**
  - **“Shall inform the IEEE (or cause the IEEE to be informed)” of the identity of each “holder of any potential Essential Patent Claims of which they are personally aware” if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents**
  - **“Should inform the IEEE (or cause the IEEE to be informed)” of the identity of “any other holders of potential Essential Patent Claims” (that is, third parties that are not affiliated with the participant, with the participant’s employer, or with anyone else that the participant is from or otherwise represents)**
- **The above does not apply if the patent claim is already the subject of an Accepted Letter of Assurance that applies to the proposed standard(s) under consideration by this group**
- **Early identification of holders of potential Essential Patent Claims is strongly encouraged**
- **No duty to perform a patent search**

# Patent Related Links

All participants should be familiar with their obligations under the IEEE-SA Policies & Procedures for standards development.

Patent Policy is stated in these sources:

IEEE-SA Standards Boards Bylaws

*<http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6>*

IEEE-SA Standards Board Operations Manual

*<http://standards.ieee.org/develop/policies/opman/sect6.html#6.3>*

Material about the patent policy is available at

*<http://standards.ieee.org/about/sasb/patcom/materials.html>*

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at [patcom@ieee.org](mailto:patcom@ieee.org) or visit <http://standards.ieee.org/about/sasb/patcom/index.html>

This slide set is available at  
<https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.ppt>

# Call for Potentially Essential Patents

- If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:
  - Either speak up now or
  - Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible or
  - Cause an LOA to be submitted