

# Electrical Interface Ad-hoc Meeting

- Opening/Agenda/Work-items

IEEE P802.3bs 200 & 400 Gb/s Ethernet Task Force  
27<sup>th</sup> February 2017

# Opening

- The charter of the Electrical Interface Ad hoc is:
  - Address all issues in relation to the electrical interfaces to ensure progress towards a final draft.
    - *Identify issues or omissions in the draft*
    - *Find consensus now, rather than in comment resolution.*
- Next Ad-hoc Meeting
  - Monday 6<sup>th</sup> March
- 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>

# Participation in IEEE 802 Meetings

- All participation in IEEE 802 Working Group meetings is on an individual basis
  - *Participants in the IEEE standards development individual process shall act based on their qualifications and experience. ([https://standards.ieee.org/develop/policies/bylaws/sb\\_bylaws.pdf](https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf) section 5.2.1)*
  
- *IEEE 802 Working Group membership is by individual; “Working Group members shall participate in the consensus process in a manner consistent with their professional expert opinion as individuals, and not as organizational representatives”.*  
*([http://ieee802.org/PNP/approved/IEEE\\_802\\_WG\\_PandP\\_v19.pdf](http://ieee802.org/PNP/approved/IEEE_802_WG_PandP_v19.pdf) section 4.2.1)*
  - *You have an obligation to act and vote as an individual and not under the direction of any other individual or group. Your obligation to act and vote as an individual applies in all cases, regardless of any external commitments, agreements, contracts, or orders*
  - *You shall not direct the actions or votes of any other member of an IEEE 802 Working Group or retaliate against any other member for their actions or votes within IEEE 802 Working Group meetings, see [https://standards.ieee.org/develop/policies/bylaws/sb\\_bylaws.pdf](https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf) section 5.2.1.3 and [http://ieee802.org/PNP/approved/IEEE\\_802\\_WG\\_PandP\\_v19.pdf](http://ieee802.org/PNP/approved/IEEE_802_WG_PandP_v19.pdf) section 3.4.1, list item x*
  
- By participating in IEEE 802 meetings, you accept these requirements. If you do not agree to these policies then you shall not participate.

# Agenda

Ad-hoc Opening/Agenda D3.0 Comment review Straw poll results	Andre Szczepanek	szczepanek_01_022717_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/20Feb\\_17/minutes\\_draft\\_20-Feb\\_2017\\_elect.pdf](http://www.ieee802.org/3/bs/public/adhoc/elect/20Feb_17/minutes_draft_20-Feb_2017_elect.pdf)

## D3.0 Comment big-ticket items (1)

- Merge/restructure Jitter sub-clauses
  - **i-87**, i-157, i-63, i-32, & i-33
  - I propose “Grant editorial license to relocate and merge 120D.3.1.1 and 120D.3.1.8.” as response to all these comments

## D3.0 Comment big-ticket items (2)

### ■ Jitter measurement methodology

- **i-26**, i-86, i-114, i-115, i-116, i-68, & i-88
- I propose accepting i-26 remedy (as modified below) as response to these comments

Replace lines 43 to 50 with the following:

*For each transition  $i$ ,  $1 \leq i \leq 12$ , of the transitions specified in Table 120D-2, obtain a set  $S_i = \{t_i(1), t_i(2), \dots\}$  of transition times modulo the period of the pattern. The size of all sets should be chosen to enable calculation of  $J4$  (as defined below) with sufficient accuracy.*

*Calculate the average of each set  $S_i$ ,  $t_{i\_Avg}$ , and subtract it from all elements of that set, to create a set  $S_{i0} = \{t_i(1) - t_{i\_Avg}, t_i(2) - t_{i\_Avg}, \dots\}$ .*

*Combine the sets  $S_{i0}$ ,  $i=1$  to  $12$ , to create an estimated probability distribution  $f_J(t)$ .*

*$J4$  is defined as the time interval that includes all but  $10^{-4}$  of  $f_J(t)$ , from the 0.005th to the 99.995th percentile of  $f_J(t)$ .*

*$J\_RMS$  is defined as the standard deviation of  $f_J(t)$ .*



# Straw-man jitter sub-clause

- The editor is willing to create a prototype combined jitter sub-clause for presentation at the next ad-hoc meeting
  - Should this include the i-26 remedy ?

## D3.0 Comment big-ticket items (3)

- C2M margin with connector crosstalk
  - i-94, i-77, i-78, i-95, i-100, i-66, & i-124

# C2M Xtalk issue Straw Poll results

- Option A: Change 10.2 dB to 7.5 dB for current MDI crosstalk with CL120.d TX
- Option B: Reduce MDFEXT=2.8 mV and PSXT=2.9 mV and define an improved CL120.d TX to support 10.2 dB
- Option C: Reduce C2M channel loss to 7.5 dB and leave the current crosstalk limit of CL 92, then add an informative section on engineered link implementation to support up to 10.2 dB using COM analysis.
- Option D (not in Ali's presentation): Reduce MDFEXT=2.8 mV and PSXT=2.9 mV and define a reduced receiver Vertical Eye Opening to support 10.2 dB
  
- 12 responses received
  - Option A : 0
  - Option B : 1
  - Option C : 2
  - Option D : 6
  - B & D : 1
  - B or D : 1
  
- None of the above : 1

# 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