

Agenda and General Information

IEEE 802.3

IEEE P802.3ch MultiGigabit Automotive Ethernet
PHY Task Force Ad Hoc

George Zimmerman (Ad Hoc Chair)

CME Consulting

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MultiGigabit Automotive Ethernet PHY TF Ad Hoc Communications

- Now a Task Force...
- The web page and reflector are up.
- The SG ad hoc area files are posted at:
 - <http://www.ieee802.org/3/NGAUTO/public/adhoc/index.html>
- The TF ad hoc area files are posted at:
 - <http://www.ieee802.org/3/ch/public/adhoc/index.html>
- Reflector instructions are at:
 - <http://www.ieee802.org/3/NGAUTO/reflector.html>

Attendance

- Attendee names and affiliations for these ad hoc meetings will be taken from the Webex participants list.
- Please ensure that your full name and employer/affiliation are indicated correctly.
- If the Webex participants list does not correctly indicate your name and employer/affiliation, please send an e-mail to the TF and/or AdHoc chair.

Ground Rules

- Based upon IEEE 802.3 Rules
 - Foundation based upon Robert's Rules of Order
 - Anyone in the room may speak
 - Anyone in the room may vote
- **RESPECT**... give it, get it
- NO product pitches
- NO corporate pitches
- NO prices!!!
 - This includes costs, ASPs, etc. no matter what the currency
- NO restrictive notices

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 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”. (subclause 4.2.1 “Establishment”, of the IEEE 802 LMSC Working Group Policies and Procedures)**
- **Participants have an obligation to act and vote as an individual and not under the direction of any other individual or group. A Participant’s obligation to act and vote as an individual applies in all cases, regardless of any external commitments, agreements, contracts, or orders.**
- **Participants 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 section 5.2.1.3 and the IEEE 802 LMSC Working Group Policies and Procedures, subclause 3.4.1 “Chair”, 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.

(Latest revision of IEEE 802 LMSC Working Group Policies and Procedures: <http://www.ieee802.org/devdocs.shtml>)

Important Bylaws and Rules

- **IEEE-SA Operations Manual**
http://standards.ieee.org/develop/policies/sa_opman/
- **IEEE-SA Standards Board Bylaws**
<http://standards.ieee.org/develop/policies/bylaws/>
- **IEEE-SA Standards Board Operations Manual**
<http://standards.ieee.org/develop/policies/opman/>
- **IEEE 802 LAN/MAN Standards Committee (LMSC) Policies and Procedures**
<http://standards.ieee.org/about/sasb/audcom/pnp/LMSC.pdf>
- **IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual**
<http://www.ieee802.org/devdocs.shtml>
- **IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures**
<http://www.ieee802.org/devdocs.shtml>
- **IEEE 802.3 Working Group Operating Rules**
http://ieee802.org/3/rules/P802_3_rules.pdf

Instructions for the WG Chair

The IEEE-SA strongly recommends that at each WG meeting the chair or a designee:

- **Show slides #1 through #4 of this presentation**
- **Advise the WG attendees that:**
 - The IEEE's patent policy 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 strongly 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.
- **Instruct the WG Secretary to record in the minutes of the relevant WG meeting:**
 - That the foregoing information was provided and that slides 1 through 4 (and this slide 0, if applicable) were shown;
 - That the chair or designee 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) of which the participant is personally aware and that may be essential for the use of that standard
 - Any responses that were given, specifically the patent claim(s)/patent application claim(s) and/or the holder of the patent claim(s)/patent application claim(s) that were identified (if any) and by whom.
- The WG Chair shall ensure that a request is made to any identified holders of potential essential patent claim(s) to complete and submit a Letter of Assurance.
- It is recommended that the WG chair review the guidance in *IEEE-SA Standards Board Operations Manual* 6.3.5 and in FAQs 14 and 15 on inclusion of potential Essential Patent Claims by incorporation or by reference.

Note: **WG** includes Working Groups, Task Groups, and other standards-developing committees with a PAR approved by the IEEE-SA Standards Board.

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 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

Other Guidelines for IEEE WG Meetings

- **All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.**
 - **Don't discuss the interpretation, validity, or essentiality of patents/patent claims.**
 - **Don't discuss specific license rates, terms, or conditions.**
 - Relative costs, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings.
 - Technical considerations remain primary focus
 - **Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.**
 - **Don't discuss the status or substance of ongoing or threatened litigation.**
 - **Don't be silent if inappropriate topics are discussed ... do formally object.**

See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and “Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association’s Antitrust and Competition Policy” for more details.

OBJECTIVES! (1 of 2)

http://www.ieee802.org/3/NGAUTO/0317_approved_objectives_3NGAUTO.pdf

- Preserve the IEEE 802.3/Ethernet frame format at the MAC client service interface
- Preserve minimum and maximum frame size of the current IEEE 802.3 standard
- Support full duplex operation only.
- Define optional startup procedure which enables the time from power_on=FALSE to a state capable of transmitting and receiving valid data to be less than 100ms
- Support data rates of 2.5 Gb/s, 5 Gb/s and 10 Gb/s at the MAC/PLS service interface.
- Support a BER better than or equal to 10^{-12} at the MAC/PLS service interface (or the frame loss ratio equivalent)
- Support optional Auto-Negotiation
- Support optional Energy Efficient Ethernet
- Support operation in automotive environments (e.g., EMC, temperature)
- Do not preclude meeting FCC and CISPR EMC requirements.

OBJECTIVES! (2 of 2)

http://www.ieee802.org/3/NGAUTO/0317_approved_objectives_3NGAUTO.pdf

- Define the performance characteristics of an automotive link segment and an electrical PHY to support 2.5 Gb/s point-to-point operation over this link segment supporting up to four inline connectors for at least 15m on at least one type of automotive cabling (e.g., UTP, STQ, STP, SPP, Coax, or Twinax).
- Define the performance characteristics of an automotive link segment and an electrical PHY to support 5 Gb/s point-to-point operation over this link segment supporting up to four inline connectors for at least 15m on at least one type of automotive cabling.
- Define the performance characteristics of an automotive link segment and an electrical PHY to support 10 Gb/s point-to-point operation over this link segment supporting up to four inline connectors for at least 15m on at least one type of automotive cabling.
- Support optional Clause 104 power over data lines on appropriate media.

Presentations

| Title | Presenters(s) | Affiliation(s) | Approx Time |
|--|------------------------------------|--|--------------------|
| Agenda | George Zimmerman (ad hoc Chair) | CME Consulting/ADI, Aquantia, BMW, Cisco, Commscope, LTC | 7-7:15 |
| SG Chair's Comments | Steve Carlson (TF Chair) | High Speed Design and Robert Bosch GmbH | 7:20-7:30 |
| Link Segment Configuraion, Proposal for Testing | Mike Gardner & Harsh Patel | Molex, LLC | 7:30-7:50 |
| NGAUTO Sleep/ Wake-up Concept | Stefan Buntz | Daimler AG | 7:50-8:10 |
| Discussion & Next Steps | All | | -9:00 |

Future Meetings

- See: <http://www.ieee802.org/3/interims/index.html>
- Ad hoc meetings every 2 weeks, this time slot
- Next meeting Wed, June 28, 2017
 - 7-9am Pacific – see reflector for webex
- Please email presentation requests to ad hoc Chair by Monday (6/26) 8am Pacific
- July 2017 802.3 Plenary
 - Berlin, Germany
 - July 10-13, 2017

Thank You!