

# IEEE 802.3 Working Group Opening Plenary 10<sup>th</sup> July 2017

David Law  
Chair, IEEE 802.3 Working Group  
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Agenda, voter lists:  
<http://www.ieee802.org/3/minutes/jul17/index.html>

# IEEE 802.3 Officers

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IEEE 802.3 Chair: David Law <dlaw@hpe.com>

IEEE 802.3 Vice Chair: Adam Healey <adam.healey@broadcom.com>

IEEE 802.3 Secretary: Pete Anslow <panslow@ciena.com>

IEEE 802.3 Executive Secretary: Steve Carlson <scarlson@ieee.org>

IEEE 802.3 Treasurer: Valerie Maguire <valerie\_maguire@siemon.com>

## **IEEE 802.3 Task Force chairs**

IEEE P802.3bs 200 Gb/s and 400 Gb/s Ethernet: John D'Ambrosia <jdambrosia@ieee.org>

IEEE P802.3bt DTE Power via MDI over 4-Pair: Chad Jones <cmjones@cisco.com>

IEEE P802.3ca 25 Gb/s, 50 Gb/s, and 100 Gb/s EPON: Curtis Knittle <c.knittle@cablelabs.com>

IEEE P802.3cb 2.5 Gb/s and 5 Gb/s Backplane Cables: Dan Smith <daniel.f.smith@seagate.com>

IEEE P802.3cc 25 Gb/s Ethernet over Single-Mode Fiber: David Lewis <David.Lewis@lumentum.com>

IEEE P802.3cd 50 Gb/s, 100 Gb/s, and 200 Gb/s Ethernet: Mark Nowell <mnowell@cisco.com>

IEEE 802.3.2 (IEEE 802.3cf) YANG Data Model: Yan Zhuang <zhuangyan.zhuang@huawei.com>

IEEE P802.3cg 10 Mb/s Single Twisted Pair Ethernet: George Zimmerman <george@cmephyconsulting.com>

IEEE P802.3ch Multi-Gig Automotive Ethernet PHY: Steve Carlson <scarlson@ieee.org>

# WG Decorum

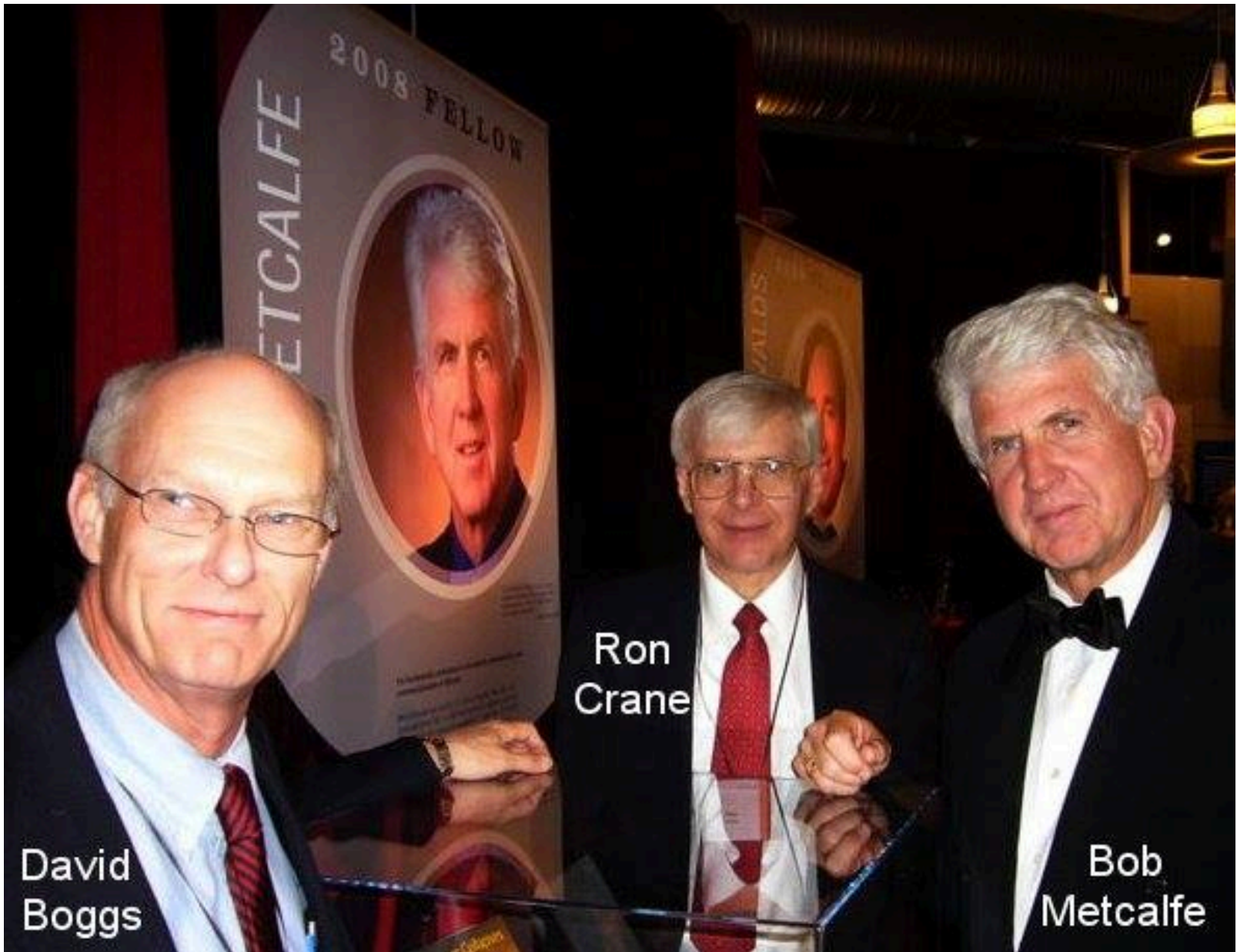
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- Photography or recording by permission only (December 2016 IEEE-SA Standards Board Ops Manual 5.3.3.2)
- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (December 2016 IEEE-SA Standards Board Ops Manual 5.3.3.3)
- Cell phone ringers off
- Wear your badges at all times in meeting areas
  - Help the hotel security staff improve the general security of the meeting rooms
  - **PCs HAVE BEEN STOLEN** at previous meetings
  - **DO NOT** assume that meeting areas are secure
- Please observe proper decorum in meetings

# Remembering Ron Crane





David Boggs

Ron Crane

Bob Metcalfe



# Agenda and Minutes

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- Approve agenda
  - <http://www.ieee802.org/3/minutes/jul17/>
  - Any modifications, additions or deletions?
- Approve March 2017 plenary meeting and May 2017 interim meeting minutes
  - <http://www.ieee802.org/3/minutes/mar17/>
    - Published 22<sup>nd</sup> March 2017
  - <http://www.ieee802.org/3/minutes/may17/>
    - Published 1<sup>st</sup> May 2017
  - Any corrections, modifications, additions?

# 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](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

# 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.**

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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.

# Important Bylaws and Rules

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- IEEE-SA Operations Manual
  - [http://standards.ieee.org/develop/policies/sa\\_opman/](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](http://ieee802.org/3/rules/P802_3_rules.pdf)

# Participation in IEEE 802 Meetings

**Participation in any IEEE 802 meeting (Sponsor, Sponsor subgroup, Working Group, Working Group subgroup, etc.) 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”. (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](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>)

# Interim meetings since March 2016

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- 4<sup>th</sup> May 2017 2017, Teleconference
  - IEEE P802.3cb interim meeting
- 22<sup>nd</sup> through 26<sup>th</sup> May 2017, New Orleans, LA, USA
  - IEEE 802.3 interim meeting series

# Membership and attendance recording

## Membership requirements

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- Membership requirements (gaining and retaining)
  - 75% attendance at 2 of last 4 plenary sessions
    - A qualifying interim may be substituted for one plenary
  - Request to become member during potential voter agenda item at IEEE 802.3 opening or closing plenary
  - Participate in **two** out of the last **three** IEEE 802.3 Working Group ballots to retaining membership
  - Maintain valid contact information
  - Consistent declaration of affiliation



# Membership and attendance recording Meeting attendance tool procedures

Pete Anslow

IEEE 802.3 Working Group Secretary

[panslow@ciena.com](mailto:panslow@ciena.com)

# Membership and attendance recording

## Meeting attendance tool procedures

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- The IEEE-SA Meeting Attendance Tool will be the basis of the official attendance record for this meeting: <http://imat.ieee.org>
- You need to login only once per meeting day
  - You are certifying that you are attending a "substantial" portion of that meeting day
- The server must be accessed from the meeting network
  - You will probably have to disconnect your VPN software
- Check that your affiliation (slide 24) and employer (slide 25) are correct per presentation below
- Full details of how to record attendance are available at the URL below (this link was e-mailed to all registered participants prior to the meeting):

[http://www.ieee802.org/3/minutes/nov16/1116\\_imat.pdf](http://www.ieee802.org/3/minutes/nov16/1116_imat.pdf)

# Membership and attendance recording

## Review of membership

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- IEEE 802.3 voters

[http://www.ieee802.org/3/minutes/jul17/0717\\_voters.pdf](http://www.ieee802.org/3/minutes/jul17/0717_voters.pdf)

- IEEE 802.3 voters in peril

[http://www.ieee802.org/3/minutes/jul17/0717\\_peril.pdf](http://www.ieee802.org/3/minutes/jul17/0717_peril.pdf)

- IEEE 802.3 potential voters

[http://www.ieee802.org/3/minutes/jul17/0717\\_potential.pdf](http://www.ieee802.org/3/minutes/jul17/0717_potential.pdf)

# IEEE 802.3 Ethernet Working Group Treasury Report

Valerie Maguire, IEEE 802.3 Treasurer  
The Siemon Company  
Berlin, Germany  
July 10, 2017

# IEEE 802.3 Ethernet Working Group Treasury Report, cont.

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- Account balance
  - Opening Mar 2017 balance: \$ 21,581.70
  - Deposits: (0.00)
  - Interest paid: \$30.64
  - Debits: (0.00)
  - Closing Jun 2017 balance: \$21,612.34

Questions?

Thank you!

# IEEE 802 Executive Committee report

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- 2017 Reserve Estimate
  - Beginning \$1.6M, end \$1.4M
    - Net worth decrease ~\$225K
- myProject Development update
  - Phase I: convert myProject from PERL
    - Greater effort required than anticipated
    - Completion not expected before 2018
  - Phase II: Feature Enhancement
    - To be incorporated into scheduled maintenance releases
  - Phase III: MENTOR and IMAT conversion from PERL
    - Not scheduled or budgeted at this time

# IEEE 802 Executive Committee report

## Cross-IEEE 802 topics

<b>Monday</b>	<b>Notes</b>
<b>18:00-19:20 Tutorial: Practical PoE</b>	ECC Room 1
<b>19:30-20:50 Tutorial Optical Wireless</b>	ECC Room 1
<b>21:00-22:30 Tutorial 802 Ethernet for Automotive</b>	ECC Room 1
<b>Tuesday</b>	
<b>13:30-15:30 802/JTC1 Standing Committee, Myles</b>	Room: 30441 4 <sup>th</sup> fl.
<b>13:30-15:30 802/IETF Standing Committee, Thaler</b>	not being held this week
<b>19:00-21:00 802.1 Industry Connections: Network Enhancements for the next decade</b>	Room: tbd
<b>Wednesday</b>	
<b>08:00-09:00 802/ITU Standing Committee, Parsons</b>	Room: 30241 2 <sup>nd</sup> fl.
<b>19:00-21:30 Social Reception</b>	Estrel Berlin Boat Dock
<b>Thursday</b>	
<b>07:30-08:00 Next Venue Logistics, Rosdahl</b>	Room: 30241 2 <sup>nd</sup> fl.
<b>08:00-09:00 Future Venues Ad Hoc, Rosdahl</b>	
<b>09:00-10:00 802 Chair's Open Office Hours, Nikolich</b>	
<b>13:30-15:30 802/JTC1 Standing Committee, Myles</b>	Room: 30441 4 <sup>th</sup> fl.



# IEEE 802 Executive Committee report

## Meeting for the week

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Sunday 19:30-21:30	LMSC Rules Review
Mon 08:00-10:00	Opening Executive Committee meeting
Tue 07:00-9:00	Open Source discussions          Parsons
Tue 13:30-15:30	802/JTC1/SC6          Standing Committee
Tue 13:30-15:30	<del>802/IETF</del> <del>Standing Committee</del>
Tue 16:00-18:00	
Wed 08:00-09:00	802/ITU          Standing Committee
Thu 07:30-08:00	Plenary venue space allocation planning
Thu 08:00-09:00	Future venue planning
Thu 09:00-10:00	802 Chair's Open Office hour
Thu 10:30-12:30pm	IEEE 802 Task Force
Thu 13:30-15:30	<del>802/JTC1/SC6</del> <del>Standing Committee</del>
Thu 16:00-18:00pm	open
Fri 08:00-10:00	open
Fri 10:00-12:00	closing EC agenda prep
Fri 13:00-18:00	closing Executive Committee meeting

# IEEE 802 Executive Committee report

## IEEE 802 Task Force draft agenda

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- 802 Task Force Thurs 10:30AM-12:30

### Tentative agenda

#### 1. Open portion of meeting:

1. IEEE SA staff update, 15 min, Goldberg
2. Any other business?
3. Action item review, 5 min, Nikolich

#### 2. Closed portion of meeting (as necessary):

1. (Time specific 11:30am) IEEE SA tools update/discussion, 15 min, Nikolich + SA staff on phone

#### 3. Adjourn

# IEEE 802 Tutorials

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- Session #1, Monday 18:00 – 19:20
- Practical PoE
  - The success of Base-T technology and PoE is largely due to the cost-effectiveness and plug-and-play simplicity of deploying over copper structured cabling. Recent revisions to the National Electric Code will effectively impose compliance requirements on IEEE PoE that will impact deployment of potentially billions of power managed ports by 2020.
  - The tutorial will offer an in depth analysis of the thermal and electrical characteristics of PoE deployment in a variety of high density bundled cabling configurations including wireless access points and digital lighting in comparison to laboratory results that were used as the basis for the NEC code revisions.
- Session #2, Monday 19:30 – 20:50
- An Overview on High-Speed Optical Wireless/Light Communications
  - The presentation provides an overview of current and past activities in 802.11 to understand the broad picture of what 802.11 does. It provides more detail in two areas: high efficiency and reduced power consumption. It also describes a new pre-project activity called “Light Communication”.

# IEEE 802 Tutorials (continued)

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- Session #3, Monday 21:00 – 22:30
- IEEE 802 Ethernet Networks for Automotive
  - IEEE 802.3 Ethernet networks are being introduced in automotive networks. 100 and 1000BASE-T1 are existing PHYs that are applicable in automotive. There is ongoing work on further PHYs, e.g., with 2.5, 5 and 10 Gb/s in P802.3ch. The applicability of the 10 Mb/s single-pair PHY is under study in P802.3cg. In addition, the IEEE 802.1 Working Group, in particular the Security and Time-Sensitive Networking (TSN) Task Groups are addressing the needs of automotive networks. Accurate timing and guaranteed data delivery are critical in the automotive environment. IEEE 802.1AS provides timing accuracy in the sub-microsecond range, which will be required as Ethernet usage grows within the vehicle. In addition, other IEEE and TSN standards provide secure, ultra-reliable, bounded low-latency communications throughout the vehicle. The TSN standards can be applied at various link speeds. Previously known as the Audio Video Bridging (AVB) set of standards, which are successfully used in Automotive Infotainment systems today, AVB has evolved into the Time-Sensitive Networking in order to reflect the expanded scope of work toward autonomous driving.

# Other IEEE 802 PARs under consideration this week

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- Amendment project PARs
  - IEEE P802.1ACct Support for IEEE Std 802.15.3
  - IEEE P802.1ABcu Link Layer Discovery Protocol (LLDP) YANG Data Model
  - IEEE PP802.1CBcv – Frame Replication and Elimination for Reliability (FRER) YANG Data Model and MIB Module
  - IEEE P802.1Qcw Scheduled Traffic, Frame Preemption, and Per-Stream Filtering and Policing YANG Data Models
  - IEEE P802.1Qcx Connectivity Fault Management (CFM) YANG Data Model

# Other IEEE 802 PARs under consideration this week (continued)

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- Revision project PAR
  - IEEE P802.1AE: Media Access Control (MAC) Security
- PAR Modification request
  - IEEE P802.1AS-Rev: Timing and Synchronization for Time-Sensitive Applications
- PAR Extension request
  - IEEE P802.1Qcc Stream Reservation Protocol Enhancements and Performance Improvements

# Liaisons

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- External Liaison letters (new)
  - Broadband Forum: YANG model development
    - IEEE P802.3.2 (IEEE 802.3cf) YANG Data Model Definitions Task Force
  - ITU-T SG15: Initiation of work to support IMT-2020/5G in the Transport Network
    - John D'Ambrosia
  - ITU-T SG15: Access Network Transport (ANT) Standardization Work Plan
  - ITU-T SG15: Home Network Transport (HNT) Standardization Work Plan
  - ITU-T SG15: Optical Transport Network Technology (OTNT) Standardization Work Plan
    - Next meeting of ITU-T SG15 is 29<sup>th</sup> January to 9<sup>th</sup> February 2018
      - Immediately after the IEEE 802.3 January 2018 interim meeting
      - IEEE 802 Executive Committee approval required for letters to ITU-T
    - Develop responses at IEEE 802.3 November 2017 plenary week
  - TR-42: Single-pair cabling standards
    - IEEE P802.3cg 10 Mb/s Single Twisted Pair Ethernet Task Force

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Assigned group or individual to review letter and make a recommendation at the IEEE 802.3 closing plenary if there should be a reply, and if so, propose a draft reply

# Liaisons (continued)

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- External Liaison letters (new, information item)
  - ITU-T SG15: Comments on convergence, wavelength plans, and ongoing communications to IEEE P802.3ca
  - OIF: Progress on CEI-56G-MR-PAM and CEI-56G-LR-PAM
  - OIF: Progress on CEI-56G-VSR-PAM4 project

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Assigned group or individual to review letter and make a recommendation at the IEEE 802.3 closing plenary if there should be a reply, and if so, propose a draft reply



# Continuing Agenda ...