

SESSION 1

6:00 PM – 7:20 PM

TITLE OF TUTORIAL: Practical PoE

NAME OF PRESENTERS, THEIR AFFILIATIONS AND CONTACT INFO:

Presenter Name	Affiliation	Email Address
Christopher DiMinico	Panduit	cdiminico@ieee.org
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ABSTRACT:

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

7:30 PM – 8:50 PM

TITLE OF TUTORIAL: An Overview on High-Speed Optical Wireless/Light Communications

NAME OF PRESENTERS, THEIR AFFILIATIONS AND CONTACT INFO:

Presenter Name	Affiliation	Email Address
Nikola Serafimovski	pureLiFi	nikola.serafimovski@purelifi.com
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ABSTRACT:

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”.

TITLE OF TUTORIAL: IEEE 802 Ethernet Networks for Automotive

NAME OF PRESENTERS, THEIR AFFILIATIONS AND CONTACT INFO:

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ABSTRACT:

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.