Joint Workshop Abstract Submitted via 802.3 Process

Title: FTTx Access in North American MSO Networks
Author: Ed Mallette
Abstract: Some North American Multiple System Operators (MSOs) have been deploying and operating Ethernet Passive Optical Networks with great success over the last five years. This paper will talk about the types of services and customers EPON access within MSOs supports today, how DOCSIS provisioning of EPON (DPoE) is positioned to revolutionize the provisioning problem space for EPON in cable operator networks, and how MSOs are looking to extend both the reach and media types EPON supports to continue to push access speeds up while keeping costs to deliver those high speed services low.

I would be willing to co-present. I will be reaching out to my MSO colleagues to collaborate on the presentation as well, if this proposal is approved.

Title: FTTx in Japan: Past, Present, and Prospects for the Future
Author: Ken-Ichi Suzuki, NTT Access Network Service Systems Laboratories, NTT Corporation
Abstract: Since the 1990s, NTT has conducted a sustained FTTH program with many landmark technical achievements and operational innovations. Today, more than 21.9 million Japanese subscribers are served by optical fiber, and it is expected that a rapid rate of copper conversion will continue for some time to come. In this talk I will give an overview of NTT's current FTTH solution and will make some comments regarding possible

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Title: FTTx in China – Current Status and Future Prospects
Author: Marek Hajduczenia
Abstract: China now leads the world in customers served by fiber, with more than 30 million FTTx subscribers today and an annual growth rate of more than ten million customers. This presentation will (1) give an overview of China's current FTTx architecture, service offerings, and management solutions, and (2) offer some insight into possible future directions for FTTx in China.

Title: Extended EPON optics: project status and future outlook
Author: Marek Hajduczenia
Abstract: This presentation gives a brief update on the status of the IEEE P802.3bk project, together with overview of current technical proposals and timeline expectations.

Title: Introduction to IEEE 802.3 EPON Protocol over Coax (EPoC) PHY
Author: Howard Frazier
Abstract: Overview of the IEEE 802.3 amendment project for EPoC, including background, objectives, technical considerations, and timeframe.

Title: Building on top of 802.3: IEEE P1904.1 SIEPON
Author: Glen Kramer
Abstract: Overview of SIEPON market drivers, objectives, and scope. Relationship to IEEE 802.3.

Title: IEEE P1904.1 SIEPON Scope and Structure
Author: Lior Khermosh
Abstract: The intention of the presentation is to provide an overview of the SIEPON project. Describe the scope of it – what does it cover and its targets. Go over the intentions of the project to cover the higher layer functions for EPON and put the basis for interoperability between EPON ONUs an OLTs of different vendors ending up in a certification program.

Title: DOCSIS Provisioning of EPON – Architecture, Specifications, and Qualification
Author: Curtis Knittle
Abstract: The DOCSIS Provisioning of EPON (DPoE™) project marries the provisioning policies and processes of DOCSIS provisioning with the technology benefits of EPON. This presentation will describe the goals of DPoE specifications, the current status of specification development and qualification (certification) activities, and discuss the benefits cable operators enjoy when deploying DPoE devices.

Title: Conformity Assessment Ecosystem
Author: Ravi Subramaniam
Abstract: Here is a short summary:

- ICAP Introduction
- Conformity Assessment Principles
- Demand Drivers and Ingredients for a successful program
- Process Flow
- Formation of the SIEPON Committee of Experts
- Program policies
    - Rules that vendors will play by
    - Inclusion by similarity
    - Authorized Test Labs
    - OEM/ODM management
- Pilots and official launch

Title: Status Update on 802.3 Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet
Author: Dan Dove
Abstract: Status Update on 802.3 Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet

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Title: IEEE 802.3 Ethernet Bandwidth Assessment Ad hoc Findings
Author: John D'Ambrosia
Abstract: Present the findings of the IEEE 802.3 Ethernet Bandwidth Assessment Ad hoc, which performed an assessment of industry bandwidth requirements. (I am assuming that this presentation will be similar to the tutorial that we plan to present to IEEE 802 in July).

Title: Bandwidth Demands of the Science-Driven Network
Author: Mike Bennett
Abstract: This presentation provides an Internet Service Provider's perspective on bandwidth demands due to the movement of scientific data, including needs beyond 100Gb/s. The Energy Sciences Network (ESnet) provides the high-bandwidth, reliable connections that link scientists at national laboratories, universities and other research institutions, enabling them to collaborate on some of the world's most important scientific challenges including energy, climate science, and the origins of the universe. Supporting international scientific collaborations involving programs such as the Large Hadron Collider, climate research, and ITER that generate and exchange massive amounts of data, ESnet's average traffic has grown by a factor of 10 every 47 months for the last two decades and continues to accelerate with improvements in high-performance computing. The presentation will discuss the challenges ESnet will face as demand increases and will conclude with suggested topics for consideration by the next higher-speed study group.

Title: Component technology requirements
Author: Antonio Teixeira
Abstract: With the increasing demand on data rate specifically at access and short reach (e.g. data centres) there are several activities in ITU and IEEE which tend to: increased data rate and better fiber utilization. Topics which are on the table tend to address wavelength flexible PHY (tuneable components - already touched in the IEEE and FSAN), photonic integration for lowering costs, wavelength allocation (e.g. the G.multi initiative in ITU), and ultra high data rates (100G+, which may require both multi-wavelength and Post electronic processing based on A/D).

The idea behind this discussion topic is to test a common alignment between ITU-T and IEEE on the above mentioned topics and therefore generate enough synergy on the agreed directions to help the related ecosystem to develop at a faster pace. A common study platform could be formed to mediate the next steps.

Title: The Future of Energy Efficient Ethernet
Author: Mike Bennett
Abstract: This presentation will provide a brief overview of Energy Efficient Ethernet as defined in IEEE 802.3az-2010 followed by current developments in IEEE 802.3 and how these developments may apply to future generations of Ethernet. It will discuss the benefits and challenges of using Low Power Idle, the underlying mechanism by which energy is saved during periods of low link utilization as well as opportunities for system energy savings. The presentation will conclude by discussing an example of an energy-savings technology that may be enhanced by the use of EEE.

Title: Energy Efficiency in FTTx Systems
Author: Lowell Lamb
Abstract: This talk will review the energy-efficiency challenges that face modern, PON-based access networks. As an example current power-savings solutions for IEEE EPON systems will be discussed, as well as role of IEEE 802.3az Energy–Efficient Ethernet (EEE). Finally, some comments will be made on prospects for energy-efficiency improvements in the future.