



# WORKSHOPS

Mohegan Sun Pocono  
Wilkes-Barre, Pennsylvania

TUESDAY, October 4th 9:00 AM WORKSHOPS	
<p align="center"><b>Wi-Fi is the Internet – How To Get The Most From Your High Speed Connection</b></p>	<p align="center"><b>My Video Customers Are Cutting The Cord. Now What?</b></p>
<p align="center"><u>Presenter:</u> <i>Patrick Moreno</i> Product Marketing Manager <b>Zyxel Communications</b></p>	<p align="center"><u>Presenter:</u> <i>Terry Kucera</i> Regional Sales Director <b>NeoNova</b></p>
<p>Wi-Fi has become synonymous with Internet for subscribers, offering higher speeds and performance in the home and in small businesses like never before. Higher performing Internet access allows subscribers to do more than they did in the past. More than a third (35%) of U.S. broadband subscribers experienced average connection speeds of 15 Mbps or higher in the first quarter of 2016, according to Akamai’s latest State of the Internet report. So, where does that leave us with the connected home and optimizing home networks with this higher-performing Internet access? Join Zyxel in an informative and enlightening discussion on how to get the most from your high speed connection.</p> <p>Upon attending the presentation, attendees will have the chance to discuss:</p> <ul style="list-style-type: none"> <li>• How to utilize the most of your high speed Internet connection</li> <li>• What devices best take advantage of high speed Internet connections</li> <li>• Home networking support - pro and cons</li> <li>• Remote management: alternative options for managing and maintaining subscriber home networks</li> </ul>	<p>As more and more video customers are cutting the cord or never even signing up for traditional terrestrial video services, providers are beginning to step into the shallow end of the managed broadband video pool to test the waters with emerging technology and alternative streaming options. Learn how to take advantage of this migration to OTT and managed broadband TV while monetizing your broadband network.</p> <p>Three key points that attendees will learn from the presentation:</p> <ol style="list-style-type: none"> <li>1. You can (and should) monetize your broadband network.</li> <li>2. There are options available for cordcutters that keep them tied to your broadband.</li> <li>3. Local channels will continue to be popular with rural demographics.</li> </ol>

**TUESDAY, October 4th**  
**10:00 AM WORKSHOPS**

<b>Achieving High Availability with NFV</b>	<b>Documenting the Fiber Network: A Case Study In Fiber Audits</b>
<p><u>Presenter:</u> <i>Fred Elliott</i>, Manager  Business Development &amp; Technical Alliances  <b>REDCOM</b></p>	<p><u>Presenter:</u> <i>Deron Leight</i>  Vice President  <b>Celerity Integrated Services, Inc.</b></p>
<p>Network Function Virtualization (NFV) presents a unique set of challenges for carriers who have previously deployed network services with high availability and reliability, and are looking to achieve the same with NFV based services. This session will focus on the various methods that can be used and the tradeoffs of these methods to maximize service availability in a virtualized environment.</p>	<p>Celerity has performed countless fiber optic network audit projects to catalog networks that have not been properly documented. For many network operators, the network does not remain stagnant as changes continue to occur. Whether these changes are due to network expansion, emergency repairs or added laterals into a customer facility, the physical changes to the outside plant are not often reflected in the documentation of the network back at the central office. Over time, the records become highly inaccurate and often times they become utterly useless. The challenge of reconciling the documentation to the actual field condition may seem daunting. However, the importance of a well-documented network is crucial to nearly every vital function of the network operator--from capital expansion decisions to decreased restoration times. The purpose of this workshop is to present a few case studies of the more challenging fiber audits we have successfully completed. The workshop will include an explanation of the process for conducting a thorough fiber audit; a photo intensive display of some rather congested splice cases that we have audited; examples of the deliverables associated with a fiber audit; and a highlight of the value associated with a well-documented network. Above all else, there seems to be an embarrassment among operators that their network isn't as well documented or organized as someone else's network. This presentation would certainly show that accurately documented and neatly organized networks are an exception more than they are a rule.</p>

**TUESDAY, October 4th**  
**11:00 AM WORKSHOPS**

<p style="text-align: center;"><b>The Realities of the Migration to Next Generation PON</b></p>	<p style="text-align: center;"><b>Leveraging IP and SIP at Service Provider Interconnect Borders</b></p>
<p style="text-align: center;"><u>Presenter:</u> <i>Alan DiCicco</i>  Director, Network Solutions Marketing  <b>CALIX</b></p>	<p style="text-align: center;"><u>Presenters:</u> Jay VanOrden, CEO, Worldwide Supply  Jonas Haskins, Sales Consultant, Oracle Communications    <b>Worldwide Supply/Oracle</b></p>
<p>2016 will see the commercial availability of Next Gen PON systems based on the NG-PON2 and XGS-PON standards. These standards are designed to overlay and coexist with 2.5 GPON. Migration to these standards will need to be done through a process of identifying existing infrastructure that is compatible to ensure a smooth migration. The presentation highlights a case study of an existing service provider and different alternatives for migrating to next generation PON.</p>	<p>The transition from circuit-switched to all IP real-time communications service delivery is well underway. Communication service providers already use MPLS/IP networks to trunk off network and long distance call terminations for enterprises and residences. This trend is only going to increase with all IP services such as Voice over Long Term Evolution (VoLTE) and other emerging multimedia services such as Rich Communications Suite (RCS) and Unified Communications (UC). A majority of international long distance traffic is also carried over IP. However, the interconnection between networks of individual service providers is still mostly based on the deployment of different network solutions, specifications and technologies. Consequently, the deployment of the various interconnect solutions within a service provider network gives rise to higher capital, operational costs as well as inconsistent service quality. Service providers require a new interconnect architecture that would reduce capital and operational expenditures and provide a strong foundation to deliver high-quality voice and multimedia services across its networks. This presentation will discuss how border architecture is required to solve key technical challenges and allow service providers to realize the benefits of all-IP interconnections.</p>

**TUESDAY, October 4th**  
**1:30 PM WORKSHOPS**

<b>NECA's New DSL Speed Offerings &amp; ETS E-Rate Option</b>	<b>The Importance of Inspecting Before You Connect</b>
<u>Presenter:</u> <i>Barbara J. Vrahnos</i> Manager – Access Planning <b>NECA</b>	<u>Presenter:</u> <i>Andrew Wolinski</i> Sales Associate <b>Concord Communications</b>
Training on new tariff offerings including additional ADSL and SDSL speeds; the introduction of an Ethernet Transport Service E-Rate Option; as well as plans for new tariff offerings and updates to existing tariff offerings in 2017.	Concord Communications will talk about how inspecting your fiber connectors are vital to the healthy and optimized fiber network. Fiber connections are the weakest and most vulnerable aspect of a fiber network. The only way to make sure that jumpers and bulkheads are not dirty is by using an inspection scope to look at the fiber end before connecting. We will also show Viavi Solutions Wireless Inspection Scope as the newest tool to complete this task, and explain how this is an important practice for any technician.

**TUESDAY, October 4th**  
**2:30 PM WORKSHOPS**

<b>TDM Transformation to IP to Cloud</b>	<b>MTM and Cisco – Collaboration and Spark</b>
<u>Presenter:</u> <i>Rita Sims</i> Director Eastern Region <b>Taqua</b>	<u>Presenter:</u> <i>Anthony Oligino and Gerry Genna (Cisco)</i> <b>MTM Technologies</b>
By transforming to next generations solutions and adding enhanced cloud services you will increase your revenue and decrease your cost.  We will discuss and demonstrate the reduction in cost by transforming to IP From an existing TDM network as well and showing you how you gain revenue by adding enhanced services using a cloud environment which also decreases your cost.	Cisco Collaboration is a catalyst for evolving from merely using technology to rethinking business, changing process, and adapting culture. In a post-PC world, collaboration is more critical than ever. It means getting the right information to the right people at the right time to make the right decision. In turn, these well-informed and quicker decisions help organizations get work done, fostering productivity, innovation, and growth.

**TUESDAY, October 4th**  
**3:30 PM WORKSHOPS**

<p style="text-align: center;"><b>2016 Rural Video and Broadband Research Study</b></p>	<p style="text-align: center;"><b>Performance Monitoring</b></p>
<p style="text-align: center;"><u>Presenter:</u> <i>Scott Sobolewski</i>  Vice President of Sales  <b>Innovative Systems</b></p>	<p style="text-align: center;"><u>Presenter:</u> <i>Ran Hysler</i>  Business Development - RAD  <b>Telecom Reps/RAD</b></p>
<p>This research report is a compilation of over 400 live telephone surveys of rural households in North America. The presentation will reveal how rural consumers have different video and broadband consumption habits that can affect how service providers should plan their broadband and video service delivery. As a bonus this workshop will offer the complete 40 page research study to attendees free of charge!</p> <p>Attendees Will Learn –</p> <ul style="list-style-type: none"> <li>• Streaming only Homes are far fewer than the national average</li> <li>• Time shifted viewing is much greater for the rural subscribers compared to the national average</li> <li>• What impact does OTT viewing have on the rural video consumer</li> <li>• What “Add On” to your video service customers are ready to buy right now</li> <li>• What “New” service you are not likely offering that your customers are willing to pay over \$20.00 a month for</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to Carrier Ethernet and Service Level Agreements (SLA)</li> <li>• Why SLA Performance Monitoring is needed ?</li> <li>• Market Trends</li> <li>• Service Providers Challenges</li> <li>• How SLAs can be monitored ?</li> <li>• Performance Monitoring Solution Overview</li> <li>• How to apply SLA Monitoring ?</li> <li>• SLA Performance Monitoring Applications</li> <li>• Summary</li> <li>• Q&amp;A</li> </ul>

**WEDNESDAY, October 5<sup>th</sup>**  
**9:00 AM WORKSHOPS**

<b>Fiber Indexing, a New Approach to FTTH Design</b>	<b>Looking to Gilligan's Island</b>
<p style="text-align: center;"><u>Presenter:</u> <i>Matt Brice</i> Product Sales Manager <b>Comstar Supply</b></p>	<p style="text-align: center;"><u>Presenter:</u> <i>Dusty Johnson</i> <b>Vantage Point</b></p>
<p>Commscope's new Fiber Indexing terminals are making their way to market, and providers need to consider it as an option before planning their next FTTH build.</p> <p>Fiber indexing is a novel approach to FTTH network design. CommScope's pre-connectorized plug-and-play solution allows to deploy fiber up to 75% faster, reduce the amount of cable required by up to 70%, and eliminate the need for fiber splicing. How? By changing from a star to a daisy-chain topology for connecting service terminals, and consolidating functionality into the service terminal. By using hardened service terminals with hardened multi-fiber connectors, this architecture combines the advantages of a daisy chain-topology with plug-and-play connectivity.</p>	<p><b>"Sit right back and you'll hear a tale"</b> . . . A tale of what the misfit cast from Gilligan's Island can teach us about the telecommunications policy framework. Join Vantage Point's Dusty Johnson for a discussion of regulatory and policy "hot topics" through the lens of the greatest television show ever.</p>

**WEDNESDAY, October 5<sup>th</sup>**  
**10:00 AM WORKSHOPS**

<p style="text-align: center;"><b>New Technologies in Cable Locating – Protecting Your Buried Plant in Today’s Congested Underground Environment</b></p>	<p style="text-align: center;"><b>CO Transformations and How Do I Plan For It</b></p>
<p style="text-align: center;"><u>Presenter:</u> <i>Kelvin Cherrington</i>  Regional Sales Engineer for Vivax Metrotech  <b>Rep Com International</b></p>	<p style="text-align: center;"><u>Presenter:</u> <i>Mark Hess</i>, Business Development Manager – Inside Plant Hardware  <b>Corning Optical Communications</b></p>
<p>With increased underground facilities, accurately locating and protecting your buried plant is becoming more and more difficult. In this session, we will discuss new technologies in cable locating equipment that will help technicians not only be faster and more efficient , but also be more confident when putting paint on the ground. We will discuss the importance of new technology as well as educating the locators. New technologies include signal direction, accuracy in depth measurements, buried marker locating and GPS mapping.</p>	<p>The increase in demand for data and the resulting IP explosion is driving change throughout the access network as we know it. Within the central office space, the shift to IP traffic is driving change that offers tremendous opportunity, while also presenting some significant challenges. The resulting change is a transforming Central Office that is beginning to look and operate like a data center and thus, forcing change not only on the equipment within the CO, but the cabling infrastructure that connects it all together.</p> <p>Learner will be able to:</p> <ol style="list-style-type: none"> <li>1.Gain a high level understanding of how technologies such as NFV, SDN, and IP are driving change in the CO</li> <li>2.Gain exposure to the Ethernet transceiver road map and what’s in the works for future technology shifts</li> <li>3.Gain an understanding of different options for fiber cabling infrastructure within the CO+</li> <li>4.Learn about the efficiencies and operational savings of pre-terminated solutions</li> <li>5.Plan for cabling infrastructure that can migrate with future technology shifts</li> </ol>

**WEDNESDAY, October 5<sup>th</sup>**  
**11:00 AM WORKSHOPS**

<b>G.HN and G.FAST, Moving Copper Into the Gigabit Era</b>	<b>Fight Obsolescence: Extend the Life of Legacy Telecom Networks</b>
<p><u>Presenter:</u> <i>Dennis Troxel</i>  Senior Sales Engineer  <b>Transition Networks/Goldfield Telecom</b></p>	<p><u>Presenter:</u> <i>Mike Dazio</i>  <b>ZT TECHNOLOGY SOLUTIONS</b></p>
<p>G.hn is the common name for a home network technology family of standards in which G.hn specifications define networking over power lines, phone lines and coaxial cables with data rates up to 1 Gbit/s. G.Fast is a digital subscriber line (DSL) standard for local loops shorter than 500 m, with performance targets between 150 Mbit/s and 1 Gbit/s, depending on loop length. These 2 technologies provide up to 1 GE Broadband access for service provider customers on their current phone line or coaxial connections. This service can be provided to residential, business, government and enterprise customers. The customer benefits are higher speed broadband with little change to their infrastructure and cabling. Reduced costs to the service provider equals reduced costs to the customer's bottom line price for the service.</p> <p>The Business Model is that Service providers can utilize both of these technologies in a number of deployments. One is a FTTB (Fiber To The Basement) with G.Fast technology. The deployment is to bring fiber to the building and then utilize the existing copper in the building to connect customers at speeds of 150Mb – 1GE depending on distance. Another deployment is known as FTTdp, Fiber To The Distribution Point. This is used in residential, campus or Business parks applications where the distribution point is located in a remote terminal, close to the collection of homes/offices. Existing copper or coaxial connections are now made to the subscribers without the providers having to run Cat5/6 ethernet cabling which increases costs.</p>	<p>This talk was recently presented by Mike Dazio at the IEEE Workshop on Communications, Quality and Reliability (May, 2016) and focus on the issues facing service providers as they struggle to maintain legacy telecom networks. The goal is to extend the life of your legacy telecom investment by fighting obsolescence. This talk focuses on issues and solutions that are relevant to service providers:</p> <p>Market Trends</p> <ul style="list-style-type: none"> <li>• Aging telecom network</li> <li>• Subscribers decreasing 10% per year</li> <li>• Wireline maintenance costs increasing</li> <li>• Vendors exiting legacy business</li> <li>• Lack of technical support and repair capability threaten major service disruption</li> <li>• Cost to Migrate to next generation is too expensive</li> </ul> <p>Solutions to Extend the life of Legacy Systems</p> <ul style="list-style-type: none"> <li>• Assess the network for legacy products</li> <li>• Manage OEM vendors (Determine End of Life dates)</li> <li>• Assess the network for legacy products</li> <li>• Assess Technical Support Issues</li> <li>• Assess Repair Issues</li> </ul>