

Meeting Agenda

- All times listed are in Pacific Time Zone
- All exhibits, sessions and meals will be held at the Silver Legacy Resort Casino, 407 N. Virginia Street, Reno
- For virtual access to the sessions [you will need to access the agenda that includes the Zoom link on the NetWorks site by clicking here.](#)
 - Registration to the event is required to access the NetWorks site. [Click here to register now](#) and contact support@utc.org for assistance.

Sunday, February 13th

- 12pm – 2pm Big Game Party Ticket Pick-Up – Silver Legacy lobby level across from Pearl restaurant. At 2pm location moves to Circus Circus.
- 2pm Big Game Party – Circus Circus Convention Center

Monday, February 14th

- Breakfast, all sessions and the EXPO hall are located on the lower level below the casino floor
- Lunch will be held in the Silver Baron Ballroom on the Lobby level

- 8:00AM Registration & Breakfast
- 9:00 – 9:15AM Welcome Remarks
- 9:15 – 9:45AM UTC Leadership & Advocacy Update
- Presented by: Paul Lambert, UTC Board Chair, East River Electric Cooperative
Sheryl Riggs, President & CEO – UTC
Brett Kilbourne, VP of Policy & General Counsel – UTC
Regional Chairs TBD
- 9:45 – 10:45AM State of the Union Utility Presentations
- Presented by: Utilities Representatives TBD
- 10:45 – 11:15AM Networking Break
- 11:15 – 12:15PM Why Open access, Middle mile broadband networks?

This session discusses why an open-access, middle mile broadband offering is a great opportunity for an Investor-Owned Utility (IOU) to utilize their fiber assets to increase grid reliability for their customers while facilitating broadband in underserved areas. Having an open-access, middle mile broadband

Utility Technology Forum – Agenda Continued

initiative is a way to encourage fair competition, reduce the cost for last mile providers, and to give them access to new customers. Meanwhile, this gives the IOU access to new revenue streams in a steady and scalable manner while offering a higher return on investment of their assets. There are different broadband business models an IOU can explore, and all forms can be built to support grid reliability, and serve multiple customer bases and their broadband needs.

Session Goals:

- Learn why Investor-owned utilities are in the unique position to explore open-access middle mile networks
 - Learn the advantages and challenges of different forms of networks
 - Discuss key technology considerations to successfully optimize cost, truck rolls, and other benefits for the utility and customers
-

Speaker: Ryan Smith, Head of Business Development – U-Telco

12:15 – 1:45PM Networking Lunch – Silver Baron Ballroom on the lobby level

1:45 – 2:45PM Navigating the complexities of a new tower build

The process of planning, designing, and building a new communications tower can seem like a daunting task. “What should I look for in good design and construction partners?” “What do I need to know to ask informed questions?” This session will guide you through the stages of a new tower build so you can be confident you’re getting the solution you need. Topics to be covered include: siting, permitting, tower types, construction, and on-going maintenance.

Speakers: Chelle Eischens, Business Development Manager - VIKOR
Marty Johnson, Senior Director, Wireless and Utility – VIKOR
Shaun Skidmore, Communications Principal Engineer – Idaho Power
Lee Onsager, Senior Engineer – Telecom Department – NV Energy

2:45 – 3:15PM Networking Break

3:15 – 4:15PM Distributed Energy Resources

Energy companies continue to face new challenges as safety and reliability expectations continue to expand. New emerging technologies while they introduce new communications capabilities, they also present new and expanding opportunities for utilities. Regardless of the potential flexibility and new functionality the safety and reliability of utility assets must be reliably and securely maintained.

This discussion presentation has been developed to provide deeper insight into the suite of options for Distributed Energy Resources and to lay a foundation for what the Next Generation converged communication networks for fixed and mobile assets will look like.

Objectives

1. Discuss the business drivers for improved business efficiency and worker safety

Utility Technology Forum – Agenda Continued

2. Provide insight into recent technology advancements Commercial and Private LTE

3. Explore the challenges and benefits of Converged Wireless Communications

Speaker: Daniel Draughn, Director Market Development – Critical Industries

4:30 – 6:30PM Exhibit Hall Grand Opening Reception

Tuesday, February 15th

- **Breakfast, all sessions and the EXPO hall are located on the lower level below the casino floor**
- **The Networking Reception will be held at Top Golf on the Lobby level**

8:00AM Registration & Breakfast

9:00 – 10:00AM Testing Aspects of Pseudo-Wire Interfaces over Packet Transport – Part I

Electrical utilities adoption of packet-based transport for mission critical communications is accelerating at an increasing rate. While many of the aspects of testing legacy circuits are still valid for pseudo-wire applications, there are some parameters that are particularly critical for the new network topologies and which had not been widely adopted in the past. Additionally, with TDM no longer available the traditional methods for transporting timing over the network can no longer be leveraged. Whether it is SyncE, 1588v2 or both that are deployed for synchronization and timing, this introduces additional complexity and testing requirements.

This session will present and discuss some of the best practices and testing aspects that ensure pseudo-wire networks meet the performance criteria for mission critical applications. It will cover end to end performance, timing and synchronization as well as packet-based testing concepts.

Speaker: Mike Snelgrove, Engineer – Albedo Telecom

10:00 – 10:30AM Networking Break

10:30 – 11:30AM Testing Aspects of Pseudo-Wire Interfaces over Packet Transport – Part II

11:30AM – 12:00 PM General Roundtable Discussion

12:00 – 2:00PM Networking lunch & Exclusive Exhibit Time

2:00 – 3:00PM Look Out for Those Trees: When RF Modeling Meets the Real-world

Do you have accurate tower documentation for your utility's radio systems? If you are looking for ways to collect precise information without climbing your towers, one way to capture information as efficiently as possible while on-site is to use 3D ground-based LiDAR

Utility Technology Forum – Agenda Continued

scanning of equipment rooms and outdoor structures. Working alongside a confidential client, Burns & McDonnell provided 3D models of communication towers and equipment utilizing LiDAR and photo technology. Not only was this technology used to provide detailed documentation, but LiDAR scans were also used to analyze the path performance of a failing microwave link which theoretically worked in RF models. In this session, the tools and processes used throughout this project will be demonstrated, and the potential use cases of these new technologies will be discussed.

Speakers: **Corey McMahon, Project Manager - Burns & McDonnell**
Grace Jensen, Assistant Electrical Engineer - Burns & McDonnell

3:00 – 3:30PM **Networking Break**

3:30 – 4:30PM **A Next Gen Architecture for Network Configuration Management**

The utility industry is undergoing a comprehensive transformation as it modernizes to a more efficient and smarter grid. Utilities rely heavily on manual processes to keep track of network conditions and inventory. The manual process makes it impossible to develop a comprehensive, real-time view of the system and inhibits a utility's ability to identify potential trouble spots or guide where and when to deploy new infrastructure. Utilities need convenient, automated tools that provide timely visibility of network conditions to inform their technology.

This presentation will provide a next gen architecture for network configuration, inventory, and alarm management of a multi-vendor network to support the journey utilities need to follow for automated network architecture.

Speaker: **Mitch Simcoe, Director, Solution Marketing - Ciena**

5:00 – 7:00PM **Networking Reception at Top Golf on the Lobby Level**

[Wednesday, February 16th](#)

- **Breakfast and all sessions are located on the lower level below the casino floor**

7:00AM **Breakfast**

8:00 – 9:00AM **Building Cost-Effective Multi-Service Broadband Networks**

We will explore the critical elements of a broadband network and how they are employed to support a diverse and rapidly growing user base. New technologies make it possible to keep initial costs low while enabling scalability when the need arises in the future, avoiding expensive forklift upgrades and maintenance outages.

Speaker: **Jack Breeding, Business Unit Leader, Rural Markets – Ribbon**

9:00 – 9:30AM **Networking Break**

Utility Technology Forum – Agenda Continued

9:30 – 10:30AM

C37.94 Pseudo-wire for protective relaying circuits over packet network

The migration of real-time mission-critical applications such as protective relaying, to a packet-based network poses many challenges when it comes to deterministic performance and reliability. Transporting that communications channel using a C37.94 protocol over an IP network can be successful provided the right technology and implementation is carried out.

This presentation will focus on the advantages and disadvantages, as well as the requirements and available technologies that support successful deployment of C37.94 over IP network for protective relaying applications. The presentation strives to explain the relationship between bandwidth and latency, the importance of timing synchronization, guaranteed service, and pre-production testing in order to have a successful deployment, avoiding any shortcomings. Furthermore, the presentation analyzes the most suitable transport technologies (MPLS vs MPLS-TP vs Carrier-grade Ethernet) for relaying.

Speaker: **Emmanuel Duvelson, Product Manager, RFL™ Products – Hubbell Power Systems**

10:30 – 11:30AM

Synchronization and Timing in Modern Utilities

TDM-to-Packet, MPLS-TP, Private LTE and 5G are just some of the emerging technologies driving network evolution in the Utility industry. The introduction of these applications places an increased demand on network synchronization and requires new timing solutions to achieve the necessary accuracy, reliability and security.

This session will use recent network timing evolutions to explore the motivations and technical dynamics behind next-gen synchronization. Attendees will be introduced to new architectures, protocols and time delivery strategies that are being called upon to augment and eventually replace legacy BITS Clocks. Learn how IEEE-1588 v2 PTP and SyncE can mitigate GPS vulnerabilities while enabling the introduction of new services and revenue generating opportunities. Understand key packet timing takeaways and leave better prepared to manage your own timing migration.

Topics Covered:

- IEEE-1588 v2 PTP and SyncE
- Grandmaster Clocks, Boundary Clocks, Transparent Clocks
- Cesium Reference Systems / Packet PRS
- Network Assymtry and Packet Delay Variation
- Substation backup timing from a secure Telecom Core
- Stabilizing and supporting BITS Clocks through TDM sunset

Speaker: **Beacham Still, Sales Manager – Syncworks**

Utility Technology Forum – Agenda Continued

11:30AM – 12:00PM

Prize Drawings & Wrap-Up