

UTC REGION 8 ROCKY MOUNTAIN

Fall Technical Meeting



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Your Network's Edge



UTC Regions 8 Fall Technical Training Meeting
Sheraton Denver Tech Center
October 18, 2018
Denver, CO

Gold Sponsor: 

Thursday, October 18, 2018

7:00 AM - 5:00 PM Meeting Registration

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7:00 – 8:00 AM Attendee Breakfast

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8:00 – 8:10 AM Welcome Remarks

Presenter: **UTC Region 8 Chairman**

**8:15 – 9:15 AM Utility Case Study: NERC CIP Low Impact Substation and
Generation Facilities for Cyber Security**

Presentation would cover a case study on the engineering design, installation, and procedures developed for the NERC Low Impact requirements and the lessons learned in the design, installation, and procedure developed for the NERC Low Impact requirements and the lessons learned in the design, installation, and procedure phases.

Presenter: **Matt Schnell, ITT Telecommunications Manager –
Nebraska Public Power District**

9:15 – 9:30 AM Networking Break

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9:30 – 10:30 AM

FCC Spectrum Applications

UTC Spectrum Services, a leading FCC-certified Frequency Coordinator for Industrial and Business organizations that rely on communications networks for their day-to-day and critical operations. Frequency coordination and an FCC Radio Authorization are required for most hand-held units, platforms, marine, microwave, Multiple Address Systems and aviation units.

This session will detail the frequency application and coordination process, explain how to navigate coordination resources (FCC's ULS, SpectrumWatch), and discuss how to avoid common pitfalls, including FCC violations and expensive fines. Join our spectrum management experts and gain essential coordination insight and valuable information to help you and your organization achieve FCC licensing requirements.

Presenter:

**Joann Howell, Senior Manager, Frequency
Coordination Services – UTC**

10:30 – 11:30 AM

Wireless Communications Troubleshooting Techniques, Event Correlation

As many wireless communications systems are now being integrated in to network management systems via SNMP there are more tools available at the Network Operations Center (NOC) for diagnosing intermittent problems of failures. A skill that needs to be developed by the NOC staff is in understanding the large quantity of traps, event data and performance values that are coming in to the system.

NOC personnel seldom have the expertise as wireless communications experts to understand the importance

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of the RF radio path and the variables that can indicate different types of problems. We will review the following:

- What is interference and what is link fading
- What are acceptable service levels for wireless data
- What does latency look like across a wireless connection
- And more.....

Presenter: **Ms. Tisha Hayes, Senior Engineer, 4RF**

11:30 AM – 12:30 PM **How to Prioritize Teleprotection Traffic Over A Multi-Service Substation Wan**

This presentation will cover the test results of running multiple services (voice, video and teleprotection) over a Carrier Ethernet substation WAN. It will demonstrate that by establishing VLANs of different service classes including a high priority class for teleprotection; even in situations of sever network congestion and/or failure hat the service characteristics required for teleprotection traffic (e.g. ultra-low latency and asymmetry) continues to be delivered over other low priority traffic such as video.

Presenter: **Mitch Simcoe, Senior Advisor – Ciena**

12:30 – 1:30 PM **Networking Lunch**

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1:30 - 2:30 PM **Digital Signage for Utilities**

Digital Signage is a method of getting meaningful information and messages to our employees in a quick and efficient way. CenterPoint has used digital signage

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for over four years successfully. This technology is used in over sixteen locations in multiple states.

Presenter: **Greg Angst, UTC Vice-Chairman of the Board,
CenterPoint Energy**

2:30 – 2:45 PM **Networking Break**

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2:45 – 4:45 PM **UTC Training: Designing Wireless Networks for Field Area Networks (FAN)**

Designing and maintaining Field Area Networks is a significant challenge for utilities. Application latency parameters, ever-increasing data payloads, limitations of spectrum, foliated terrain, antenna placement, and multi-pathing create the need for a prescription, programmatic approach for all phases of network design, installation, and maintenance. Within this training, a comprehensive review of the above challenges and their impact on radio network design methodology will be presented enabling the utility to more effectively build a radio network which will deliver the required performance for utility applications.

Presenters: **Keith Woodall, Communications Architect – S&C
Electric Company**
**John Toone, Senior Automation Solutions Engineer –
S&C Electric Company**

4:45 PM **Wrap-up**