Utilities Technology Council™
Region 3 Southeast

Region 3 Spring Meeting
Columbia Marriott
Columbia, SC
March 6-8, 2019

Wednesday, March 6, 2019

7:00 AM	**REGISTRATION AND BREAKFAST FOR ALL ATTENDEES**
8:00 AM	**CALL TO ORDER, OPENING REMARKS & INTRODUCTIONS**
Speaker:	Tim Parsons, Region 3 Chair
8:30 AM	**WELCOME MESSAGE & HOST UTILITY HIGHLIGHT**
9:30 AM	**BREAK**
9:45 AM	**UTC Leadership Report**
Speaker:	Roger Bryant, UTC's Chairman of the Board/Southern Company
10:15 AM	**Federal Advocacy Update**
Speaker:	Joy Ditto, President & CEO - UTC
11:15 AM	**UtiliSite Update**
11:30 AM	**LUNCH** (On Your Own)
1:00 PM	**CALL TO ORDER & INTRODUCTIONS**
Speaker:	Tim Parsons, Region 3 Chair
1:15 PM	**UTC COMMITTEE REPORTS**
Speakers:	Present Committee Chairs or Delegates
1:45 PM	**BREAK**
2:00 PM	**State of the Union Utility Presentations**

Speakers: **Various Utility Attendees**

The State of the Union Presentation is an opportunity to give an update on staff, projects, and plans taking place at each utility. The presentations are generally more specific to the telecom and IT areas, but interesting and major projects in other departments will often be discussed as well. The presentations are a good way to promote discussion between utilities about ongoing projects, lessons learned, etc.

******* THE REMAINDER OF THE MEETING IS FOR UTC UTILITY MEMBERS ONLY *******

2:30 PM **REGION 3 BUSINESS**

Treasurer's Report: - Daniel Harrison, Region 3 Secretary/Treasurer

Old Business:
- Minutes from Region 3 Fall 2018 Meeting

New Business:
- Call for Host Utilities for Future Meetings
- Call for Interest in Presenting at Future Meetings
- Review Training Requests for Future Meetings
- Review Agenda format

ANNOUNCEMENTS

3:30 PM **ADJOURN TO EXHIBIT HALL**

Please visit the Exhibit Hall hosted by our vendors between 3:30 PM and 6:30 PM. This is an outstanding opportunity to see the latest technology in our industry, plus network with peers and vendor partners.

Thursday, March 7, 2019

8:00 AM **REGISTRATION AND BREAKFAST FOR ALL ATTENDEES**

8:30 AM **INTRODUCTION OF TECHNICAL PRESENTATIONS**

Speaker: David Adams, Region 3 Vice Chair

8:45 AM **Session 1 – Timing and Synchronization for the Modern Utility**

Speakers: Beacham Still, Syncworks
Scott Chaffin, Microsemi/Microchip

This will serve as a high-level overview of the Time Synchronization challenges and precise delivery requirements facing Power Utilities in their Migration to Packet.
All large telecom networks face uncertainty as they transition away from the traditional BITS Clock timing utilized throughout the TDM generation. While DSI and Composite Clock Outputs are beginning to be phased out, these frequency synchronization needs will persist for the foreseeable future. We will cover how Network operators strategically manage these frequency requirements while they migrate to new time delivery systems. We will build on this discussion to introduce Packet Grandmaster Clocks, Packet Slaves/Sync-E and the numerous benefits of "PTP", including how it can be used to counter the GPS dependency of prior architectures.

9:30 AM **Session 2 – Setting realistic throughput requirements in narrowband RF channels**

Speaker: **Tisha Hayes, Senior Engineer - 4RF**

As there are several equipment manufacturers who now build wireless equipment for use in the licensed VHF, 220, UHF, 700 and 900 MHz bands with capability to support very narrow (12.5 KHz) up to wide (100 KHz) channels the utility telecommunications engineer needs to understand what is reasonably achievable for services and protocols.
We will review the traditional services such a substation SCADA and distribution- automation while also including expanded requirements such as AMI-backhaul, VOIP, Ethernet-based protocols like IEC61850 and challenging requirements such as protective-relaying or corporate LAN extension.
In our presentation we will demonstrate the use of a spreadsheet-based tool for calculating loading and discuss the challenges of estimating capacity, growth factors and network utilization. We will provide a basic outline of QOS (quality of service), in band and out of band management and the demands of network management (SNMP, logfiles, firmware updates and device administration).

10:15 AM **BREAK**

10:30 AM **Session 3 – Introduction to IEEE 802.16s**

Speaker: **Keith Herreman, National Sales Director - Ondas Networks**

This session will provide an introduction and technical presentation of the newly released IEEE 802.12s standard. IEEE 802.16s is a narrow channel WiMAX standard which was a collaboration of utilities, manufacturers, UTC, EPRI, and the WiMAX Forum. The idea for the standard was first introduced at the UTC annual meeting in Atlanta in 2015 and after over two years of joint work and collaboration on the

standard, it was ratified and published by IEEE in October 2017. It is a technology which provides a standard wireless technology solution for utilities and other critical infrastructure entities in any frequency band in channel sizes between 100 kHz up to 1.25 MHz.

11:15 AM **Session 4 – Case Study: Fuel cell usage for backup power requirements within Southern Linc's LTE network**

Speaker: Blake Thompson, Radio Access Network Manager, Southern Linc
Darin Painter, Executive Sales Director, Plug Power

Since 2014, Southern Linc has been installing hydrogen fuel cells to meet the backup power needs for many of its new LTE telecom network sites in the southeast region. To date, nearly 400 of the anticipated 500+ fuel cells have been installed and operate on an as-needed basis. In 2018, Southern Linc's network was hit hard by hurricane Michael, providing a massive real-world test to the new technology. This presentation will discuss the successes, challenges and opportunities of deploying hydrogen fuel cells at scale

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12:00 PM **LUNCH** (On Your Own)

1:30 PM **Session 5 – The Changing ICS Threat Landscape**

Speaker: Thomas Pope, Dragos

The ICS Threat Landscape is ever changing. Before 2016, there were only a handful of instances where ICS networks were specifically targeted. But the game has changed. Now, not just state actors, but cyber criminals are looking to exploit the need for 100% uptime in critical infrastructure. The talk will cover current activities observed in the wild and an outlook for the future of ICS specific attacks

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2:15 PM **BREAK**

2:30 PM **Session 6 – Understanding and Addressing the GAPS in Substation Communication IP Migration**

Speakers: Manny Duvelson, Product Manager, RFL Products

As power utilities migrate toward a packet-based communication system, there are three major gaps that must be understood and addressed properly in order to have a successful migration both during and years after the migration. The three major gaps that must be considered and addressed are:

- The **Technology Gap** since power utilities are usually 15-20 years behind current technology.
- The **Knowledge Gap** since knowledge of new and old technology must be shared in order to have continuity.
- The **IT/OT Convergence Gap** since IT and OT have different operating philosophies for each of their required application data.

3:15 PM **Session 7** – A Round table case for the implementation of an OT network security and access control system.

Moderator: **Lee Ayers – MCEC, other speakers from MCEC and SEL TBD**

MCEC presents the case for their implementation of an OT security and access control system. Discussion to include drivers for the need to develop and implement on through system design, configuration, and implementation considerations.

4:00 PM **ROUND TABLE, CLOSING STATEMENTS & ADJOURN**

Speaker: Tim Parsons, Region 3 Chair

5:30 PM **NETWORKING EVENT - Cocktail reception**

Friday, March 8, 2019

8:00 AM **BREAKFAST FOR ALL ATTENDEES**

******* THE REMAINDER OF THE MEETING IS FOR UTILITY MEMBERS ONLY *******

8:30 AM **UTC Region 3 Members Meeting**
UTC Region 3 Meeting in Review
Discussion Regarding Next Meeting
Special Topic: TBD
Lessons Learned / "Pens Down" Roundtable