Utilities Technology Council™

Northeast Territory/Private LTE Workshop
September 15 – 17, 2021
Providence, RI

Meeting Agenda

- **All sessions will be held at the Graduate Providence, 11 Dorrance Street, in the Biltmore Ballroom on the 17th Floor**
- **All times listed are in Eastern Time Zone**

Wednesday, September 15th

8:00AM **Registration & Breakfast**

9:00 – 9:15AM **Welcome Remarks**

Speaker: **Sheryl Riggs, President & CEO - UTC**

9:15 – 10:15AM **NYPA's Private LTE Program**

Please join us for an overview of the New York Power Authority (NYPA) Private LTE field trial. NYPA's digital strategy, pilot project objectives, system configuration, test criteria and results will be discussed for 3 use cases: drones, digital utility worker and VoLTE will be highlighted along with lessons learned for 600 MHz and 900 MHz spectrums. A panel comprised of members of NYPA, NYSTEC, Nokia, Omega Wireless and Anterix will discuss answers to audience questions. Learn about this important building block to realize NYPA's vision to become a fully digital utility.

Speaker: **Ali Mohammed, PMP, Sr. Director, Digital Innovation & Transformation Office - New York Power Authority**

10:15 – 10:45AM **Networking Break**

10:45 – 11:45AM **Innovating with Private LTE and CBRS Solutions**

This session will introduce Private LTE and CBRS solutions and discuss how this innovative option in the network connectivity toolbox helps utilities to modernize and optimize power grids.

Speaker: **Jamaal Smith, VP Business Development Private Networks - Geoverse**

11:45 – 1:00PM **Networking Lunch**

1:00 – 2:00PM **NB-IoT and Other Paths to Private 5G for Utilities**

Utilities and other critical infrastructure organizations are expanding their use of wireless applications to move their organizations to the next generation of grid situational awareness, control and reliability. Utilities have the option of specialized wireless equipment from a variety of industrial suppliers. Many are opting to consider private networks using equipment meeting the same 4G & 5G (3GPP) technical standards used by mobile wireless "cellular" companies. For those utilities selecting the 3GPP approach, spectrum licenses or leases are typically difficult to obtain and often very expensive.

This session will explore a range of 3GPP options including:

- Upper 700 MHz A Block for NB-IoT (a 5G standard)
- 900 MHz with expectations of achieving 4G LTE spectrum (typically leased)
- CBRS (3.55 GHz)
- Satellite spectrum repurposed for terrestrial operations
- Two-band Solution – NB-IoT for coverage and broadband where needed using shared equipment

This session will discuss the advantages and disadvantages of the various solutions including spectrum availability, system cost and risk factors.

Speaker: **Robert Finch, President – Select Spectrum**

2:00 – 2:30PM **Networking Break**

2:30 – 3:30PM **Private LTE is decided, what now?**

Many utilities are making the decision that private LTE (PLTE) is the right direction for their Utility, but after the financial planning and approvals are done, what's next? How do utilities cut through the noise from vendors, carriers and all those that want to be part of this exciting journey? In this session, we will discuss the programmatic approach and all the preparation that comes next. Such as:

- Building a program Foundation
- Determining a spectrum strategy
- Building an Architecture plan to meets your use case requirements.
- Preparing RFP's and a contracting strategy
- Designing a deployment plan

And may other steps to make your journey not only successful but avoid the many pitfalls and distractions that would hinder that success.

We will talk to a panel consisting of utilities that are making this journey and learn what their experience has taught them so far.

Speakers: **Bruce Albright, 5G Solutions Manager - Burns & McDonnell**
Russell Ehrlich, Sr. Manager, Digital Grid UComm Engineering – Exelon
Joe Mellot, Engineering Manager – Evergy

3:30 – 4:30PM **CBRS for Utility Use-Cases**

With the success of the CBRS shared spectrum model, more private LTE networks are being deployed today than before. While missing critical applications have requirements that push the limits of CBRS, most of the use cases requirements are fully met in large part due to the reliability of LTE compared to other systems. This session will cover the basics of CBRS and LTE, including a comparison with WiFi, and the utility-specific use cases.

Speaker: **Dr. Mauricio Subieta, Energy Segment CTO for North America - Nokia**

5:00 – 7:00PM **Reception with Exhibitors**

Thursday, September 16th

8:00AM **Registration & Breakfast**

9:00 – 10:00AM **Key Points to Consider When Considering Using a Private LTE Network**

This presentation will cover some of the key points for a utility to consider when to use a Private LTE Network. What are the driving factors for a utility to move to their own private LTE network? (These same points will cover the use of private 5G as well). Private networks for a utility are not new. Over the years they have evolved from satellite, microwave, dedicated TDM and packet-based networks to the early use of 2G and 3G to now 4G LTE, CBRS and 5G. From the initial use of different wireless technology, to the acquiring of the spectrum, to the personal on staff, its not as straight forward and easy to implement a private LTE network. Points to consider:

1. What's driving a utilities consideration of using Private LTE? Security, flexibility, future expansion.
2. Technology. Which technology or technologies will work best to meet a utilities need.
3. What are the needs SCADA enhancement, additional IoT devices, the control of consumer renewable energy fed back into the grid.
4. Is the network for data traffic only is the voice. Are all of the assets fixed, or are there mobile devices? Handheld?
5. Buy or lease? From spectrum to infrastructure equipment. What are commercial communications companies providing. Why are IOUs building their own?
6. Staffing. Today, tomorrow, and future needs
7. Summary

Speaker: **Scott Burk, Sales Director - Commercial and Industrial Markets – Council Rock**

10:00 – 10:30AM **Networking Break**

10:30 – 11:30AM **Public/Private Cellular Network Design Choices**

Networking based on public cellular carriers has not always been a simple or successful exercise. The gaps between promises, expectations, and results has not been helped by the need for regular hardware upgrades as technology evolves.

By means of case study material this presentation will examine design criteria with a balanced view of today's public/private cellular options in the context of both greenfield LTE, 3G replacement, and radio field area network backup. The recent COVID constraints and the need for network redundancy as protection from reduced field force availability will also be considered.

Objectives:

- Learn to better manage field service with constrained travel
- Understand issues involved in working with remote vendor support
- Help reduce time to repair with remote access to technical specialists

Speakers: **Steve Moffat, COO – 4RF USA**
Joe Sirianni, Cellular Network Engineer – 4RF USA

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

2:00 – 2:30PM **UTC Leadership Address & Advocacy Update**

2:30 – 3:00PM **Networking Break**

3:00 – 4:00PM **Considerations at the Edge: Planning for Private LTE**

This session will contain insights into an often overlooked approach to managing the edge. Useful tips will be provided that utility customers should consider when planning their network edge gateway/device strategy

How to define your edge:

- Where and what is your starting point?
- Reliability and Durability – impact on truck rolls
- Redundancy - blending private LTE with public carrier/FirstNet
- Security - What's important?
- Flexibility - choosing connection and interface options right for you

Life on the edge:

- Device management: the fundamentals
- Overcoming challenges with initial field installations and provisioning
- Ongoing lifecycle considerations like firmware, user credentials, and certificate management

Speakers: **Mike Waitley, LTE Business Development Manager – GE**
Tom Schwartz, Sr Technical Applications Engineer – GE

4:30 – 6:30PM **Networking Reception**

Friday, September 17th

7:30AM **Registration & Breakfast**

8:15 – 9:15AM **Anterix Session TBD**

9:15 – 10:00AM **CRBS – Fixed Wireless Access – An Alternate Option for Broadband to the Home**

With changes in technology and the availability of new spectrum (CBRS), fixed wireless access has become as solid solution for rapid deployment to address growing bandwidth demands. This session will cover the basics of the technology along with sample use cases for rural deployments.

Speaker: **Kal Kalenda, Sales Director - Ribbon**

10:00 – 10:30AM **Networking Break**

10:30 – 11:30AM Engineering & Construction Review Process for Pole Mounted Small Cells

This presentation would take the audience through the process from SCIP package through as-built sign-off for the deployment of small cell/5G antennas on their utility poles. We would start with the initial discussions with the wireless carrier / host provider regarding their proposed deployment and the scope of their work. We would then focus on the process / steps necessary to provide the carrier/host with the information they would need to provide to the utility to move the process/deployment forward in accordance with the utilities safety protocol and engineering standards. We would also discuss utility worker safety awareness measures. Items to be covered: * review of SCIP package * scheduling site walks *review of construction drawings, structural reports & RF compliance reports *review of carrier's agreement/approval from the affected municipality to deploy their network *Utility to issue License *construction phase *as-built phase.

Speaker: Tony Suppa, Project Manager - Public Service Enterprise Group – *Presenting Virtually*

11:30AM – 12:00PM Roundtable Discussion & Wrap-Up