NASPI

THE NORTH AMERICAN SYNCHROPHASOR INITIATIVE

WEBINAR SERIES

Resilient Timing for Grid Measurements: Best Practices and New Solutions

Doug Arnold (Meinberg), Rick Knea (Oscilloquartz), and Carter Christopher (ORNL)

Timing is a critical element for synchronized measurement systems. Without a common clock capable of timestamping measurements within acceptable error, many synchrophasor applications cannot be utilized. While timing information from global navigation satellite systems (GNSS) has historically been very reliable, these signals are relatively weak, lack encryption, and use a very well-known protocol. Degradation and cybersecurity of ground-based equipment must also be considered.

In this webinar, practical solutions to achieve resilient timing for grid measurements will be discussed. Attendees will learn best practices for protecting existing timing systems. Presenters will also share the potential of alternative timing systems, including the use of Low Earth Orbit (LEO) satellites that offer encryption and are powerful enough to eliminate the need for external antennas. Recent research successes, engineering challenges, and future opportunities for the timing and synchronization industry to meet the resilience needs for the grid of tomorrow will also be discussed.

Dr. Douglas Arnold has over 20 years of experience developing precise time and frequency equipment and in network time transfer technology. He is currently a Principal Technologist with Meinberg USA.

Rick Knea brings his well-rounded career and over 30 years of experience in the telecommunications industry to Oscilloquartz/Adtran to assist customers in solving their timing and synchronization issues in multiple applications.

Dr. Carter Christopher is the Principal Investigator of DOE's Center for Alternative Synchronization and Timing (CAST) at Oak Ridge National Laboratory (ORNL), where he leads the development of alternative timing architectures to support a resilient grid.

To attend this free webinar, please register at https://www.naspi.org/node/987.

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10:00 a.m. Pacific / 1:00 p.m. Eastern (1 hr.)

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