

NASPI Work Group Meeting
Control Room Solutions, Distribution,
Performance Requirements Standards & Verification Task Teams
CRSTT, DisTT and PRSVTT
Joint Breakout Session

Co-Leads

CRSTT: Mike Cassiadoro & Jim Kleitsch

DisTT: Dan Dietmeyer & Sascha von Meier

PRSVTT: Jim O'Brien & Farnoosh Rahmatian

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CRSTT, DisTT, PRSVTT Joint Breakout Agenda

1. Introductions
2. Review mission, goals and objectives for each Task Team
3. CRSTT: Work Products Review, Operations Use Cases
4. PRSVTT: Revised PMU Standard
5. DisTT: European Distribution Operators' Perspective
Distribution PMU Use Case Survey
6. Train the Trainer Recap/Summary
7. Discussion: Synchrophasors for wildfire mitigation

DisTT Mission Statement

The mission of the Distribution Task Team (DisTT) is to foster the use and capabilities of networked PMUs at the medium-voltage distribution level, beyond the substation.

This group will share information in support of effective research, development and deployment of distribution PMUs and their applications.

We aim to create a community to solve technical and other challenges specific to distribution PMU technology and context.

See www.naspi.org/distt

DisTT Activity Context

Over the past two years, DisTT has produced a White Paper, several Use Case Papers, and updated priorities of use cases for synchrophasor data.

Of special interest:

- Fire Risk Mitigation (e.g., broken conductor, falling conductor)
- Load disaggregation on circuits with distributed generation
- Monitoring of distributed generation
- Distribution system state estimation & model validation
- Equipment health diagnostics (e.g., tap-changers, reactive compensation)
- Microgrid automation

DisTT Near Term Goal

Shift from academic to practitioner focus

Produce a well-researched, updated study to

- describe needs and priorities of transmission and distribution grid operators that motivate use of time-synchronized measurements
- summarize opportunities and barriers as of today
- present a strategic vision for advancing the use of high-frequency measurement data in distribution systems
- inform decisions to deploy available measurement technologies in a way that addresses urgent needs of real-world practitioners
- support further development of the sensor hardware, data visualization, and analytic software necessary to address the identified needs.

DisTT Action Plan

Conduct a series of focused interviews with transmission and distribution operators to

- clarify needs and priorities
- ascertain most important areas where time-synchronized measurement data can have a major near-term impact
incl. Synchrophasor, Time-synchronized, and Point-on-wave data

Collect and synthesize responses

Delegate sections of study writing

European Distribution Operator Perspectives

Panos Moutis, Omid Alizadeh-Mousavi (DEPsys, Switzerland)

- Conducted a survey of European utilities
- Informed the development of GridEye platform
- Smart meter deployment in Europe: desire to use data for more applications, but running into issues with data quality and ownership. Trend toward wider-area grid monitoring solutions to meet use cases that existing datasets cannot support.
- Applications of interest include power quality, DG, fault detection
- Use cases of interest and prioritization vary significantly depending on the characteristics of the utility

DisTT Use Case Survey

https://docs.google.com/forms/d/1MaHZ0U1UaTllsTeZ81IYv920GRYfmxs5k1cL383_Ttc/edit?usp=sharing

The screenshot shows a web browser window with two tabs: 'CRSTT/DisTT Survey - Google' and 'Synchronphasor Use Cases Survey'. The address bar shows the Google Forms URL. The browser's top bar includes various extension icons like 'Apps', 'PG&E Map', 'Phasor-Based Co...', 'Copy Requests', 'Eastern Sierra Ava...', 'Sascha's Group M...', 'UC Berkeley - Cal...', and 'Kincade fire'. The survey interface has a header with a back arrow, the title 'Synchronphasor Use Cases Survey', a star icon, and icons for palette, eye, settings, and a 'SEND' button. Below the header are two tabs: 'QUESTIONS' (active) and 'RESPONSES'. The main content area is divided into sections. The first section is titled 'Section 1 of 4' and contains the survey title 'Synchronized Measurement Use Cases Survey'. Below the title is a paragraph: 'This survey by the North American Synchronphasor Initiative (NASPI) aims to assess the needs and priorities of electric grid operators for using time-synchronized measurement data, especially in distribution systems.' This is followed by a list of relevant data types: 'Relevant data may include any of the following: - Measurements of rms voltage or current magnitudes that are time stamped to within a fraction of a second, so they can be compared across locations for the same instant - PMU (synchronphasor) data, reporting rms magnitudes and phase angles at 30 to 120 frames per second - Time-stamped point-on-wave data (e.g. time-domain waveform, with kHz sampling)'. At the bottom of the section is a navigation bar with 'After section 1' and 'Continue to next section'. The second section is titled 'Section 2 of 4' and contains the title 'Distribution System Monitoring'. A vertical toolbar on the right side of the survey contains icons for adding, deleting, duplicating, and other editing actions.

Synchrophasors for Wildfire Mitigation: Open Discussion

DisTT Contacts

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Next NASPI DisTT Conference Call

Tuesday Nov 26, 2019, 10 am PST / 1 pm EST

