



January 28, 2020 Combined Call Notes

Control Room Solutions Task Team (CRSTT)

Co-leads, Michael Cassiadoro (mcassiodoro@totalreliabilitysolutions.com), Jim Kleitsch (jkleitsch@atcllc.com) and Sarma Nuthalapati (NDR) (ndrsarma@ieee.org)
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Distribution Task Team (DisTT)

Co-leads, Sascha Von Meier (vonmeier@berkeley.edu) and Dan Dietmeyer (DDietmeyer@semprautilities.com)
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Teresa Carlon, NASPI support and website and listserv contact (teresa.carlon@pnnl.gov)

Attendees

Roll call – see list below. Call led by Sacha and NDR. [Combined agenda](#).

Action Items

- Sascha would like to recruit volunteers to help write sections of the paper – please send an email to any of the team leads or Teresa.carlon@pnnl.gov if you have time to contribute. Bryce Johanneck volunteered to help but would like to confirm his ideas align with the rest of the DisTT and a path forward.
- Use of Time-Synchronized Measurements in the Operations Horizon – Train-the-Trainer Workshop material posted on the [NASPI website](#).
- ALL – Mike Cassiadoro tentatively committed to forming a Use Case Panel session at the NASPI Work Group meeting April 2020; any vendor or utility that would like to participate in this panel session please reach out to Mike.
- How do you feel about the joint conference calls? Send your feedback to any of the team leads.

CRSTT

- Welcome NDR as a new co-lead to the CRSTT! NDR has made significant contributions to the CRSTT and will his willingness to help lead the CRSTT is greatly appreciated.
- For those of you new to the CRSTT you can find call notes, mission statement, goals, objectives, focus area documents, video event files, and use cases on the NASPI CRSTT [web page](#). If you have questions about this content please reach out to Mike, Jim, NDR or Teresa.
- NDR is leading the effort to identify any CRSTT papers that might need updating with more current information.
- CRSTT will focus for 2020 will be Operational Use Cases to help drive training. Email was sent to the CRSTT on December 13, 2019. Outlines effort led by PNNL to develop use cases to help form operational training. We don't want to limit training to just the transmission side – so these use cases are a great opportunity for the two task teams to work together and create a community that will receive beneficial information. Mike tentatively committed to forming a panel to discuss use cases at the NASPI WG April meeting; any vendor or utility that would like to participate in this panel session please let Mike know.

DisTT

- Report being drafted to share the results of the last DisTT survey - Synchronized Measurement Use Cases distributed in November 2019. Content would include use cases, section that relates to the implications of some of the software/hardware used to support some of the use cases, one response stands out as being the highest priority – fault detection and implications for wildfire safety.
 - What contributions can you make in terms of experience with PMU based or other fault detections?
 - Might be useful in pulling together sample data. Sascha asserted she could get some data. Would be nice to have a reference library we could look at. Look at how intelligence varies with different quality of PMU measurements.
 - Compile an example(s) of fault detection and localization with synchronized measurement data.
 - Fault detection use cases would hopefully help engage people and provide actionable items in the control centers.
- Dan Dietmeyer asserted if you have other focus areas you would like the DisTT to consider please let Dan/Sascha know. In the meantime, the DisTT needs experienced people to help with the Synchronized Measurement Use Cases report.
- Bryce Johanneck thinks that there might be a need to combine data and explore potential in distribution topology. We don't have the granularity at the moment with topology (spatial density for sensor placement vs resolution of data from individual sensor + physical location of sensor) for the most robust use cases, but wise to start down that path. Start with a model that a system operator will use. Bryce added the physical location of the sensors in a distribution network; don't have, can't have enough PT/CT microprocessors to know state awareness with enough confidence to implement robust protection. Granularity with SCADA is not good enough, time synchronization is an issue, etc.
 - (Sascha) Thoughts on barriers and our limitations and the decision-making process; what stands in the way of getting the data that we need?
 - (Bryce) said is coming to down to judgement and speculating 'cost.' No provision for PTs and CTs in most of distributions grid, same for transformers or overhead switch poles, etc., high cost to try and proliferate a microprocessor at every point.
 - (Dan) thought on improving meters... smart meters provide data back to control center to get some of the data, wonder if regards to synchrophasor, if we had a microPMU help for higher resolution, possibly using a customer's Internet for a credit? One of the challenges for deployment is cost of getting every branch circuit wanted/needed. Lower cost devices that could be integrated with current infrastructure.
 - (Bryce) asserted that is a valid point, functionality that metering should be providing, if utilities are knocking on the door of depreciation, then this is a good time to sit down and talk about what that next technology should look like.
 - (Slava Maslennikov) primary responsibility is to use pmu in the transmission system but sees some potential tasks combining measurements in the distribution; 1) locating the source works successfully, 2) when talking about locating the fault location we need not to forget about business reasons. Sascha would like to follow up with Slava regarding the problem formulation for the node item identification (great problem for researchers).

- (Panos) trying to setup research and obtain data, using pmu synchronized measurement for trying to extract the approach on the fire front for disconnected power line, trying to asses the approach on the fire front.
- (Sascha) thought on sensor placement and productivity; telecommunications could serve a function in system distribution monitoring in that when you look at providers (e.g. Comcast) they have power supplies connected to secondary distribution and communications infrastructure in place to backhaul data – isn't that type of node a useful and practical place to tap into the distribution system for visibility? Secondary side wouldn't compromise customer privacy. What is the potential for trying to leverage the telecommunications industry to help capture useful measurements at those nodes? (Dan) are voltage/current phasors enough to identify distribution topology? If every communication box had voltage/current data is that enough data to identify distribution feeder topology, maybe not. Worth exploring. Sascha has some research papers on the subject, maybe not with 100% confidence. (Panos) Virginia Tech has some done some work in this area. Need to add useful shareable resources and information to the DisTT web page as they come in.

Next conference call: February 25, 2020, 10:00am PT / 1:00pm ET.

Attendees

Bryce Johanneck
Dan Dietmeyer
David Lavery
Dominic Mullins
Frank Tuffner
Jeff Zhao
Jim Kleitsch
John Hastings
Matthew Hanley
Mike Cassiadoro
Panos Moutis
Rajkumar Anumasula
Santiago Mesa-Jaramillo
Sarma Nuthalapati (NDR)
Sascha von Meier
Slava Maslennikov
Subburaman Sankaran
Teresa Carlon
Tom Rzy
Yi Hu