



Distribution Task Team (DisTT) Conference Call Minutes

August 24, 2017 10:00 am PT/1:00pm ET

Sascha Von Meier (vonmeier@berkeley.edu), Lead

Teresa Carlon (teresa.carlon@pnnl.gov), Support

Email list address: naspi-taskteam-distribution@lyris.pnnl.gov

Attendees

Roll call – see list below.

Action Items

All white paper volunteers; feel free to begin writing your section(s).

Ongoing Business

Tom Rizy; provided an update on the Sensing and Measurement Strategy Methodology, asserted that the funding from DOE has been slow, progress made on roadmap, and technical reviews. Waiting to gear back up again when the funding comes in. Call today to get status on the working group. Synchro placement tool is another activity underway. Working on physical constraints for placement by the users, a poster will be presented at the next NASPI Work Group meeting in Springfield, MA, please come and see the research effort underway. Ranking of applications underway by IEEE. Trying to get vendors more involved in the project. The tool will have to be of interest to the community and needs the support of vendors. Harold Kirkham would like to see the placement tool. Harold and Tom to talk more about this subject. Sascha asserted that the physical constraints for placement will be a significant issue anywhere in the distribution context as opposed to the transmission context. May impact the science of what we can do with the data.

Sascha; discussion of white paper. We have a lot of material, probably more than we can have in this individual paper. Time to discuss what we want this paper to accomplish and maybe identify candidate titles for subsequent or separate papers. Technical Foundations – question of how much should we get into applications and use cases? We already have standalone use cases. We should have an intro that provides a motivation for readers to read about synchrophasors. Looking for key points to add to the introduction to “hook” readers. Important to ask ourselves why is this document important and what would make readers want to read it? Theory, definition, and limitation of phasor measurement...sometimes we don't all agree and that is ok. Perhaps the inclusion of definitions in the introductory white paper because the reader might be overwhelmed, history is important in the context of laying the foundation for what should be future performance standards for the distribution synchrophasor or how should we articulate expectations. History section; should this be a separate document or not?

Keep points to “hook” readers:

- Blurring boundary between T and D: transmission operator need visibility into distribution.
- Increasing risk of constraint violation with high-penetration DER: distribution operators need more visibility
- Need for better data across various planning and operation functions justify the paradigm of a versatile data store to support diverse use cases, rather than traditional siloed approach.

After some discussion Sascha summarized by saying in general distribution systems are messier than transmission systems, we have motivation according to table X, Y, Z for more situational awareness, we have instruments that can provide situational awareness, but because distribution systems are so messy we now find ourselves in conditions that challenge the capability of the instrument and the capability to interrupt the measurement outputs of those instrument. This can lead the reader into the theoretical section of the white paper. Main points despite the challenges we are miles from where we have been in terms on situational awareness in distribution circuits. Important to have that message up front before we delve into the challenges and imperfections. How about the history? Understanding the definitions of the phasor (section) follow on to the caveat; systems aren't perfect, waveforms aren't perfect. What should we expect from the instruments? Consensus about how to handle theoretical part, tight and brief as possible, put history off into another paper, put use cases into other individual use case papers, avoid adding a lot of material into the sections that are yet to be complete. Harold and Tom discussed writing about the functionality of a PMU and what does it provide? The general consensus is that the paper is probably too long; keep tight and brief. Everybody wants to add material but it is important to stay within scope and consider maybe putting other material in another document(s). History could go into another paper. Use cases could be put into individual use case papers. Harold proposed technical content under history or another paper but keep the use cases in the current white paper.

Purpose of the paper: establish distribution systems as a new and distinct application area in contrast to transmission PMUs. This argues in favor of keeping the use cases in the paper.

Use cases may want to be included in the white paper. There are likely equally important use cases but they haven't been completed yet.

Action: Use cases (with different data requirements) that need to be addressed – team to create a list. Sascha to send a list of Use Cases (completed and future) that could be included in a “Use Case” chapter.

Sascha has put the latest version of the DisTT white paper on the NASPI DisTT SharePoint site (<https://spteams1.pnnl.gov/sites/naspi/distt/default.aspx>). If you need assistance working from SharePoint or would like access to the white paper please email teresa.carlon@pnnl.gov.

Next Call

- The DisTT will be meeting face to face in Springfield, MA, at the NASPI Work Group meeting.

Reference Material

- DisTT White Paper: <https://spteams1.pnnl.gov/sites/naspi/distt/default.aspx>
- Topics of ongoing work for this group include:
 - Present practices, research, state of the art and challenges with distribution PMUs
 - Distribution PMU applications and use cases
 - Theoretical aspects of PMU measurements
 - Technical requirements and specifications for distribution PMUs
- Table: [Data Requirements](#).
- CRSTT Reference - [NASPI Diagnosing Equipment Health and Mis-operations with PMU Data](#) and the [event summary table](#).
- DisTT SharePoint Site: <https://spteams1.pnnl.gov/sites/naspi/distt/default.aspx>. Need access? Email teresa.carlon@pnnl.gov
- U.S. Department of Energy Grid Modernization Lab Consortium ([GMLC](#)).

Attendees

Anna Scaglione
Dan Lutter
Emma Stewart
Emmanuel Taylor
Frank Tuffner
Harold Kirkham
James Follum
Laura Mehrmanesh
Liz Ratnam
Rakesh Batra
Sascha von Meier
Sumit Paudyal
Teresa Carlon
Tom Rizy
Yi Hu