Performance Requirements, Standards, & Verification Task Team (PRSVTT)
Call Notes / September 27, 2019

Jim O'Brien (Jim.O'Brien@duke-energy.com) and
Farnoosh Rahmatian (frahmatian@nugridpower.com), Co-leads
Teresa Carlon (teresa.carlon@pnnl.gov), Support
Email list address: naspi-taskteam-performance@lyris.pnnl.gov

New business & action items:

- NASPI Work Group registration and room block is now open! If you plan on attending please get registered, rates will increase after October 8 (registration) and October 7 (hotel).
- Teresa will send the survey out before the NASPI Work Group meeting to the SGIG recipients and to those additional company's Farnoosh and Jim identified.
- Refer to "other topics" for items that could be on the agenda for the PRSVTT breakout session. Lots of interesting ideas.

1. Roll call – see below. Jim O'Brien led the meeting. — All

2. Outstanding projects update

   - PMU Application Requirements Task Force (PARTF) – Allen; no activity, hopefully someone will get an interest in using it eventually, get an expert in the system to use it. — Allen Goldstein

   - Synchrophasor data under fault conditions – Jim talked to them at PSRC last week, after discussions, looking to withdraw it. Some contentions on the topic, and some issues getting traction on it. No objections, provided the information "gets out there" (see below). Harold has published some stuff on it, so that may be covered, some items during faults/protection, but never really seem to go anywhere. If withdraw it, will the material go somewhere to be useful? Krish talked about making into a transactions paper. — Krish Narendra/ Nuwan Perera

   - Survey of instrument transformers connected to installed PMUs – Farnoosh; Teresa will work on getting the survey out before the NASPI Work Group meeting to the SGIG recipients and to those additional company's Farnoosh and Jim identified. — Farnoosh Rahmatian

   - Analyzing PMU performance requirements for Synchrophasor-based control applications – Pratim; Work going on (3 white papers right now), volunteers providing info, should have something in the next month. Pratim won't be at NASPI, but Anurag might be, maybe present at the breakout session? — Anurag Srivastava/ Pratim Kundu

3. Update on other activities – Standing Topics:

- PMU Standards
    - C37.242 (Allen Goldstein); Jim – -- Completed all working group comments, has been sent to IEEE SA "mandatory editing", PAR was extended for a year (would have expired in December, but need more time. Sponsor ballot group has been formed - applications for sponsor ballet closed Sept 19 - looks like a big group. Document has been approved by PSRC to go to sponsor ballot (maybe). Next steps are get back from IEEE and then send out to sponsor ballot, expect to get a lot of comments, then work on resolving, then do 10-day reballot, finish by 2020.
    - C37.118.2-P9 (Vasudev Gharpure); - met last week at PSRC, done with changes they want to make in this revision, work up a proper document as an update to the previous standard, figure out which informative sections to include, and what to modify. Probably take the rest of this year, then WG go through document and see if ready for ballot.

- PDC Standards All
    - PC37.247-C19 (Vasudev Gharpure); finally published. - Have CTF40 task force to see if there are any follow-up actions, paper or tutorial or something like that, ongoing task force for that effort.
- IEEE PES PSRC C23 (Mahendra Patel); - Allen hosted (filled in for Mahendra) - presentations from Dagle and Farnoosh on expanding NASPI scope (POW), discussion on "GoF" information, someone suggested investigating point-on-wave without high speed sampling (not sure what this meant), validation of data from process bus information, Vaheed [Vahid?] suggested NASPI working on value proposition of sample data. Ken Martin reported some IEEE group disbanding. New task force under PSRC C to look at distribution PMUs, frequency and ROCOF, and requirements. Recommendations are still going back and forth between NASPI and PSRC
- IEEE ICAP/NIST (Allen Goldstein/ Ravi Subramaniam); - ICAP test suite specification is published. Still meeting, but not much work to do. ICAP steering committee did decide to continue to meet at PSRC. Continue to have interesting discussions and maintain expertise, keeping group together. Allen has been chair for 2 terms (4 years) - he's okay going forward, but if someone wants to nominate someone new, January is roughly when nominations would be needed.
- IEEE PE/PSCC P2664 Standard for Streaming Telemetry Transport Protocol (Ken Martin); - Ken not on call. Allen did attend the meeting. It looks like a work in progress. Sure could use more help. There are a number of companies actively developing, so would be good to get them involved.

Christoph Lackner; document is still in progress, needs a lot more input, sounds like there may be a new version coming out, but details sketchy, Allen would like a call with Ken Martin and GPA to help sort this out.

- GMLC Update – still watching. https://www.energy.gov/sites/prod/files/2019/05/f63/GMI-National-Lab-Call-2019-05-29.pdf

4. Other topics / new business; All

- Jim talked to Ken at PSRC; thought he'd be able to join to discuss what Allen mentioned earlier, distribution requirements and such.
- Allen talked about expanded scope and this committee has new relevance, hard time since not being in DisTT. Will the PRSVTT have a joint meeting with DisTT? Jim thinks that's the plan, but not 100% sure. Mostly hinges on if there is any PRSVTT pressing business that needs to be done first?
- Understand applications and what needs to go into those. Ken had a presentation on applications. His findings weren't showing the application need for super-high angle accuracy for the distribution, may be corner cases, but need to understand it better.
- Euromet created website on frequency and RoCoF. Report on RoCoF tied to inertia, information on frequency measurements beyond the PMU standard, with expanding role into sampled values, IEC has standards for sampled values, when that gets fed into PMU algorithm (or any algorithm), what kind of requirements does that produce?
- C23 talk about goodness-of-fit, using synchrophasor to estimate point-on-wave signal (how well it work?) Validate synchrophasor using the sampled values. Farnoosh raised the question of between PSRC and NASPI, how is that work being divided? Anything PSRC wants NASPI to specifically work on? There is a core group that attends both, but lots of people who don't attend both meetings. Lot of expertise at NASPI to tap into.
- Task force not implemented yet, but see something like NASPI creating reports/set of reports that get put into a standard, similar to how C37.242 came together. PSRC continue to use these reports to influence their work. One aspect of NASPI could be to make sure get all the distribution application, since there may be broader attendance there.
- Emphasis of how get to more accuracy in amplitude and phase, instrument transformer becomes a lot more important, provide grade of requirements to make sure still needed, notional system that "requires" some of these things is good for academic, but it would be good to have actual examples. Grades of distribution PMUs (and instrument transformers) could be useful, Farnoosh definitely interested.

- Jim mentioned this discussion would definitely be good for an agenda item with the DisTT

Next PRSVTT Conference Call — All

- **November 22, 2019 @ 8:00am PT / 11:00pm ET**.

Attendees

Allen Goldstein
Christoph Lackner (GPA)
Farnoosh Rahmatian
Frank Tuffner
Jim O'Brien
Pratim Kundu
Yi Hu