

Performance and Standards Task Team

- **Task Team Leader:** Vahid Madani/PG&E
- **Task Team Co-Leader:** Damir Novosel/Quanta Technology
- **Task Team Support:** Henry Huang/PNNL
- This task team comprises more than 100 members

PSTT Session Highlights

June 2010

Presented by
Farnoosh Rahmatian, Quanta Technology

Well-attended

Overview of NIST PAP and SGIP – delivered by R. Farquharson

- Summary of NIST Smart Grid Interoperability project results
- Summary on SGIP-TCC (Test and Certification)
- Check out the SGIP Twiki site for more detailed and up-to-date information

Overview of Standards: Status and Expected Deliverables

- IEEE C37.118 – delivered by K. Martin
 - PSRC WG H11, C37.118.1, Performance requirements for PMUs
 - Dynamic performance requirements being discussed.
 - Expected balloting Jan 2011.
 - PSRC WG H19, C37.118.2 (being worked together with IEC TC57 WG10 as IEC 61850-90-5), Communication requirements (dual logo with IEC 61850)
 - Progressing well
 - Communication via both GOOSE messaging and Sampled-Value (process bus) may be covered.
 - Multi-cast is supported in the standard/protocol.

Overview of Standards: Status and Expected Deliverables

- Latency of PMU – delivered by J. Murphy
 - Focus on the latency of the PMU itself (excluding communication, etc.)– various devices with latencies up to 300 ms.
 - PMU latency requirements are also dependent on PMU specification and settings including
 - Filtering requirements
 - Record/phasor rates
 - ...

Overview of Standards: Status and Expected Deliverables

- Addressing gaps with Present PMU Standards – delivered by M. Adamiak and H. Mehta
 - Three categories of short-coming or “opportunities” for improvement to PMU standards
 - Critical gaps
 - Nice-to-have gaps
 - Interoperability agreements needed
 - Issues in Developing SG Interoperability Framework
 - New Dimensions to Interoperability Framework (software issues in multifunction product and application environment, legacy practices, and installation and maintenance support)
 - Industry and Regulatory Bodies need to focus on Compliance as well as Good Practices issues
 - NIST’s third-phase for Interoperability Roadmap

Role of NASPI PSTT in Supporting IEEE/IEE, NIST, and SGIG Awardees

- PDC requirements and metrics for performance – delivered by T. Weekes
 - Covering PDC performance metrics
 - How many inputs
 - Sample rates
 - PDC-Latency
 - Verification of correction functioning of the PDC Waiting Time
 - Bi-directional data-flow requirements
 - [Combination of PMU+communication+PDC testing – important but not PDC scope, part of sub-system testing).]

Role of NASPI PSTT in Supporting IEEE/IEE, NIST, and SGIG Awardees

- Test requirements, Applications and Levels – delivered by V. Madani
- Test Equipment & Set-up/ Certification process – delivered by Y. Hu
 - Both equipment and set-up/process needs to be traceable to National Standards to ensure consistency (and assist interoperability)
- PDC Test Bench – delivered by R. Robertson
 - Quanta will be working on providing test process with input from SGIG winners
 - Test bench being developed by GPA
 - Expect alpha version in 45 days
 - Includes phasor stream time tagging and timing/latency measurements
 - Stores both input and output of PDCs
 - Gathers and stores a number of performance parameters
 - Would like to get feedback from NASPI community on the alpha version of the PDC tester to incorporate in future versions
- Maintenance test requirements – Life Cycle – delivered by M. Kezunovic
 - Reviewed various elements affecting the need for “maintenance”
 - Reviewed standards maturity process (and C37.118 meets only 3 of the 12 criteria – i.e., not a very mature standard).

Reviewing PSTT Priority Tasks - Support of the NIST Interoperability and Work on Future Standards

- Initiatives on Fast-Track – delivered by V. Madani
 - Phasor Data Concentrator Requirements
 - PMU-PDC/PDC-PDC Communication Methods
 - Phasor Data Concentrator Testing and Calibration Standard
- Moving PSTT documents to IEEE Standards and Guides – delivered by P. Myrda
 - PSRC meeting – Madison, WI, May 2010- WG C5 progress update on the fast track process.

Questions?

