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 ballotng 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?