



## **NASPI TASK TEAM PROJECT STATUS REPORT**

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| <b>Task Team Name:</b>      | Performance and Standards Task Team                       |
| <b>Task Team Leader:</b>    | Vahid Madani/PG&E,  |
| <b>Task Team Co-Leader:</b> | Damir Novosel/Quanta Technology                           |
| <b>Task Team Support</b>    | Zhenyu Huang/PNNL   |
| <b>Date:</b>                | 10/12/2008  |
| <b>Reporting Period:</b>    | June 10, 2008 through October 17, 2008                    |
| <b>Team Members:</b>        | 97 members. See attached spreadsheet for a list of names. |

# 1. Executive Summary

## Highlights of Task Team Work

- The scope of the Performance and Standards Task Team includes coordinating and acting as liaison to standards efforts and determining consistent and satisfactory performance of synchronized measurement devices and systems by creating guidelines and reports in accordance with best practices.
- PSTT (formerly PRTT) has been active in developing guidelines and requirements documents to serve NASPI needs. The scope of the documents covers a wide spectrum from PMU testing to phasor network deployment to phasor applications.
- Completed documents (with the document leads) are:
  - PMU System Testing and Calibration Guide, Jerry Stenbakken (NIST)
  - SynchroPhasor Accuracy Characterization, Sakis Meliopoulos (Georgia Tech)
  - PMU Installation/Commissioning/Maintenance Guide
    - Part I: Acceptance Checklist for Connecting to SuperPDC, Ritchie Carroll (TVA)
    - Part II: Installation Procedures, Ken Martin (BPA)
  - Installation/Commissioning/Maintenance Survey & Summary, Virgilio Centeno (Virginia Tech)
  - Eastern Interconnection Phase Angle Reference, Henry Huang (PNNL)/Ritchie Carroll (TVA)
  - Phasing Inconsistency with Mapping Examples, Virgilio Centeno (Virginia Tech)/Henry Huang (PNNL)
  - Phasor Requirements for State Estimation, Lucy Wu (Areva)
  - Phasor Requirements for Raw Data Utilization, Sakis Meliopoulos (Georgia Tech)
  - IEDs with Integrated PMU Functionality, Damir Novosel/Yi Hu (Quanta Technology)

## 2. Accomplishments

- Completed PMU definition document that incorporates IEEE standard as part of the performance definition and has additional functional descriptions from application perspective.
- Completed the prototype of a web-based phasor tool repository, ready for trial uses. The repository aims to be a platform to facilitate the sharing of information related to phasor tools with the electric power industry.
- Completed revision of the document on “Guidelines for synchronization techniques – accuracy and availability”. The document is currently under PSTT team review.
- Ongoing collaborative activities with IEC 61850 group in creating a common platform to include phasor data to the operating environment.
- Ongoing collaborative activities with the IEEE SynchroPhasor Standard group to include “dynamic phasors” into the standard.
- Ongoing collaborative activities with the IEEE PSRC H10 WG (Naming Installed Intelligent Electronic Devices, and the IEEE PSRC HTF1 WG to develop add-on modules for phasor representation in COMTRADE format.

## 3. Plans for Next 6 Month

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| ○ Complete the document on “Guidelines for synchronization techniques – accuracy and availability”. <i>Target is end of 2008.</i>                      |
| ○ Finalize the phasor tool repository per comments and trial feedback. <i>Target is end of 2008.</i>   |
| ○ <i>Standardizing PMU Configuration for IEC 61850 Applications. Deliver “Mapping rules” to IEC 61850 team.</i>  |
| <i>Priority activities evaluated and proposed at the PSTT meeting in Charlotte (this is a draft to be further evaluated):</i>                          |
| ○ Continue working on “Define functional PDC requirements”. <i>High effort expected. Needs resources.</i>  |
| ○ Develop the scope document for the task on “System and device requirements for combined applications”. <i>High effort expected. Needs resources.</i> |
| ○ Expand guidelines for using devices with Integrated PMU Functionality. <i>Medium effort expected. May still need resources.</i>                      |