NASPI North American SynchroPhasor Initiative

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

Highlights

- 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.

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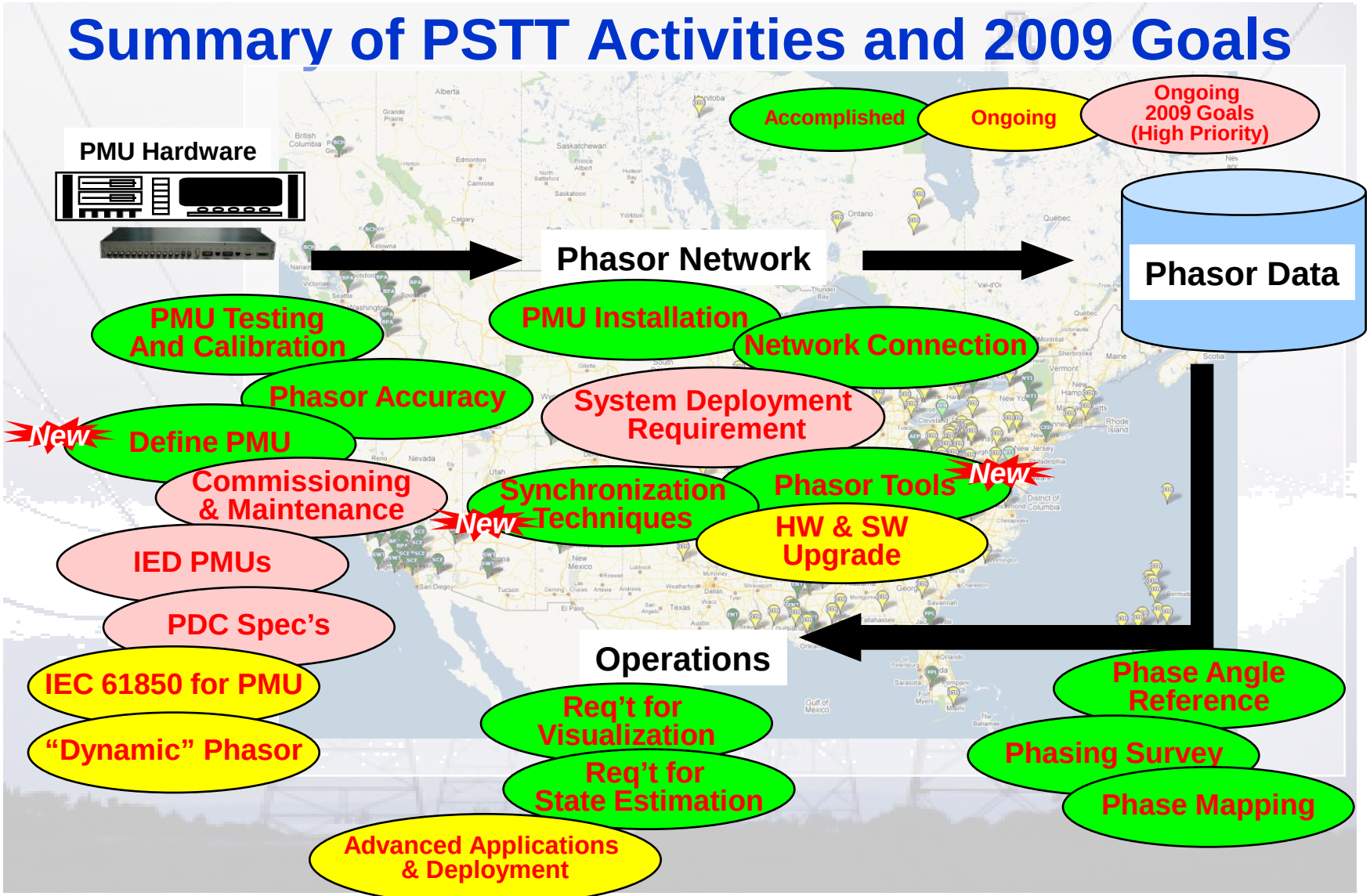
Summary of PSTT Activities and 2009 Goals



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PSTT 2009 Goals and Priorities

	Priority	Amount of Work
Focus Area 1: PMU and PDC		
• Define standard PMU:	*(Completed)*	
• Commissioning/maintenance guide:	High	Medium
• Expand guidelines for IED PMUs:	High	Medium
• PDC functional requirements:	High	High
• Dynamic phasors:	*(Collaboration w/ IEEE)*	
• COMTRADE extension for phasors:	*(Collaboration w/ PSRC)*	
• Standardizing PMU configuration for IEC 61850:	*(Collaboration w/ IEC)*	
Focus Area 2: Phasor Network/Architecture		
• Phasor tools repository:	*(Completed)*	
• Guidelines for synchronization techniques:	*(Completed)*	
• Requirements for HW/SW upgrades:	Low	Medium
Focus Area 3: Application Requirements		
• Requirements for combined applications:	High	High
• Requirements for protection and control:	Low	High

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Highlights

- Completed documents (with the document leads) are:
  - *(new)* Guidelines for synchronization techniques - Accuracy and Availability, Alfredo Vaccaro (University of Sannio, Italy)
  - *(new)* NASPI Phasor Tool Repository, Teresa Carlon (PNNL)
  - *(new)* Standard PMU Definition / Basic Specification, Ken Martin (Quanta Technology)
  - PMU System Testing and Calibration Guide, Jerry Stenbakken (NIST)
  - SynchroPhasor Accuracy Characterization, Sakis Meliopoulos (Georgia Tech)
  - IEDs with Integrated PMU Functionality, Damir Novosel/Yi Hu (Quanta Technology)

Highlights

- Completed documents *(cont'd)*:
  - 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)

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Accomplishments Since Last Meeting

- Completed the document on “Guidelines for synchronization techniques – accuracy and availability”, posted at *http://www.naspi.org/resources/pstt/psttresources.stm*.
- Finalized the NASPI Phasor Tool Repository *http://www.naspi.org/resources/pstt/toolsrepository.stm.* Tool entries are being submitted by NASPI members and vendors.
- Reviewed and revised the scope statement of “PDC Functional Requirements”, and coordinated with the Data and Network Management Team (DNMTT).
- Derived and delivered “mapping rules” for phasor data to IEC 61850 team.

Accomplishments Since Last Meeting

Cont'd

- 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.

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Plans for Next 3 Months

- Develop a scope statement for system and device requirements for combined applications.
- Develop “PDC Functional Requirements” specification and proposal for NERC resource application.
- Expand guidelines for using devices with Integrated PMU Functionality if NERC resources are available.
- Expand the Guide on PMU Installation, Commissioning and Maintenance.