

Performance Requirements, Standards & Verification Task Team

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Final Report
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<https://www.naspi.org/node/535>

PRSVTT Mission Statement

The PRSVTT is a group of professionals from utilities, academia, manufacturers and government. Our aim is to help the adoption of phasor measurement technology through standardization. We provide a forum for discussing, developing and monitoring requirements. We identify areas where synchrophasor technology would benefit from guidelines and standards. We coordinate the development of these guidelines with other NASPI task teams and, as appropriate, migrate those guides to IEEE Power & Energy Society (PES) Working Groups.

Performance Requirements, Standards & Verification Task Team

- System requirements and monitoring
- Standards and guidelines development and coordination
- Migration between versions of standards and interaction with standard-setting bodies
- Performance requirements for data exchange
- System interoperability and compatibility testing, conformance, and certification

Mission Accomplished

Successful transition of performance assessment and standards development activities related to synchrophasors to IEEE, IEC and other standards development bodies.

Examples of key outcomes and accomplishments

- Combination of 4 guides developed by NASPI PSTT prior to 2011 to create
 - IEEE Std C37.242-2013 --- IEEE Guide for Synchronization, Calibration, Testing, and Installation of Phasor Measurement Units (PMUs) for Power System Protection and Control
 - C37.242-2013 was created in 18 months, a record short time for developing standards at IEEE PES PSRC – many thanks to NASPI-PSTT work prior to that
 - Edition 2 now available - C37.242-2021

Examples of key outcomes and accomplishments

- Use of NASPI PDC (Phasor Data Concentrator) guide to develop
 - IEEE Std C37.244-2013
 - IEEE Guide for Phasor Data Concentrator Requirements for Power System Protection, Control, and Monitoring
 - Later leading to the development of IEEE Std. C37.247-2019, IEEE Standard for Phasor Data Concentrators for Power Systems

Examples of key outcomes and accomplishments

- Numerous inputs captured through revisions of synchrophasor standards including
 - IEEE Std C37.118.1-2011, IEEE Standard for Synchrophasor Measurements for Power Systems
 - And its amendment in 2014
 - IEEE Std C37.118.2-2011, IEEE Standard for Synchrophasor Data Transfer for Power Systems
 - IEEE/IEC 60255-118-1-2018, IEEE/IEC International Standard - Measuring relays and protection equipment - Part 118-1: Synchrophasor for power systems - Measurements

Examples of other accomplishments

- Guide for Installation of Multi-Function Phasor Measurement Units
- Contributions to various NASPI-wide efforts including NASPI “PMU Applications Requirements Task Force”
- Draft Documents on analyzing PMU performance requirements for synchrophasor based control applications
 - Survey of Existing PMU applications around the World and Classification
 - Analyzing Synchrophasor Performance Requirements for Synchrophasor based Control Applications
 - Data Quality Impacts on Synchrophasor based Control Applications
- Contributions to Test Suites Specifications (TSS) for PMU Certification through IEEE Conformance Assessment Program (ICAP)



**Many Thanks to
All
Contributors and Participants**

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