



PMU Conformity Assessment & Certification

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- IEEE Conformity Assessment Program (ICAP)
 - The IEEE Conformity Assessment Program (ICAP) is a joint initiative of the IEEE Standards Association (IEEE-SA) and IEEE Industry Standards and Technologies Organization (IEEE-ISTO). By drawing together subject matter experts (SME's) from industry, ICAP develops and maintains independent and industry-testing and interoperability support to entities utilizing IEEE standards
- ICAP is assessing the viability of establishing a conformity assessment program for Synchrophasors. ICAP has established a Synchrophasor Conformity Assessment Steering Committee (SCASC) whose charter is to:
 - Converge of a Test Specification for Synchrophasor testing
 - Determine compliance levels
 - Assume an advisory role for test methods and interpretation of standards
 - Test lab requirements / audit
 - Inaugural SCASC meeting convened in conjunction with PSRC conference in New Orleans

Conformity Assessment Description & Drivers

- Industry recognized process to demonstrate a product is compliant to a standard
- Conformity Assessment testing resulting in certification provides
 - Assurance
 - Desired level of confidence
- Neutral, Independent, unbiased
- Builds on top of standards development activities
- Benefits of conformity assessment
 - Increased adoption
 - Free-flow of goods
 - Reduced cost of implementation
 - Increased innovation
 - Desired level of assurance and confidence



Approaches to Certification

- Certification programs are dependent upon technology, market, participants, etc.
- Demand drivers are needed for successful program to be realized
- **Vendors** wishing to demonstrate compliance, **Utilities** (or large purchasers) demanding a certification in order to procure, **Government** as a demand driver (regulations, or reference in RFPs, etc.)
- Different approaches available to certification
- Self-Assertion
 - With or without Test suites
 - With or without third party verification
- Third-Party testing
- Interoperability Testing (Public or Private)
 - Improve development of product



Key Partnerships

- Test Labs
 - Commercial
 - University (also possibly research related)
- Vendors
- SMEs (e.g., A program Committee of Experts)
- Alliances / User Forums / Working Groups
- End Users (Utility, Service Providers, Retailers, Consumers)
- Government Institutions (e.g., NIST, others?)
- Test Tool Vendors
- Other SSO / SDO conformity assessment activities
 - ANSI, IEC, ITU, CASCO, SGIP, NASPI etc.



Benefits of a PMU Certification Program

- Standards based Conformity Assessment
- Vendors – Test once, sell to many
- Increase buyers confidence in the purchase of certified products for their organizations over time
- Supports free flow of products and services across state and national boundaries
- Demonstrates Interoperability
- Stimulates Innovation

Recent Developments

- SGIP / SGTCC delivered the Interoperability Process Reference Manual (IPRM V2 released this year)
 - Best practices
 - Interoperability Testing and Certification Authority
 - Certification Program Requirements (ISO/IEC Guide 67)
 - Accreditation Body to follow ISO/IEC 17011
 - Certification Body to adhere to ISO/IEC Guide 65
 - Testing labs to adhere to ISO/IEC 17025
- ICAP supportive of IPRM
 - Will implement based on industry direction / support
- ICAP co-sponsorship of Synchrophasor workshop with WSU
 - Discussions led to the exploration of a Synchrophasor Conformity Assessment Steering Committee (SCASC)
 - Converge on a test specification for Synchrophasor testing
 - Inaugural SCASC meeting held in conjunction with PSRC in New Orleans
 - Seeking participation from utilities, vendors, ISOs and test labs



Thank You

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