Conformity Assessment Program Update
IEEE 1588

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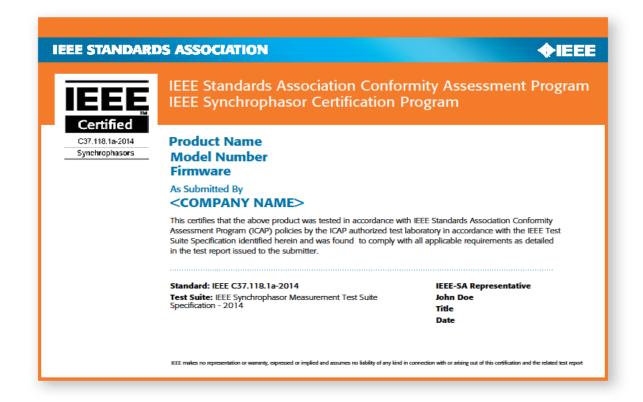**U.S. DEPARTMENT OF ENERGY**

IEEE 1588 Conformity Assessment Program

- A series of tests (test suite) to determine if a Power Industry device is conformant (can be downloaded)

    - https://www.iol.unh.edu/1588PowerProfileConformance   <- available here

- Conformant: A well-defined criteria (tests) to establish compliance to the specification.

    - Follow-on topics being discussed include, but are not limited to, Interoperability, Cybersecurity, Redudancy, etc.

- University of New Hampshire Interoperability Laboratory & National Institute of Standards & Technology

- Currently version at 1.22

    - Divided into 13 groups of tests
    - Validates behavior (timeouts, protocol values, response behavior, …)

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IEEE Certificate and Registry

- Upon successfully passing all tests, applicants receive a certificate and are listed on an IEEE registry (shown for Synchrophasor program).

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TSS preview testing at ISPCS Workshop

Sample testing off**ered at last 3 ISPCS** **Workshops**

Need to transition to Pilot Program for **more thorough test and feedback on TSS** **and to transition to active Certification**

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Test Suite Specification (TSS) for IEC 61850-9-3 / IEEE C37.238

UNH-IOL
IEEE 1588 Testing Service

1588 Power Profile Conformance
Test Suite Specification
Version 1.22
Technical Document

NOTICE: This is a living document. All contents are subject to change.
Individual tests and/or test groups may be added/deleted/changed in forthcoming revisions.
General feedback and comments are welcome, please contact ptplab@iol.unh.edu.

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1588 Power Profile Test Suite Specification

Contents

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What it Covers: Two power profiles

- IEC / IEEE 61850-9-3 (Everyone has to conform to this standard)

- IEEE C37.238 (This is an optional extension)

IEEE Standard Profile for Use of
IEEE 1588™ Precision Time Protocol
in Power System Applications

IEEE Power & Energy Society

Sponsored by the
Power System Relaying Committee
and
Substations Committee

Utilities interest in a Conformity Assessment Program for PTP Power Profile devices

- BPA & AltaLink will look to include certification into their procurement language in the future.

- Utilities viewed as end-users of these products and garnering their support in this effort is pivotal to this program's success.

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What You Can Do – One of Three Ways

1. Consider Sending equipment to UNH Pilot Program for full evaluation report
   - $6000
   - 3 months
   - Helps to advance Power Test Suite (still formative, but useful at this point)
   - Funds grad students in an area we want funded
   - https://www.iol.unh.edu/1588/power

2. Consider Participating in the IEEE-SA ICAP-CASC (small fee)
   - https://standards.ieee.org/products-services/icap/ptp-power-profile/index.html

3. Consider Hiring an Intern with NIST or UNH experience

   - contact: Bob Noseworthy <ren@iol.unh.edu>