SGTCC Overview

• The Smart Grid Testing & Certification Committee (SGTCC) is a standing committee of the Smart Grid Interoperability Panel (SGIP)
• SGTCC has developed a framework to enable industry testing and certification programs for Smart Grid interoperability
• SGTCC members are a diverse, elected group including manufacturers, end users and test labs
SGTCC Structure and Major Activities

• Interoperability Process Reference Manual (IPRM)
  – Issued in January 2011

• IPRM Implementation
  – Providing assessment tools for ITCAs
  – Supporting ITCA first adopters to integrate IPRM

• End to End Testing
  – Assessing and identifying priority use case testing needs and the key standards supporting them

• Advocacy for Smart Grid Interop Testing
  – Communications outreach to stakeholders
SGTCC ORGANIZATIONAL STRUCTURE

SGTCC Management Chair: Rik Drummond
Vice-Chair: Dean Prochaska
Secretary: T. Richardson
Administrator: R. Schubert

WG9 – End to End Testing (M. Ortiz)
Focused on assessing priority use case testing, and the underlying supporting standards. A major part of current efforts is on developing an End to End testing model that can be used across different test cases.

WG8 – IPRM Implementation (K. Donohue/R. Bienert)
Developing IPRM assessment tools and artifacts to support Interoperability Testing & Certification Authorities (ITCAs) as they implement IPRM recommendations.

Developed and released the IPRM in January 2011; Based on implementation experiences, WG4 intends to update the IPRM with Version 2 targeted for January 2012.

WG3 – Interop Standards Maturity Assessment (J. Mater)
Developed and released a Maturity Assessment Questionnaire and Tool (IMAM) in Fall 2010; WG3 is currently dormant.

WG5 – Lab Qualification (R. Schubert/K. Donahue)
Developed recommendations and background rationale for the use of ISO Guide 65 and ISO 17025 for Smart Grid Test & Certification programs, eventually integrated into the IPRM; WG5 is currently dormant.

SGTCC Roadmap (C. Powell) – Released new version in April 2011
Focused on standardizing and simplifying the testing and certification process for smart grid technologies.
What is the IPRM?

• The Interoperability Process Reference Manual (IPRM) is the primary document defining the framework for Smart Grid testing and certification

• Key IPRM Topics
  – Best Practices for Interoperability Test Construction
  – Criteria for certification body process quality
  – Criteria for test laboratory best practices
  – Best Practices for Cyber Security Test Construction
    • Security supplemental criteria under development
GOALS OF THE IPRM

• Increase the buyer’s confidence in the purchase of certified interoperable products for their organizations
• Standardize the testing and certification processes, through an initial set of best practices, across multiple standards ensuring more consistent and quality interoperable products within the Smart Grid at large
• Implement a formal approval process for those organizations following the SGTCC Testing and Certification Framework to assure the purchasing organizations of quality, audited testing programs
• Support end users purchasing Smart Grid products based on standards to reduce costs and shorten product implementation cycle time
**IPRM FACTS & FICTION**

- **Mandatory vs. voluntary**
  - Implementation of the IPRM is a voluntary process
  - SGTCC recommends implementation and supports ITCA efforts
    - ITCA – Interoperability Testing and Certification Authority
  - SGTCC does not certify ITCAs
  - Purchasers and other stakeholders may mandate compliance – individual business decisions

- **US vs. International**
  - SGTCC views the IPRM as globally applicable and elected to use international ISO standards as a basis for many IPRM recommendations
KEY 2011 ACTIVITIES
2011 - IPRM Implementation Year

• 2011 is considered a transition year, progressing towards more independent and formal accreditation proposed by 2012
  – Migration from SGTCC volunteer support to ITCAs, to industry 3rd party assessment services
  – SGTCC developing assessment tools and guidance artifacts to accelerate the availability of industry services
  – IPRM recommendations, along with ISO Guide 65 and ISO 17025 international standards serve as the basis for program assessments
• SGTCC is collaborating with industry organizations engaged in accreditation activities, as well as existing and newly emerging ITCAs to progress towards a systematic approach to recognize those ITCAs that successfully implement the IPRM
• SGTCC strongly advocates the concept of “approved programs”, encouraging SGIP members to use the program to intelligently influence their purchasing and deployment decisions
**End to End Testing Needs Assessment**

• Focus Areas:
  • Model/Framework for how End-to-End testing can occur
    • System Architecture Identification to Abstract use cases
  • Identification of priority use cases and supporting standards to insure basic level of interoperability and complete data sets
  • Testing procedures and witness processes to ensure open, fairness and repeatability, and auditability of the testing results.
**Interop Testing Advocacy**

• Communicating the importance of interop testing and certification programs to end users
  – Building confidence in technology selection
  – Reducing cost/time of end user lab and integration tests

• Outreach to SSOs – Advocating and supporting the development of test criteria, cases, methodologies to parallel their standards
DEFINITIONS

• ITCA – Interoperability Testing & Certification Authority
• IPRM – Interoperability Program Reference Manual (The IOP Framework)
• ISO 65 - International Standard for Certification Bodies
• ISO 17025 – International Standard for Test Labs
• SGTCC IOP Best Practices – Lists of best practices not covered in ISO 65 and ISO 17025
SGTCC Committee Members

- Rik Drummond (chair) – Drummond Group
- Dean Prochaska (vice-chair) – NIST
- Tobin Richardson (secretary) – Zigbee Alliance
- John Adams – Honeywell
- David Alderman – NIST
- Phillip Beecher – Beecher Communications Consultants
- Rolf Bienert – TUV Rheinland Group
- Peter Cain – Agilent Technologies
- Kent Dickson – Tendril Networks
- Kent Donahue – Underwriters Laboratories
- Larry Durante – National Grid
- Greg Ennis – WiFi Alliance
- Margaret Goodrich - SISCO
- Chris Held – GE Energy
- Donny Helm – Oncor Electric Delivery
- Mladen Kezunovic – Texas A&M
- Lance LaVoy – DTE Energy
- Zahra Makoui (WG4 lead) – PG&E ISTS
- James Mater (WG3 lead) – Quality Logic
- Gary McNaughton – Cornice Engineering, Inc.
- Ian Mundell – PJM Interconnection
- Bruce Muschlitz – EnerNex
- Emily O’Brien - KEMA
- Mark Ortiz – Consumers Energy
- Clint Powell, Powell Wireless Consulting
- Rudi Schubert (WG5 lead) – EnerNex
- John Simmins – EPRI
- Ravi Subramanian – MET Laboratories
- Tim Worthington – GE Appliances
- Tony Youssef – Cisco Systems