SGIP SEPTEMBER PLENARY MEETING

Steve Widergren, SGIP Plenary Chair
16 September 2011
## Agenda

<table>
<thead>
<tr>
<th>Time Durations</th>
<th>Item</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>0:00 – 0:10</td>
<td>Welcome &amp; Status Overview</td>
<td>Steve Widergren</td>
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<tr>
<td>0:10 – 0:20</td>
<td>NIST Update</td>
<td>George Arnold</td>
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<td>0:20 – 0:30</td>
<td>Governing Board Update</td>
<td>John McDonald</td>
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<td>0:30 – 0:45</td>
<td>Calendar of Events</td>
<td>Dave Mollerstuen</td>
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<td></td>
<td>– Grid-Interop SGIP Co-Location Meeting in Phoenix</td>
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<td>– Upcoming Elections</td>
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<td>– 2012 Calendar</td>
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<td>0:45 – 1:00</td>
<td>Administrator and Program Management Office Report</td>
<td>Stuart McCafferty</td>
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<td>– Standards review status and upcoming standards votes</td>
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<td>– Administrator contract update</td>
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<td>– PAP highlights</td>
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<td>1:00 – 1:30</td>
<td>Standing Committee Reports</td>
<td>Marianne Swanson Ron Ambrosio Rik Drummond</td>
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<td>– Cyber Security WG</td>
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<td>– Architecture Committee</td>
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<td>– Testing &amp; Certification Committee</td>
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<tr>
<td>1:30 – 1:45</td>
<td>DEWG Updates</td>
<td>Al Hefner Ken Wacks</td>
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<td>– Distributed Renewables, Generators, and Storage</td>
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<td>– H2G: Appliance Interface for Demand Response</td>
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<td>1:45 – 1:50</td>
<td>OpenADR Adoption Plans for SGIP Facilitated Standards</td>
<td>Rolf Bienert</td>
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<tr>
<td>1:50 – 2:00</td>
<td>Questions</td>
<td>Steve Widergren</td>
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<tr>
<td>2:00</td>
<td>Adjourn</td>
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Welcome
SGIP Membership

as of 08.26.11

• Total # of Member Organizations: 704 (July 680)
  – # of Participating Member Organizations: 380 (July 372)
  – # of Observing Member Organizations: 324 (July 308)
  – # of Organizations who joined in July & August: 24

• Total # of Individual Members*: 1,854

• # of Organizations by Country
  USA: 623
  Europe: 23
  Oceania: 6
  Africa: 1
  North America (non-US): 32
  Asia: 18
  South America: 1

* Omits non-active Signatory Authorities.
SGIP Membership as of 08.26.11

Participating Member Organizations by Declared Stakeholder Category

Stakeholder Categories
SGIP Membership

as of 08.26.11

- Total # of Participating Member Organizations that could have voting rights: 380 (July 372)
- Of these...
  - # of Members currently in “Good Standing” with voting rights: 200 – 53% (July 229 – 62%)
  - # of Members that “Abstain” from voting: 6 (July 6)
  - # of Members that need their “Rights Activated” or need their “Rights Restored” to vote: 174 (July 137) *
- Reviewing participation trend
  - New database structure to facilitate trending in the future
- How to have “Rights Activated” or “Rights Restored”
  - Voting rights are activated once a Participating Member Organization has one of its Member Representatives attend two consecutive plenary meetings (face to face and/or web based).

* Those who do not have Voting Rights include new participating member organizations.
Accomplishments

- Standards progress
  - Standards recommended for the CoS by GB
    - SAE J2847-1 PEV Communication between PEV and Grid (PAP 11)
  - Standards for GB confirmation
    - OASIS WS-Calendar (PAP 4)
    - IEEE C37.238-2011 Use of IEEE 1588 Precision Time Protocol (PAP 13)
  - Upcoming standards
    - IEEE 1815 DNP Protocol (PAP 12)
    - IEEE & ITU-T G9972 Coexistence of Broadband PLC (PAP 15)
    - SEP 1.x to SEP 2 Transition and Coexistence (PAP 18)

- 1st international meeting in Montreal a success
- Grid-Interop and 2012 event planning underway
- Discussions with EU Smart Grid-Coordinating Group initiated
CoS Status and Actions

- CoS objective: provide relevant standards to advance SG interoperability
- Initial 6 entries from PAPs balloted by SGIP membership
  - Tested overall process
  - Preparation of all supporting collateral necessary
  - Enhance facility desired for member interaction during public review period
- Backlog of identified standards from NIST Framework
  - Initial list now prioritized with features to see completion of all collateral (posted on Twiki)
  - Forms and templates for collecting information and performing reviews updated
  - Coordination meetings with DEWGs, WGs, and committees held
- Administrator received one new standard identified for review
- Planning underway for next groups of standards for SGIP ballot
  - Results of PAPs (4, 11, and 13)
  - First group of standards identified from NIST Framework document
Issues/Concerns Being Worked

• Treatment of reliability, implementation, and safety issues in SGIP being explored
• PAP 5 AEIC Guidelines for Meter Interoperability issues being worked
• Logistics to support international engagements
• Market adoption
  – Communication of interoperability work product availability (standards, guides, etc.)
  – Implementation testimonials and other evidence of adoption
  – OpenADR use of PAP 3, 4, and 9 facilitated standards
NIST Update

George Arnold
National Coordinator for Smart Grid Interoperability
NIST
NIST Update

- NIST House Staff Briefing
- NIST House Science and Technology Committee Hearing
- NIST Senate Staff Briefing
- Framework 2.0 Status
- NIST Smart Grid Federal Advisory Committee Update
- SEP 2.0 Announcement
- Utility Engagement
- Regulatory Engagement
- International Update
- GridWeek
- Administrator Contract Extension
Governing Board Update

John McDonald
SGIP Governing Board Chair
Governing Board Update

• GB Meeting on September 8, 2011

• GB Vote on these Standards
  – SAE 2847-1 (PAP 11) (August)
  – OASIS WS-Calendar (PAP 4) (September)
  – IEEE Std C37.238-2011 (PAP 13) (September)

• Outreach
  – Empowering Consumers and Promoting Innovation through the Smart Grid Hearing
  – John Caskey (GB Vice Chair), Rik Drummond (GB TCC Chair)
• Distributed Generation and Storage
  – Need forum to identify issues and standards gaps related to distributed generation and storage, including renewable/clean energy
  – Possible creation of a new Domain Expert Working Group (DEWG)—the Distributed Renewables, Generators, Storage (DRGS) DEWG
  – Goal would be to advance interoperability through consistent integration approaches for DRGS to effectively aggregate and manage these resources
  – Draft charter distributed to GB members for review and comment
Governing Board Update (con’t)

• International Outreach
  – LOI signed with Korea in July
  – Discussions with Japan, China, European Union
  – Task group for executing LOIs

• Reliability, Safety and Implementation
  – Exploratory team formed to study these issues
  – Team expanded to include grid operating entities, state and federal regulators, and reliability organizations
  – Defining scope of issues to be addressed, options to accommodate such issues in the SGIP organization, and the composition and qualifications of participating experts
Calendar of Events

Dave Mollerstuen
SGIP Plenary Secretary
# 2011 Meeting Schedule

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Time</th>
<th>Detail</th>
<th>Attendance Required for Voting Rights?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep</td>
<td>16</td>
<td>1p – 3p</td>
<td>Plenary Virtual Meeting</td>
<td>Yes</td>
</tr>
<tr>
<td>Nov</td>
<td>10</td>
<td>1p – 4p</td>
<td>Governing Board Virtual Meeting</td>
<td>No</td>
</tr>
<tr>
<td>Dec</td>
<td>4</td>
<td>6:30p – 9p</td>
<td>Governing Board meeting (information session Sunday evening, issues and decisions session Monday morning)</td>
<td>No</td>
</tr>
<tr>
<td>Dec</td>
<td>5</td>
<td>8a – noon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec</td>
<td>5-8</td>
<td>All Day</td>
<td>F2F: Grid-Interop, Phoenix, AZ</td>
<td>Yes</td>
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</tbody>
</table>
# 2012 Meeting Schedule (Tentative)

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Time (ET)</th>
<th>Detail</th>
<th>Attendance Required for Voting Rights?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>12</td>
<td>1p – 4p</td>
<td>Governing Board Virtual Meeting</td>
<td>No</td>
</tr>
<tr>
<td>Jan</td>
<td>20</td>
<td>1p – 3p</td>
<td>Plenary Virtual Meeting</td>
<td>Yes</td>
</tr>
<tr>
<td>Mar</td>
<td>20-22</td>
<td>All Day</td>
<td>F2F: Charlotte, NC or Miami, FL (GB: pm 19th, am 20th)</td>
<td>Yes</td>
</tr>
<tr>
<td>May</td>
<td>17</td>
<td>1p – 4p</td>
<td>Governing Board Virtual Meeting</td>
<td>No</td>
</tr>
<tr>
<td>May</td>
<td>25</td>
<td>1p – 3p</td>
<td>Plenary Virtual Meeting</td>
<td>No</td>
</tr>
<tr>
<td>Jul</td>
<td>10-12</td>
<td>All Day</td>
<td>F2F: San Diego, CA, USA (GB: pm 9th, am 10th)</td>
<td>Yes</td>
</tr>
<tr>
<td>Sep</td>
<td>6</td>
<td>1p – 4p</td>
<td>Governing Board Virtual Meeting</td>
<td>No</td>
</tr>
<tr>
<td>Sep</td>
<td>14</td>
<td>1p – 3p</td>
<td>Plenary Virtual Meeting</td>
<td>Yes</td>
</tr>
<tr>
<td>Oct</td>
<td>18</td>
<td>1p – 4p</td>
<td>Governing Board Virtual Meeting</td>
<td>No</td>
</tr>
<tr>
<td>Oct</td>
<td>26</td>
<td>1p – 3p</td>
<td>Plenary Virtual Meeting</td>
<td>Yes</td>
</tr>
<tr>
<td>Dec</td>
<td>TBD</td>
<td>All Day</td>
<td>F2F: Dallas, TX (Co-located with Grid-Interop – GB at start)</td>
<td>Yes</td>
</tr>
</tbody>
</table>
GB Elections

• All odd-numbered stakeholder categories, including 3 At-Large seats (Category 23) are scheduled for elections in Fall 2011.

• Election process begins late September, results announced in early December (at Grid-Interop F2F).
## GB Elections Calendar

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>September 29, 2011</td>
<td>Candidate Evaluation Committee (CEC) proposed by Administrator.</td>
</tr>
<tr>
<td>September 29, 2011</td>
<td>Call for Candidates opens.</td>
</tr>
<tr>
<td>October 13, 2011</td>
<td>CEC approved by SGIP GB.</td>
</tr>
<tr>
<td>October 14, 2011</td>
<td>Call for Candidates closes.</td>
</tr>
<tr>
<td>October 27, 2011</td>
<td>Nominations reviewed, slate prepared by CEC.</td>
</tr>
<tr>
<td>November 10, 2011</td>
<td>CEC presents slate to SGIP GB for approval.</td>
</tr>
<tr>
<td>November 23, 2011</td>
<td>Voting opens.</td>
</tr>
<tr>
<td>December 06, 2011</td>
<td>Voting closes.</td>
</tr>
<tr>
<td>December 08, 2011</td>
<td>Results, any runoffs announced; begin runoff voting.</td>
</tr>
<tr>
<td>January 1, 2012</td>
<td>New GB members assume their roles.</td>
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</table>
Plenary and Committee Elections

• Plenary Officers serve two-year terms
  – Chair to be selected by GB at January 12, 2012 meeting
  – Vice chair and Secretary elections in Q1 2012

• Standing Committees (two-year term)
  – SGAC (50% of the current members terms expire December 2011)
  – SGTCC (50% of the current members terms expire December 2011)
  – As per procedures initiated in 2010, each committee will have its own nominating committee, and slates will be presented to the Plenary for approval.

• Preliminary Schedule Milestones (Plenary and Committees)
  – Nominations period: January 2012
  – Election period: mid- to late-February 2012
  – Run-off contingency: early March 2012
Administrator & PMO Report

Stuart McCafferty
SGIP Administration and Program Management Office
Voting Privileges Reminder

- **Membership**
  - The SGIP **WANTS, ENCOURAGES, and APPRECIATES** your participation
  - But, there are minimal participation requirements per the bylaws
- **How do members lose voting privileges?**
  - Miss two consecutive SGIP plenary meetings **–OR–**
  - Miss two consecutive votes
- **Which meetings count?**
  - Required meetings are posted on Events page on TWiki
    - 6 or so per year
  - Members are reminded of required meetings through SGIP member newsletters
- **Who needs to attend?**
  - Any NAMED representative of the member organization
  - Any session during plenary F2F counts!
    - **ALWAYS (ALWAYS)** a webinar and phone alternative to in-person attendance
- **Who can vote in plenary ballots?**
  - The voting member representative
# Upcoming Standards Votes and Standards Review Status

## Standards Vote Schedule

<table>
<thead>
<tr>
<th>Standard</th>
<th>PAP</th>
<th>Governing Board Vote</th>
<th>Plenary Vote</th>
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</thead>
<tbody>
<tr>
<td>OASIS WS-Calendar Common Schedule Communication Mechanism for Energy Transactions</td>
<td>4</td>
<td>Sept 8 – Sept 23</td>
<td>Oct 3 – Oct 14</td>
</tr>
</tbody>
</table>

## Standards Review Queue

- [http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/CoSStandardsReviewQueueAndTrackingTool](http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/CoSStandardsReviewQueueAndTrackingTool)
- Track the status and prioritization of the SGIP standards reviews
- Find the SGIP CoS standards informational templates
- Find the instructions for completing SGIP CoS paperwork
PAP Lifecycle Progress

Note: Some PAPs are in multiple places above due to the status of separate standards they are involved in.
<table>
<thead>
<tr>
<th>PAP</th>
<th>Status</th>
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<tbody>
<tr>
<td>PAP 2 – Wireless Communications for the Smart Grid</td>
<td>Version 1 of Wireless Guidelines (NISTIR 7761) added to CoS and Version 2 under development</td>
</tr>
<tr>
<td>PAP 3 - Common Price Communication Model</td>
<td>Completing CoS documentation and reviews. SGIP Standards Package to go to Board in November</td>
</tr>
<tr>
<td>PAP 4 - Common Scheduling Mechanism</td>
<td>Board voting on standard now</td>
</tr>
<tr>
<td>PAP 5 – Standard Meter Data Profiles</td>
<td>Met in August and resolving remaining issues in AEIC Guidelines document</td>
</tr>
<tr>
<td>PAP 6 - Common Semantic Model for Meter Data Tables</td>
<td>PAP team creating a UML model, schema, and white paper as final deliverables</td>
</tr>
<tr>
<td>PAP 7 - Electric Storage Interconnection Guidelines</td>
<td>IEEE 1547.8, IEC 61850-90-7 under development, and UL 1741 waiting for 1547.8 to complete before starting work</td>
</tr>
<tr>
<td>PAP 8 - CIM for Distribution Grid Management</td>
<td>Completed V 4.1 of MultiSpeak and PAP work/requirements handed off to IEC TC 57 WG 14 for addition to IEC 61968</td>
</tr>
<tr>
<td>PAP</td>
<td>Status</td>
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<tr>
<td>------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PAP 9 - Standard DR and DER Signals</td>
<td>Energy Interop Standard in third public review at OASIS</td>
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<tr>
<td>PAP 10 - Standard Energy Usage Information</td>
<td>NAESB REQ18, WEQ19 energy usage information added to CoS in July and adoption of standard is being monitored/promoted</td>
</tr>
<tr>
<td>PAP 12 - IEC 61850 Objects/DNP3 Mapping</td>
<td>IEEE 1815 DNP in SGIP reviews. IEEE 1815.1 mapping document in development PAPWG requirements handoff imminent.</td>
</tr>
<tr>
<td>PAP 13 - Time Synchronization, IEC 61850 Objects/IEEE C37.118 Harmonization</td>
<td>IEEE C37.238 standard being voted on by Board. Draft IEC 61850-90-5 out for IEC approval</td>
</tr>
<tr>
<td>PAP 14 - Transmission Power Systems Model Mapping</td>
<td>Strategic work moved to TnD DEWG and SGAC Semantic Group (application level language harmonization). New objectives for PAP are ComFEDE – event integration and relay settings standardization</td>
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## PAP Progress

<table>
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<tr>
<th>PAP</th>
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<tr>
<td>PAP 15 - Harmonize PLC Standards for Appliance Communications</td>
<td>Broadband PLC standards IEEE P1901 and ITU-T G.9972 standards in SGIP reviews</td>
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<tr>
<td>PAP 16 - Wind Plant Communications</td>
<td>IEC 61400-25-2 has received PAPWG requirements requesting the addition of a dozen logical nodes to the information model</td>
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<tr>
<td>PAP 17 - Facility Smart Grid Information Standard</td>
<td>ASHRAE SPC201P has received PAPWG requirements with first draft released internally to ASHRAE June 13 (800+ pages) and expected completion in June, 2012</td>
</tr>
<tr>
<td>PAP 18 - SEP 1.x to SEP 2 Transition and Coexistence</td>
<td>Deliverables complete and in SGIP reviews</td>
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Cyber Security Working Group

Marianne Swanson
CSWG Chair
**CSWG Quad Chart**

**Activities and Accomplishments**
- Collaborating with:
  - CMEWG on CSWG handout
  - DOE/NERC/NIST on risk management document
  - NERC Task Force on Cybersecurity
- Participated in DOE Meeting for ARRA recipients

**Upcoming Key Milestones and Activities**
- SEP 1.0 / 1.1 Cybersecurity Technical White Paper
- Research cyber-physical attacks and possible conference and NISTIR
- Privacy Subgroup developing a “Best Practices” document on best ways to protect data when sharing with third parties
- Testing Subgroup developing assessment guide for NISTIR 7628 high level security requirements
- IRMA Cybersecurity chapter

**Deliverables**
- Cybersecurity Review:
  - Pap 12 – IEEE 1815-1 Mapping to DNP3
  - SEP 2.0 v.07
  - PAP 3 – OASIS Energy Market Information Exchange
  - Pap 15 – IEEE P 1901 and ITU-T G.9972

**Issues, Concerns, and Help Needed**
- Cybersecurity review assistance – SME’s needed in the following areas:
  - MultiSpeak
  - SEP 2.0 version 0.7
  - IEC 61400-25-2
  - REQ21
  - WS-Calendar
Architecture Committee

Ron Ambrosio
SGAC Chair
# SGAC Quad Chart

## Activities and Accomplishments
- Targeted outreach at industry events
- Creating white papers from the material not used in the NIST Roadmap Chapter 3 revision on:
  - Semantic work
  - Conceptual architecture work
- Completed the P2030 review and submitted formal comments
- Started discussions with IETF and ITU/T on dates for similar work.
- Standards review working party created, staffing underway from the wider community
- Conceptual Architecture Working Session held 16 to 18 August, Knoxville

## Upcoming Key Milestones and Activities
- White papers on architecture
  - Semantic work
  - Conceptual architecture
- Semantic Modeling
  - Summit Follow-on work with PAPs and SSOs
  - Working on next version of white paper

## Deliverables
- Update to the Conceptual Architecture Deliverables
- Presentations from outreach
- Updated Standards review template
- P2030 review white paper

## Issues, Concerns, and Help Needed
- Need a broader base of people to handle the volume of standards that need review.
**Key Smart Grid System Architectures**

- **Conceptual**
  - Defines *Services* Provided by the System
  - Exa. Outage Detection Service

- **Logical**
  - Defines *Components* of a System
  - Made up of multiple Services
  - Exa. Outage Management Component

- **Physical**
  - Defines *Implementation* of a System
  - Made up of multiple Components
  - Exa. AEP Outage Management System
SGAC Conceptual Architecture Process

- **Goals Workshop**
  - Goals
  - Whitepaper
  - Process
  - Presentation

- **Requirements Workshop**
  - Requirements
  - Whitepaper
  - Traceability
  - Matrix

- **Services Workshop**
  - Conceptual
  - Services
  - Traceability
  - Matrix

- **Interaction Workshop**
  - Interactions
  - Traceability
  - Matrix

- **Harmonization Meetings**
  - Whitepaper on each architecture reviewed
Harmonization Review Goals

- Document Standard’s Coverage
- Identify Functionality Gaps
- Test Completeness of SGAC Conceptual Architecture
- Identify Needed New Work Areas
- Create a landscape of current SDO efforts.
IEEE P2030 Harmonization Review

P2030: Draft Guide for Smart Grid Interoperability of Energy Technology and Information Technology Operation with the Electric Power System (EPS), and End-Use Applications and Loads

- **Coverage**
  - P2030 maps to all domains within the NIST Smart Grid Framework.
  - P2030 entities map to all the SGAC Architecture Actors.

- **Gaps**
  - P2030 defines only a Centralized Smart Grid System Architecture.

- **SGAC Arch Completeness**
  - SGAC Conceptual Architecture had service gaps in GIS, Meter Data Management, Spares Management, and Customer DER Services.

*Complete Review can be found on SGAC Harmonization Twiki page.*
Testing & Certification Committee

Rik Drummond
SGTCC Chair
**Activities and Accomplishments**

- Five ITCA programs have announced IRMA implementation plans and are collaborating with SGTCC (UCA, MultiSpeak, NEMA SGIC, OpenADR, USNAP)
- End-to-End (E2E) work group agreed on content within the HAN Installation and Provisioning test case during the July F2F meeting. It is intended as a pilot towards a common test case approach for a range of E2E test issues
- IRMA implementation working group updated its FAQ document and other implementation support tools; published on the Twiki for ITCA use
- SGTCC flyer completed and debuted at July F2F
- Publicity release highlighting ITCA program collaboration with SGTCC issued

**Deliverables**

- 2011 Roadmap final version released
- IRMA FAQ document completed
- IRMA self-assessment deliverable completed
- Interoperability Maturity Assessment Tool, V1, completed

**Upcoming Key Milestones and Activities**

- IRMA Version 2 enhancements underway with a target completion of January 2012
- Security testing sub-group preparing an outline for the IRMA by mid-August to enhance IRMA security content for Version 2
- IRMA implementation working group transitioning efforts to focus on processes to recognize successful IRMA adoption by ITCAs
- TCAP approach being developed with goal to initiate targeted work efforts in early Fall 2011

**Issues, Concerns, and Help Needed**

- Limited volunteer resources to progress the multiple SGTCC focus areas in parallel
- Engaging ITCAs and end users to adopt and implement SGTCC recommendations in their technology evaluation activities
- Legal challenges to establish an ITCA recognition approach necessary to drive private sector’s requirements and demand for adoption of testing programs and IRMA
Distributed Renewables, Generators, Storage (DRGS) DEWG Proposal

Al Hefner
NIST
DRGS DEWG Proposal

• Scope
  – Forum to identify issues and standards gaps related to distributed generation and storage, including renewable/clean energy

• Goal
  – Advance interoperability through consistent integration approaches for DRGS to effectively aggregate and manage these resources

• Initial Activities
  – Work plan with timelines in 30 days
  – Roadmap to advance DRGS interoperability w/in 6 months
  – Identify relevant standards, issues, and gaps
  – Coordinate with T&D and end-user DEWG where DRGS concerns may overlap
Home-To-Grid DEWG Report - Appliance Interface Specification

Ken Wacks
H2G DEWG Co-Chair
Home-to-Grid DEWG Accomplishments

• More than 100 members
  – Utilities
  – Equipment suppliers
  – Trade associations
• Issue white papers for NIST by consensus of members
• Published papers:
  – Home-to-Grid Requirements
  – Roadmap for Interoperable Networks, Systems, Devices
  – Privacy of Consumer Information
  – Appliance Interface (2 papers)
  – Electromagnetic Compatibility (EMC) Issues for Home-to-Grid Devices
  – Installation Guide for Smart Grid Applications
Modular Comm. Interface (MCI) Specification

EPRI ASI (Appliance Socket Interface) +

U-SNAP (Utility Smart Network Access Port)

• Merged specification: 72 pages
• Thoroughly reviewed by H2G
  – Presentation to H2G DEWG plus Q&A session
  – 77 written comments submitted and resolved
  – 7 versions edited
  – Reached consensus of H2G members
• CEA will process MCI toward a national standard
Modular Communications Interface

- Common interface design
- Adapt to appliance
- Simple installation
MCI Supports Multiple Architectures

- Powerline Based
- Wireless
- Wired / Fiber
OpenAdr 2.0 efforts using PAP 3, 4 and 9

Rolf Bienert
Technical Director OpenADR Alliance
Topics

- Charter and Efforts of the OpenADR Alliance
- Tie-in of PAP 3, 4 and 9 outcome into OpenADR 2.0
- Next steps and important milestones
Charter of the OpenADR Alliance

• Formed to build on the foundation of technical activities to support the development, testing, and deployment of commercial OpenADR and facilitates its acceleration and widespread adoption.

• Alliance will be ITCA for OpenADR 2.0 certification

• Selected ISO 17025 accredited test facility

• Selected test tool vendor to build certification and development tests and tools

• Use Energy Interop specification to create Alliance profile with strict conformance statements and definitions – OpenADR 2.0 a subset of Energy Interop

• OpenADR 1.0 de-facto standard with 200MW enrolled

• OpenADR 2.0 now standardized through Energy Interop / PAP 9 – Alliance builds interoperable profile as an advancement to OpenADR 1.0
Tie-in of PAP 3, 4 and 9 into OpenADR 2.0

OpenADR 2.0 is using PAP 3 outcome for Price processes

OpenADR 2.0 is using PAP 4 outcome for DR event scheduling

Section 12.1 provides the OpenADR 2.0 Profile
Tie-in of PAP 3, 4 and 9 into OpenADR 2.0

- OpenADR 2.0 will have 3 feature sets
  - Basic implementations will use EiEvent Services PAP 9 + PAP 4 (Ws-Calendar)
  - More ‘intelligent’ systems will additionally use PAP 3 for smarter price, quote and bidding functionalities (EiQuote – EMIX)
  - Full implementations will use all of the above + additional EI services like Feedback, Opt functionality, etc. from PAP 9 (Energy Interop)

- First basic implementations expected by year-end
Next Steps and Important Milestone

- Basic implementations will use PAP 4 outcome (WS-Calendar ➔ EiEvent services from Energy Interop (PAP 9))
  - The Alliance profile needs the EiEvent services solidified ASAP
- Next effort around EiQuote ➔ PAP 3; will start in the next few weeks
  - EMIX is a crucial component for this effort
- Further Energy Interop (PAP 9) services will be incorporated in the next few months
- Certification testing to start by year-end
Questions