Meeting Minutes
August 5, 2009 – August 6, 2009

Ron Ambrosio chaired the meeting that was held from 8:30 a.m. – 4:30 p.m. on Wednesday August 5, 2009. He had to leave unexpectedly and asked Ron Melton to chair the meeting on Thursday, August 6, 2009 in Knoxville, TN.

Members

Ron Ambrosio, IBM T.J. Watson Research Center
Robert Burke, ISO New England
Rik Drummond, Drummond Group
Erich Gunther, EnerNex Corporation
Stephanie Hamilton, EPRI
David Hardin, Invensys Process Systems
Alex Levinson, Lockheed Martin
Lynne Kiesling, Northwestern University
Tracy Markie, Engenuity
Nora Mead Brownell, ESPY Energy Solutions
Robert Saint, NRECA
Ken Wacks, supported by GridPlex

Support - PNNL

Ron Melton, GWAC Administrator
Ron Jarnagin
Steve Widergren
Caitlin Owen
Heather Kuykendall, GWAC Support (by phone)

Speakers and Guests

George Arnold, NIST
Anto Budiardjo, Clasma Events
Colin Harrison, IBM
Gale Horst, EPRI
Doug Houseman, Capgemini
Joe Hughes, EPRI
Jeff Iott, Masco Corporation
Jim LeClare, Maxim (by phone)
James Mater, Quality Logic
Bernie Neenan, EPRI
Jim O'Callaghan, EnOcean
Matt Wakefield, EPRI

Members (not present)

Richard Schomberg, EDF

Proprietary Information Notice

The members and guests were reminded of the proprietary information disclosure policy according to the Bylaws.

Agenda Review

No items added to the agenda.

Administrative Business

Approval of minutes from previous meetings (May 21-22 and June 12)

- Motion to approve made and seconded by Stephanie Hamilton and Erich Gunther
- Minutes approved by unanimous vote of council members present.

Upcoming events review and GWAC meeting schedule.

- GridWeek is September 21 – September 24 in Washington, DC. GWAC meeting scheduled for morning of September 25th.
- Web meeting scheduled for October 30, 2009, 8:00 am – 10:00 am Pacific (11:00 am – 1:00 pm Eastern)
- Grid-Interop forum is November 17 –19 in Denver, CO.
- Web meeting scheduled for December 11, 2009, 8:00 am – 10:00 am Pacific (11:00 am – 1:00 pm Eastern)
- Meeting in Orlando January 28-29, 2010.

NIST Roadmap: George Arnold

George Arnold provided an update on NIST activities.

George attended a congressional hearing on smart grid along with Pat Hoffman from DOE, FERC Commissioner Suedeen Kelly, Paul De Martini, Jeff Ross, and Michael A. Stoessl. Several members had expressed concern by the threat posed by EMP. The EMP commission completed a study demonstrating that it is impossible to protect everything, including the most critical assets.

Countries that have contacted NIST recently include: Japan, Korea, Australia, Singapore, China and the EU. This is an opportunity to coordinate between GWAC and NIST. The industry wants international standards wherever possible.

George discussed the NIST Three Phase Plan and its progress to date. George reiterated the valuable role GWAC has played in the NIST activities. There was discussion about the role of the FCC in smart grid. 80 comments were received on the original list of 16 standards published in the Federal Register. Responses to the comments will be available prior to GridWeek. NIST will produce a framework document in this time period. It will contain a list of v1.0 standards, proposed actions, and timelines.

Note: The smart grid Conference, to be held on September 1, needs a guest speaker. Erich Gunther volunteered. Web portal: http://smart-grid.tmcnet.com/topics/smart-grid/articles

EPRI Smart Grid Demonstration Program: Stephanie Hamilton

Stephanie and colleagues from EPRI gave a briefing on the EPRI Smart Grid Demonstration Program[1]. This program includes exploration of deploying "Virtual Power Plants" (using various

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[1] EPRI Smart Grid Resource Center website – www.smartgrid.epri.com

components such as generation or demand reduction or combination of both). Of particular note in the presentation was that EDF is now participating with sites in Europe.

There were questions about the nature of participation. Stephanie stated the project is owned by the utility. Utilities propose to become a participant in the program. EPRI is not initiating these projects but implementing the framework in which these projects can be proposed. EPRI works with proposers to shape it. EPRI provides consistency. They have life cycle process that they are going through which is a five year program. At least some of the projects include test beds, for example, the AEP project.

Lynne Kiesling stated that projects are not hitting some of the key elements. For example, how do you communicate price signals? Bernie Neenan suggested leveraging funding to look at topics such as interoperability of equipment, analyzing behavioral aspects, and standardizing how customer response is measured. Bernie is working with DOE on a common cost-benefit analysis approach.

There was a discussion about barriers to implementing smart grid functionality and addressing interoperability. As to Critical Interoperability Technologies & Standards – not all are equal but they are a good starting point. There is an opportunity to organize and contain the chaos. If we don't organize the chaos we will not, for example, have an automated home. Markets are based on what consumers are willing to pay for. George Arnold stated that the chaos will allow for organization. Layering is a fundamental principle.

The benefits of existing and planned investments should be maximized. There also needs to be integration of distributed resources with utility system operations and distributed power generation. The council will work with a receptive regulator to identify a way to identify and communicate pricing.

DOE Status Update

Steve Widergren reported that DOE has been addressing Congressional questions about smart grid. Not only did Pat Hoffman provide testimony to the smart grid panel that George Arnold mentioned earlier, but she also spoke before another committee on cyber security issues. The Office of Electricity is amassing resources to address the Recovery Act proposals expected for the smart grid investment grants and the demonstrations. Given the pressure to see the funds allocated, they are striving to address the proposal review and selection activities in a relatively short period of time.

The previous week the Secretary of Energy's Smart Grid System Report was sent to Congress as directed by the EISA 2007 legislation. An award for the smart grid clearinghouse project was also announced. The project will be lead by Virginia Tech with EnerNex as a subcontractor.

Smart Cities and Sustainable Infrastructure

Colin Harrison from IBM presented "Smart Cities – The Inside Story." IBM is developing a strategy that anticipates a vast number of sensors being deployed to support various applications across infrastructure industry segments (e.g., power, water, transportation, gas). While the sensors serve their original applications, they are beginning to be harnessed for integrating into new, unplanned applications (e.g., managing traffic congestion can integrate sensors from other more localized applications that were not installed for this other purpose). The potential to manage this data in new ways opens avenues for greater productivity and efficiencies; qualities that align well with the smart grid vision for managing electricity.

Capgemini: Doug Houseman

Presented by Doug Houseman

Doug discussed what the rest of the world is doing related smart grid. He gave a picture of significant changes in China, India, and South Africa (a cross-continent grid). Every continent has activities moving forward, but each area emphasizes issues relevant to their starting point and regional needs.

Decision Maker's Checklist Update Ideas: James Mater

Presented by James Mater

The GWAC Decision-Maker's Interoperability Checklist v1.0 is a good first step, but James Mater feels that interoperability should include evidence of conformance, such as test results. Checklists could be designed or tailored specifically for utilities, vendors, and other audiences. A team of volunteers was formed to look at this in more depth: James Mater, Rik Drummond, Stephanie Hamilton, Ron Ambrosio, Erich Gunther, Bob Saint, and Joe Hughes (EPRI) will look at updating the checklist. Dean Prochaska (NIST) and Alison Silverstein (GWAC emeritus member) will be consulted.

ACTION:

Ron Melton will set up a teleconference for the team to begin looking at options for updating the checklist. (due 30 Sept 09)

EnOcean

Presented by Jim O'Callahan and Jeff Iott

The EnOcean Alliance includes 110 companies and has an interoperable standard with their own division. All devices communicate at the radio and device level. Technology has been deployed to 100,000 buildings throughout the world.

GWAC Vision Brainstorming Prep

The Council was given some topics to think about for discussion during Day Two of the meeting, and to re-evaluate some of the opportunities:
- What are the key fundamental issues?
- What are some of the unique things that we can contribute? What are the gaps we can identify and fill? How do we use ourselves most effectively?
- What products might we develop that would help the market place?

GWAC Vision and Direction

This planning session was focused on the issues facing the Council in the current environment of smart grid activity with the goal of developing a path forward that would allow the Council to continue to provide leadership in this area. The discussions first looked at elements of the Constitution to review the driving forces for the Council, then brainstorming was conducted to identify issues, opportunities/gaps and then products and services that might be needed. The key points raised in these sessions are located in the appendix.

ACTION

Ron Jarnagin will produce synthesized results from the brainstorming session. (due 30 Aug 09)

Grid Week and Grid-Interop

GridWeek will take place September 21 – September 24, 2009 in Washington, DC. Anto expects four times the number of attendees from last year. He reminded members to register soon. Some identified keynote speakers are the governors of Texas, California, and New Mexico, and Secretary Chu. Additionally, Mayor Bloomberg, Secretary Locke, and President Obama may be speaking. The Council should create a larger presence at this meeting. Ron Melton will look into acquiring a booth. All council members are prepared to occupy the booth.

Grid-Interop's Program and Planning Committees meet via weekly teleconferences. Authors submitted approximately 50 papers in response to the Call for Papers. The committees were hoping for a larger pool and the call may be extended to allow for more entries. Ron Jarnagin is working on confirming some plenary speakers as well.

Outreach and Events
- GridWise Alliance - Ron Ambrosio was not present to comment.
- IEEE/IGCC: Expect a report from Erich at the GridWeek meeting.
- ISO/IEC JTC1: Ron Ambrosio has been working on a multi-part standard. At the last meeting, Ken asked about getting council endorsement for this work. Ken reminded Ron Melton to discuss this with Ron Ambrosio.
- ConnectivityWeek, June 8 - 11 in Santa Clara, California. Attendance was up by 30%. Smart Grid 101 track was well attended. Next Connectivity Week will be May 24 - 27, 2010.

- Dave Hardin presented smart grid in Brazil on June 25. Brazil is moving ahead and is interested in international standards.
- EPRI: Stephanie Hamilton presented collaborative efforts to the EPRI smart grid demo group.
- Request to endorse a conference in China. The endorsement includes the option of having someone attend. China's Smart Grid Forum is in early December 2009. After discussion, the council agreed to endorse the meeting.
- Benefits Papers: Lynne Kiesling suggested a common neutral statement to be used with all of the benefits papers. After discussion the council agreed on this approach. Lynne will provide input to Ron Jarnagin.

Action Item	Assigned To	Due Date
Set up a teleconference for the team to begin looking at options for updating the Decision Maker's checklist.	Melton	30 Sept 09
Write a foreword for the interoperability benefits papers.	Jarnagin/Kiesling	15 Aug 09
Produce a synthesized result of the brainstorming meeting.	Jarnagin	30 Aug 09
Speak with Anto about a booth at GridWeek.	Melton	30 Aug 09

Appendix

Constitution Elements

- Transformational
- Efficiency
- Collaborative
- Distributed control/participation
- Sustainable
- Information security/privacy
- Resilient
- Safe operation

Constitution Thoughts

- Re-socialize the Constitution
- Fuse and use the Constitution to evaluate the NIST process
- Lack of consistency in security and management policies
- Outreach needed for states and governors
- Outreach needed for municipal utilities and Co-Ops
- Simple way to check security

Issues

Top Priority Issues
- Building goal oriented business cases to stimulate demand for interoperability solutions
- Additional resources to support GWAC
- Awareness/adoption of relevant standards

Mid Priority Issues
- GWAC focused on interoperability – should we have an additional focus?
- Need regulatory change
- Methodology impacts – apply new stuff more consistently across the industry and educate developers

Lower Priority Issues
- What new territory does GWAC want to stake? (or plant the flag more firmly?)
- Need to shift GWAC to upper levels of the stack
- Maintain the momentum
- DOE/NIST funding evaporating after ARRA

Other Issues
- Anticipating problems with standards and being proactive with solutions
- Need for work at higher levels of GWAC stack to inform the work at lower levels
- Rating model for Interoperability Maturity Model
- Revisit system engineering methods (need more industrial strength)
- Bill this as something that allows you to have the tools for managing your energy (manageable and predictable)
- Understanding critical success factors for smart grid
- U.S. vs. international issues
- Help speed up standards processes
- New standards vs. retooling or adopting existing standards
- Are there legal or other limitations on GWAC that prevent them from getting other resources?
- Resources limited for standards development-need to use demonstration projects to inform standards development or modification
- Results of projects consistent with GWAC principles
- Emerging technologies and standards integration
- Managing IP issues
- Architecture still needed

Opportunities/Gaps

- Stimulus funding
- Kyoto protocol
- New energy legislation
- Economic recovery
- Expanded SG funding
- Help DOE and NIST achieve their goals
- Establish/maintain visibility
- International opportunities
- Growing economy through technology innovation
- Enabling U.S. manufacturer access to international markets

Products and Services

- Who are the customers? (Implementers, Regulators, Consumers, Vendors, Owner/Operators, NIST?DOE)
- Interoperability Framework Update (best practices, tools, white papers)
- Conceptual model
- Marketing/information
- Publish a book (tutorial)
- Interoperability maturity model
- Use social networking tools
- Independent review of the work of others