



GridWise Architecture Council Meeting

September 6 - 7, 2006 in Santa Fe, New Mexico

Meeting Minutes

Prepared 16 September, 2006

The meeting was held from 8:00am – 6:00pm and led by Rik Drummond, GWAC Chairperson. The following individuals were present:

Architecture Council Members

Ron Ambrosio, IBM T.J. Watson Research Center
Jay Britton, AREVA-T&D Corporation
David Cohen, Infotility
Rik Drummond, Drummond Group Inc.
Erich Gunther, EnerNex Corporation
Stephanie Hamilton, Southern California Edison
Dave Hardin, Invensys Process Systems
Lynne Kiesling, Northwestern Univ. & IFREE
Mike McCoy, Becker Capital Management
Jack McGowan, Energy Controls, Inc.
Alison Silverstein, Consultant
Vito Stagliano, NCEP (GWAC Member Emeritus)
Don Watkins, Bonneville Power Administration

Architecture Council Support

Steve Widergren, PNNL
Mia Paget, PNNL
Olga Anna Kuchar, PNNL

Guests

David Breecker, Breecker Associates
Stephanie Forrest, University of New Mexico and the Santa Fe Institute
Steve Hauser, SAIC and GridWise Alliance
Eric Lightner, DOE OE
Mark Palmer, NIST
Rob Pratt, PNNL
Larry Silverman, Broadband Energy Networks Inc.

Guests (continued...)

Kenneth Wacks, home automation consultant

Not Present

Larsh Johnson, eMeter Corporation

Proprietary Information Notice

The members were reminded of the proprietary information disclosure policy from the Bylaws.

Welcome new members: Alison Silverstein and Dave Hardin

The GWAC welcomed its newest members in person, Alison Silverstein and Dave Hardin. Ms. Silverstein is an energy policy consultant and past advisor at FERC. Mr. Hardin, Technology Officer at Invensys Process Systems, adds his expertise in industrial controls/factory automation sector to the spread of expertise in the Council.

Administration Change

Mia Paget is transitioning her administrative leadership duties to Olga Kuchar who will be the project deputy. Mia will continue her involvement with the Architecture Council in a technical support role. Heather Kuykendall (not present) was also introduced as the Project Assistant. Heather will support the Council, Olga, and Steve with administrative support.

Review and Approve 28 July 2006 Meeting Minutes

The minutes for the July 28, 2006 web meeting were approved with no corrections.

November 29-30 GWAC Meeting: Golden Colorado

The next GWAC face-to-face meeting will be held November 29-30, 2006 in Golden, Colorado. Other important meeting dates are as follows:

- October 20, 2006 – web meeting from 8 – 10 am Pacific Time.
- January 19, 2007 – web meeting from 8 – 10 am Pacific Time.
- The week of March 19th in Washington DC for Grid Week (Eric Lightner and Steve Hauser)

Speakers for the November Meeting

The following suggestions were presented for potential speakers at the next meeting:

- Alison Silverstein suggests Catherine Allen, Executive Director of BITS, a financial/banking interoperability and security organization with the focus of how to get the CEO and other officers to listen. Ms. Allen is in DC but lives in Santa Fe.
- Steve Widergren said that Andreas Tolk recommends Adrian Gheorghe (Old Dominion University). Dr. Gheorghe is involved with critical infrastructure security. He should be considered along with Massoud Amin (University of Minnesota).
- Erich Gunther suggests someone from Southern California Edison (SCE) to discuss aspects of their advance meter initiative and what contributions the GWAC might make to the effort.
- Lynne Kiesling suggests that if we are in DC in March, then Brad Johnson (MADRI) could be a good speaker for that meeting.. Alison suggests other MADRI stakeholders should be considered as well. For example, Rick Morgan (Washington DC Commissioner and MADRI chair).
- Alison Silverstein suggests that a representative from Site Controls be invited to speak about the way their offering addresses interoperability as well as the business plan they have for aggregating demand-side resources.

Action Items: Council members are to submit other potential speakers to Steve Widergren or Olga Kuchar by e-mail.

Member Renewal

The council member renewal process will occur towards the end of this year. Larsh Johnson and Don Watkins have announced that they will be leaving the Council the end of this year. Jay Britton and Jack McGowan also have their terms ending, but may be interested in renewing their commitment for another two years. We need to review the positions that will become available and the characteristics/attributes desired to maintain balanced representation on the Council. A nominations committee will be formed that includes the GWAC Administrator, two council members, and two people selected by DOE (Eric Lightner). We will research potential candidates and solicit people to submit their names. From the pool of candidates, the nominations committee will nominate a slate to fill the open positions. The slate is then reviewed and confirmed by the confirmation committee (sitting council members and Eric Lightner). This will be a topic for discussion at the next web meeting.

Action Items: Britton and McGowan are to confirm their interest in renewing their commitment to the AC. Council members are to submit potential candidates to Steve Widergren or Olga Kuchar by e-mail before October 17, 2006. Olga Kuchar is to draft a list of attributes of candidates to be sought during this member renewal cycle.

Outreach and Liaison Reports

- Steve Hauser gave an update on the GridWise Alliance. The Alliance has 20 members and has targeted 35–40 companies. Site Controls recently joined. He mentioned that he is working with Eric Lightner to get more visibility and coordination to GridWise. They plan to hire a consultant to work on strategic planning issues over the next 6–12 months. Council members expressed concern that there is no clear picture of how different smart grid efforts and organizations work together. Lightner mentioned that in November, there would be a technical coordination sessions for various grid modernization initiatives, to include identifying the overlaps and discussion of future coordination.
- Erich Gunther reported that the details on future plans for IntelliGrid deployment are fuzzy at present due to moving the IntelliGrid program within EPRI as a target like other EPRI research initiatives. The specific projects funded will depend on which ones EPRI members sign up from. In any case, the requirements definition and systems engineering based analysis process of the IntelliGrid Architecture continues to be applied on specific projects and this will accelerate in the coming year. Demonstration projects and joint work with universities through the Power Systems Engineering Research Center (PSERC) and other organizations such as GridApp are being pursued.
- Steve Hauser reported on the Modern Grid Initiative and gave some background. Funding came in February, so the Initiative projects are currently in their sixth month of work. The main purpose is to show regional demonstration projects and to build business. Two grid modernization demonstration projects are emerging in West Virginia (source of congressionally directed funds). Steve suggested that the Council may be able to help in articulating the role of government in facilitating the smart grid. There are also two upcoming Modern Grid conferences: one is in Columbus, Ohio on November 15-16 and the other in California in late January. Please check the Initiative's website for more details.
- Erich Gunther reported on Advanced Metering Infrastructure (AMI). UtilityAMI approved the first document on AMI system requirement. Please see <http://www.utilityami.org> for more information. Erich explained that UtilityAMI intends to set the high-level policies and requirements, while OpenAMI handles the technical aspects related to deployment. Southern

Cal Edison (SCE) is finalizing a logical architecture. A request for proposal will be ready at the end of November.

- Lynne Kiesling relayed the success of Energy2006 August 6-9 in Chicago. This meeting was a government sponsored training workshop and exhibit expo. Kiesling and Gunther presented GridWise principles and Dave Chassin (PNNL) presented some results from the Olympic Peninsula testbed project. Lynne described the audience as a good group of potentially early adopters. The audience included the Tennessee Valley Authority (TVA), power managers involved in power efficiency and control, and Bonneville Power Administration.
- Erich Gunther described advancement concerning smart metering: This summer, Erich presented interoperability and GWAC principles in San Francisco.
- Alison Silverstein organized discussions with NARUC and the California PUC. Rik Drummond and Erich Gunther attended some of the meetings with regulators. The impact of interoperability on the evolution of telecommunications and finance are powerful explanatory examples. She plans to give a similar message to the Edison Electric Institute (EEI) and NERC stakeholders committee in the future. She suggests that the Council target key states that are known as early adopters.
- Rik Drummond, Ron Ambrosio, and Jack McGowan will have leading roles at Connectivity Week in Amsterdam, Netherlands October 3-5. Eric Lightner and Rob Pratt will also be attending and presenting.
- Jack McGowan discussed the International Air-Conditioning, Heating, and Refrigeration (AHR) Expo that is taking place in Dallas January 29-31. They are expecting 25,000-30,000 attendees (consultants to building design and engineers – influential trade association). Jack McGowan suggests GridWise to be an endorser and to have a one to two hour panel discussion that he can chair.
- David Cohen will be presenting at 2nd International Conference on Integration of Renewable and Distributed Energy Resources in Napa, CA on December 4-8.
- Ken Wacks will be speaking in San Diego October 15-17 at the Connected@Home 2006. This conference is to address the automation of homes and buildings. We need to keep it on the radar. Larry Silverman noted that home automation does not yet emphasize energy, but utility companies are getting interested since 90% of their customers are residential.

Action Items: Jack McGowan will send out more information on AHR Expo and the outline for a 1-2 hour panel discussion. Please send any outreach activities to Terry Shoemaker.

UN/CEFACT & e-Business Standards Convergence (Guest Speaker Mark Palmer)

Mark Palmer described the work he is doing to help converge multiple standards direction related to e-business and issues related to the GWAC's mission. A key discussion point was on vision. The vision of "interoperability saves your heating bill" gets old quickly. One of his suggestions is to deliver a roadmap to demonstrate how multiple efforts under DOE are collaborating and integrating their specific efforts, thus overall, creating a new standard in reliability and effectiveness for the grid.

Action Items: Mark Palmer will send his report from 2004 related to the value of interoperability and the report made for the UN/CEFACT.

Home Automation Interoperability (Guest Speaker Ken Wacks)

Ken Wacks described his work to facilitate interoperability in the home automation community through standards. There are several applicable standards today. A group like the GWAC may need to embrace several standards as long as you can map between the concepts.

Interoperability Framework Plan

Steve Widergren presented the Framework Plan. Main discussion focused around the workshop in December. This workshop is not for education, but for participation. We plan to develop a list of people to invite to the workshop and brief the participants the draft framework paper before the session. We would like people with interoperability framework experience to participate in this workshop. Our October web meeting will focus on this topic. Key dates for moving forward with the workshop are the October 20 and November 29 meetings.

Action Items: Need to get a list of potential participants to Steve Widergren or Olga Kuchar.

Interoperability Framework Document

Steve Widergren presented the plans for the interoperability document. Suggestions included:

- Framework diagram: Mark Palmer suggested dropping the word “stack” and focusing more on the layers as “paradigms” and the framework as a model for conceptualization. There is a flow through the model and we need to be careful since users may try to break this model instead of understanding that this is a view of how to get to an end state. The suggestion is take the slide and see if your user community agrees or has problems with it. Mark was also uncomfortable with “semantic interoperability” as one characteristic.
- Alison Silverstein noted that 2-3 examples are needed. Providing a table of examples against the interoperability categories may be a good way to do this.
- Stephanie Hamilton recommended that the introductory slide should be as simple as we can get.
- Lynne Kiesling pointed out the lack of economics in the Policy/Regulatory Environment category.
- David Cohen commented that multiple perspectives are needed to test the framework.

Action Items:

- *Draft paper sent out to the Council for the October 20th web conference.*
- *Erich Gunther and David Cohen will provide 2-3 examples that help explain the framework.*

Meeting Minutes: Day 2

Policy/Regulatory Team Progress

Lynne Kiesling gave an overview of the team's progress. The team distributed a white paper outline and is looking for comments from the Council. Some suggestions from the group included including topics on information rights (information access and ownership). The group is working on creating a checklist of interoperability concerns for regulators. Both Lynne Kiesling and Erich Gunther will be attending a PJM AMI meeting at the Thomas Jefferson Hospital in Philadelphia. Lynne Kiesling emphasized the need to engage consumer advocates on access to meter data.

Action Items: Draft paper sent out to the Council by October 27, 2006.

Interoperability Forum

Several meetings to engage others in our work are emerging. This fall, the workshop on the interoperability framework will convene a group of 30–40 individuals who will study the Interoperability Document and provide feedback and direction. Once the workshop is complete, we will have a revised document to circulate 3–4 months before a larger forum proposed to be held in June, 2007. This would involve a call for papers for presentations related to the framework, identifying important friction points in achieving interoperability and prioritizing areas for action. A webcast with a presentation of the interoperability paper can help launch the call for papers.

Eric Lightner and Steve Hauser also announced plans for a forum called Gridweek, tentatively scheduled for March 2007. The GWAC is encouraged to schedule 1 to 1.5 days of Council related meetings, then participate in a summit meeting attended by important players in government and industry.

There was concern that since the interoperability forum is several months from now, that we will not have enough visibility this fall or early winter for GWAC and its activities. We need to inform the community of our progress and keep them interested in us. A proactive communication strategy involving press releases and updates to the website will be used to engage a broad set of constituents and inform them about the GWAC progress until the next large GWAC forum.

Action Items:

- *Steve Widergren and Olga Kuchar to consider press releases and webcasts this fall and winter to provide visibility to the GWAC work. The first press release could be a work plan and products (include framework related material and give timeframe for other products).*
- *Mike McCoy will participate in the organization committee for GridWeek. He will report back to the Council on this effort.*
- *Send to Terry Shoemaker a list of upcoming activities for the next two months.*
- *Send to Terry Shoemaker a list of publications by the Council members.*
- *A Press Release Team was created with the following members: Rik Drummond, Jack McGowan, Alison Silverstein, and Mike McCoy.*

Santa Fe Energy Innovation Center

David Breecker presented his slides and solicited reactions to his slides concerning Santa Fe's efforts to provide a regional focus for energy innovation. Santa Fe hopes to develop ties between research, industry, and the community to become a leader in energy efficiency. The following are some highlights of the discussion around gaps in the future grid:

- The future grid needs to have technologies that exist today and the ability to do what we can do right now, but having an architecture that supports interoperability and adaptability for future enhancements.
- The community needs to become involved as much as possible, and there was some discussion around partnering with real estate. Other discussions were around micro-grid, its definition and usage. There was also mention of small areas or co-ops.

National Commission on Energy Policy

Vito Stagliano (member emeritus) gave a presentation on the National Commission on Energy Policy. By bringing this work to the GWAC's attention, there may be ways of inserting interoperability aspects into this commission's policy recommendations. For example, if interoperability became a part of the mandatory requirements that ERO is pushing, then it might improve reliability. The NCEP may be able to help the GWAC by getting relevant people to meetings and supporting interoperability principles in their policy recommendations.

Identity and Naming Report

Rik Drummond presented an update to this report and points to a FAQ available on our SharePoint site that references these issues of identity and naming. There was an extensive discussion of naming; during this discussion, it became clear that naming is a very complicated topic in which there is little common understanding or agreement.

Action Items: Rik Drummond will send out a draft of the document.

Pioneering Development Showcase

We need to present a clear message of what this Council is doing and how it is influencing the future grid. The problem is that most people think that GridWise is a product. Different groups are making progress toward the GridWise vision. By recognizing them and any actions improving interoperability, we can bring visibility to the issues and people contributing to resolving them.

Roadmap

Steve Widergren did an overview of both near-term and long-term roadmap. The near-term slide needs to be updated to reflect the activities planned by the policy team. Concerning the long-term roadmap, the "constitution" top section should focus on managing/sustaining/growing the principles.

Action Items:

- *Policy team needs to update the roadmap for their activities until the end of FY07.*
- *David Cohen and Erich Gunther to get a first draft of use cases by September 14, 2006.*
- *Alison Silverstein to draft a list of the measures of progress for discussion at the November 29, 2006 meeting.*
- *Alison Silverstein to make the first attempt at a list of topics for use cases that will help explain why interoperability is important.*

Summary of New Action Items

#	Item	Owner	Due Date
230.	Submit potential speakers for the November meeting to Steve Widergren or Olga Kuchar.	All Members	20 Oct 06
231.	Confirm interest in renewing their Council commitment.	Britton and McGowan	17 Oct 06
232.	Submit potential Council candidates to Steve Widergren or Olga Kuchar.	All Members	17 Oct 06
233.	Draft a list of attributes of candidates to be sought during this member renewal cycle.	Kuchar	20 Oct 06
234.	Send information on AHR-Expo and the outline for a 1-2 hour panel discussion.	McGowan	November
235.	Send outreach activities to Terry Shoemaker.	All Members	Ongoing
236.	Send 2004 report related to the value of interoperability and the report made for the UN/CEFACT.	Palmer	November
237.	Names for potential workshop participants for December sent to Steve Widergren or Olga Kuchar.	All Members	20 Oct 06
238.	Draft interoperability framework document sent out to the Council.	Widergren Ambrosio Cohen Drummond Hardin Watkins	19 Oct 06
239.	2-3 examples that help to explain the interoperability framework.	Gunther and Cohen	14 Sep 06
240.	Draft policy/regulatory document sent out to the Council.	Kiesling and Silverstein	27 Oct 06
241.	Determine press release and webcast dates for this fall/winter to provide visibility to the Council's work.	Widergren and Kuchar	1 Nov 06
242.	Send a list of publications to Terry Shoemaker.	All Members	Ongoing
243.	Draft identity and naming document sent out to the Council.	Drummond	November

244.	Policy/regulatory team needs to update the roadmap for their activities until the end of FY07.	Kiesling and Silverstein	November
245.	Draft a list of the Council's measures of progress to be discussed at the next meeting.	Silverstein	29 Nov 06
246.	Topic list for use cases that will help to explain why interoperability is important.	Silverstein	20 Oct 06
247.	Draft a list for the measures of progress for the Council.	Silverstein	October