

GridWise Interoperability Workshop

Interoperability Next Steps Breakout
Green Group

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Objective of Symposium

- Gather stakeholders to make actionable steps
- Audience
 - Vendors, Consultants and Integrators
 - End users and their agents (e.g. aggregators)
 - Utilities – to improve operations
 - Executive / decision makers – business case is key
 - Operations / technical – tactical / how to use
 - Regulatory agencies – to facilitate implementing policy
 - Consultants and integrators – to get more business
 - Advocacy groups (NRECA, DistCo's, etc.)

Value to Attendees

- Vendors, Consultants and integrators
 - Better understanding of requirements
 - Opportunity to influence process / framework
- End users and their agents (e.g. aggregators)
 - Identify opportunities for savings, new services, and process improvement
 - A forum to be heard
- Utilities – to improve operations, reduce cost
 - Executive / decision makers – how to assign value
 - Operations / technical – actionable steps
- Regulatory agencies
 - Understand the need for interoperability
 - Tools to facilitate implementing policy
- Standards Organizations
 - Guidance on where standards are needed

Symposium Topics

- Interoperability Drivers – Why Interoperability?
 - Business value of interoperability
 - Enable regulatory policy implementation
- Aspects of Interoperability
 - Where? Points of interoperability (use cases can be used to find them)
 - Role of standards – how to choose
- Managing the path – are we done yet?
 - The continuum of interoperability – how much is enough?
 - Framework should provide that guidance
 - Metrics – see separate slide
- Understanding the roles of the modern grid organizations and how to use their work products
 - Commercial Alliances
 - Research Organizations
 - Government
- Impact on stakeholders
 - Cost
 - Organizational change management

Why?

- What are the business drivers?
- Make the business case for interoperability
- AMI is a good example
 - Assign value to interchangeability / interoperability
- What level of detail/specificity is required to achieve interchangeability?
 - Is it worth it?
 - How do we make that evaluation?

Interoperability Goals

- Desired outcomes
 - Lower cost, more reliable systems
 - Enabling new services
 - Third party billing, alarming, other services
 - Data mining services
 - Flexibility
 - Choice of solutions
 - Scalability
 - Manage technology change
 - Shorter time to implement solutions
- The Case for Interoperability

Interoperability Goals

- What is the end goal?
 - Identify and define points of interoperability
 - E.g. interfaces between systems and devices
 - Within which domains?
 - Where do we stop? – where is the edge?
 - What other industries do we need to touch?
 - Define Characteristics of Interoperability
 - To what degree – continuum of interoperability
 - Determine which standards are applicable to achieve it
- Then we can identify the steps to get there

Interoperability Drivers

- Economics
 - Business cases
- Impact of large adopters
 - e.g. GSA specifies using BACNet based on their requirements – others follow / adopt
 - Enjoy the benefit of products that arise
- Regulatory / Societal Value
 - Mandates / policy – e.g. CEC Title 24 PCT
- Avoidance of vendor lock-in – e.g. MV90 support for new, competitor products

The Path - Are we done yet?

- How do we know when interoperability has been achieved?
 - Use interchangeability as a test
 - E.g. – two devices may both be DNP3 enabled but may use different register maps, units, etc.
 - USB key is an example of fine tuned interoperability to achieve interchangeability
- Vendors providing product based on requirements
- What are the metrics?

Measuring Progress - Metrics

- Metrics - How do we know when interoperability has been achieved?
 - Use interchangeability as a test
 - E.g. – two devices may both be DNP3 enabled but may use different register maps, units, etc.
 - USB key is an example of fine tuned interoperability to achieve interchangeability
 - How to measure, report, and use for improvement
- Business side
 - Lower operating costs
 - Vendors and users follow the framework and it happens to work! Their expectations are met.
- Standards Community
 - Standards bodies address gaps, referencing the framework
- Societal / Regulatory side
 - Reliability improvement
 - Policy objectives achieved
- GridWise Compliance / Conformance
 - GW Inside
 - What does it mean to be compliant?

Use of standards

- Meta standards
 - Guidelines for different environments?
 - What can / should be used in different situations
- Vendor driven?
 - When can the vendor community help? How should they be involved?
 - Motivation not to have a standard in some cases
 - AMI utilities decided to minimize the vendor driven aspect – define common requirements instead
- Defacto standards – how/when/if they can be used
- Impact of large adopters – e.g. GSA specifies using BACNet.
- Impact of regulation – because I said so
- Framework could identify progression of adopting standards
 - Like building codes
 - Model after Common Commercial Code – model upon which individual state codes are based

Grid Initiatives

- Who are they?
- What do they do?
- What have they done?
- How to use their work products?
- How does each position themselves with respect to the others?

Summary

- What we listed are attributes that will create a compelling symposium
- To Do:
 - Need to prioritize these topics
 - Organize into paper and panel sessions
 - Recruit volunteers
 - Need a process to do the above three items