



# MOVING TOWARD A SMARTER ELECTRIC GRID

## Session 3: Smart Grid Communications Architecture: Requirements, Implementations, and Future Directions

**Time and Date:** 8:30 AM – 2:00 PM, Saturday, May 22, 2010

**Venue:** EG&G Education Center, MIT, 50 Vassar Street, Cambridge, MA

### Speakers:

**Keynote:** Gene Zimon, President, Edge Advisors (former CIO, NStar)

**Utility Communication Requirements:** Christopher Bull, SMART Program Director, National Grid

**Vendor Communication Equipment Panel Discussion Featuring:**

Jeffrey Katz, CTO Energy & Utilities, IBM

John Geiger, Wireless Center of Excellence Leader, GE Digital Energy

Nachum Sadan, CEO, Amperion Inc.

Jay Ganson, Manager, Business Development and Environmental Affairs, Ambient Corp. (Invited)

**Communications Research:** Timothy Roxey, Manager of Critical Infrastructure Protection, NERC

### Overview:

At Smart Grid Communications Architecture: Requirements, Implementations, and Future Directions, you will learn about the current state of the art in Smart Grid data communication implementations, standards, and products. This ½-day session in the on-going Moving Toward a Smarter Electric Grid series of symposia will cover:

- What information utilities require from the Smart Grid and why
- Current data communication architectures with emphasis on transmission media, interoperability, and security standards
- What products companies are currently marketing to support utility requirements and Smart Grid standards
- What researchers predict about the future of communication requirements, standards, and equipment as our understanding of the Smart Grid evolves.

Participants will have the opportunity to listen to, and meet with leaders in Smart Grid technologies, and will gain a deeper insight into the basic ideas, technical challenges, and specifically to potential areas where they might be able to make personal contributions.

### Background:

The nearly century old United States Electric Grid is on the verge of being radically transformed. This new “Smart Grid,” will be more efficient, more reliable, and more secure. To meet these goals, the Smart Grid will be heavily dependent on the collection, flow and management of massive amounts of data. This data will support more intelligent and agile power generation management, automated remote sensing and monitoring, automated failure avoidance, self healing, and highly dynamic demand management. Further, this transition to the Smart Grid needs to be accomplished while simultaneously hardening the grid against the possibility of cyber attacks.

See [www.ieeeboston.org](http://www.ieeeboston.org) for updated information on this and future sessions in the series *Moving Toward a Smarter Electric Grid*. Potential topics for future sessions include: Measuring & Controlling Smart Meters and Smart Appliances; Proposed Smart Grid Open Distributed Architectural

Platform; Modeling and Computing; Distributed Power Generation and Storage.

Note the Special Session in September associated with the 2010 IEEE Conference on Innovative Technologies for an Efficient and Reliable Electricity Supply.

### Program

**8:00 Registration and Networking**

**8:30 MIT and IEEE Boston Welcomes**

**8:45 AM Keynote**

**9:45 AM Utility Smart Grid Communication Requirements and Q&A**

**10:30 AM Networking Break**

**10:45 AM Vendor Smart Grid Communication Architectures and Products Panelist Presentations and Q&A**

**12:15 PM Networking Lunch**

**1:00 PM Smart Grid Communication Architecture Research and Insights Presentation and Q&A**

**2:00 PM MIT and IEEE Wrap-ups and Adjourn**

**Registration Fees: Decision (Run/Cancel) Date for this Course is [Wednesday, May 12, 2010] (see, [www.ieeeboston.org](http://www.ieeeboston.org) to register)**

*Payment received by [May 10]:*

IEEE Members, MIT Faculty / Staff \$75

Non-members \$105

Student/Unemployed \$30

*Payment received after [May 10]:*

IEEE Members \$105

Non-members \$135

Student/Unemployed \$45