

# industry reports

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## First IEEE PSRC WG H7 Sub C7 1588 Plug-fest



The Power System Relaying Committee is in the Power & Energy Society of IEEE.

SYNCHRONIZATION PLAYS AN IMPORTANT ROLE FOR MANY POWER SYSTEM APPLICATIONS. Some applications require relative synchronization (synchronization of merging units), others need traceability to UTC either locally or over a wide area (event recorders, synchrophasors). Synchronization of samples and various measurements is critical for protection applications, which demand high security and dependability.

To address power industry and Smart Grid needs for accurate timing and synchronization over Ethernet networks, the Relaying Communications Subcommittee (H Subcommittee) of the IEEE Power System Relaying Committee (PSRC) and the Data Acquisition, Processing, and Control Systems Subcommittee (CO Subcommittee) of the IEEE Substations Committee (SUB) established a joint Working Group, PSRC H7/Sub C7, tasked to develop IEEE Standard PC37.238 titled "IEEE Standard Profile for Use of IEEE 1588 Precision Time Protocol in Power System Applications". The joint Working Group coordinates its work with IEC TC57 WG10 to enable adoption of the standard profile into IEC 61850. To speed up standard profile development and ensure that the most appropriate and interoperable options are selected, the WG established an interoperability testing program called plug-fest. The first plug-fest took place on September 14, 2009 in Arlington, TX, where 6 vendors with 15 devices were able to







by Erich W. Gunther, EnerNex Corporation, USA

Dollen from EPRI is the chairman and I am his vice-chair.

In recognition of the need for ongoing support and advice on smart grid activities to the PES governing board, they recently created an at large position for smart grid for which I am honored to be the first holder of that seat. In support of that role I recently visited many working group, subcommittee, and committee meetings at the recent PES Joint Technical Meeting in Orlando. Al Rotz, the incoming PES president, accompanied me to reinforce the message that the IEEE PES is taking an active role in mobilizing the PES membership to actively support grid modernization through the evolution and development of smart grid related standards. We encouraged the membership to participate in the NIST SGIP efforts and look for opportunities for the IEEE to apply its expertise and standards to accelerate the standards development process.

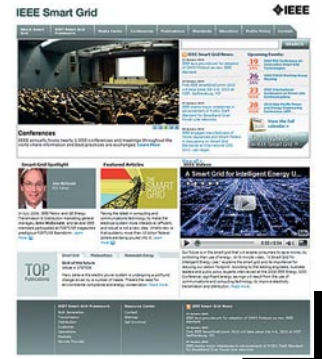
A major aspect of the NIST effort is to accelerate greatly the standards development process. Standards

groups have been criticized for taking many years to develop standards. That isn't fast enough to support the fast changing world of smart grid where billions of dollars are being spent now on assets that may become stranded if they do not implement interoperable standards. We have seen the IEEE Communications Society move very quickly when necessary to produce a key standard to support mass markets (think 802.11a,b,g - WiFi) and NEMA produce a metering firmware upgrade standard in 90 days when asked to do so by NIST. Creating a mindset and process to fast track key standards development is a difficult challenge, but one that we must accept and accomplish. To that end, a new PAR was recently approved (P1815) and a working group formed to adopt and publish the DNP3 protocol as an IEEE standard. This project is being used to demonstrate that the IEEE-PES can create a standard in less than six months.

This is a unique point in history for the electric power engineering profession. Our discipline is being

recognized for its critical role in maintaining, developing, and transforming our most critical infrastructure upon which all others depend. We are able to implement new systems based on ideas, concepts, technologies that we may have thought of decades ago but now with adequate funding, political support, and a customer base hungry for solutions that empower them to control their energy footprint associated costs. The IEEE is facilitating this once in a lifetime transformation of our electric power infrastructure. I suggest that we embrace the opportunity and make the most of it. ■

The new IEEE smart grid web site.



The NIST has been given by the US Congress in the Energy Independence and Security Act of 2007 (EISA) the task to develop a smart grid interoperability roadmap.

### 1 The National Institute of Standards and Technology (NIST) Conceptual Model

