Electric Power and Power Electronics Institute

INVITED SEMINAR
3-4pm, Wednesday January 20, 2016, ETB 1003

TITLE

USE OF SYNCHROPHASOR TECHNOLOGY FOR GRID OPERATIONS AT ERCOT

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Abstract

Implementation of the future smart grid requires enhancements to the current grid at various levels of operation and control including integration of phasor based devices and new approaches in utilization of the large amount of data for various applications. Synchrophasor Technology is now being deployed for situational awareness, oscillation detection, event analysis and other benefits across the world. DOE has funded several projects to deploy this technology in US as well. ERCOT is one of the beneficiaries of DOE's funding and was involved in 'Discovery across Texas' project which already demonstrated some success stories in using synchrophasor technology in managing the grid. ERCOT was given the NASPI 'Outstanding Utility of the Year Award' for being a 'leader in using synchrophasor technology for a variety of operating and planning functions, particularly for wind integration and baselining to set alarms and alerts'. This talk would tell the story of 'use of synchrophasor technology for grid operations at ERCOT' and present some of the use cases for integration of PMU data into control center operations.

Speakers Bio

Dr. Sarma Nuthalapati obtained his bachelors and Masters Degrees from NIT Warangal, India, in 1983 and 1986 respectively. He obtained his Ph.D. degree from Indian Institute of Technology, Delhi, India in 1995. He has been working at ERCOT since Aug 2007 in the Advanced Network Applications Group in its Operation Department. He is involved in the Synchrophasor Project at ERCOT that was funded of DOE, USA under the Smart Grid Initiatives Grants. He also spent about 5 years as PostDoc at TAMU, working on several projects in the area of Shipboard Power Systems, funded by ONR. Dr. Sarma is involved in organizing several panel sessions at the IEEE PES Society General Meetings. He is active in the IEEE Working Group for State Estimation and led the IEEE Task Force on 'State Estimation Concepts and Terminology'. He is currently the Chair of the IEEE Task Force on Real Time Contingency Analysis. He is also a member of the NERC Standards Authorization Request (SAR) Drafting Team on 'Project 2009-02 Real-Time Monitoring and Analysis Capabilities'. He is also a member of the NERC Synchrophasor Subcommittee (SMS). He is a Member of the CIGRE Working Group B2.59 on 'Forecasted Line Ratings' and IEEE Task Force on 'Predicting Overhead Line Thermal Ratings'. He is also active at the NASPI Working Group meetings and was recently given NASPI Control Room Solutions Task Team Most Valuable Player (MVP) Award for being a leading organizer and contributor to the CRSTT and the NERC Synchronized Measurement Subcommittee and a public champion for synchrophasor technology'. He is a senior member of IEEE and a member of IEEE Power and Energy Society (PES).