



North American SynchroPhasor Initiative Working Group Meeting June 5-6, 2012

**Hyatt Regency Tech Center
7800 East Tufts Ave.
Denver, CO 80237**

This NASPI work group meeting will feature user success stories with synchrophasor technology and a vendor show. A session on Wednesday afternoon will look at the September 8, 2011 Southwest Blackout and the importance of phasor data for understanding what happened on the grid that afternoon.

There will be a \$200 registration fee to cover meeting costs, refreshments and lunch on the two meeting days; **the fee will rise to \$300 after May 18, 2012**, and there will be a \$50 handling fee for cancellation and refund requests. The meeting registration link is at [NASPI Meeting Registration Link](#). The Hyatt Regency Denver Tech Center's group room rate ended on May 21, 2012 but attendees can contact the hotel for room availability at [Hyatt Regency Denver Tech Center Hotel Reservation Link](#).

Final Agenda (6/1/12)

Tuesday, June 5, 2012		
7:30 – 8:00 am	Registration, refreshments, and networking – Summit Foyer	
8:00 – 8:10 am	Welcome, introductions, and logistics review Grand Mesa DEF Rooms	Jeff Dagle (PNNL) Alison Silverstein (NASPI)
8:10 – 8:30 am	Welcoming keynote	Jim McIntosh (CAISO)
8:30 – 8:40 am	NERC update	Mark Lauby (NERC)
8:40 – 8:50 am	DOE update	Phil Overholt (DOE-OE)
8:50 – 9:50 am	User success stories <ul style="list-style-type: none"> • How to manage and use synchrophasor data in real-time environments -- Kevin Frankeny (MISO) & Scott Stapels (Utilicast) • Overcoming technical challenges of synchrophasor data -- Austin White & Steven Chisholm (OG&E) • MISO data quality investigations -- Kevin Frankeny, Anna Zwergel, David Kapostasy (MISO) & Ken Martin (EPG) 	
9:50 – 10:05 am	Break (refreshments and networking), sponsored by OSIsoft Grand Mesa Foyer	
10:05 – 11:00 am	Technical drill-down – Interoperability standards, conformance testing and PMU certification <ul style="list-style-type: none"> • Mladen Kezunovich (Texas A&M) – moderator • Lloyd Green (IEEE) • Rik Drummond (SGIP TCC) 	

	<ul style="list-style-type: none"> • Yi-Hua Tang (NIST)
11:00am – noon	<p>User success stories</p> <ul style="list-style-type: none"> • Use of gateways to exchange phasor data in the Eastern Interconnection – Floyd Galvan (Entergy Services) & Said Sidiqi (TVA) • A real-time hardware-in-the-loop laboratory for developing WAMPAC applications – Luigi Vanfretti (KTH), Greg Zweigle & Bill Flerchinger (Schweitzer Engineering Laboratory) • Real-time voltage stability margin monitoring using synchronized measurements – Armando Salazar (SCE) & Dino Lelic (Quanta Technology)
noon – 1:00 pm	Lunch (provided)
1:00 – 2:50 pm	<p>User success stories</p> <ul style="list-style-type: none"> • Digital fault recorders as phasor measurement unit devices – notes from field installs – Jim Kleitsch (ATC), Jim Hackett & Harish Mehta (Mehta Tech) • Practice in PMU development for smart substations – Bonian Shi (Beijing Sifang) • Phasor measurement unit calibrator development – Yi-Hua Tang & Gerard Stenbakken (NIST) & Allen Goldstein (Fluke Calibration) • Eliminating GPS dependency for wide-area synchrophasor applications -- Magnus Danielson (Net Insight) & Dan Lutter (Allied Partners) • Accurate synchrophasor estimation to support the islanding maneuver of active distribution networks -- M. Paolone (Ecole Polytechnique Federale de Lausanne), A. Borghetti & C.A. Nucci (University of Bologna) & Owen Golden (National Instruments) • GPS clocks and PMU interoperability issues – Dave Bertagnolli (ISO-NE)
2:50 – 3:10 pm	Break (refreshments and networking)
3:10 – 6:00 pm	<p>Task Team break-out sessions</p> <ul style="list-style-type: none"> • Performance Standards TT in Grand Mesa DEF • Operations Implementation TT in Grand Mesa A room • Planning Implementation & Research TTs in Chasm Creek room • Data & Network Management TT in Grand Mesa B&C room
5:30 – 6:00 pm	<p>Multi-vendor demonstration of IEEE 61850.90-5 that will use Multicast and Unicast and demonstrate UDP, error counters, and more. Presented by Performance Standards Task Team in Grand Mesa DEF Demo participants will include: PG&E, Grid Protection Alliance, Alstom, RuggedCom, GE Energy, CISCO, SISCO, Mississippi State University, and Quanta Technology</p>
6:00 – 8:30 pm	Vendor exhibits and reception – 2d floor Atrium

Wednesday, June 6, 2012

7:30 – 8:00 am	Refreshments and networking – Summit Foyer
8:00 – 9:00 am	<p>Technical drill-down – Voltage monitoring – Grand Mesa DEF</p> <ul style="list-style-type: none"> • Dmitry Kosterev (BPA) – moderator • Marianna Vaiman (VR Energy) • Damir Novosel (Quanta Technology) • Manu Parashar (Alstom Grid) • Saad Maalik (WECC)

9:00 – 10:00 am	<p>User success stories</p> <ul style="list-style-type: none"> • Wide area monitoring system for Ecuador – Gonzalo Uquillas (CENACE National Control Center) & Chuck Wells (OSIsoft) • Analysis of select past WECC system oscillation events – Jim McIntosh (CAISO) & Bharat Bhargava (EPG) • Monitoring voltage & angle stability of the power system by monitoring voltage and angle sensitivities using synchrophasor data – Mahendra Patel (PJM) & Bharat Bhargava & Song Xue (EPG)
10:05 – 10:20 am	Break (refreshments and networking), sponsored by Harris Corp. and National Instruments
10:20 – 11:20 am	<p>User success stories</p> <ul style="list-style-type: none"> • Advanced analytics & visualization of PMU data – Tim Bradberry (Duke) & Chuck Wells (OSIsoft) • Event analysis using phasor data – John Adams & Prakash Shrestha (ERCOT) & John Ballance (EPG) • Implementing a synchrophasor-based system defence scheme in Iceland – Robert Folkes (Psymetrix)
11:20 – noon	Task Team report-outs
Noon	Lunch (provided) – 2d floor Atrium
1:00 – 2:30 pm	<p>Tracking the September 8, 2011 Southwest Blackout using synchrophasor data</p> <ul style="list-style-type: none"> • Causes and recommendations from the FERC-NERC April 2012 Blackout Report – Mahmood Mirheydar (FERC) (20 mins) • Event visibility – tracking the outage events using PMU data – Bob Cummings & Greg Henry (NERC) & Perry Servidio (FERC - invited) (40 mins) • Constructing the Sequence of Events and simulating the blackout using phasor data -- Bob Cummings (NERC) (30 mins)
2:30 pm	Adjourn

NASPI thanks our event sponsors, OSIsoft, Harris Corp. and National Instruments.

Work Group attendees should be aware that NASPI, in conjunction with the National Renewable Energy Laboratory, is sponsoring an additional workshop on June 7 to explore synchrophasor technology and renewable resource integration.