North American SynchroPhasor Initiative (NASPI)

Performance and Standards Task Team Meeting

***June 26*, 2009**

8:00am-9:00am PT
By Teleconference and Live Meeting

Agenda

1. (5 min) Introductions / Roll Call – All
2. (5 min) Final DOE FOA — All
3. (5 Min) Update on NIST Activities – Additional Standards for interoperability — Allison / Farzaneh
4. (5 min) NASPI Goals — Allison
5. (5 Min) Update on PSTT Standards — Vahid
6. (5 Min) Efforts towards PSTT documents becoming part of IEEE Standards — Vahid
7. (5 min) IEEE organizing efforts for SCC 21 P2030 initiative — Harish / All
8. (5 min) Time sync (IEEE 1588 and NTP) — All
9. IEC 61850 provisions for time sync/time stamp — All
10. (10 Min) Interoperability — Ken Martin / Harish Mehta
    - ♦ Approach to handling of time of measurement and calculated results
    - ♦ Communication Protocol
    - ♦ Data Format
    - ♦ Configuration Parameters
    - ♦ Parameter Matrix (Performance, Response, Latency, etc.)
11. (5 Min) Update Clarifying relationships between PRC-002-2 & PSRC C37.118 — Ken Martin / Harish Mehta

Action Items: PSTT will develop a matrix of applications and performance parameters so that users can develop acceptance criteria consistent with their own use requirements and conforming to the applicable standards

- ✓ NERC's mandatory regulations for disturbance monitoring and reporting
- ✓ Time Stamp Accuracy
- ✓ The need for different filters to obtain accurate phasor values for different types of disturbances – Within a PMU design, a single data stream means a single filter. Does this mean a PMU needs to be configured for a specific disturbance condition? Would data quality for other conditions suffer?
- ✓ Does meeting NERC PRC-002 data recording requirements acceptable for for phasor applications?

12. New topics for consideration
    - ♦ Data storage requirements and optimization to minimize the storage — Anurag Srivastava
13. (5 Min) Update on PSTT Web Site and Repository Review — Teresa
14. (10 minutes) Review the "PSTT Activities for 2008 Goals" — **All**
    - Objectives: Identify Deliverables, Timeline / Schedule for 2009, Resources

2008 Goals	Task Leaders
1. Define standard PMU	**Ken Martin**, Sakis Meliopoulos, Harish Mehta, Mladen Kezunovic
2. Requirements to guide PMU deployment and system architecture needs, locally and regionally	
a) System and device requirements for combined applications	**Yi Hu**, Jim Hackett - Review draft proposal The PSTT presentation (an example of system and device requirements for combined applications - Requirements to guide PMU deployment and .....) at the Task Team Break Out session on Thursday afternoon. Perhaps, Dave Bertagnolli (ISO-New England) can make the presentation on my behalf since he will be attending. The proposed presentation basically describes the integrated Phasor Streaming and DDR (both continuous and trigger based recording) installations that Dave has installed across New England. It will also outline the requirements for these combined applications that involve multiple sites, multiple types of communications, and multiple end-users.
b) Phasor Tools Listing - Requirements and specifications for phasor tools	**H. Huang**, J. Hackett, E. Martinez, T. Weekes., Sushil Cherian; Krish Narendra; Robert Folkes Henry to provide update
c) Guidelines for synchronization techniques - Accuracy and Availability	**Bill Dickerson**, J. Stenbakken, Alfredo Vaccaro, K. Narendra Document sent for review to the entire PSTT – Closed December 30, 2008 – Posted on Share point
d) Requirements for hardware and firmware upgrades	**S. Haveron**, J. Hackett, F. Galvan., E. Martinez, K. Narendra Review draft proposal by Shane and his team
3. Procedures for testing PMU at the commissioning level ✓ **Acceptance** ✓ **Installation** ✓ **Commissioning, Field Maintenance**	**V. Madani**, T. Weekes., K. Martin, Mladen Kezunovic, Alfredo Vaccaro, K. Narendra
4. Standardizing PMU Configuration for IEC 61850 Applications a) Implementation Agreements (Standards) for Interoperability of the Synchrophasor Values b) Coordination with IEC Standards	**Shane Haveron**, Roger King., Sushil Cherian
5. Expand guidelines for using devices with	**D. Novosel**, J. Hackett, V. Madani, E. Martinez, Yi

Integrated PMU Functionality	Hu Krish to lead discussion of progress with his team consisting of Anurag, Damir, Jay, and Jerry
6. **Issues with "Dynamic Phasors"** Jerry will work with Henry to distribute presentation and discussions on the use of Taylor Series for feedback from PSTT Ultimately - Ken to consider the information the PRSC WG that will participate in updating the IEEE phasor standard	**Henry Huang**, T. Weekes, J. Stenbakken, B. Kasztenny, M. Adamiak, K. Martin, Arun Phadke Jerry to provide update and if any feedback received from the PSTT.
7. **Standards & requirements for Protection and Control Applications**	**S. Haveron**, E. Martinez, K. Martin, J. Hackett, Virgilio Centeno, V. Madani, Yi Hu, S. Meliopoulos, Mohammad Zubair Review proposal provided by Shane
8. Identify requirements for redundancy (part of architecture)	
9. Discussions with IEEE on COMTRADE file use with PMU – See notes from January 2008 conference call. Feedback from PSRC indicates that COMTRADE standard defines only formats but not contents. An add-on configuration may be developed to satisfy the need when Comtrade is used for phasor measurements. Jim Hackett, as vice chair of PSRC WG H10, invites PSTT members to attend the next H10 meeting at Kansas City on May 13-14, 2008 or give Jim some feedback for discussion at the H10 meeting	
10. Define Functional requirements for PDC Hardware Input protocols, and protocols needed if in the future we want to go to the SE - Whether it is better to have a independent server or independent database etc. for future expansion, what data bases will match what PDCs	Tony Weekes to provide update

15. Next Conference Call: July 24, 2009 Friday, 8:00am-9:00 am PT.

16. Adjourn

Appendix A: Instructions for conference call participants:

NEW CONFERENCE CALL INSTRUCTIONS.

Please use the instructions below for connecting to the PSTT teleconference, Friday October 31, 2008, 8-9am, PT. The conferencing system has been automated so that you can go directly into your conference bridge.

Local participants (Richland, WA): **Dial 376-0190 then dial zero at the prompt** and they are in the conference bridge.

Long distance participants: **Dial 1-800-664-0771, at Octel voice message dial 376-0190 then dial zero** at the prompt and they are in the conference bridge.

This should make it much quicker for your participants to get into the conf bridges.

If you are experiencing problems with your conference call, dial 376-7411(local) and (long distance) dial 1-800-664-0771, at the Octel voice messaging system dial zero and we will assist you – Hanford Operator.

Appendix B: Instructions for LiveMeeting:

Teresa Carlon has invited you to attend an online meeting using Microsoft Office Live Meeting.

https://www.livemeeting.com/cc/pnnl/join?id=JPGN7J&role=attend&pw=Fc%25%60KH%216m

Add to my Outlook Calendar:

https://www.livemeeting.com/cc/pnnl/meetingICS?id=JPGN7J&role=attend&pw=Fc%25%60KH%216m&i=i.ics

FIRST-TIME USERS

To save time before the meeting, check your system to make sure it is ready to use Microsoft Office Live Meeting.

http://go.microsoft.com/fwlink/?LinkId=90703

TROUBLESHOOTING

Unable to join the meeting? Follow these steps:

1. Copy this address and paste it into your web browser:
   https://www.livemeeting.com/cc/pnnl/join
2. Copy and paste the required information:
   Meeting ID: JPGN7J
   Entry Code: Fc%`KH!6m
   Location: https://www.livemeeting.com/cc/pnnl

If you still cannot enter the meeting, contact support:

http://r.office.microsoft.com/r/rlidLiveMeeting?p1=12&p2=en_US&p3=LMInfo&p4=support