Control Room Solutions Task Team (CRSTT) Minutes

Co-leads, Michael Cassiadoro (mcassiadoro@totalreliabilitysolutions.com) and
Jim Kleitsch (jkleitsch@atcllc.com)
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Attendees – See below. Call led by Jim.

Action Items

- Mike C. will contact ATC, CAISO, SCE, SDG&E and others to determine interest in developing operational use case addressing the use of synchrophasor data to monitor synchronous devices.

New Business

- Total Reliability Solutions (TRS) will be collaborating with PNNL to develop a Use of Time-Synchronized Measurements in the Real-time Ops Horizon training course. The base materials will be made available to the public upon completion. Intended audience is RC, BA, and TOP System Operators tasked with monitoring and controlling the Bulk Electric System. "Train the Trainer" class will be held at PNNL in February 2019. Eric Andersen (eric.andersen@pnnl.gov) is PNNL's point-of-contact. More details can be found in today's agenda.
- Jim Kleitsch shared an Eastern Interconnection event that occurred on 1/11/19. NDR provided a link to a website containing images (https://www.usgridsec.com/2019/01/12/eastern-interconnection-frequency-oscillation-observed/). As to 1/23/19 the cause of the frequency swings has not yet been determined.

On-going Business

- **NDR and Mike**; updating the Phase Angle Monitoring spreadsheet and possibly the paper in an effort to keep the CRSTT documents current. (Download the paper). This task will be on hold until the Disturbance Location document has been drafted.
- **Continue building library of events to demonstrate value PMU data provides when analyzing abnormal events and disturbance**.
- **CRSTT & PRSVTT join panel session on enhanced state estimation**; teams agreed to coordinate their respective work efforts in this area to support development of NERC SMS paper.
- Determining Disturbance Locations (Nuthalapati); final draft sent to NASPI Leadership and CRSTT members for review.
- Using Synchrophasor Data to Monitor Reactive Power Balancing; no significant progress to date.
- Video Event Files; CRSTT is always looking to add more videos. Please contact team leads if you feel you have an event you'd like to contribute.
- Use case documents; develop docs that demonstrate ways that grid operators and electric utilities are using synchrophasor data to provide operational value.

CRSTT Goals

- Develop a series of use case summary docs that define how grid operators and electric utilities are using synchrophasor data to provide operational value.
- Prioritize and complete the remaining focus area documents.
- Create additional video event files for use cases and simulated events.
- Gather operator feedback on synchrophasor applications (best practices).

- Support the development of synchrophasor-related training for operations staff.
- Develop a series of Lessons Learned documents related to the use of synchrophasor technology in the operations environment.

Next conference call: February 20, 2019 at 12:30pm PT/3:30pm ET.

Reference Documents (also posted on the NASPI CRSTT web page).
NASPI CRSTT web page (Videos, use cases, reference documents, and call notes).
Using Synchrophasor Data for Oscillation Detection
Using Synchrophasor Data for Phase Angle Monitoring
Using Synchrophasor Data for Voltage Stability Assessment
Using Synchrophasor Data during System Islanding Events and Blackstart Restoration
Using Synchrophasor Data to Diagnose Equipment Health and Misoperations
EA001 - Using Synchrophasor Data to Analyze Fault Event Causes
EA002 - Using Synchrophasor Data to Analyze Concurrent Fault Events
EA003 - Using Synchrophasor Data to Identify a Failing Potential Transformer
EA004 - Using Synchrophasor Data to Identify System Voltage Oscillations
Use Case: GEN-03 – Automatic Voltage Regulator (AVR) Malfunction
Use Case: GEN-05 – Nuclear Plant Voltage Oscillations

Attendees
Carl Benner
Greg Zweigle
James Kleitsch
Junbo Zhao
Kaveri Mahapatra
Mike Cassiadoro
Nilanjan Chaudhuri
Sarma Nuthalapati
Slava Maslennikov
Teresa Carlon
Tom Rizy