Data & Network Management Task Team Report Out

Co-Chairs:

Dan Brancaccio, Bridge Energy

Jim McNierney, NYISO

February 21, 2013

Huntington Beach, CA

DNMTT Breakout Agenda

- Dave Bakken, WSU announced October workshop on distributed computing in Vancouver

- Quick discussion on DNMTT questionnaire

- Dan Brancaccio, WISP -Discuss the use of COMTRADE for exchange of event data

- Scott Sternfeld, EPRI – Latency in a synchrophasor network

- Dan Lutter, Allied Partners – Providing an alternate Time Source within WAN

- Magnus Danielson, Net Insight – Network Service Levels affecting Grid Stability

- Bob Braden, DETER/USC – An Internut View on NASPInet

COMTRADE for Event Data

Dan Brancaccio, Bridge Energy/WISP

- WECC facility for providing event data (to WECC members only)
  - Auto-generated reports
- COMTRADE specifications
  - Brief History, Latest revision of standard
  - Walked through several examples
    - File types – ASCII, Binary
- Future topics (to be handled on TT calls)
    - Address difficulties - .INF component
    - Handling of missing data

EPRI – Latency Study

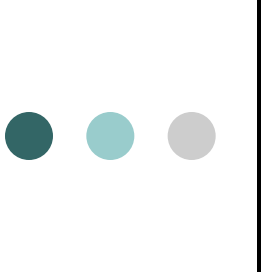Paul Myrda, Scott Sternfield, EPRI

- Presented some latency testing results that were just completed
  - Simulated WAN in lab followed by deployment in WAN (Knoxville, KY to Lenox, MA – 700 mi)
    - Modifying configurations on servers, within applications to address buffering
    - Use of Unicast / Multicast C37.118
    - Modified network traffic (decreased # of signals)
- Future Tests
  - (add encryption, 61850-90-5, adding QoS)

GPS Alternative

Dan Lutter – Allied Partners

- Time Transfer over IP (TToIP) Overlay Networks using NIMBRA product

- "non-disruptive" overlay network approach to provide resilient network clocking and synchronization as a backup for or alternative to GPS.

- Improvements to quality of service and guaranteed data delivery

Communication Time Delay Effects in Power Systems
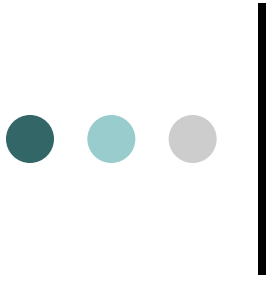
Net Insight – Magnus Danielson

- Early research on network service levels required to maintain power grid stability using PMU's for active mode damping in large-scale WAMPAC systems.

- Presentation provided an overview of the project, showing some of the simulations that have already been done.

An InterNut Look at NASPInet

Bob Braden, USC / DETER

- Taking lessons learned from the evolution of the Internet (IETF) and applying them to the goals and implementation of a NASPInet

- Needless re-inventing of the wheel is costly

- Interoperability is essential

- Don't over-optimize (the future will be upon you sooner than you think), keep it simple

- Two different NASPInet functions:
  - Delivery of PMU data streams
  - Closed loop control
  - Should we have two networks? or one optimized

Thank you for participating!