



Data & Network Management Task Team Report Out

Co-Chairs:

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Atlanta, GA



D&NMTT Breakout Agenda

- Development of IEC 61850-90-5 Gateway software – Seyed Reza Firouzi (SmarTS Lab, KTH Royal Institute of Technology, Sweden)
- Edge Processing of phasor data at UCSD – Dr. Chuck Wells (OSIsoft)
- DNMTT Business - Development of Business Case and Schema for a Synchrophasor signal registry



D&NMTT Breakout Agenda

○ IEC 61850-90-5 Gateway development

- Providing a protocol converter
- Enabling both C37.118 and 61850 to coexist
- Developed as Open Source software and Platform independent
 - Developed to run on embedded systems with the least HW requirements
 - Using standard C libraries
- Code name Khorjin
- Includes three modules
 - IEE C37.118 module
 - IEC 61850-90-5 data model mapping module
 - 61850 Publisher module
- Future Considerations
 - Add PDC functionality
 - Provide 61850 to C37.118 conversion



D&NMTT Breakout Agenda

○ Edge Processing (Thresholdless Event Det.)

- Work has been ongoing for 5 years at UCSD
 - Micro Grid support
- <http://sygma.sdsc.edu>
- Smart PMU – should be doing edge processing
 - Steady state data for the most part.
 - When event is detected, collect data, send to archive
- Only store events that are significant
- Local processing used to detect events
- Approach is based on dynamic and statistical analysis of PMU data
- Filtered rate of change – not using pre-configured thresholds
- Two variables used as inputs; computed frequency & magnitude of voltage
- Training the filter on “ambient” data



D&NMTT Breakout Agenda

○ Synchronphasor signal registry

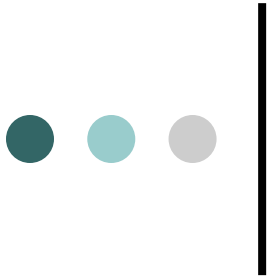
- During monthly calls we have been discussing an XML file based registry exchange file
- Facilitate data exchanges
- Need to work towards a standard schema
- Use of UML, CIM other methods to compile registry

○ Business Case Document

- High Level document
- Outlining use
- Outlining benefits

○ Next Steps

- Compile listing of volunteers
- Follow up with monthly call



Thank you for participating!