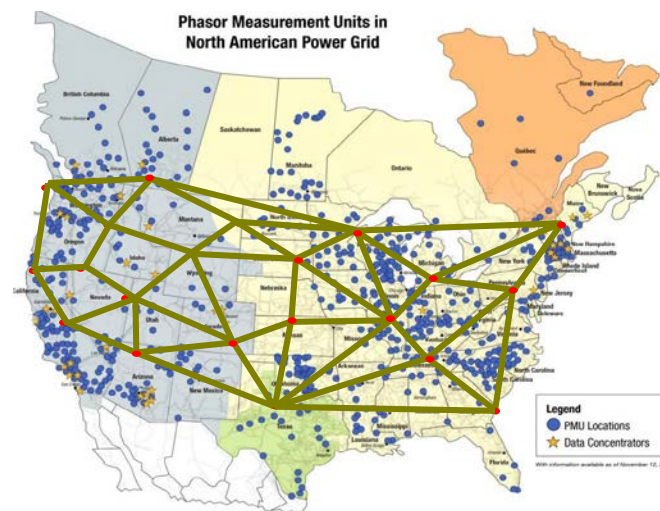


Technical Standards and Synchrophasor Technology

Damir Novosel, Moderator
IEEE PES President
President, Quanta Technology

March 22, 2016



Panelists

Ken Martin (EPG) – Overview of synchrophasor standards

Priyanka Mohapatra (SP Energy Networks) – Scottish Power's synchrophasor pilot, standards and roadmap

Dr. Tianshu Bi (North China Electric Power University) – PMU standards, testing, and their applications in China

Eugene Song (NIST) – Interoperability test method for IEEE C37.118 standard-based PMUs

Ravi Subramanian (IEEE) – Report from IEEE Standards Association & Consumers Energy Laboratory Services

International Synchophasor Deployment

- China has installed PMUs in more than a thousand 500/230 kV substations and number continues to grow
- India is installing 1,732 PMUs
- Latin America
 - Colombia – Deployed applications for improved grid observability and reliability
 - Ecuador and Peru – Deployed System Integrity Protection Scheme using PMUs
 - Brazil - ONS is procuring the system
- Scottish Power and National Grid deployed pilots and started operational deployment
- Finland, Norway, Sweden piloting apps.
- Australia and Malaysia started installations
- Etc.



Source: Power system operation India – "Synchrophasors in India" Dec 2013

Synchrophasor System Standards/Guides Roadmap

