

i-PCGRID

March 26, 2013

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How To Get To Mars



3 - Questions

- What one thing did you want to gain from this conference?
- What technical problem are you currently working on or see coming to the electrical utility industry?
- How much time did you spend last week on that issue?





R&D Success: *Synchrophasors*

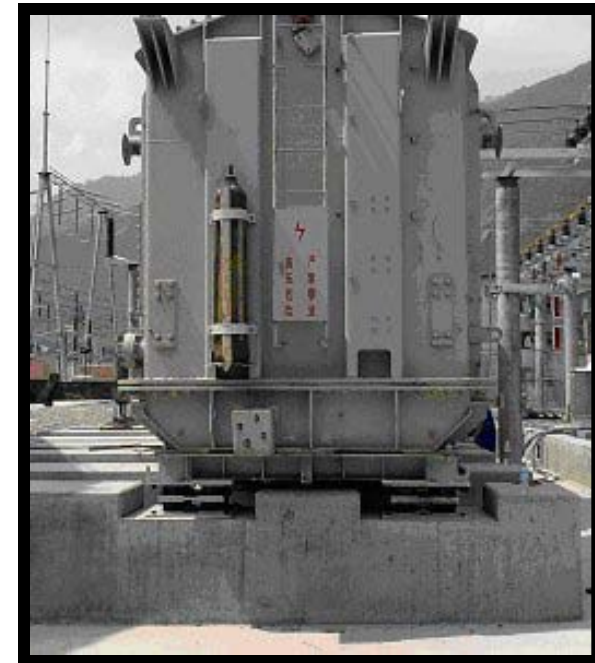
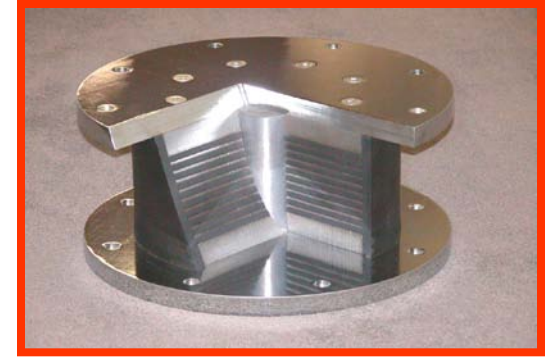
- Enhanced real-time view of the NW power grid
- Currently used in the infrastructure to understand how a generator will respond to disturbances
- 120 times faster than SCADA (60 versus 2 times a second)
- Now - sleuth grid issues (looking backward)
- Soon - control functions for reliability
- Oscillation damping
- Additional Pacific Intertie throughout



Line Shunts



Earthquake Hardening



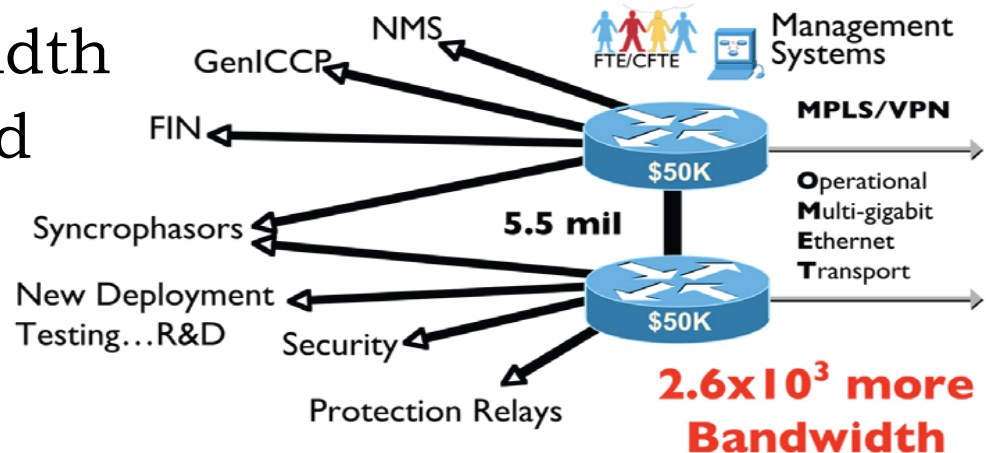
Insulator String Replacement



Operational Multi-Gigabyte Ethernet Transport

BPA is upgrading its telecommunications network to support increasing demands for both information and more sophisticated applications.

OMET provides bandwidth (trillion times more) and avoids a \$15 million upgrade.



Data will be the basis of competitive advantage going forward, calling it “the next natural resource.” It will change how decisions are made, how value is created and how value is delivered.

Many more decisions will be based on predictive elements versus gut instincts.

In the near future, “your value will not be what you know, but what you share”.

Ginni Rometty – CEO IBM

March 7, 2013