Nortel Networks SC09 demonstration

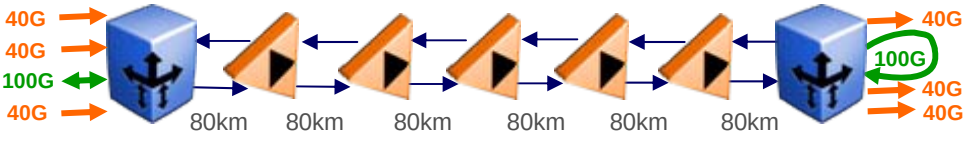
Nortel has a long and successful history of advanced technology R&D collaboration with leading research organizations, universities and with NREN's on a global basis. One of most productive and successful collaborations has been with the Dutch national network SURFnet and with members of the Dutch Research Consortium. We are proud to present our demonstration that shows how coherent receiver technology is redefining the future of optical networking.

Nortel 40G/100G Adaptive Optical Engine

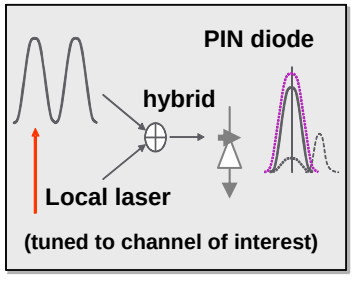
- ✓ **Volume Deployable High Capacity Solutions**
- ✓ **Improved spectral efficiency with more bits per symbol**
- ✓ **Retain Superior Performance and Agility Characteristics of Existing 10G Systems**
- ✓ **Plug and Play Solutions Leverage Existing Infrastructure and Investment**
- ✓ **Electronically compensate and monitor chromatic dispersion, PMD, PDL**
- ✓ **Colorless OADM/remote frequency selection eliminates Fixed Channel Spacing requirement**

JOINT NORTEL/DUTCH CONSORTIUM SC09 DEMONSTRATION

100GE over 1,000km alongside 3 x 40G wavelengths, all 50GHz spaced!



Coherent Colorless OADM



40G and 100G traveling over mixed fibers with NO fixed dispersion compensation!

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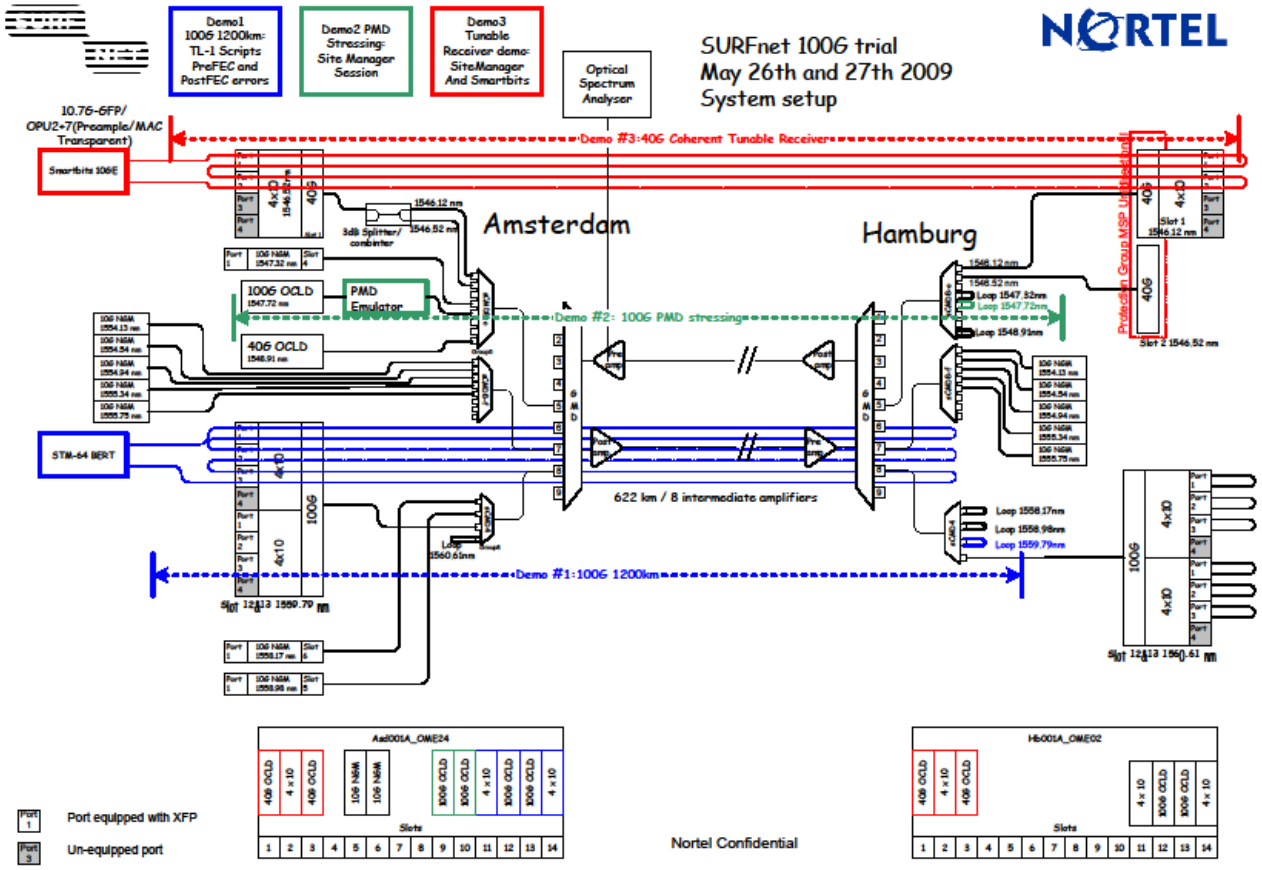
NORTEL

SURFNET



In May 2009 Nortel, in collaboration with SURFnet, conducted successful long haul 100G trials between Amsterdam and Hamburg. These trials proved:

- ✓100Gb/s circuit configuration operating over 1267km distance
- ✓ 400ps dispersion electronically compensated and instantaneous DGD (fluctuating single-digit ps)
- ✓Performance of 100Gb/s within ITU 50GHz grid
- ✓40Gb/s and 100Gb/s on a network carrying 5 x 10 Gb/s live traffic
- ✓100Gb/s and 10Gb/s on adjacent channels on a 50GHz grid and on a 100GHz grid. No guard channels were required - B/W was maximized.
- ✓3 x 40Gb/s and 1 x 100Gb/s and 1x 10Gb/s in a group of 8 wavelengths on a 50GHz grid

Product R&D on Nortel's 100G system has been completed; Nortel's 100G becomes commercially available in 2009.