JANET Lightpath Service

Rob Evans

(Most of the work done by Dave Tinkler)

JANET Lightpaths

- Two components
  - Provisioned by supplier
    - 10Gbit/s Wavelengths
    - Some 1Gbit/s circuits (depending on location)
  - Provided by JANET managed equipment
    - Most circuits of 1Gbit/s

- Supplier-provided circuits haven't changed.

What we had

- Service based on SDH.
- STM-64 circuits between Backbone PoPs.
- Ciena equipment
  - CoreDirector
  - MetroDirector
  - 3600

What we had

- Reliable, but
  - Expensive

  - High Management Overhead
    - Limited scope for 'point and click' provisioning due to the different platforms

  - Complicated
    - We're IP guys really

Time for a change.

- Time came for re-procurement
  - Stay with the same technology?
    - Most equipment would have to be replaced.
  - Something new (to us)?
    - Ethernet over MPLS
    - PBB-TE ("Carrier Ethernet")
    - Simple VLANs.

What we chose

- Ethernet over MPLS
  - Widespread use in the commercial market
  - PBB-TE was still being standardised and not clear if market was going to adopt it

- Migration
  - Replaced SDH equipment with Juniper MX-960
  - Converted STM-64 circuits to 10GE LAN-PHY

Provisioning

- Manual at the moment

- L2VPNs, BGP signalling

- Point-to-point only
  - No demand for LAN emulation.

- Not using QoS
  - Tie down paths, do not overprovision

Conclusions

- Installed five months ago, working well
- No comments on any differences in latency/jitter

Questions?