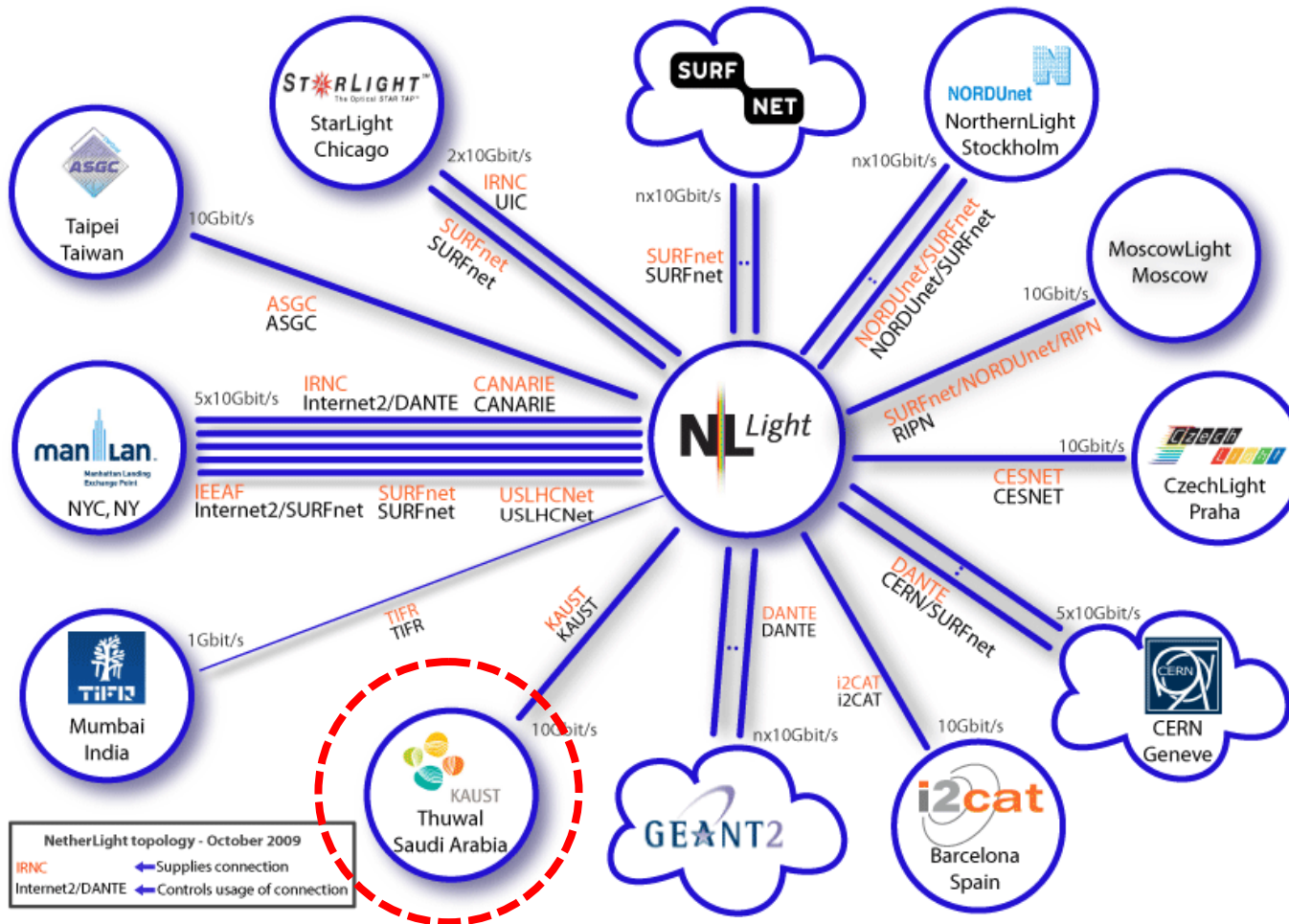


NetherLight update

Wouter Huisman

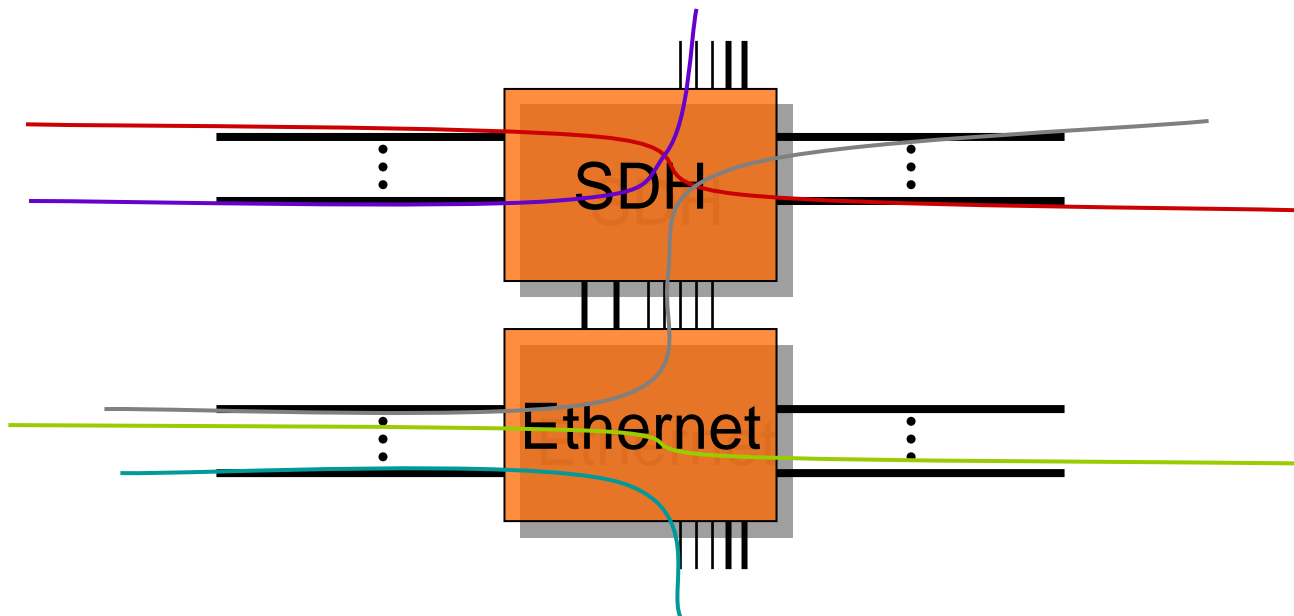
October 2009

NetherLight Connectivity



NetherLight Services

- Lightpath using SONET/SDH transport layer
- VLAN based connections using Ethernet layer 2
- Or combined service



— 1G
— 10G

PBB introduced Sept '09

802.1ah / PBB brings value to NetherLight

- Flexibility
 - VLAN retagging
 - Customer VLAN ID agnostic
- Secure
 - MAC address separation
- Scalable
 - 16M services
 - No VLAN ID stranding

Black Box issue



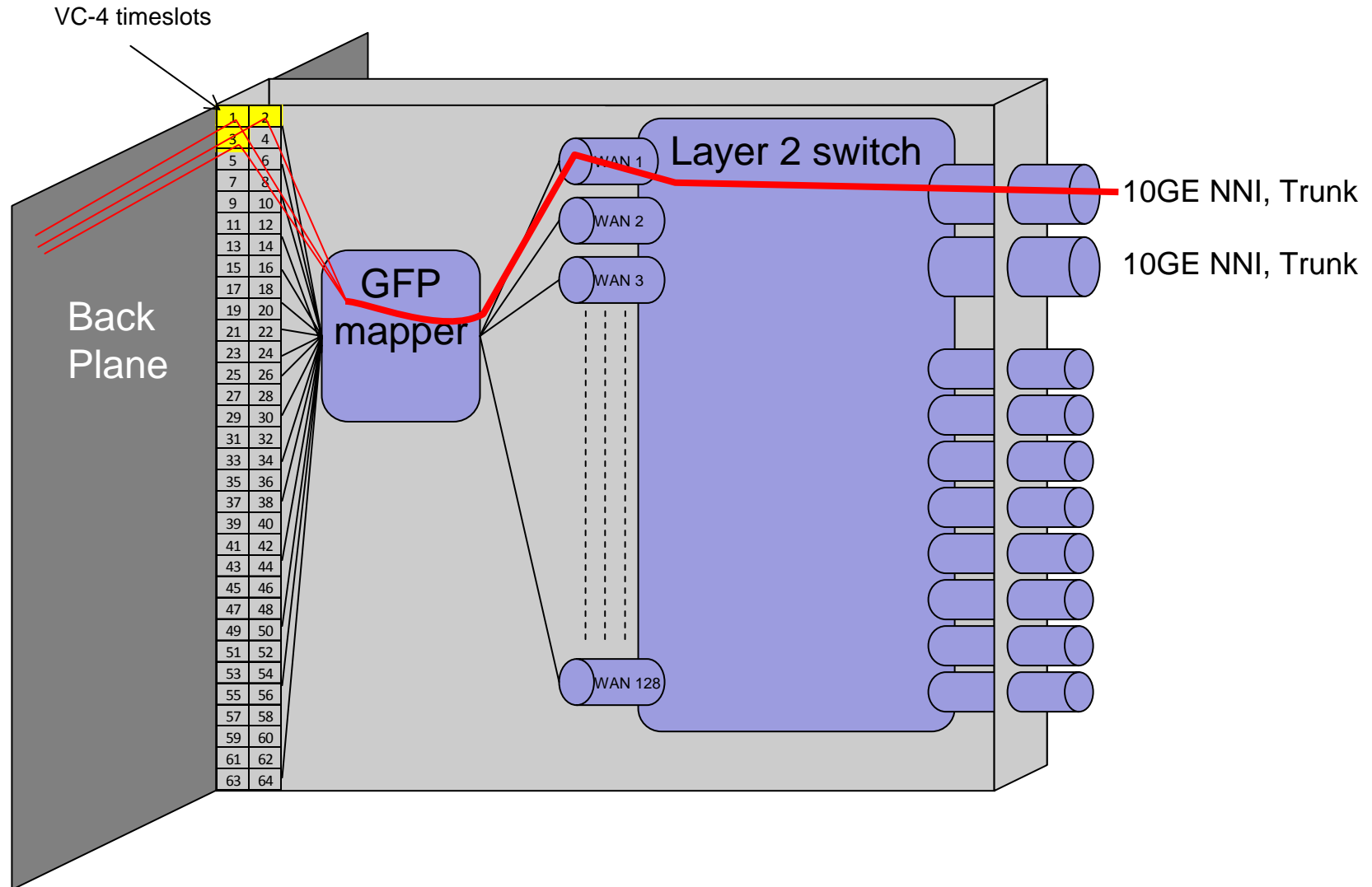
- NetherLight supports two data planes:
 - SDH Xconnects and Ethernet VLANs, which only interwork via patch cords.
- Any GE / 10G flow changing between dataplane needs a 1G / 10G interface back-to-back to connect.
- Internal port cost is high

20G L2SS card

- Supported in OME6500 from R5.2.1
- Faceplate interfaces supports of 2x 10GE LAN Phy and 8x 1GE ports
- Backplane supports max128 WAN ports using GFP mapping and VCAT
- Backplane access max 10G
- >1G circuits

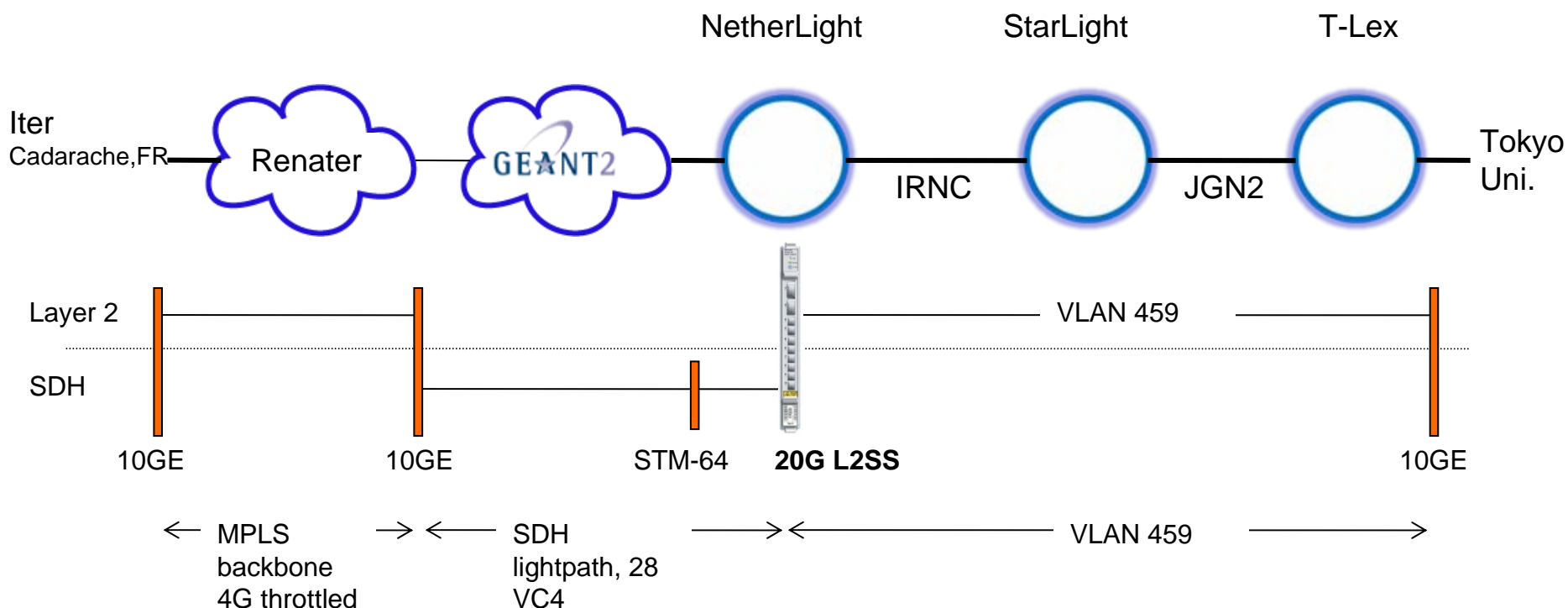


Logical Overview





Tokyo- Cadarache 4Gbs lightpath





Upcoming

- Migration of HDXc to Nortel OME6500 Double Decker
- Termination of IEEAF link 10G link sponsorship between Ams-NY per 1st of Jan 2010
- CERN Cross border fiber

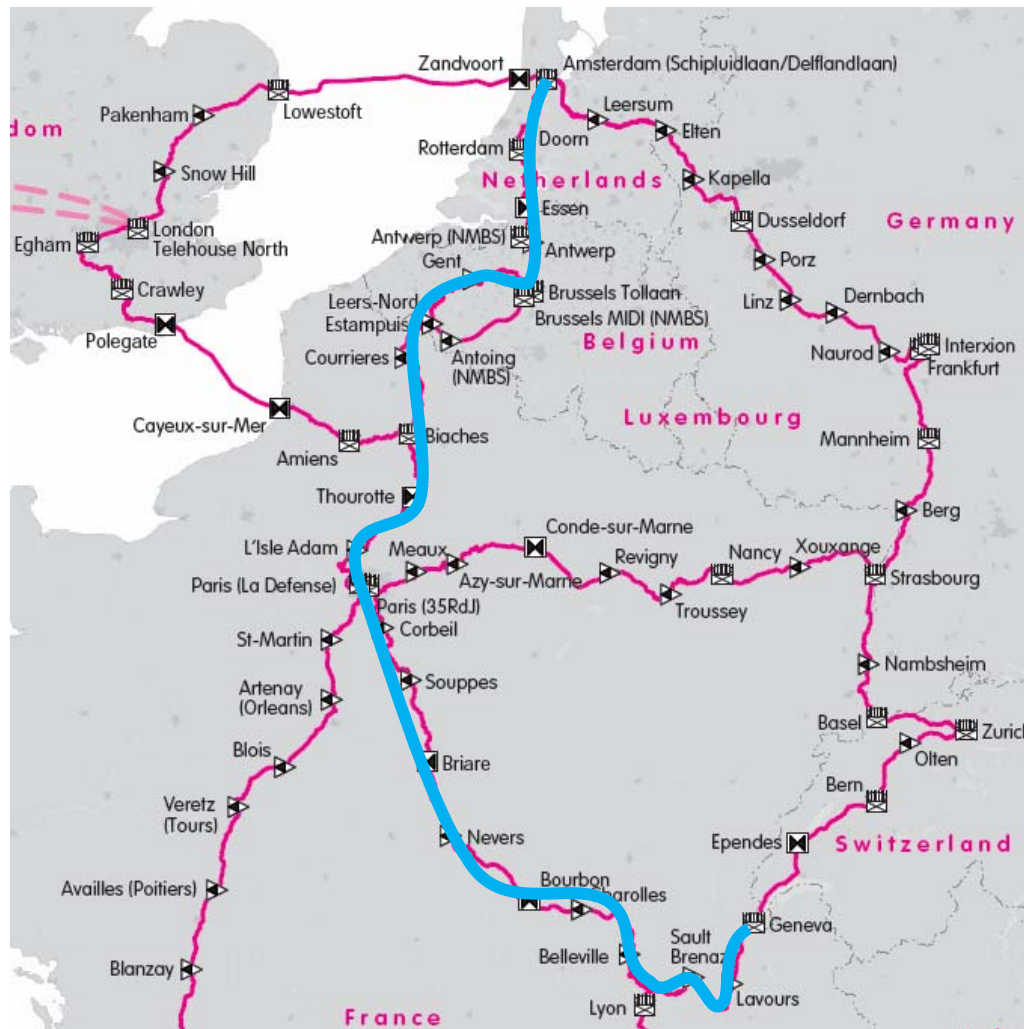
HDXc replacement

- 40G support and 100G in future
- Layer 2 service cards
- 10G EPL interface
- Scalable to 640G
- Better fit with DRAC





Cross Border fiber system to CERN



- 1600km DWDM system
- 40G and 100G ready
- Initial deployment 2x40G (8x10G) & 1x10G to Belnet
- Via Bruxelles (Belnet) and Paris