

# **NorthernLight**

## **GOLE Update**

**Lars Fischer**  
CTO, NORDUnet

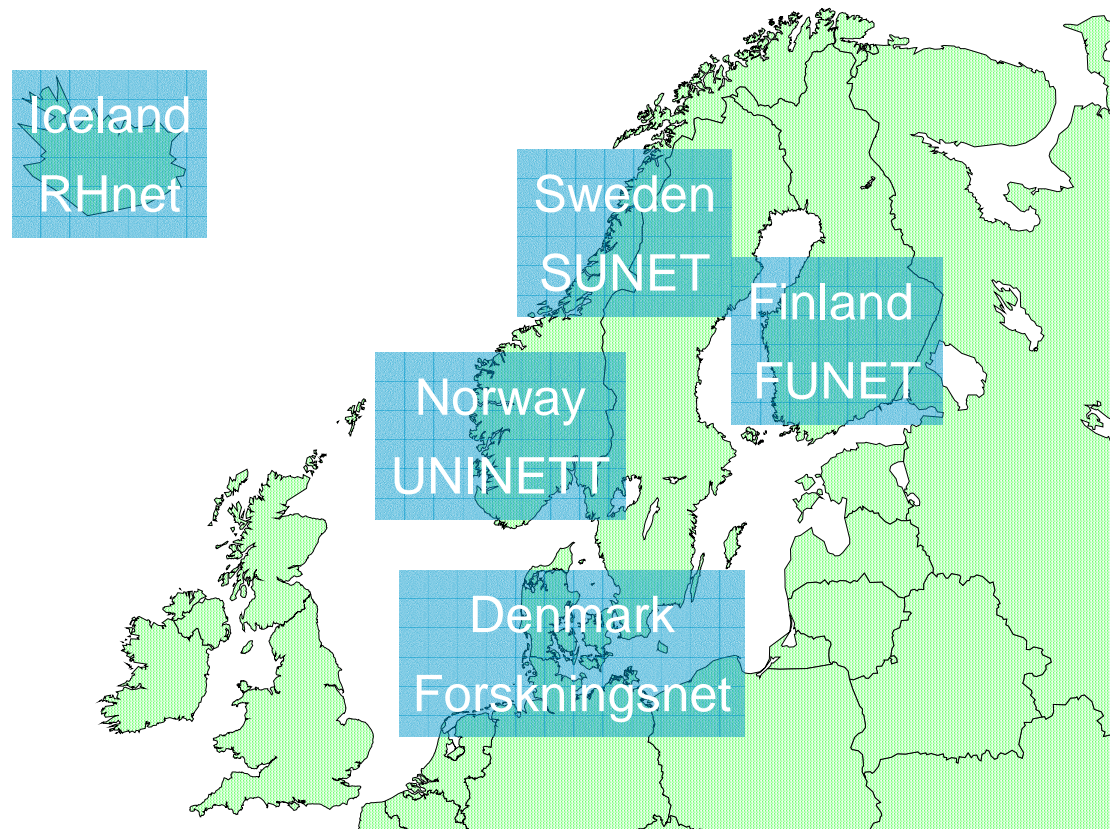
**February 2007 GLIF Tech, Minneapolis**



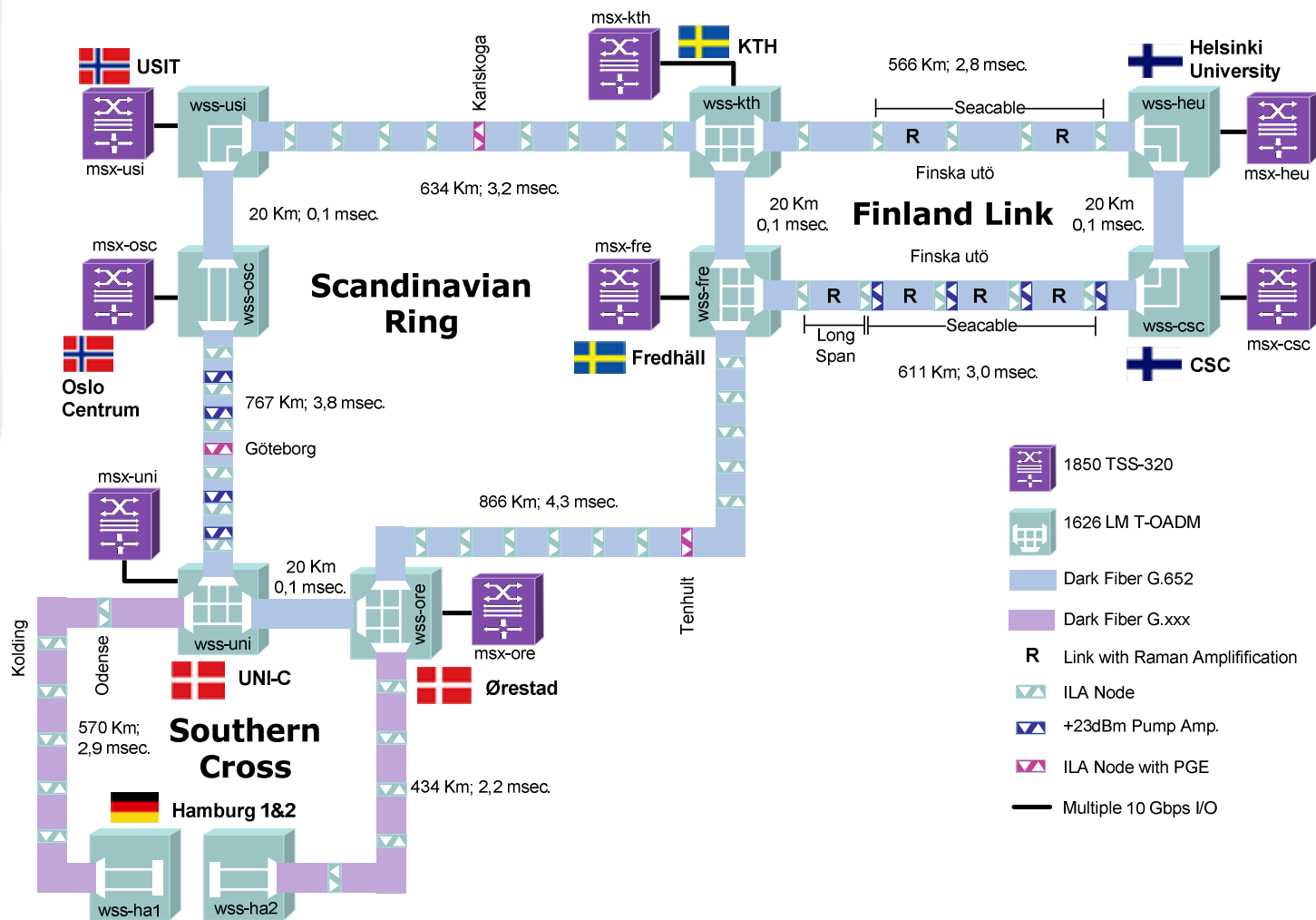
# The Frozen North



## NORDUnet collaboration



## NORDUnet dark fiber network



NorthernLight GOLE Update  
February 2007 GLIF Tech Meeting

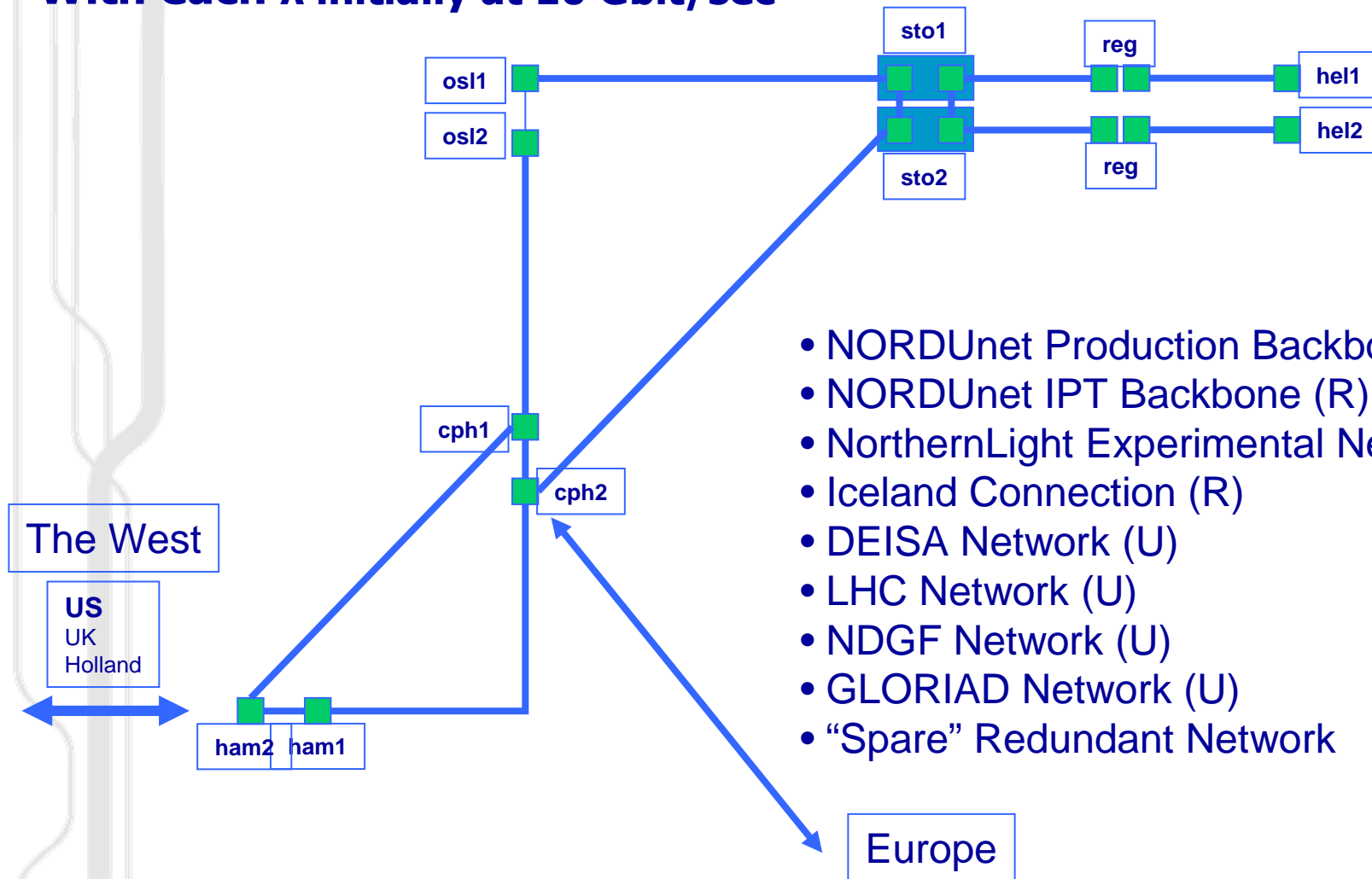


# NORDUnet

## The NORDUfibre Initial Infrastructure With each $\lambda$ initially at 10 Gbit/sec

The East

Russia  
China  
Japan  
Korea



- NORDUnet Production Backbone (R)
- NORDUnet IPT Backbone (R)
- NorthernLight Experimental Network (U)
- Iceland Connection (R)
- DEISA Network (U)
- LHC Network (U)
- NDGF Network (U)
- GLORIAD Network (U)
- "Spare" Redundant Network



## Alcatel DWDM

Up to 88 Channels

10 Gbps transponders

40 Gbps transponders

Fully Reconfigurable

OADM

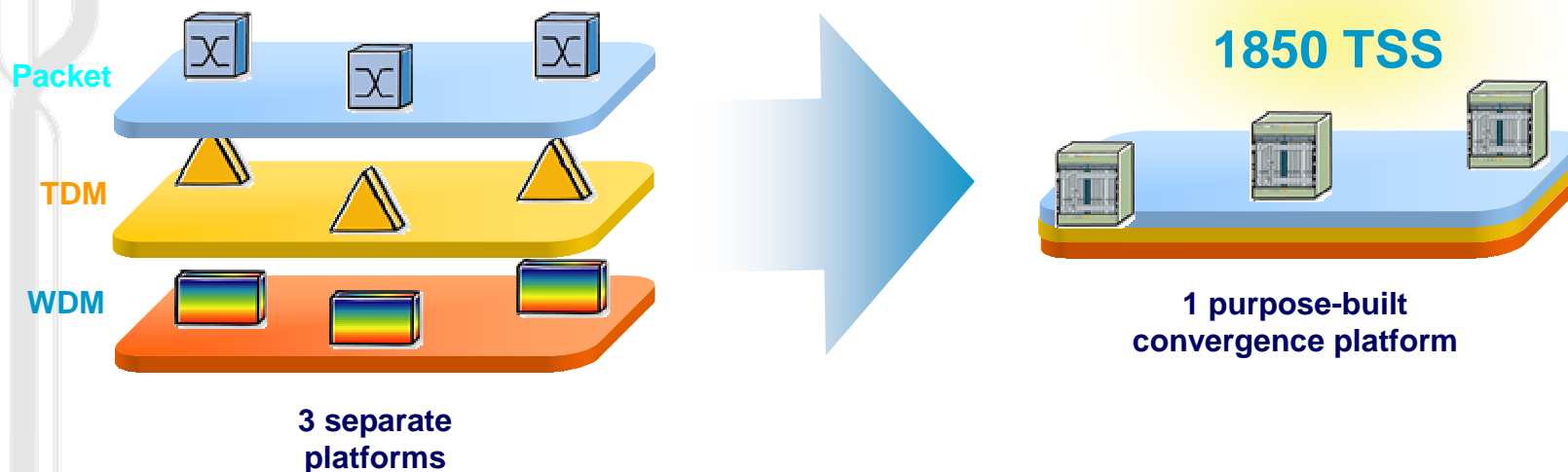
All interfaces are tunable  
over the complete C-band

Optical protection



## Alcatel TSS: SDH, Ethernet services

- SDH for interfacing to external and long-haul circuits
- 1 Gbps, 10 Gbps point-to-point and switched Ethernet



## Deployment status

- Nordic network being deployed
  - Copenhagen – Stockholm section live
  - Most sections live February or March
  - All sections – including Hamburg – live in Q2
- Sweden network being deployed
  - Migration from GigaSunet to OptoSunet ongoing
  - Migration completed in Q2
- Other countries in planning





## GOLE Status

- Current: cross connect in Stockholm
- Next Generation
  - Distributed SDH / Ethernet cross switching facility
  - Connections in Helsinki, Copenhagen, Oslo, Stockholm
  - Live by late Q2 / early Q3
- Plans for connections to Russia, Baltic Sea states in progress



## GLIF Status

- We're woefully out of date with GLIF information
- We will update as our new network comes live

