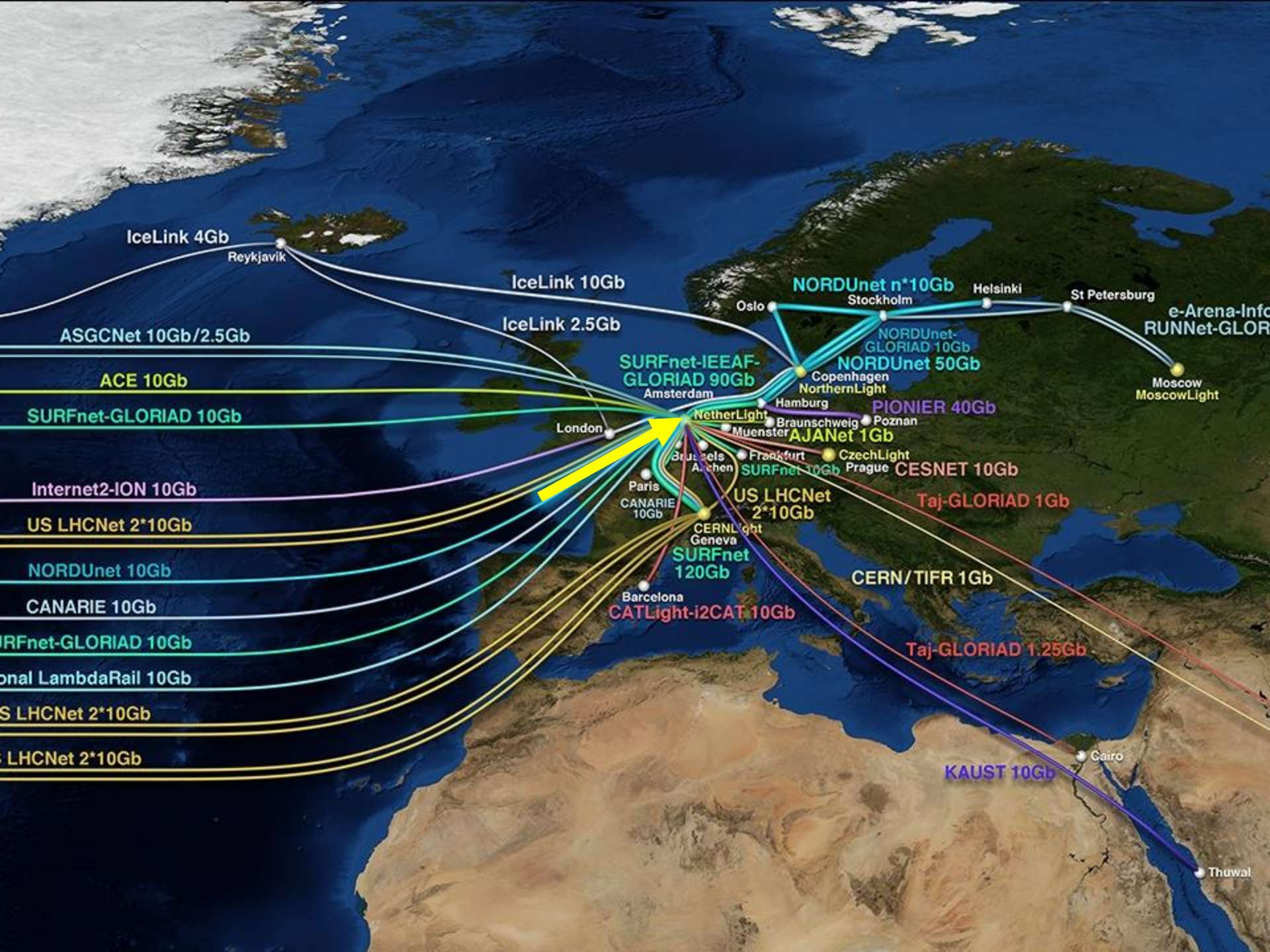# **NetherLight GOLE Update**
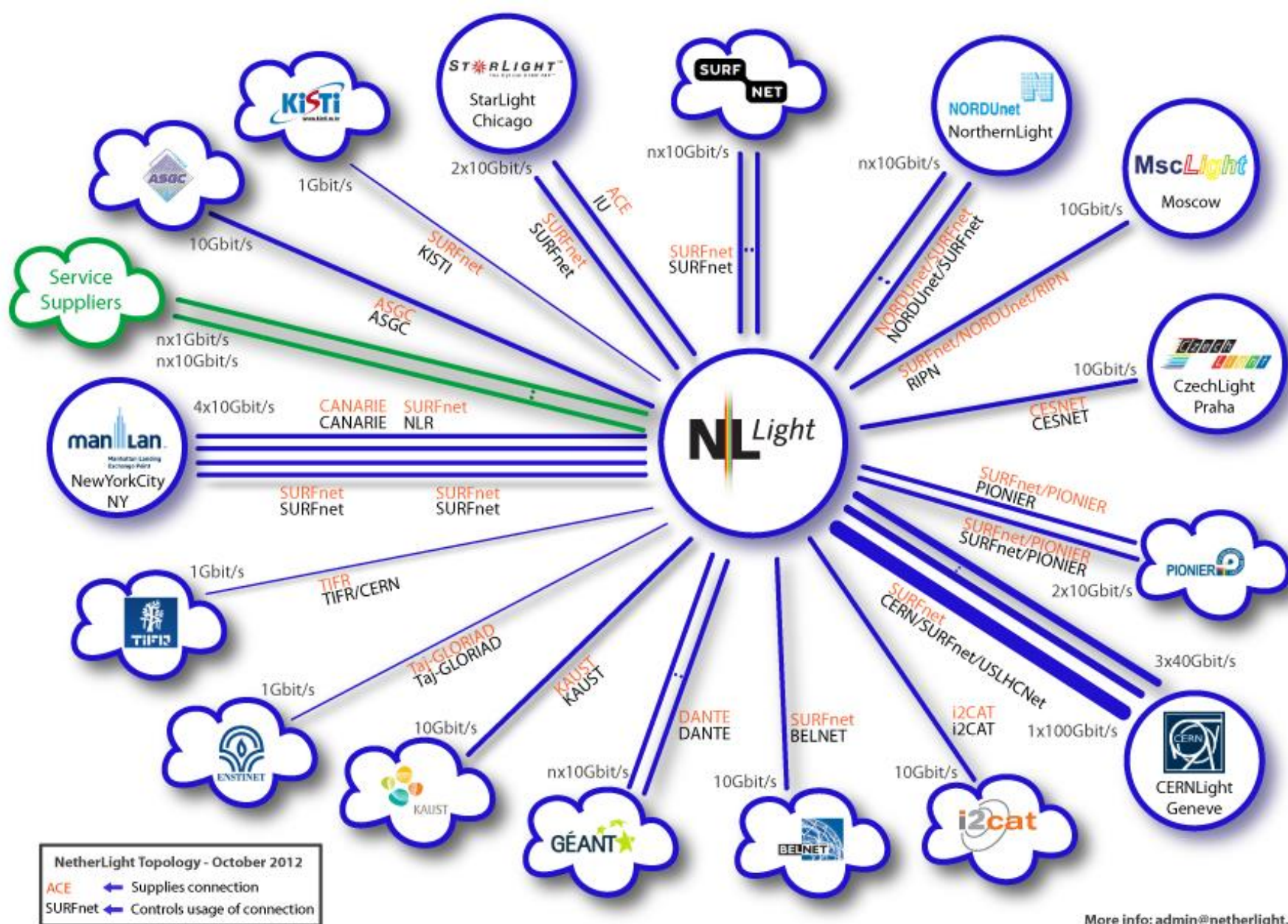
Gerben van Malenstein

GLIF Winter 2013, Honolulu, Hawaii, USA – January 17, 2013

NetherLight Topology - October 2012
ACE ← Supplies connection
SURFnet ← Controls usage of connection

More info: admin@netherlight.net

- **Dark Fiber Maastricht (Netherlands) – Hasselt (Belgium) in service since April 2012**
- **10GE Amsterdam – London in service since August 2012**
- **Second STM-4 to Egypt live since beginning of January!**
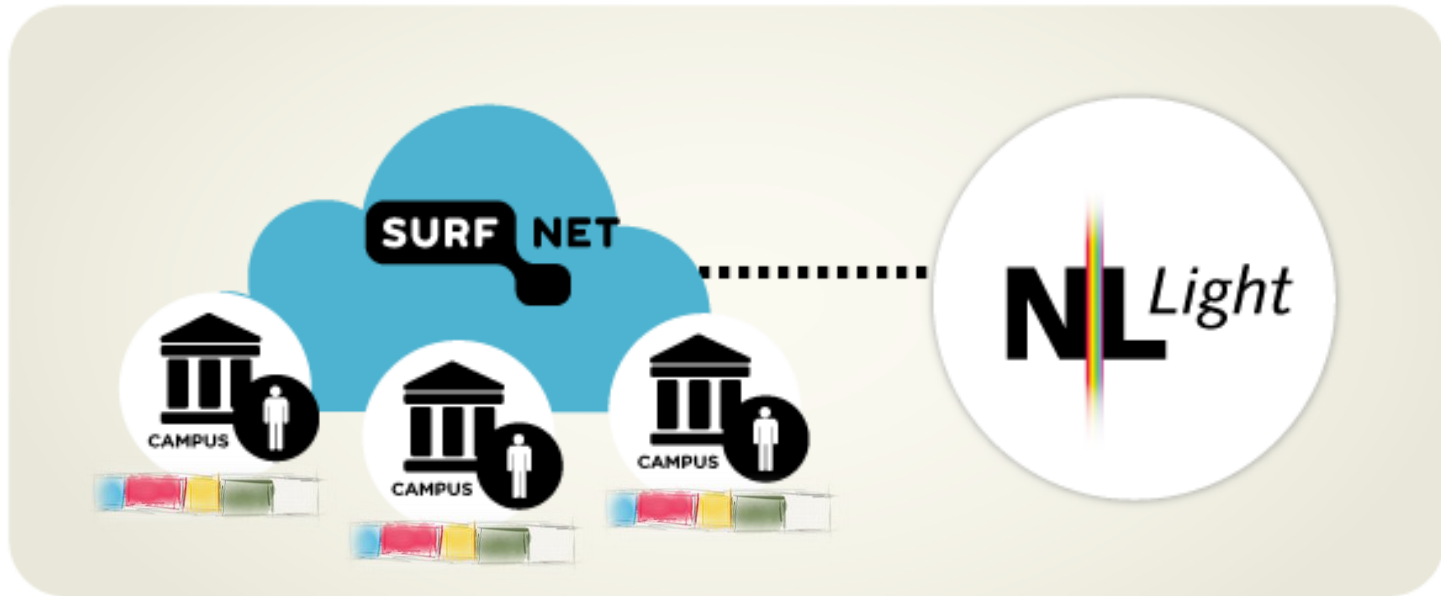
SURFnet7

- **PBB-TE by Ciena**

- **Multi Service Port**
    - Delivering all types of network services
        - via **one physical interface**
        - 10, 40 or 100GE
        - CIR and EIR

| IP | OnDemand LP | LP | LP | Available |

Connection Model

New BoD (NSI) physical interconnects: SURFnet – GÉANT

- **10GE link in Amsterdam**
  - NetherLight Automated GOLE and GÉANT
  - For testing purposes only

- **February via GNplus: all GÉANT sites in Europe**

- **Federated PoP switch in Hamburg**
  - Data plane: NORDUnet, PSNC and SURFnet connected with 10GE over Cross Border Fibers
  - Control plane: AutoBAHN (via PSNC)
  - December deliverable of NEXPReS used this infra

OpenFlow at SURFnet

- **Why**
  - SURFnet as an umbrella for bringing people together, real-world experimenting & sharing ideas and knowledge
- **Analysis**
  - Ronald in SDN TF talk
- **First steps**
  - Scouting institutions that are interested
  - OpenFlow workshop in the Netherlands by Internet2
  - Mailing list
  - Providing OpenFlow slices to our users this year

SURF NET

User NSI requests

- Asynchronous behavior of NSI protocol is a problem when user is behind firewall or NAT

- Do not want or need a separate API to be standardized to accommodate the user

- User can do asynchronous NSI if possible or query for the status if needed

- Only need minimal change to NSI to make this work: synchronous query summary

- Proof of concept implemented as a command line tool will be implemented by SURFnet this year
(if synchronous query summary is included in NSI CS 2.0)

SURF NET

2013

- New tender of trans-Atlantic circuits

- Interdomain SDN slices available
  - Manually provisioned, automated later

- Connecting more & different service suppliers

- LHCONE Dynamic P2P connectivity pilot

- NSI 2.0, topology service, BoD AAI, …

SURF NET

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