

WELCOME TO GLIF

Technical Working Group

Summer 2015 meeting



Prague, Czech Republic
29-30 September 2015

You Are Here

- Hosted by CESNET
 - 15th Annual Global LambdaGrid Workshop
 - Thanks to CESNET for hosting us
 - Thanks to all of you for participating
- Meeting schedule (past ~10 years):
 - End of summer (annual LambdaGrid workshop)
 - Winters (TECH only)
- GLIF TECH is about
 - Community reflection, discussion, alignment
 - Taskforces – and the GLIF Tech meeting serves as the F2F gathering of task forces
 - Discussion of new ideas
 - Participation



- Your co-chairs:
 - Lars Fischer (NORDUnet)
 - Eric Boyd (Internet2)
- Secretarial support:
 - GLIF Secretariat by GÉANT Association
 - GLIF Tech secretary: Kevin Meynell
- Mailing list:
 - < tech at glif . is >
 - + task force lists



GLIF Tech taskforces

- Dynamic GOLE Services
 - Gerben van Malenstein
- NSI Implementation
 - John MacAuley
- GOLE Operations
 - Dale Finkelson, Gerben van Malenstein
- Performance Verification Architectures
 - Steve Wolf, Jerry Sobieski
- Inter-Domain SDN
 - Eric Boyd, Steven Wolf
- www.glif.is/working-groups/tech/



GLIF Resources

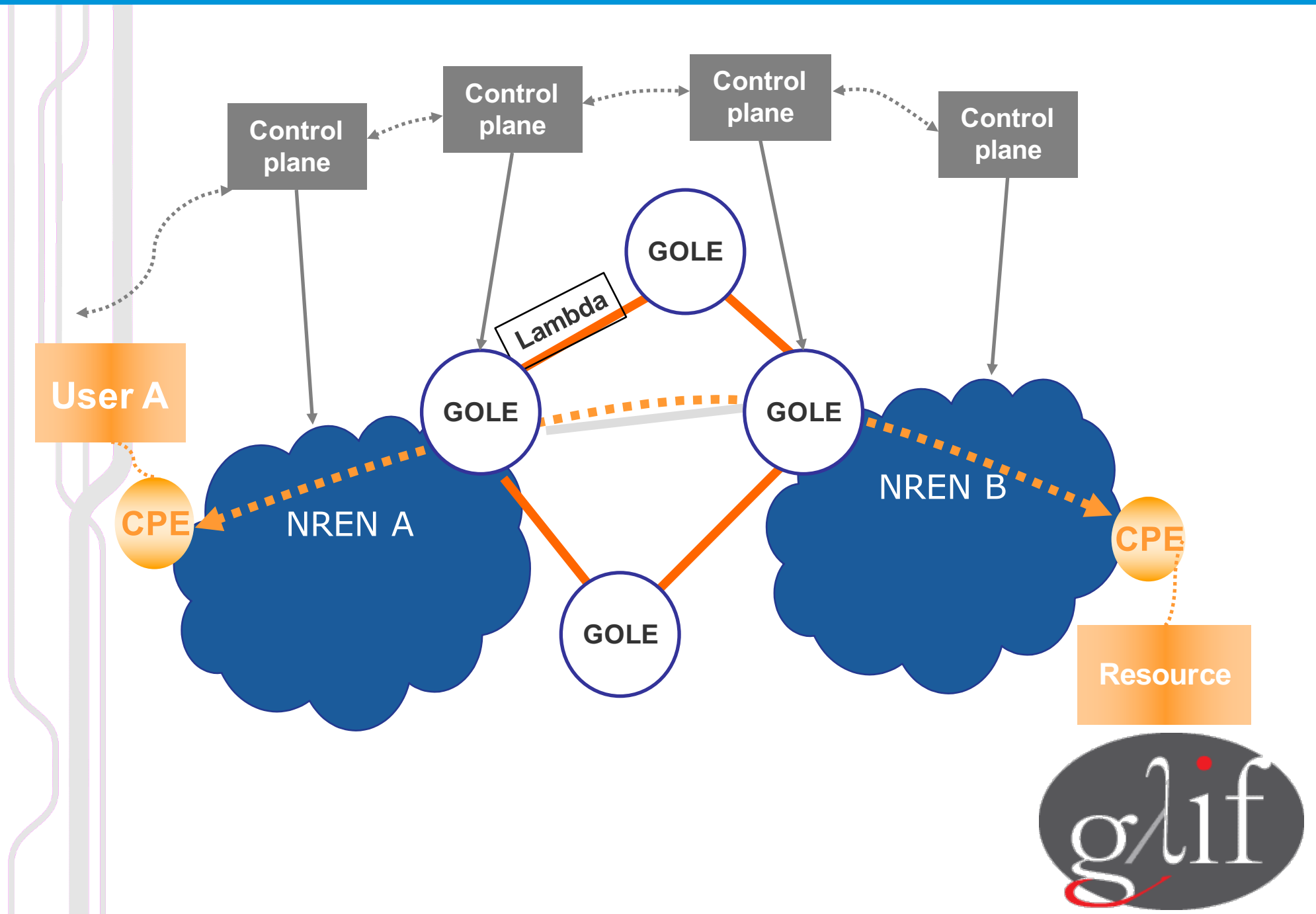
GLIF Infrastructures

- **Lambdas shared by GLIF participants**
- **GOLEs (GLIF Open Lightpath Exchanges)**
- **And of course: Hybrid, lightpath capable networks run by the GLIF Participants**

AMPATH - Miami
CERNLight - Geneva
CzechLight – Prague
GÉANT Open - London
HKOEP - Hong Kong
KRLight - Daejoen
MAN LAN - New York
MoscowLight - Moscow
NetherLight - Amsterdam
NGIX-East - Washington D.C.
NorthernLight - Copenhagen
Pacific Wave - Los Angeles
Pacific Wave - Seattle
Pacific Wave – Sunnyvale
SingLight - Singapore
SouthernLight - São Paulo
StarLight - Chicago
T-LEX - Tokyo
TaiwanLight - Taipei



GOLE-centric networking

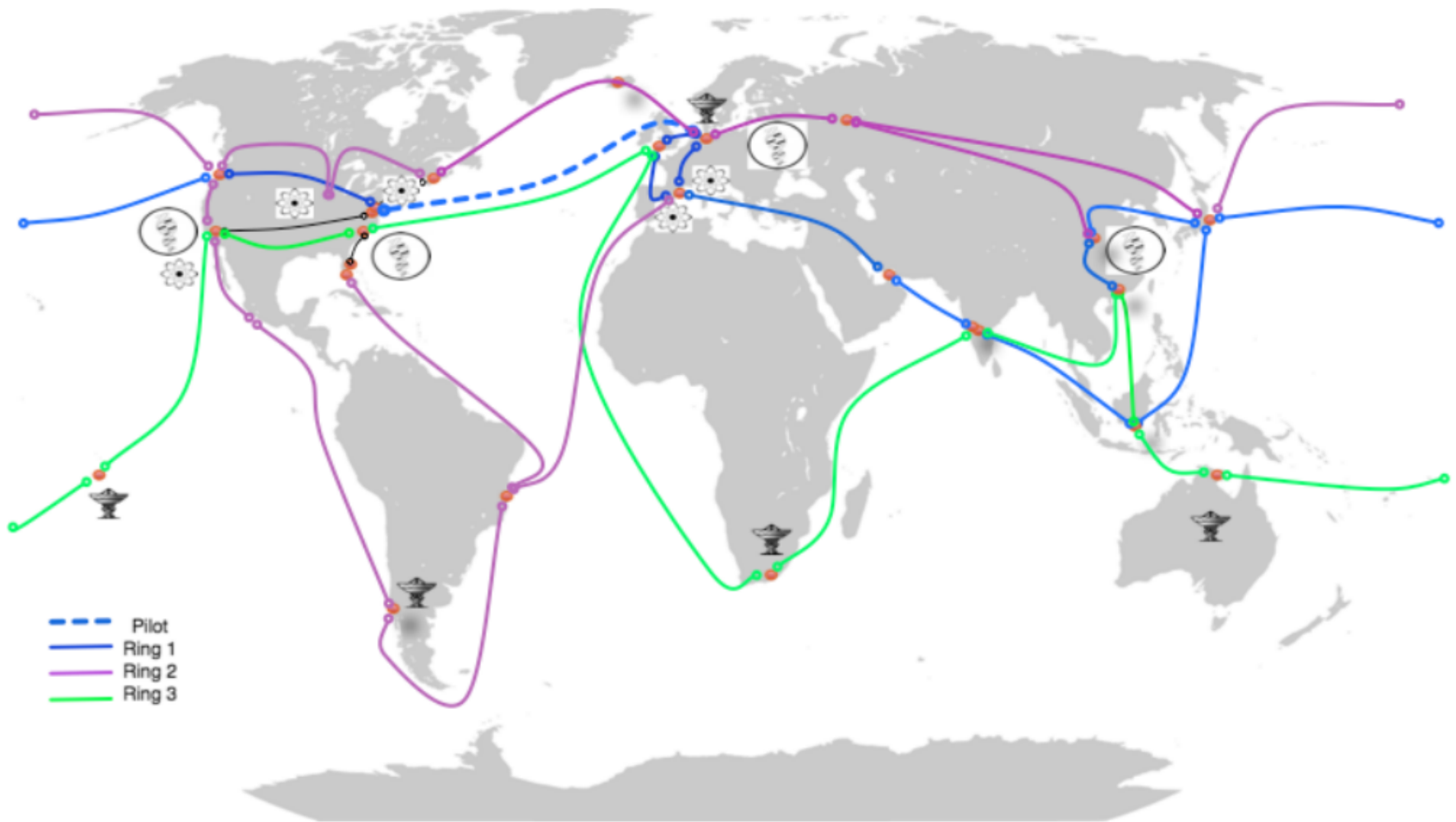


NSI Framework

- OGF NSI working group
- AutoGOLE TF
- NSI Imp TF



Global Network Architecture



We have work to do!

- Consider
 - Transport ✓
 - Cross-connect ✓
 - Topology Exchange (✓)
 - Performance Verification for end-to-end
 - Service Level management
 - Link Policy management
 - Identity Management
 - Virtualization
 - GOLE service architecture
 - Security

Plenty of fun still to be had



Agenda Day 1

Time	Subject
13:30 – 13:45	Welcome, admin – <i>Lars Fischer & Eric Boyd</i>
13.45 – 15:00	GOLE Updates
15:00 – 15:30	Coffee
15:30 – 16:00	AutoGOLE Task Force - <i>Gerben van Malenstein, SURFnet</i>
16:00 – 16:45	NSI Implementation Task Force - <i>Chin Guok, ESnet</i>
16:45– 17:10	Performance Verification Task Force - <i>Jerry Sobieski</i>
17:10 – 17:30	GÉANT Testbed Service – Jerry Sobieski



Agenda Day 2

Time	Subject
9:00 – 9:45	GOLE Operator Requirements - <i>Dale Finkelson, Internet2</i>
9:45 – 10:30	Software Defined Exchanges - <i>Eric Boyd, Internet2</i>
10.30 – 11:00	Coffee
11:00 – 11:45	Global Network Architecture - <i>Erik-Jan Bos, NORDUnet</i>
11:45 – 12:15	RINA: Recursive InterNetwork Architecture - <i>Leonardo Bergesio, i2CAT</i>
12:15 – 12:30	Wrap-up, next steps – Eric Boyd, Lars Fischer
12:30 – 13:30	Lunch



A Little History

- 2005 Winter GLIF TECH, Salt Lake City
 - GLIF Current Best Practices
 - SC04, iGrid2005
 - Schedulable GLIF Resources
 - Definition of Open Optical Exchanges
- 2008 Winter GLIF TECH, Honolulu
 - Creation of Taskforces
 - Much talk of dynamic provisioning (w/ control plane working group)
- 2009 Winter GLIF TECH
 - Taskforce Sessions: GNI API, Global Identifier, PerforSONAR, Dynamic GLIF Services Taskforce



Achievements

- Open Exchanges
 - Definition of GOLEs
 - GOLE-based circuit routing
 - Open exchanges today core in most R&E networking
- Circuit Networking
 - Offering “the other kind” of network services
- Automated Circuit provisioning
 - AutoGOLE
 - Support for consensus process through demos
 - Implementation of NSI



GLIF TECH format

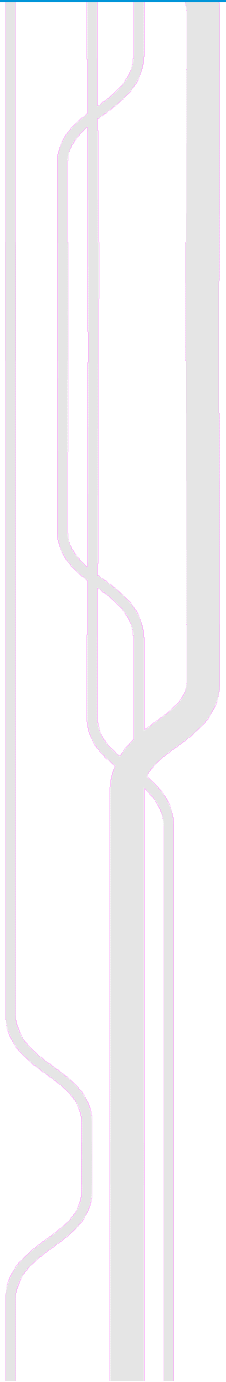
- Changes
 - (Some of) what we do has become fundamental
 - New groups, new initiatives, new pressure (i.e., ANA-200, GNA, OLEs for service integration)
- GLIF TECH format
 - We've used the same format for close to 10 years
 - We seem to have trouble leveraging new initiatives
 - Risk of double work
 - Many have trouble attending both GLIF and new initiatives
 - Slow-down of taskforces



Proposal: Year of Experimentation

- Proposal form TECH chairs
 - Experiment with form, frequency for TECH meetings – change focus
- Ideas
 - Co-locate with major events
 - Topical or single-topic meetings (i.e., GOLE Taxonomy & Operations, GOLE as Focal Point for Services, GNA, AutoGOLE, NSI Deployment, etc)
 - Frequent, short meetings – i.e., 4-hour GOLE Operations meeting at 3-4 major meetings annually.
 - Pick the best venue / event for taskforce
 - GLIF as the facilitator and coordinator
 - No “Winter TECH” in 2016





Thank You

Lars Fischer

lars@nordu.net

<http://www.glif.is>