

ESnet update with proposed European Extension

Inder Monga

Chief Technologist & Area Lead

GLIF Americas

2013



Agenda



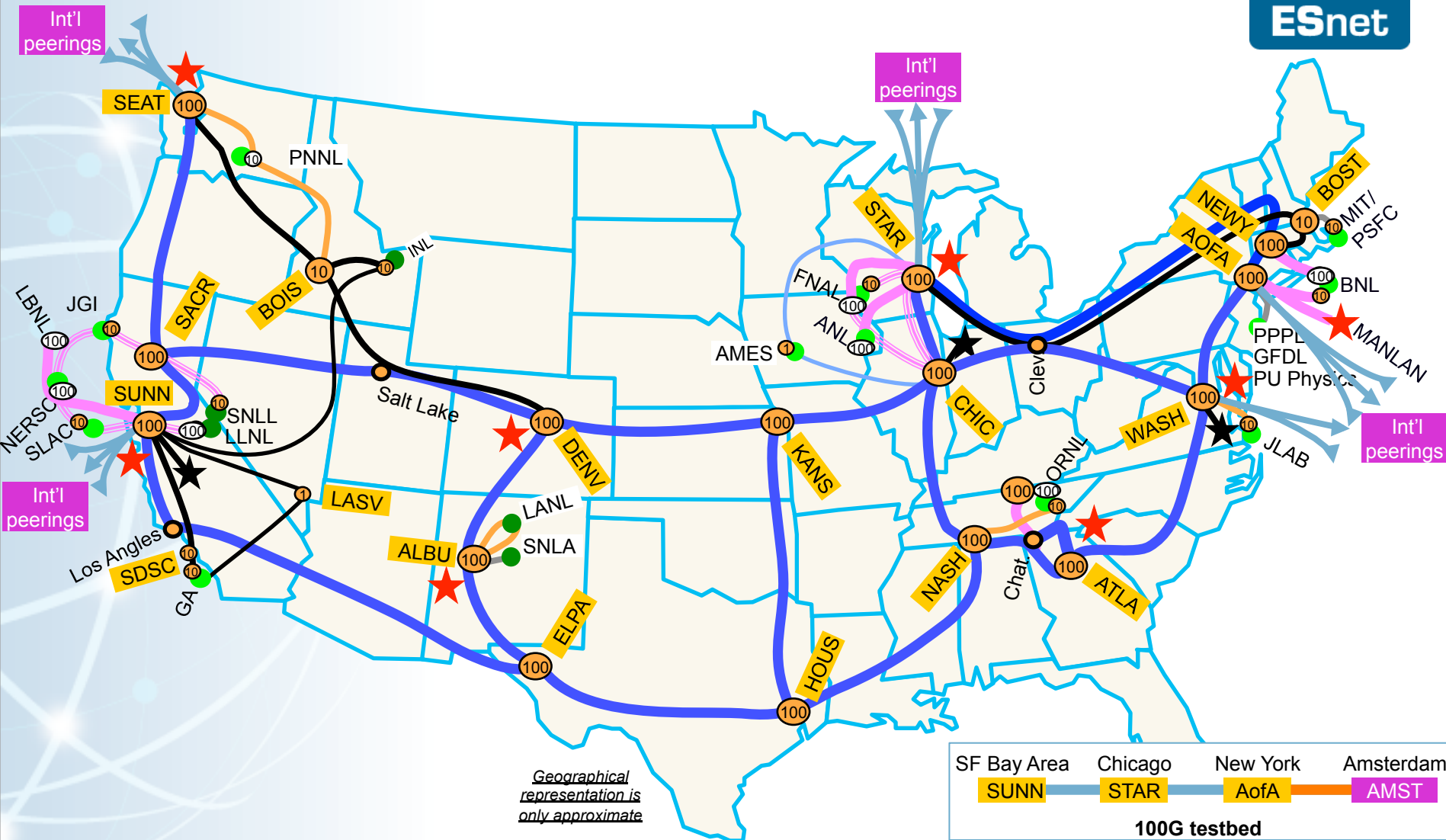
ESnet News

TransAtlantic update

Dedicated circuits built with OSCARS software

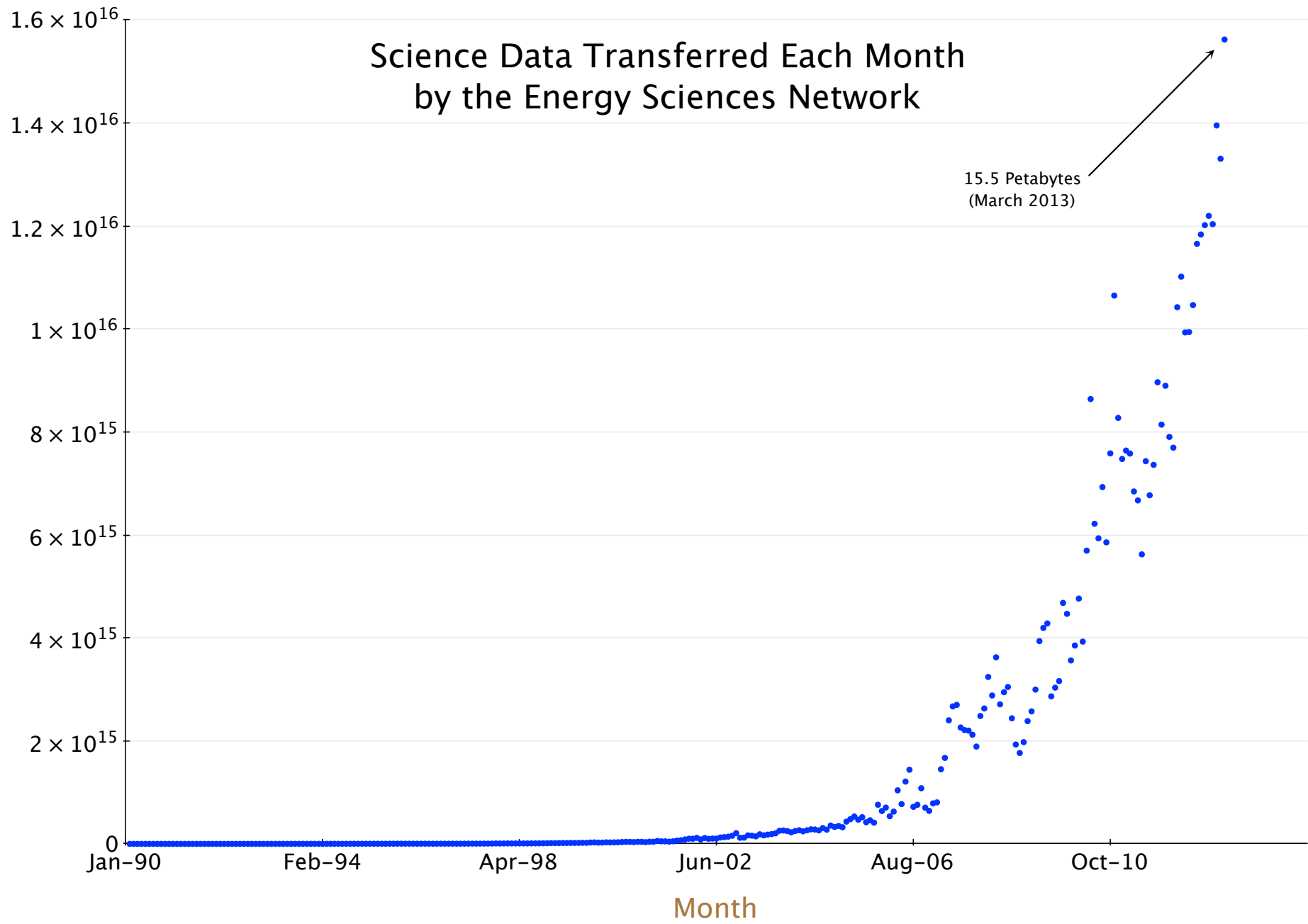


ESnet's 100G Science Network



Science Data Transferred Each Month by the Energy Sciences Network

Bytes Transferred

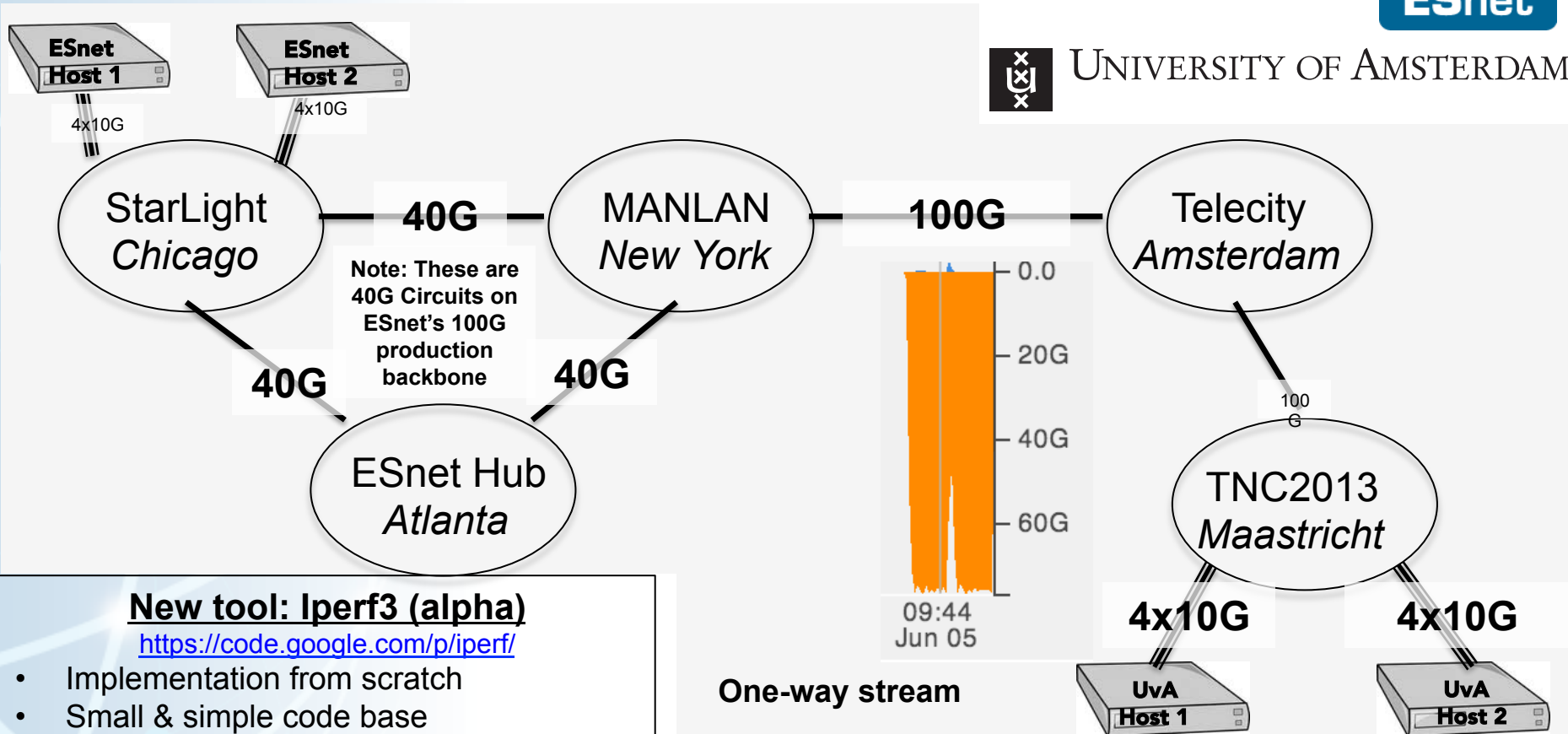


Month

ESnet/UVA 80Gbps Transatlantic Demo



UNIVERSITY OF AMSTERDAM



New tool: Iperf3 (alpha)

<https://code.google.com/p/iperf/>

- Implementation from scratch
- Small & simple code base
- New features
 - Reports retransmissions
 - Reports CPU utilization
 - JSON output format

Contributors

ESnet: Brian Tierney, Inder Monga, Chin Guok

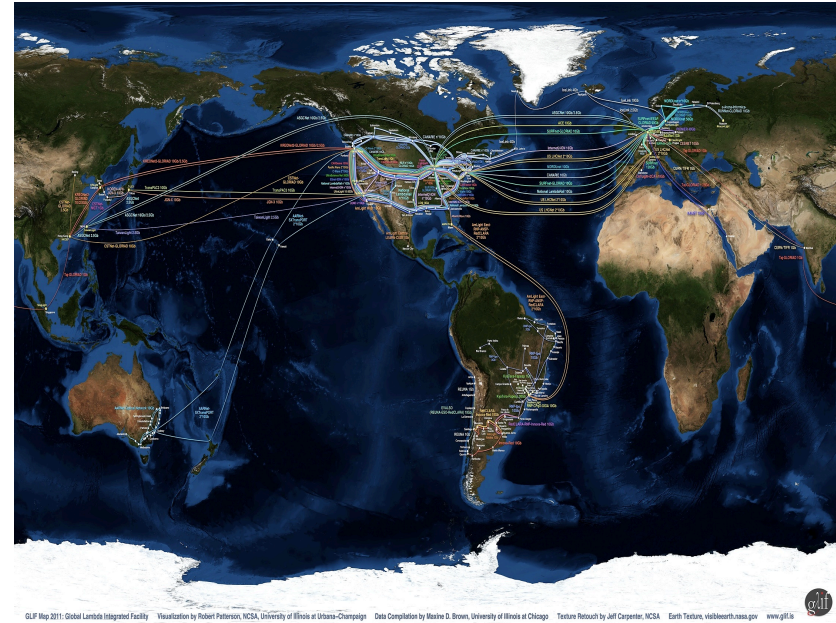
UvA: Ralph Koning, Cees DeLaat

Proposed ESnet European Extension



Motivation for Extension:

- Provide dedicated network capacity for all DOE science that does not depend on donated capacity or continued funding from other agencies or networks.
- Obviate need to build multiple program-specific Transatlantic networks.
- Support all DOE mission traffic to/from Europe.

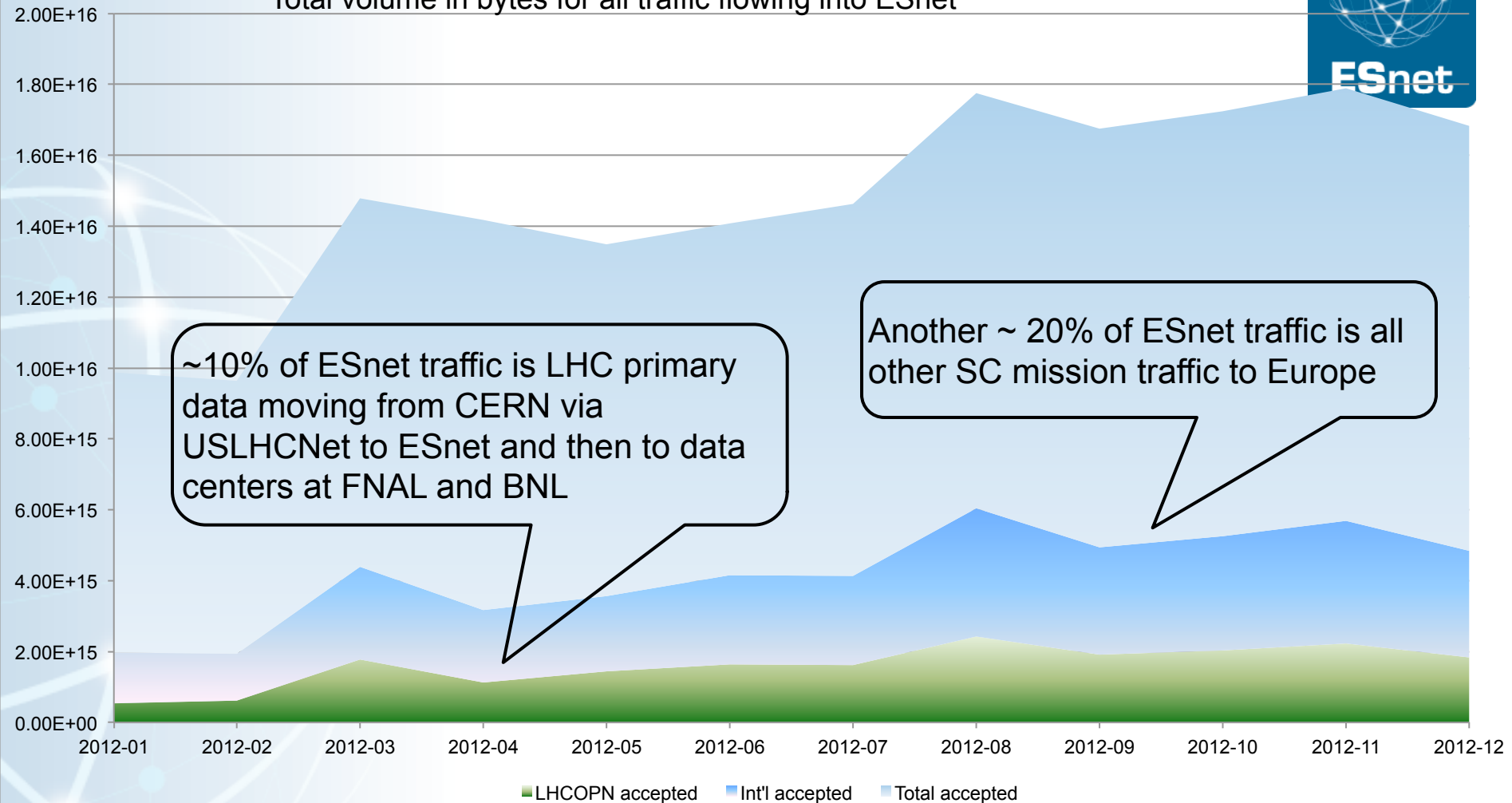


GLIF Map 2011: Global Lambda Integrated Facility Visualization by Robert Peterson, NCSA, University of Illinois at Urbana-Champaign Data Compilation by Maehre D. Brown, University of Illinois at Chicago Texture Research by Jeff Carpenter, NCSA Earth Texture, VisibleEarth.nasa.gov www.glii.org

Projection based on the historical growth of traffic



Total volume in bytes for all traffic flowing into ESnet



Projection based on the historical growth of traffic yields a estimate of about 250 Gb/s of European traffic within 5 years



Status

July 10th - EEX RFP Issued

August 22nd – DOE Review

August 28th – RFP responses received

RFP response evaluation in progress

- Many checks and balances before we procure

Current proposed timeline - sometime between March – July 2014

- Depends on many risk factors and funding approvals



Questions?

imonga at es dot net

<http://my.es.net>