

100 Gbps High-End Computer Networking for Petascale Science

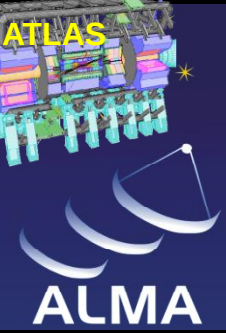
**Joe Mambretti, Jim Chen, Fei Yeh, Bill Fink, Paul Lang, Abdella Battou,
Rod Wilson, Mark Lyonnais, Lorin Dorco**

**Consortium for 100 G Services and Technologies for
Petascale Science**

Global LambdaGrid Workshop 2012

**Co-Located with IEEE eScience, Microsoft eScience, Open Grid Forum
Chicago, Illinois
Oct 11 – 12, 2012**





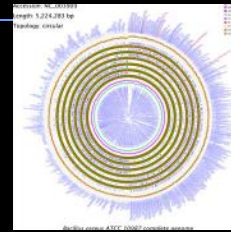
ALMA: Atacama Large Millimeter Array



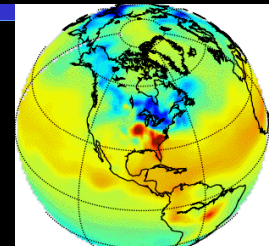
ANDRILL: Antarctic Geological Drilling
www.andrill.org



BIRN: Biomedical Informatics Research Network
www.nbirn.net



CAMERA metagenomics
camera.calit2.net



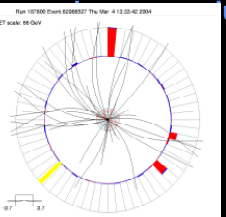
Carbon Tracker
www.esrl.noaa.gov/gmd/ccgg/carbontrack



CineGrid
www.cinegrid.org



LHCONE
www.lhcone.net



DØ (DZero)
www.d0.fnal.gov



GEON: Geosciences Network
www.geongrid.org



GLEON: Global Lake Ecological Observatory Network



OOI-CI
ci.oceanobservatories.org



ISS: International Space Station
www.nasa.gov/station



Comprehensive Large-Array Stewardship System
www.class.noaa.gov



IVOA: International Virtual Observatory
www.ivoa.net



LIGO
www.ligo.org



WLCG
lcg.web.cern.ch/LCG/public/



Pacific Rim Applications and Grid Middleware Assembly
www.pragma-grid.net



TeraGrid
www.teragrid.org



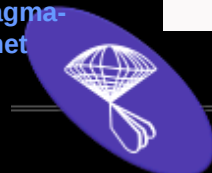
OSG
www.opensciencegrid.org



Globus Alliance
www.globus.org



SKA
www.skatelescope.org



Sloan Digital Sky Survey
www.sdss.org



XSEDE
www.xsede.org



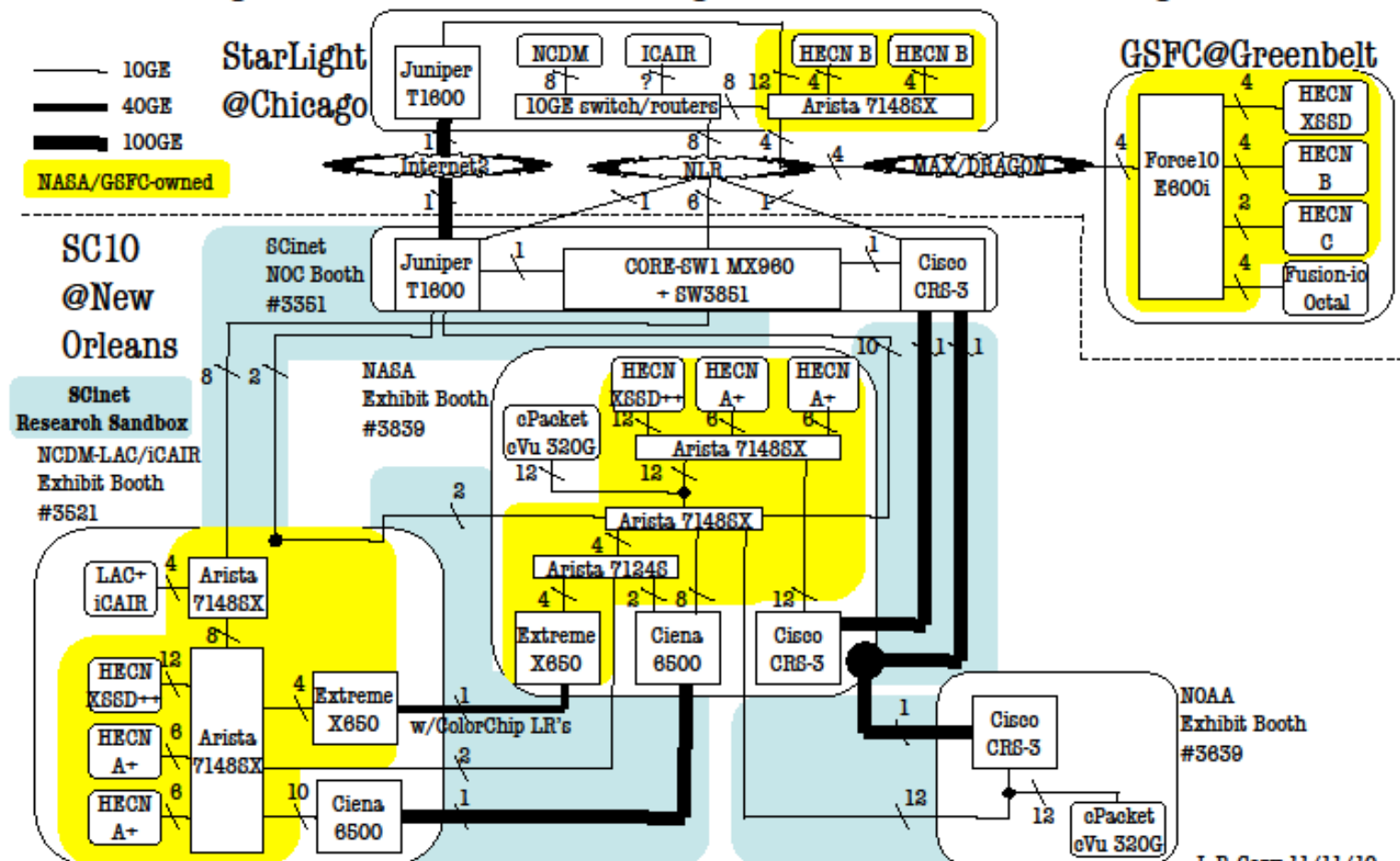
StarLight Supports All Major Data Intensive Science Projects

Compilation By Maxine Brown **STARLIGHT**SM

Using 100G Network Technology in Support of Petascale Science

A Collaborative Initiative Among NASA, NLR, NOAA, Northwestern/iCAIR, SCinet & UIC/LAC

Also Using Internet2's Multi-Vendor 100GigE Infrastructure Between StarLight and SC10



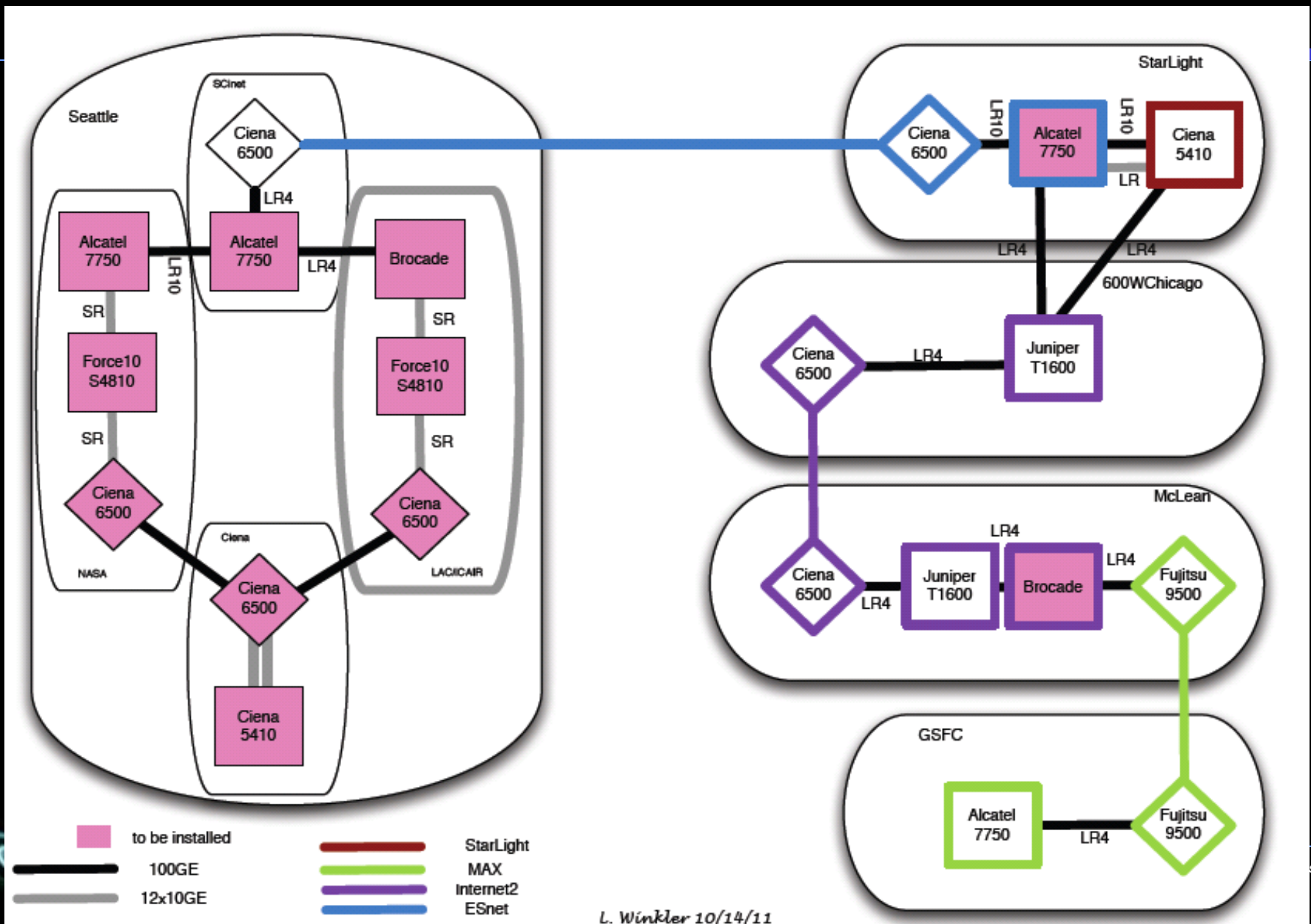
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J. P. Gary

J. P. Gary 11/11/10

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SCInet Research Sandbox Evaluations/Demonstrations of 40-100 Gbps IPv4/IPv6 Disk-to-Disk File Transfer Across WANs and LANs at SC11



Evaluations/Demonstrations of 100 Gbps Disk-to-Disk File Transfer Performance using OpenFlow Across LANs & WANs

An SC12 Collaborative Initiative Among NASA and Several Partners

SC12@Salt Lake City

