Leveraging the NLR: Creation of the Florida LambdaRail

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Network Drivers & Motivations
In Florida

- Improve networking costs…”disruptive pricing!”
- Control of our networking destiny
- Flexibility in responding to future needs
- Responsiveness to the needs of higher ed
- Innovation & support for corp. research partners
- End-to-End networking
- Eliminate “place” as an issue for collaboration

(…same as for the NLR)
Prior Efforts At Building a High Speed Network for R&E

Florida institutions have a long history of collaboration and cooperation

Legislature has provided many incentives for institutions to work together—a few examples:

- Common course numbering system
- University gen ed requirements met by CC AA degree
- Florida Information Resources Network—FIRN
- SASS: common system for reporting academic progress
- Florida Academic and Career Tracking for Students—FACTS advising system
Prior Efforts At Building a High Speed Network for R&E

Enduring interest in building a statewide high-speed Research and Education network

FL institutions had made two prior attempts...
Prior Efforts At Building a High Speed Network for R&E

Circa 1997
- Attempt to expand FIRN’s mission to provide high-speed connectivity to universities for research and economic development
- DOA because of failure to obtain state funding

Circa 1999
- Original Internet2: NSF connection grants assisted development of a Florida gigaPOP at UF
- Died when Abilene fundamentally altered the value proposition for regional gigaPOPs
The NLR articulated a new value proposition for national and regional networking: owned fiber assets

Disruptive pricing: leverage the industry shakeout

Redefine capacity and connectivity options: 10Gb wavelengths ("waves")

Eliminate the issue of "place" for connectivity and collaboration
November 5, 2003

New Opportunity: the National Lambda Rail

Consequently, when we learned of the NLR initiative...

6 FL universities were able to make a moral commitment in just 3 working days!

A tribute to the leadership, vision, and commitment of the university executive leaders
NLR footprint and physical layer topology

Note: California (SAN-LAX-SVL) routes shown are part of CalREN; NLR is adding waves to CalREN systems. Also the CENIC SVL-Sacramento (SAC) ELH route will become part of NLR SVL-SEA in exchange for a SVL-SAC LH route NLR is building (not shown here).
FLR: The NLR Build Out In Florida

- FLR is a LLC with plans to seek 501(c)(3) status.
- FLR equity participants are all public corporation or 501(c)(3) entities.
- 9 equity participants: FAU, FIT, FIU, FSU, Nova SE, UCF, UF, U of Miami, UWF.
- Estimated build out in the $20M range over 5 years.
- No dependence on add’l. state funding.
- Members expect to offset a significant portion of their costs by aggregating services and future cost avoidance.
FLR Goals and Uses

- NLR connectivity
- Build a high-speed FL network for R&E
- Put FL universities on an equal footing with the best research institutions in the nation
- Aggregate commodity ISP & Internet2 services
- Provide services to other FL colleges & univ.
- Potential for corporate partnerships and economic development
FLORIDA LAMBDA RAIL
Fiber Backbone
Optical Topology Map
Option 4a: Version 9/13/2003
Full Fiber Backbone

- Number of Amp Sites in Span
- Terminal and/or Regeneration Site
- OADM Site

ILA Sites: 18
POP Sites: 10
AMP Chassis: 18
OADM Chassis: 7
Terminal Chassis: 6
FLR: In Summary…

Many details yet to be worked out
Members will provide connection to other entities
Will provide ~100-fold increase in network speed!
…which will fundamentally redefine our ability to collaborate and compete
Has already engendered other spinoffs:
  – Internet Coast LambdaRail (ICLR)
  – Tallahassee Fiber Loop (TFL)
  – (Orlando?)
Questions?

www.flrnet.org
www.nationallambdarail.org