

A Few Things Important to the Suits...

NLR/I2 Merger and CETF

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Joint Techs Workshop

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Last tech stop for 100 miles (of policy)

dump-on-panic;

```
class operator-local {  
    interactive-commands info;
```

redundancy {

failover on-loss-of-keepalives;

```
family mpls {  
    vlan-id 121;  
family inet {  
    address 198.32.11.65/30;
```

clocking internal;

```
input flow-sample;  
address 2001:468:ff:f4f::1/64;
```

```
disable;
```

```
family iso;
```

```
oid interfaces;
```

```
community "<removed>" {  
    authorization read-only;
```

```
rib inet.2 {
```

martians {



Please come back to Utah sometime...

Jt Techs Feb 2005



Merger chronology - I

- Jan 2005
 - Groups A & B chartered
- May 2005
 - Group A report issued
- June 2005
 - Group B report issued
 - Both Boards OK merger negotiations
- July 2005
 - Joint merger team created

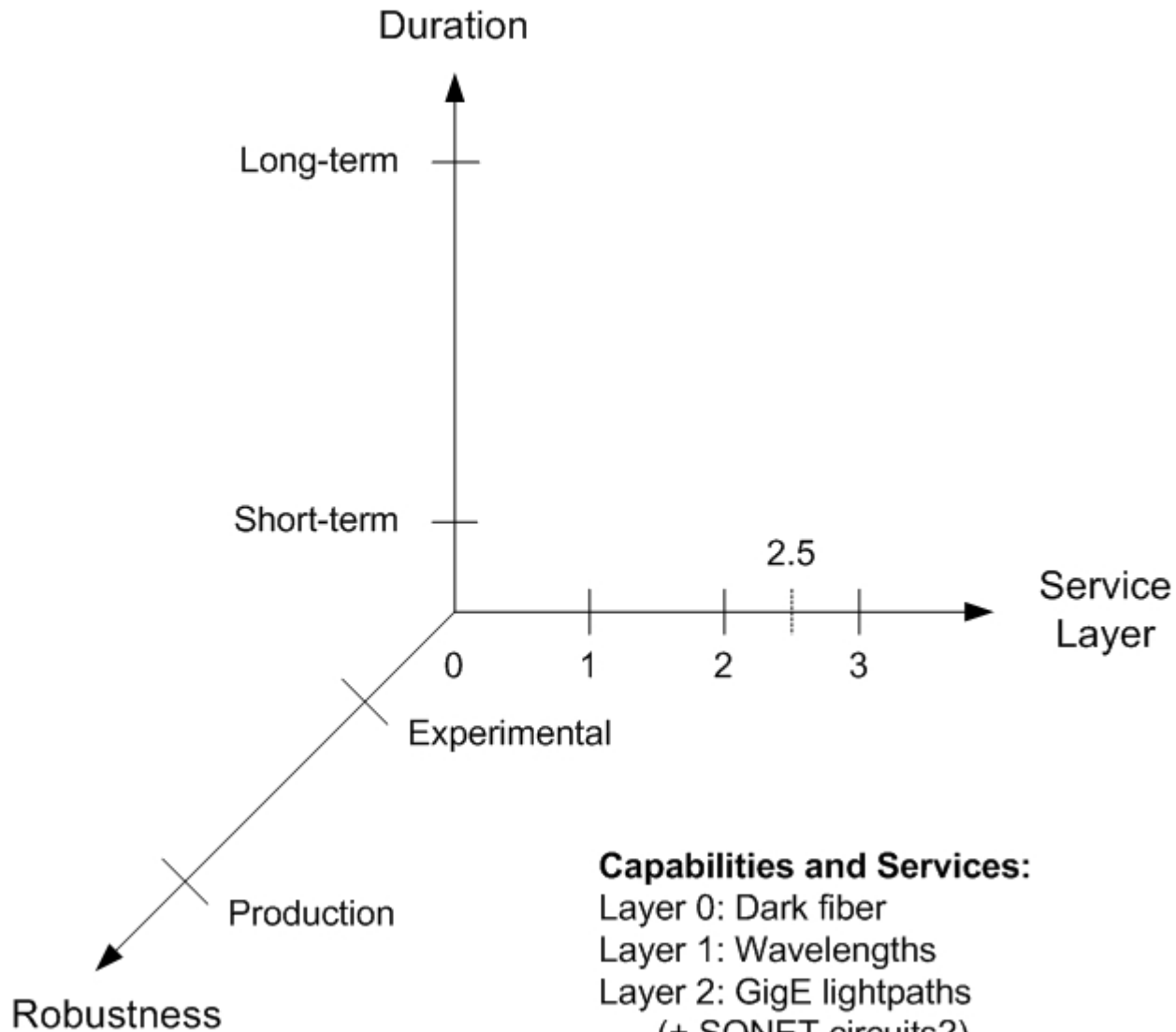


Group A report

- Group A was sanctioned by NLR and Internet2 boards to investigate next generation architecture and service requirements
 - Chaired by Wendy Huntoon (PSC)
- Report envisioned a *far richer network service environment* over the coming five years
 - Multi-dimensional attribute space
 - Network layer (dark fiber, wavelengths, GigE and SONET circuits, MPLS, IPv4/v6)
 - Duration
 - Resilience
 - Best-effort, persistent IP service (layer 3) remains important, but is no longer a '*one-size-fits-all*' service



Potential Model for Services and Capabilities to be Offered in Next Generation Higher Education Network Infrastructure



Capabilities and Services:

- Layer 0: Dark fiber
- Layer 1: Wavelengths
- Layer 2: GigE lightpaths
(+ SONET circuits?)
- Layer 2.5: MPLS tunnels
- Layer 3: IPv4/v6



Group A report - II

- A new view of end user support and end-to-end connectivity delivery assurance is needed
 - *Common Interconnection and Service Deployment Model*
 - Working across campus, regional & national scales
 - Effective campus penetration of new services is a critical issue
- *Regional optical networks and carrier-class exchange points* are critical components of the next generation infrastructure
- Quilt Fiber workshop (1/2006) demonstrated forward progress toward these ends by the regionals



Group B report

- Likewise, Group B was sanctioned by NLR and Internet2 boards to study the optimized organizational configuration to support community's advanced networking needs
- Investigated several options
 - Enhanced cooperation of separate organizations (alliance)
 - Joint venture
 - New organization



Group B report - II

- Four key recommendations
 - **Merge NLR and Internet2 as quickly as possible and as equals**
 - Integrate governance
 - **New Board of 40 members**
 - Six committees
 - Executive, Strategy, Capabilities & Policy, Operations, Finance, Audit, Nominations & Governance
 - Four advisory councils
 - Network Research
 - Science Research
 - Applications Strategy
 - Industry Strategy
 - Continue all services of both organizations at first
 - Develop an integrated financial model over the first year
 - Organizational leadership



NLR/Internet2 Joint Merger Team

- NLR
 - Tracy Futhey, CIO, Duke University (NLR Board chair)
 - Tom West, NLR CEO
 - Erv Blythe, CIO, Virginia Tech
 - Ron Johnson, CIO, University of Washington
- Internet2
 - Larry Faulkner, former President, University of Texas, Austin (Internet2 Board chair)
 - Doug Van Houweling, Internet2 CEO
 - Jack McCredie, CIO, Berkeley (NPPAC chair)
 - Don Randel, President, University of Chicago



Merger process has proven difficult

- Good advice not followed:
 - 3rd party, professional mediation from outset
- Joint merger team worked very hard
- Both organizations are 501(c)3 non-profits and serve the same community, but...
- Fundamental differences exist and have proven difficult to bridge
- Recent positive progress to report



“We have met the enemy and he is us” – Walt Kelly



Fundamental difference in organizational philosophies

- Membership
 - Basis (campus vs. regional)
 - Level of financial commitment
- Governance
 - Board structure
 - Leadership
- Business plan
 - Scope
 - Staffing
 - Financial reserve
 - Network design basis
 - Corporate partnership strategy
 - ‘Crown jewels’



Merger chronology - II

- November 2005
 - Austin meeting of JMT yielded partial set of principles for new organization
 - ‘FOG’ issues left for further work
 - Finance, Organization, and Governance
- December 2005
 - NLR Board approved these principles
 - Concept of extensive contract between NLR and Internet2 emerged
 - Internet2 board approved principles, dissolved its half of team, and gave responsibility to Board chair & CEO



Merger Team Principles (Austin)

- Commitment to Research
- Community Engagement
- Representative Board
- Owned Infrastructure
- Unity of the Network Infrastructure
- Acceptable Use Policy
- Sustaining Financial Model
- Partnership Investment Model
- Sources and Uses of Funds



Merger chronology - III

- January 2006
 - Compromise proposal advanced by community members
 - Including NLR board and I2 NPPAC members
 - **Internet2 Board endorsed and NLR Board rejected**
 - Smaller group resumed effort on expanded principles
 - Meeting in Durham – January 27
- February 2006
 - NLR Board approved expanded principles
 - Due diligence and financial pro forma work continuing
 - Joint IP Network Group forming (Huntoon & Corbato, co-chairs)
- Summary
 - Tough sledding to date; recent positive signs
 - Events are beginning to overtake process



Internet2 next generation network drivers

- March 21
 - FiberCo dark fiber
 - Expiration of original 3-year IRU pricing term with Level 3
- March 31
 - Abilene transport (wavelengths and SONET)
 - 18-month contractual trigger for another 1-year extension with Qwest
 - Otherwise, current agreement expires September 2007
- April 24-26
 - Internet2 Spring Member Meeting, Arlington VA



For more information

- Many relevant links are available at:
 - www.internet2.edu/consolidation/
 - www.nlr.net/consolidation/

