

# SURA IT Strategic Plan and IT Committee Meeting

Prepared for presentation at the SURA  
Board Meeting  
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# New SURA IT Strategy – Highest Priorities

- Foundation-Building
  - Connectivity
    - Regional (USA Waves, Crossroads)
    - National (National Lambda Rail, Internet2)
    - International Opportunities
  - High Performance Computing
  - “Grids”
    - Distributed computation
    - Data storage
    - Middleware (including security)
- Program Development
  - SCOOP
  - Bio-Informatics/ Medical Research

# New SURA IT Strategy – Secondary Priorities

- Information Assurance and Security
- Homeland Defense and Bio-Terrorism
  - Awaiting clarity on funding opportunities
- Nuclear Physics
  - Goal served primarily by infrastructure and HPC with a focus on Jefferson Lab
- International Opportunities
- Minority Serving Institutional Advancement

# IT Committee Agenda

**1:30pm Greeting and Introductions Dave Lambert**

**1:40pm Report from IT Steering Group Dave Lambert**

- IT Fund Report
- Open ITSG Positions

**2:00pm Reports, Updates and Discussion Items:**

- Status of AT&T GridFiber Agreement and route evaluations - Gary Crane
- March 3 High Performance Computing Directors Meeting - Dave Lambert
- NMI Testbed Planning (GridThink) Meeting - Mary Fran Yafchak
- Cybersecurity Symposium - Anne Agee
- The Louisiana Optical Networking Initiative (LONI) - Charlie McMahon
- Evolving relationship between SURA and NLR - Don Riley

**3:30pm Relationship of recent activities to SURA IT Strategic Plan - Dave Lambert**

# IT Committee Agenda

**3:45pm Report from the Regional Infrastructure Planning Group (RIPG) - Dave Lambert**

- **Formal acceptance of RIPG report**
- **IT Committee endorsement of SURA/NLR relationship**
- **RIPG Recommendation to support the build-out of the Jacksonville – Dallas route in collaboration with the National Lambda Rail**

**4:15pm Overview of Grid projects impacting the SURA Region**

- **GriPhyN and Grid2003 Projects - Paul Avery**
- **GridLab - Ed Seidel**
- **caBIG (Cancer Biomedical Informatics Grid) - Steve Moore**
- **LEAD (Linked Environments for Atmospheric Discovery) - Sara Graves**
- **Particle Physics Data Grid (JLab) - Roy Whitney**

**5:30pm Meeting Adjourns Dave Lambert**

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**The extended SURA IT Steering Group (ITSGplus) will reconvene for a short meeting immediately after the Board meeting adjourns on Wednesday, April 7.**

# HPC Meeting Summary

- March 3, 2004; 32 attendees
- Discussion topics
  - Access
  - Outreach
  - Collaboration
  - Resource sharing
  - Funding
- Recommendations and next steps
  - HPC mailing list
  - ‘Call for ideas’ that could grow into proposals
  - Possibly use SURA to provide grid services
  - ‘Grid Squad’ outreach and education program

# Regional Infrastructure Planning Group (RIPG)

## Summary of Recommendations

# General Conclusions

The underlying concept for utilizing the AT&T GridFiber assets revolves around the use of these assets as tools or enablers for planned regional and national R&E optical network projects as illustrated in the first map below “Examples of Regional – State Initiatives...”.

The National LambdaRail and Regional Optical Networks (RONs) represent and reach a large proportion of the SURA universities involved in HPC, SCOOP, BioMed and grid applications. Enhancing/enabling these initiatives provides value to the SURA region.

It is important to articulate the value of an enhanced regional networking infrastructure to any and all research areas that can make use of optical networking capabilities. Engaging key researchers is absolutely key to accomplishing this goal. In particular the SCOOP, HPC and BioMed applications would appear to greatly benefit from access to real time data capture, analysis and visualization capabilities.

The concept of applying grid technologies to compelling scientific research is foundational to SURA's desire to acquire and deploy optical networking capabilities and will be critical to the development of any funding/business plan.

Demonstration apps (done quickly) are important to demonstrate the value of the AT&T GridFiber Agreement both to AT&T and to the R&E networking community.

The SURA network infrastructure strategy needs to incorporate the last-mile connectivity needs of communities such as SCOOP and BioMed that represent special challenges in providing connectivity for water-based sensors and rural medical clinics.

# Specific recommendations regarding AT&T Fiber Donation

- The RIPG recommends that the following list of high impact routes be used as a basis for exploring the development of fiber assets available through the AT&T GridFiber Agreement (see illustration below and Attachment 1 – Route Descriptions):
  - Southern route; connecting Jacksonville NLR node to Dallas NLR node
    - Providing support for HPC initiatives, SCOOP, Bioinformatics and the Florida LambdaRail, Texas LEARN and Louisiana LONI regional optical network initiatives.
  - Mid US (Dallas - Tulsa – Kansas City)
    - SCOOP access to National Weather Service and support for HPC community
  - Support for other regional optical network build-outs
  - Northeastern corridor; Washington, DC to NYC to Boston route
    - Providing support for JLab, SCOOP, HPC and the MATP, NYSERNet, NOX and NEREN regional optical network initiatives.
  - Northwest (Seattle to Boise)
    - Support for Bio-informatics and rural telehealth (Lariat Project)
  - Assist with Northern Tier initiative
  - Other significant opportunities as they develop

# Additional Specific recommendations

- Additional specific recommendations for pursuing working relationships with Regional Optical Networking (RON) initiatives in pursuit of additional infrastructure assets:
  - Completing the managed waves (GridWaves) agreement with AT&T is a very high priority since this is seen as a mechanism to provide missing optical connectivity services in support of those regions not near the AT&T NexGen network, as an alternative to dark fiber for some regional optical network initiatives and as access (last mile connectivity) services for individual campuses.
  - Actively seek additional dark fiber partnerships with state, municipal and utilities based fiber infrastructure initiatives with the purpose of gaining access to additional fiber assets (particularly last mile).
  - Maintain active engagement with the IEEEAF focused on exploring access to international connections in support of the rapidly growing demand for international capacity in support of international research collaborations and the rapid development of remote campus initiatives.

# RIPG Recommendation to Proceed with Jacksonville to Dallas Implementation

The Regional Infrastructure Planning Group recommends that SURA immediately seek to develop a collaborative relationship between SURA, NLR, the Louisiana Optical Network Initiative (LONI), the Florida LambdaRail (FLR) and LEARN to develop a detailed proposal and funding model for utilizing the AT&T dark fiber to establish an optical network connecting Jacksonville, Florida to Dallas, Texas (see second map below). This recommendation includes support for a reasonable financial investment by SURA, proportional to the perceived benefits to SURA membership, in support of establishing this partnership. To establish SURA and AT&T as contributors to the evolution of the nation's newest research and education networking initiative, the RIPG recognizes the importance of acting quickly to establish this southern leg of the NLR footprint.

The RIPG further recommends that SURA continue to conduct due diligence on the following AT&T NexGen routes and explore appropriate partnerships with other entities to develop cost models and funding scenarios that would support the construction of optical network segments along these routes:

- DAL – Tulsa – KC
- DC – Boston
- NW – Lariat Project (Seattle – Bozeman)
- Rest of Northern Tier
- other opportunities as they develop

The RIPG also recommends that the SURA IT Committee and SURA explore methods for providing additional staff resources in support of these initiatives.

# Proposed Process for GridFiber Allocation

Requests of access to assets made available to SURA through the AT&T GridFiber Agreement will be accepted by SURA through SURA's IT Program staff. SURA IT Program staff will ensure that requests for GridFiber assets include the following:

- A clear statement of the type and quantity of assets being requested.
- An overview of the organization requesting the assets, including a single point of contact for the requesting organization.
- An overview describing how the requested assets will be put to use, including a projected time frame for use and a description of other organizations that will directly benefit from such use.
- An overview of how the use of these assets would benefit the broader research and education community and, if applicable, a summary of how SU RA or SURA member organizations might benefit from the proposed use of requested assets.

The SURA IT staff will forward completed requests for access to GridFiber assets to the SURA IT Committee Steering Group and the SURA President.

Acting under the guiding principles for allocation of assets (see Attachment 4) developed by the SURA IT Committee and with guidance from the SURA IT Committee Chair, the SURA IT Committee Steering Group will develop a recommended response to the request for assets.

The SURA IT Committee Steering Group Chair will forward the IT Steering Group recommendation to the SURA President for appropriate action.