

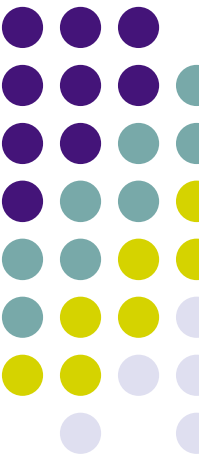
# Louisiana Cyberinfrastructure and Science Drivers Symposium

## External Review Board Meeting

Michael Khonsari

Louisiana EPSCoR Project Director

Associate Commissioner for Sponsored Programs  
Research and Development  
Louisiana Board of Regents



# EPSCoR External Review Board



Mr. James Hoehn, Executive Director, EPSCoR/IDeA Foundation, Washington, DC

Dr. Ron Hutchins, Associate Vice-Provost for Research and Technology and Chief Technology Officer, Georgia Institute of Technology

Dr. Vince McKoy, Professor of Chemistry at the California Institute of Technology

Dr. Harold Silverman, Senior Vice Provost, State University of New York System

Dr. Valerie Taylor, Professor and Department Head, Computer Science, Texas A&M University.

# Louisiana EPSCoR



Louisiana EPSCoR is housed and integrated within the Louisiana Board of Regents, the coordinating body for public higher education in the State.



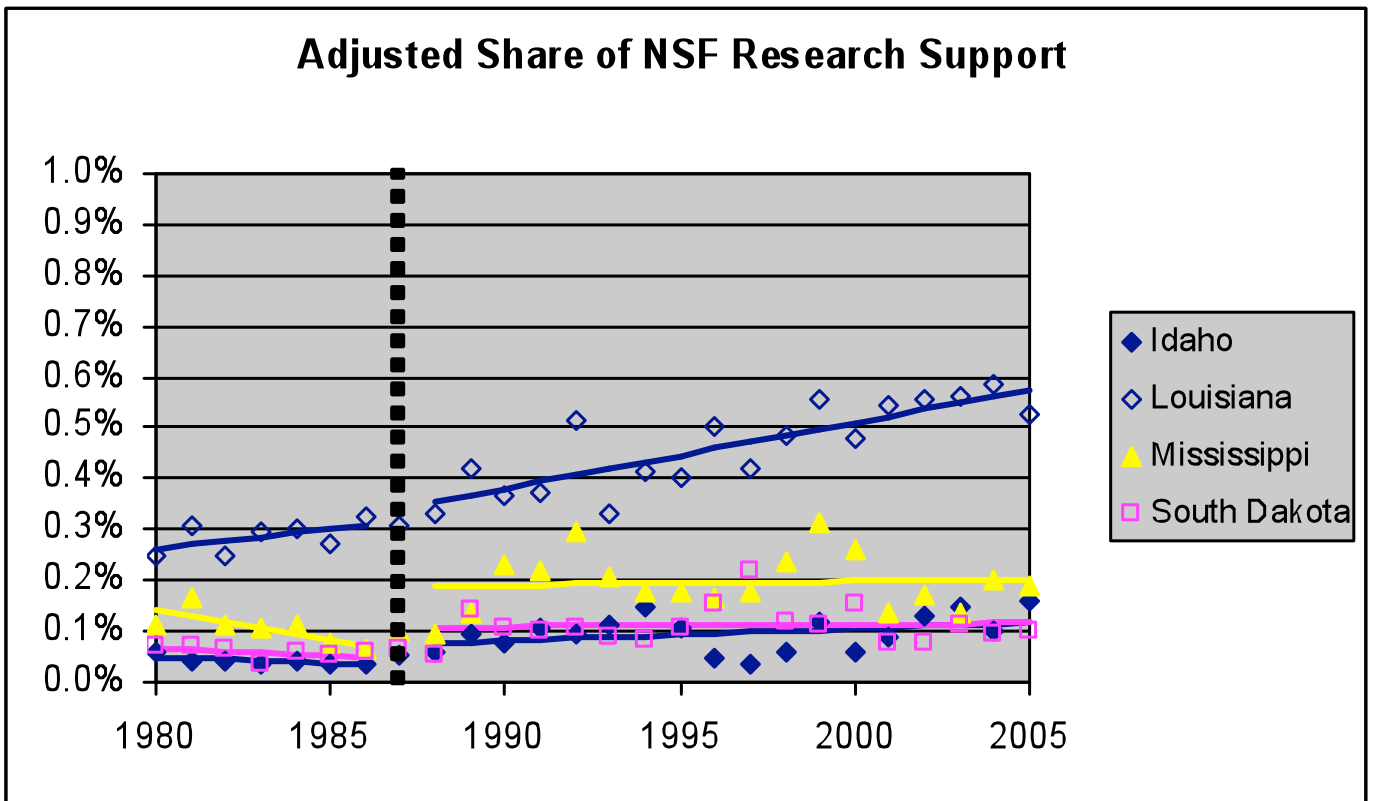


# NSF EPSCoR Cohorts

- FY 1986**
  - Arkansas
  - Maine
  - Montana
  - South Carolina
  - West Virginia
- FY 1988**
  - Alabama
  - Kentucky
  - Nevada
  - North Dakota
  - Oklahoma
  - Puerto Rico
  - Vermont
  - Wyoming
- FY 1987**
  - Idaho
  - Louisiana
  - Mississippi
  - South Dakota
- FY 1992**
  - Kansas
  - Nebraska
- FY 2000**
  - Alaska
- FY 2001**
  - Hawaii
  - New Mexico
- FY 2002**
  - U.S. Virgin Islands
- FY 2003**
  - Delaware
- FY 2004**
  - New Hampshire
  - Rhode Island
  - Tennessee



# Comparison to Cohorts



# History of EPSCoR Funds Received



Agency	Federal	BoR Support Fund
NSF	\$ 41,967,836	\$21,142,036
NASA	8,745,236	7,811,560
NIH	90,856,739	0
DOE	8,551,388	6,639,590
DOD	8,737,013	2,639,949
EPA	1,023,649	994,542
DOC	250,000	300,000
<b>TOTAL</b>	<b>\$160,131,861</b>	<b>\$39,527,677</b>

# NSF- EPSCoR Co-Funding

Co-Funding History for Louisiana since 2000

Year	Total	EPSCoR	# Awards
FY 00	\$ 2,204,762	\$ 1,059,992	9
FY 01	4,330,652	2,128,636	13
FY 02	5,823,318	2,922,531	26
FY 03	8,822,162	2,995,274	18
FY 04	14,186,798	5,961,313	28
FY 05	8,134,360	2,740,529	24
FY 06	8,396,096	3,058,041	26
FY 07	10,363,434	4,691,849	16
<b>Total</b>	<b>\$ 62,261,582</b>	<b>\$ 25,558,165</b>	<b>160</b>



# State's Strategic Investments

*Louisiana: Vision 2020*

*Louisiana: Vision*

IT drives Economic development:

- Gov. Foster *Vision 2020* initiative committed \$25M annually to five campuses in 2001
  - LSU's Center for Computation and Technology (CCT)
  - ULL's Louisiana Immersive Technologies Enterprise (LITE)
- Gov. Blanco committed \$40M over ten years to create Louisiana Optical Network Initiative (LONI) in 2004

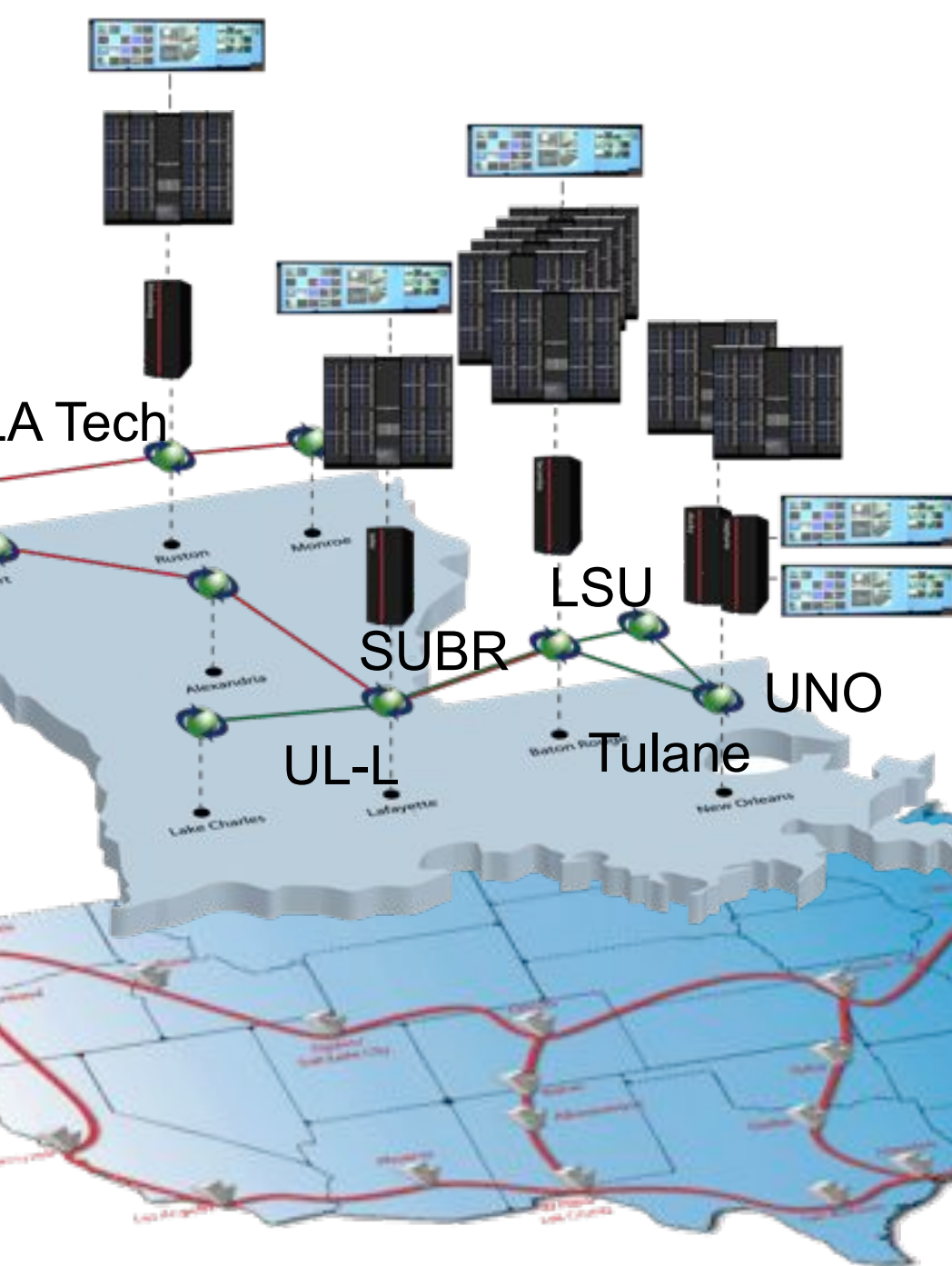




# Louisiana Optical Network Initiative (LONI)

- LONI connects Louisiana to the National LambdaRail, a high-powered nationwide fiber-optic network.
- LONI connects the State's major research institutions with optical fiber delivering up to 40 Gigabits per second.





A Tech

SUBBR

LSU

UL-L

Tulane

UNO

~ 100TF IBM, Dell  
Supercomputers  
National Lambda Rail

# Catalyst for Collaboration



- Prior to EPSCoR, Louisiana institutions competed against each other for research funding.
- LA EPSCoR has been a catalyst in achieving increased statewide collaboration and national competitiveness.
- LA EPSCoR broke down boundaries among campuses.

# RII 2007-2010

## Research Theme

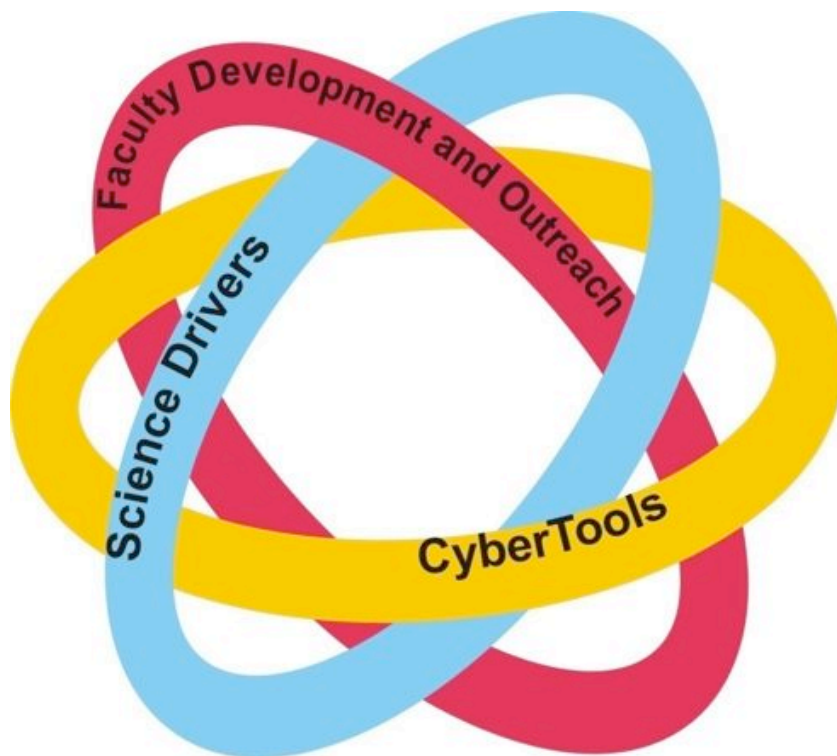
The focus of the Louisiana EPSCoR project is the development of a multi-functional cyberinfrastructure to broadly enable significant advances in modern science and engineering.



# Louisiana's Research Infrastructure Improvement Strategy (RII 2007-2010)



- This is by far the most comprehensive proposal LA EPSCoR submitted



# Institutions Involved

Louisiana State University



Tulane University



Louisiana State University Health Sciences Center

Louisiana Tech University



Tulane University Health Sciences Center



Southern University



University of Louisiana at Lafayette



University of New Orleans



Xavier University



# Proposal Development

## Review Panel Selected

- Program Director (San Diego Supercomputer Center)
- Co-Director (Pittsburgh Supercomputing Center)
- Associate Vice Provost for Research & Technology and Chief Technical Officer (Georgia Tech)
- Emeritus Vice President for Strategic Initiatives and former Director, ERC for Computational Field Simulations (Mississippi State University)
- Vice Chancellor for Research (North Carolina A&T) and former Director of the Computational and Information Sciences Directorate (CISD) with the Army Research Laboratory

Proposals reviewed, ranked, and top four were interviewed



# A EPSCoR RII Proposal

- Submitted October 2006
- Negotiation process between Team Leaders, BoR, and NSF took nearly a year
- Several hundred + page responses
- Visit by NSF Program Directors







# LA EPSCoR RII Proposal

- Strategic Plan developed including:
  - Milestones & Deliverables
  - Gantt Charts
  - Metrics
  - Organizational Charts
  - Management Plan
  - Budget



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# Cooperative Agreement

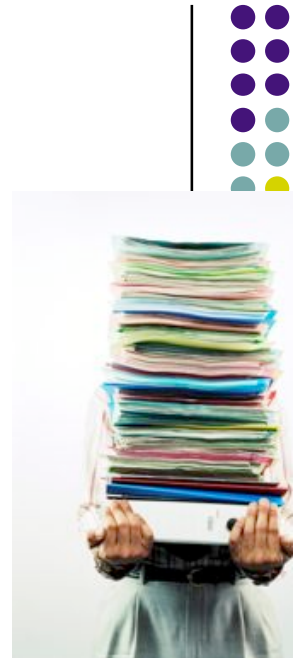
Issued in October 2007

Special Requirements include:

- Evaluation & Assessment Plan  
(submitted January 2008)
- Six-month Interim Reports (first project and expenditure reports submitted March 2008)

Annual Report submitted July 2008

reports and plans have been reviewed and approved by NSF





**Faculty Development**

Education and Outreach

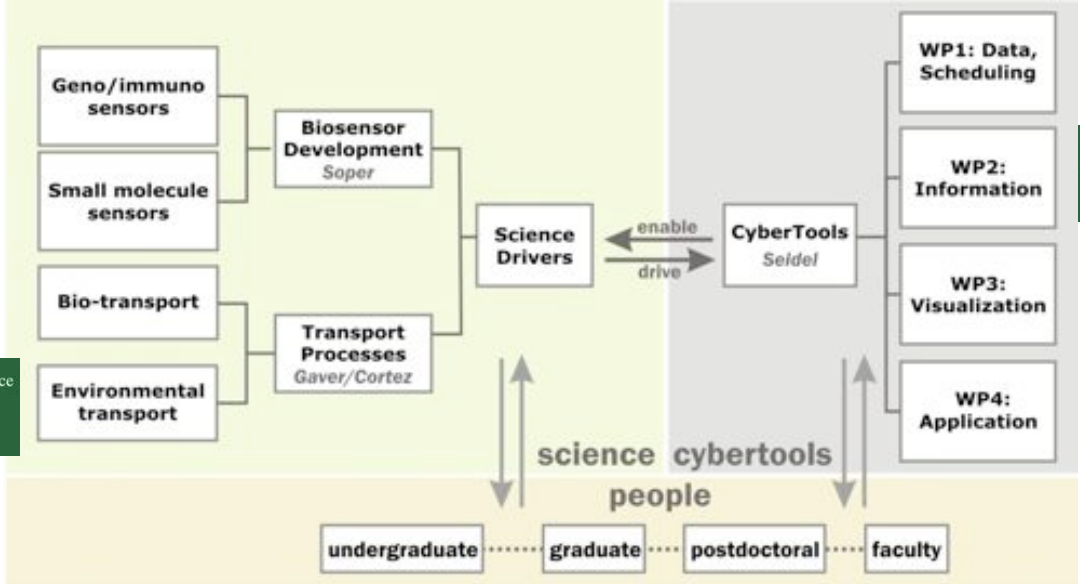
SDs + WPs

**Statewide Outreach**

# Management Structure until September 1, 2008



Center for Computational Science at Tulane University





# Meetings and Coordination

Kick-off Meeting – October 18, 2007 (included State EPSCoR Committee meeting & External Review Board meeting)

Six Science Executive Committee (SEC) meetings

Two All Hands Meetings held at Louisiana State University and the Louisiana Board of Regents.

All Hands Meeting for project review, including a poster competition – August 22-23, 2008 (attended by the ERB)





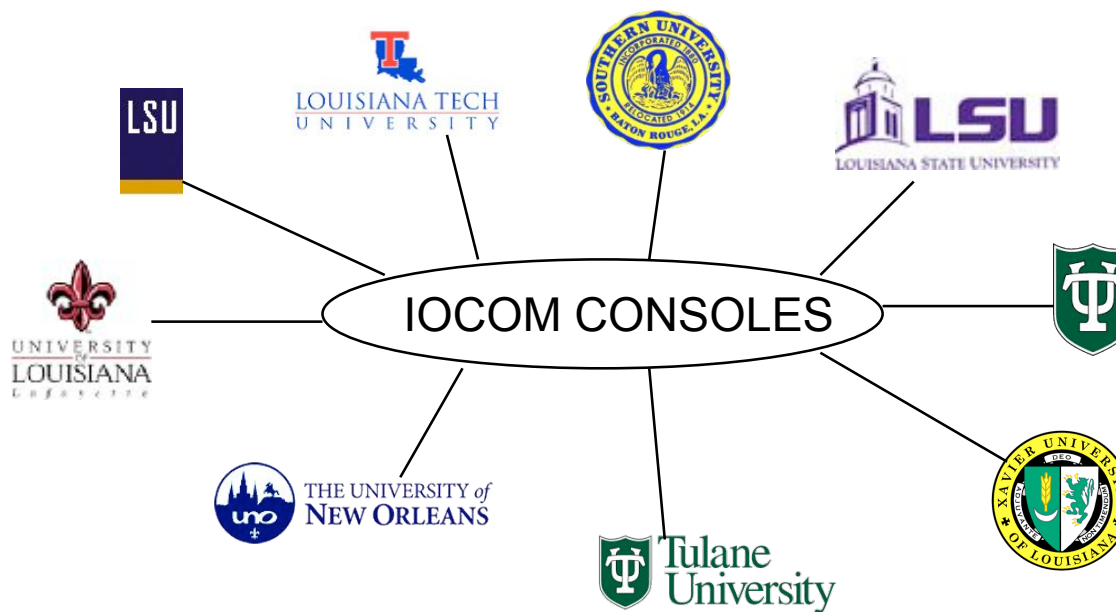
# Facilitating Collaboration

## IOCOM System

- Consoles
- Desktop licenses, cameras, microphones, etc.



Access Grid  
Compatible



# Faculty Development Programs



## Research development

- Grant writing seminars
- Travel grants for emerging faculty
- Planning grants for major initiatives
- SBIR/STTR phase zero grants
- Pilot funding for new research
- Links with industry, research centers, and national labs



## Outreach and Human Resource Development

- State/regional conferences and seminars
- Displays at State Capitol
- Speaking of Science (SoS) speakers bureau

## Technology

- Faculty expertise database and solicitation search
- Online proposal submission and reporting



# Education & Outreach



- The multi-functional *CyberTools* are being developed in association with the Science Driver projects, while **the education and outreach activities are highly integrated into this process** and into each Science Driver and *CyberTools* component.



# Agenda

- Organization of the meeting
- Poster competition
- Saturday meeting



# Agenda



- 00 – 8:50 a.m. Coffee & Donuts/Poster setup
- 50 – 9:10 a.m. Welcoming Remarks & Introduction
- 10 – 9:30 a.m. Overview of Project

## **Science Driver (SD) Presentations**

- 30 – 10:00 a.m. Geno/ Small Molecule Sensors
- 0:00 – 10:30 a.m. Immunosensors
- 0:30 – 10:50 a.m. Break/Networking
- 0:50 – 11:10 a.m. Biotransport Computations

# POSTER PRESENTATIONS



- 1:10 – 12:10 p.m. **Poster Presentations**
- 2:10 – 1:00 p.m. Working Lunch
- :00 – 1:10 p.m. Poster Competition Award(s)



# CyberTools WorkPackage (WP) Presentations and Demonstrations

12:10 – 1:30 p.m. Overview

1:30 – 2:10 p.m. Applications and Application  
Toolkits, WP4 demonstrations

*Demo 1: Fluid Flow using Multipatch Solvers in Cactus*

*Demo 2: Visualizing the BEM Code*

*Demo 3: Distributed Replica-Exchange Using SAGA*



2:10 – 2:40 p.m. Scheduling and Data  
Services, WP1 demonstrations

*Demo 1: End-to-end Workflow Management*

*Demo 2: Distributed Data and Retrieval*

2:40 – 3:10 p.m. Visualization, WP3  
demonstrations

*Demo 1: Remote Visualization*

3:10 – 3:50 p.m. Break

3:50 – 4:15 p.m. Outreach

4:15 – 4:30 p.m. Evaluation/Assessment

4:30 – 5:00 p.m. Final Discussion (ERB)

