



*Southeastern Universities  
Research Association*

*SURA Cyberinfrastructure Workshop Series  
January 2008*

# **Grid-Enabling Applications**

Offered in conjunction with:

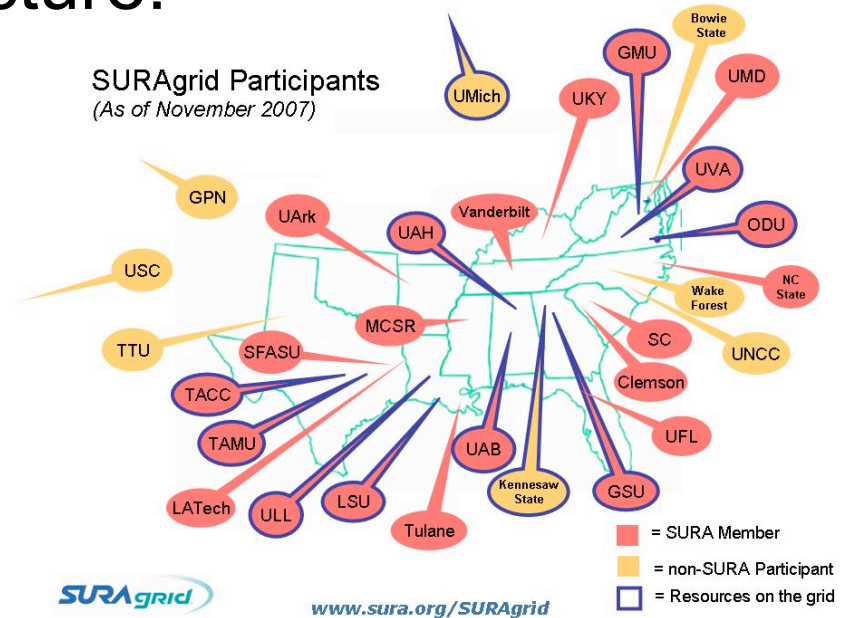
**Mardi Gras Conference 2008**

*Center for Computation and Technology*

*Louisiana State University*

# Complementary SURA Activities

- ❑ Cyberinfrastructure Workshop Series
  - [www.sura.org/programs/it\\_workshop.htm](http://www.sura.org/programs/it_workshop.htm)
- ❑ Grid Technology Cookbook
  - <http://www.sura.org/cookbook/gtcb>
- ❑ Regional grid infrastructure:



# On to the workshop...

- ❑ Developed by SURAGrid Teaching Environment WG
- ❑ Interactive learning opportunity
- ❑ Content & focus both theoretical and practical
- ❑ Our leads and guides:
  - **Dr. Purushotham Bangalore, Ph.D.**
    - Assistant Professor and Director of the Collaborative Computing Laboratory (CCL), Department of Computer and Information Sciences at the University of Alabama at Birmingham.
    - Researcher in Grid Computing Environments to support rapid grid-enablement of multidisciplinary and scheduling applications on the grid. Developing new programming techniques to synthesize parallel programs using Design Patterns, Aspect Oriented Programming, and Generative Programming.
  - **Dr. Barry Wilkinson, Ph.D.**
    - Professor of Computer Science and Director of the Computer and Information Science MS Program at the University of North Carolina, Charlotte.
    - Researcher in techniques to integrate grids and other cyberinfrastructure into the curriculum. Innovator in the use of distributed and distance technologies to teach the implementation, programming and use of grids.

Questions to be explored...

**How do you define the term  
“grid-enabling”?**

**Which application(s) were grid-enabled?**

**What was the motivation for  
grid-enabling the application  
(s)?**

**Which Grid middleware (such as Globus command-line tools, Grid Application Toolkit (GAT), Commodity Toolkit (CoG), Grid Service Wrappers, etc.) was used to grid-enable the applications?**

**What tools/utilities were  
used/developed to grid-enable  
the applications?**

**Was the application scheduled for execution on a single resource or multiple resources? How were the resources discovered and selected?**

**Was there a workflow engine used? Which workflow engine was used? What was the reason for using this specific workflow engine?**

**Was a meta-scheduler used to schedule the application?  
Which meta-scheduler was used? What was the reason for using this specific meta-scheduler?**

**How were the applications accessed by the end-users (through a Portal, Custom Client, Command-line clients, or some other means)?**

**What were the  
expectations/benefits  
expected? Were you able to  
achieve these expectations?**

**What were the important lessons learned from this effort?**

**Were there any non-technical issues involved in your grid-enabling effort?**