

Calendar/Meetings

August

14, [Workshop on Web Services-Based Grid Applications](#), Columbus, Ohio

14-18, [Cyberinfrastructure Summer Institute for Geoscientists](#), San Diego, California

21-23, [Open Science Grid Consortium Meeting](#), Seattle, Washington

[Full Calendar](#)

Image of the Week



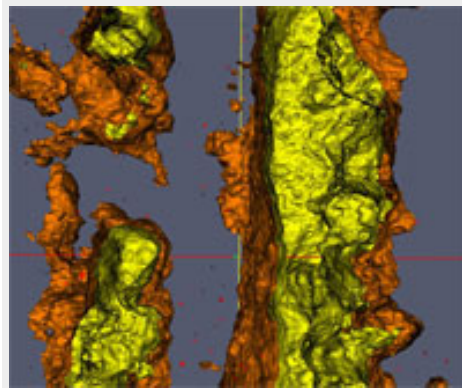
NEES equipment site activity map. (Click on image for larger version.)

Image Credit NEESit

The George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES) [equipment site activity map](#) provides information about research at earthquake engineering sites across the United States. The NEESactivities map provides links to current NEES experiments, many of which can be viewed through live video feeds. NEESactivities is part of [NEEScentral](#), which provides a simple way for researchers to share and archive earthquake engineering data. NEEScentral is developed and maintained by NEESit, the infrastructure wing of the NSF-funded

Feature Story

Viewing the Cellular World



Portion of a nerve synaptic membrane.

Image Courtesy UT Southwestern Medical Center and TACC

A collaboration of Texas researchers has opened a new window onto the world of cell biology. For the last six months, biologists from The University of Texas Southwestern Medical Center at Dallas have worked with computer scientists from the Texas Advanced Computing Center in Austin to produce a real-time, interactive remote visualization of cell structures.

The remote visualization has been used by UT Southwestern scientist Christopher Gilpin to investigate nerve synaptic membranes. The three-dimensional images were collected with an electron microscope at UT Southwestern, processed into a three-dimensional reconstruction and visualized at TACC. For the first time, Gilpin is able to interactively visualize and investigate a reconstruction of a synaptic membrane in real time from his desktop in Dallas.

"The images that we have produced are completely new, and we now have the enviable task of interpreting what we've seen," says Gilpin. "In the future we plan to do some genetic manipulation, changing the protein composition of the synaptic membrane and looking at how that affects structure."

KnowARC Will Make the Grid Simple

Digital data are stored everywhere: pictures, music and videos from every household; massive databases in public and commercial companies; huge volumes of scientific data in research institutes. The Internet allows these data to be made available to remote consumers, but conventional technologies only allow data processing when both the data and processing know-how are located in one place. Grid technologies strive to enable seamless distribution and utilization of various Internet-based resources, but these technologies are not yet mature enough to offer reliable and standardized services.



The KnowARC project will develop software foundations for a grid solution that will suit everybody—scientists, businesses and individuals alike—thus paving the road for the grid to become a household phenomenon. The project, which began June 1, is funded by the European Union and involves 10 partners from seven European countries.

"The goal is to develop a grid solution that would allow any group of scientists that need to collaborate on a problem to quickly set up a resource-sharing environment using their own resources and exercising their own policies, without going through the hassles of joining massive infrastructure projects or hiring grid experts," says Oxana Smirnova from Lund University.

[Full article](#)

Announcement

Link of the Week

Globus Toolkit Tutorial

The Globus Consortium Globus Toolkit Compute Grid Tutorial walks you through an instructional build of a three-node grid and the deployment of an application on that grid. The tutorial requires a rudimentary knowledge of Linux and administration of Linux systems, networking and basic programming principles.

Grids in the News

Grids for Kids: Building the Foundation for Innovation

GRIDtoday, August 7, 2006
By Tom Gibbs

If you asked many industry/economic analysts around the world to name the most important variable in future economic growth off the top of their heads, the knee-jerk answer today would be the price of oil.

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What's the best way to increase processing power?

ZD Net UK, August 2, 2006
By Deb Shinder

Just like death and taxes, one thing we can count on is that tomorrow's operating systems and applications will require more processing power than today's.

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Building Grids, One at a Time

the globus consortium  journal

The [August issue](#) of the Globus Consortium Journal includes an interview with the Open Grid Forum's Mark Linesch. The following is an excerpt from the interview.

GCJ: I loved the line; grids are built one grid at a time...

Linesch: Thanks! I think that our industry is great at envisioning a future destination but sometimes forgets that "the journey of 1,000 miles starts with a single step". I often say that grids are a core part of the next stage of distributed computing, and it's important that they look for specific problems that they might solve with grid today. Then start small. Let the infectious nature of grids lead to additional applications and solutions.

A great application is being able to harness CPUs within a single data center to reduce the time it takes to do risk analysis from four hours to 40 minutes. An even better application is when I have three data centers, and I can not only reduce the time, but I can dynamically allocate resources to run more instances and improve the quality AND timeliness of the information while increasing utilization rates and lowering costs. At each step, I am building on the successes and failures of the previous step—improving the security and reliability, honing the value of the application to the organization and users.

[Full article](#)

First EELA Conference



The E-Infrastructure Shared Between Europe and Latin America project will build a digital bridge between existing e-infrastructure initiatives in Europe and those that are emerging in Latin America. [EELA](#), a €1.7 million project funded by the European Commission, will create a collaborative network that will use an interoperable grid infrastructure to support the development and testing of advanced applications.

The first EELA Conference, to be held September 4-5 in Santiago, Chile, will concentrate on four thematic areas. Each area will be addressed by a different session: Collaboration with other Grid Projects; Status of EELA Activities; Grid Communities and Applications; and Status of RedCLARA and Perspectives for the Future.

The EELA Conference will be followed by the EELA Tutorial for Users and the First National e-Science Congress, both to be held in Santiago September 6-7. View the agenda and register at the [conference Web site](#), or contact po@eu-eela.org with questions.

—María José López, REUNA/CLARA