

Calendar/Meetings

October

13-18, [International ICFA Workshop on Grid Activities Within Large Scale International Collaborations](#), Sinaia, Romania

15-18, [PRAGMA 11](#), Osaka, Japan

21-23, [GCC2006: The Fifth International Conference on Grid and Cooperative Computing](#), Changsha, China

23-25, [2006 BIRN All-Hands Meeting](#), La Jolla, California

26-27, [EGEE Industry Day](#), Catania, Italy

[Full Calendar](#)

Image of the Week



LiDAR image of the southern San Andreas. (Click on image for larger version.)

Image Courtesy Chris Crosby & Ramon Arrowsmith, Arizona State University

GEON researchers have recently made a new LiDAR dataset available via the GEON portal. The dataset, which includes 30 billion data points that describe a three-dimensional, high-resolution map of the Earth's surface near the Southern San Andreas Fault, was unveiled via a pair

Feature Story

Building Better Bridges



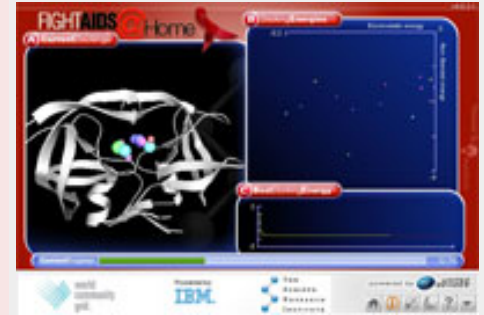
A team from Hungary is using grid computing to streamline the construction of concrete beams for highway bridges. Working with industry, the team has augmented a process that was traditionally done based on engineering intuition and experience—the pre-stressing of concrete beams—with a totally new tool developed specifically for the Grid.

"Most engineering algorithms have been developed as turbocharged versions of old hand-calculation methods," says Gabor Domokos from the Budapest University of Technology and Economics' Innovation and Knowledge Centre of Information Technology. "We thought, now that we have these enormous computational resources, why don't we think in a different way?"

Pre-stressed reinforced concrete beams, used primarily as the main building structure in highway bridges, can be over 30 meters long and weigh many tons. The reinforcing comes from the insertion of a steel bar inside the concrete, and it is this bar that placed under high tension, or pre-stressed, during construction.

[Full article](#)

Solving the World's Problems



Screensaver for FightAIDS@Home, a World Community Grid project.

With over 220,000 members, access to more than 400,000 computing devices and the backing of IBM, World Community Grid uses volunteer computing resources to tackle some of the world's most challenging problems. Teams searching for AIDS treatments, analyzing protein structures, and creating a database of tissue samples to help detect cancer are already using World Community Grid for their research, with more projects set to debut in the coming months.

"World Community Grid allows scientists to run computational research for free, and we do the work of getting them on the grid," says Project Manager Bill Bovermann. "Any scientist from anywhere in the world can submit a proposal, and as long as they meet our requirements they will have a gigantic supercomputer available to them."

Projects submitted to World Community Grid must come from a non-profit organization, be adaptable to run in a grid environment, directly benefit humanity, and the results must be made available to the public.

[Full article](#)

Grids in the News

of posters at the [annual meeting](#) of the Southern California Earthquake Center in Palm Springs.

[Learn more...](#)

[Link of the Week](#)

LEAD Annual Report

The Linked Environments for Atmospheric Discovery project has attracted a lot of attention over the past several years for its ambitious cyberinfrastructure goals. The project's third annual report and plans for its fourth year are now available.

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Office of Science/
U.S. DOE

National LambdaRail President Explains Research Focus

I have been asked: Why is National



LambdaRail (NLR) focusing so much on facilitating network research and "big" science applications as its core mission? Is it not as important to give equal or greater attention to the networking needs of the broader research and education (R&E) community?

In answering these questions, permit me to draw a comparison to the historical development and evolution of the great cities around the world.

When investing in real estate today, you are told that the principle focus should be on "Location! Location! Location!" The root of this principle is evident in the development and evolution of the major cities and regions around the globe. In most instances, the selection of the location for each of these cities was based on such strategic factors as: safety and security; access to basic necessities and resources; transportation; and the potential to develop commerce.

[Full article](#)

This article by NLR President Tom West originally appeared in [GRIDtoday](#).

Mega Grid for Mega Science

R&D Magazine, October 11, 2006
By Martha Walz

Grid computing unites scientists around the world and uses their collective computing power to investigate science's unanswered questions.

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Educating Cyberinfrastructure-Savvy Researchers

SDSC Press Release, October 11, 2006

In an increasingly complex and interconnected world the ability to make real-time decisions in a global manufacturing and service enterprise requires integrating vast amounts of data and computation through the use of cyberinfrastructure.

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PRAGMA to Enhance Grid Collaboration with NSF Funding

GRIDtoday, October 11, 2006

The National Science Foundation (NSF) has renewed its support for a grassroots effort by U.S. and Pacific Rim engineers who develop cyberinfrastructure and software tools in tandem with application scientists who use those grids to advance "collaborative science" research projects.

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