

## Calendar/Meetings

### August

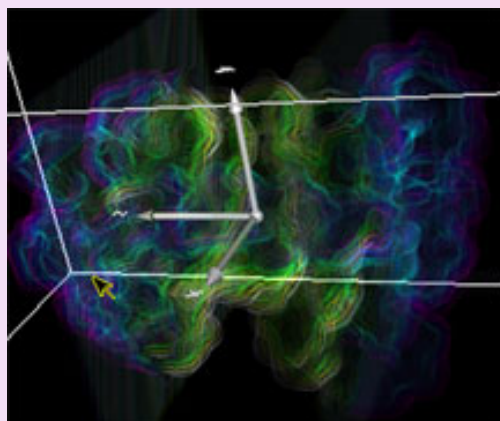
14, [Workshop on Web Services-based Grid Applications](#), Columbus, Ohio

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



**BioMOCA application running in the nanoHUB. (Click on image for larger version.)**

*Image Credit Shawn Rice, Purdue University*

BioMOCA is a three-dimensional coarse-grained particle ion channel simulator based on the Boltzmann Transport Monte Carlo methodology. This computationally intensive application, available through the nanoHUB, can be used by researchers to explore ion transport through channels in a cell membrane. The BioMOCA tool is now running on several Open Science Grid sites through the nanoHUB.

[Read more...](#)

## Feature Story

### From Microscopes to Middleware

The Telescience™ Project started over a decade ago as an effort to make rare scientific instruments globally accessible. Researchers at the National Center for Microscopy and Imaging Research began developing technologies to remotely control bio-imaging instruments over the Internet, and in 1992 the first system was demonstrated when attendees at a conference in Chicago interactively acquired and viewed images from one of NCMIR's intermediate voltage electron microscopes in San Diego. That control system for a single instrument has evolved to the Telescience Generalized Telemicroscopy System, capable of controlling several different bio-imaging instruments from different manufacturers.

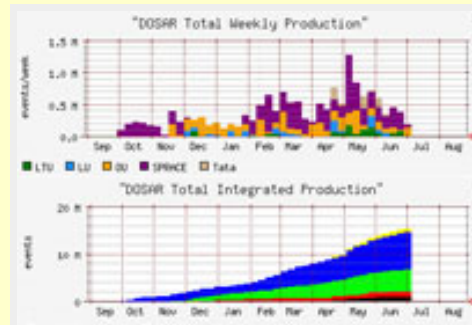


3D tomographic reconstruction of a Node or Ranvier.  
*Image Courtesy NCMIR*

During the evolution of Telemicroscopy, it became clear that remotely acquiring data wasn't enough for a complete remote research scenario. Data acquisition had to be closely coupled to data computation, data storage and meta-data management resources. Thus the Telescience Project was born, with a mandate to develop a grid-based architecture for end-to-end scientific research applications. Today, the Telescience Project focuses on minimizing the time required to create a grid-enabled scientific application.

[Full article](#)

## Helping Small Groups Make a Big Splash on the Grid



Five DOSAR institutions' contributions to simulations for the DZero experiment during the past year.

*Image Courtesy Joel Snow*

For three years, the Distributed Organization for Scientific and Academic Research has been helping high-energy physicists with modest computing resources make big contributions to their collaborations using the grid. DOSAR brings researchers together to share information and experiences, with the goal of accelerating the adoption of new technologies by all members.

Initially called DOSAR, for the DZero Southern Analysis Region, the group comprised high-energy research groups from six universities in the southern United States and the Tata Institute in India. The organization banded together to simulate particle physics events for the DZero experiment at Fermilab in Illinois.

"We started with the concept of putting together a regional grid for DZero," says founding member Jae Yu from the University of Texas at Arlington. "At some point DOSAR institutions were producing half of the simulated events for the experiment." This represented quite an accomplishment for the smaller DOSAR institutions, as the DZero experiment today includes more than 80 institutions.

[Full article](#)

## Link of the Week

### Report on Approaches to Campus Research Computing Cyberinfrastructure

Visit this link to read the final report from the Internet2 Campus Research Computing Cyberinfrastructure Workshop held in April. This NSF-sponsored workshop brought CIOs and campus technical representatives together to strategize about ways in which they may improve their institutions' support for the demands of current and future research computing.

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The logo for the Office of Science/ U.S. DOE, featuring a stylized orange and white swirl design.

## Grids in the News

### **The Stardust Hunt is On**

MSNBC, August 1, 2006  
By Alan Boyle

After months of preparation, the Stardust@Home treasure hunt kicks off on Tuesday, with tens of thousands of Internet users primed to look for grains of dust from beyond the solar system.

[Read More...](#)

### **Can Grid Computing Help Us Work Together?**

Science, July 28, 2006  
By Daniel Clery

Modern science is a game for collaborators. Hundreds of researchers took part in sequencing the human genome, and each of the giant detectors now being built for the Large Hadron Collider (LHC) at the CERN particle physics lab near Geneva, Switzerland, is designed and operated by teams of more than 1000 physicists and engineers.

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### **Internet2 expands its reach**

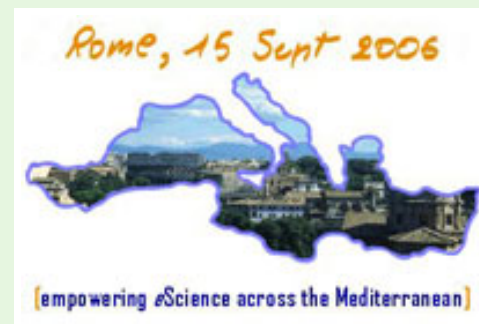
IT Week, July 28, 2006  
By Clement James

The Internet2 research organisation has announced the immediate availability of dedicated optical wavelengths in addition to dark fibre assets for its members.

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## Announcement

### **First EUMEDGRID Conference**



EUMEDGRID is a European Union-funded grid project involving major research institutions throughout Europe and the Mediterranean (currently including Algeria, Cyprus, Egypt, Greece, Israel, Italy, Jordan, Malta, Morocco, Palestine, Spain, Switzerland, Syria, Tunisia, Turkey and the UK). The project aims to set up a common grid e-Infrastructure in the Mediterranean region, and integrate it eventually with EGEE. Its first conference will take place in Rome at the University of Roma Tre on September 15, 2006.

The First EUMEDGRID Conference will present its vision of cross-national e-Infrastructures as a driving force towards widening the European research area and bridging the digital divide between Europe and the neighboring Mediterranean countries. The Conference will host discussions on how grids can become a major instrument for international cooperation in e-Science and beyond, and will include the presentation of real, running applications and case histories. The discussions will also cover the European approach to cooperation policies for the Mediterranean and other neighboring countries.

To register, or for more information, please visit the [conference Web site](#).

—Diana Cresti, INFN