NCSA to create support center for distributed applications

The National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign will receive $2 million over the next two-and-one-half years from the National Science Foundation to provide a distributed-application support center for users developing new capabilities using NSF's very-high-performance Backbone Network Service (vBNS).

NSF named NCSA as the Distributed Applications Support Team for the National Laboratory for Applied Networking Research, a distributed laboratory with staff at all of NSF's supercomputer centers. As such, an NCSA team will help users of the vBNS maximize the performance of their applications and solve network problems. In addition, the team will maintain information including links about vBNS applications and provide training to network and applications engineers.

The applications being prototyped on the vBNS give researchers the ability to run simulations on the largest-scale high-performance computers available—such as the 512-processor SGI/Cray Origin 2000 system at NCSA—and pump the data back to their local site for immediate visualization.

The DAST Web site (*http:// www.ncsa.uiuc.edu/DAST/*) plans to offer information sources about the vBNS, network protocols, and their interactions to help researchers optimize their distributed applications. The site's resources section helps users who want to turn their applications into distributed vBNS applications.

The vBNS, provided by NSF in partnership with MCI, was launched in 1995 to link NSF-sponsored supercomputer centers. NLANR was initially developed to provide engineering and technical support, and coordination of the supercomputer center connections to the network. However, in the last two years, the vBNS has grown to include connections to university campuses. Sixty-three universities have been approved for connections so far. Approximately 100 institutions are expected to have vBNS connections in the next 12 to 18 months. The vBNS network backbone currently runs at a maximum of 622 Mbits per second. It is expected to operate at 2.4 Gbits by the year 2000.

And you thought El Niño was a problem

Researchers at Los Alamos National Laboratory are modeling the effects of tsunami produced by the impacts of asteroids and comets on the Earth's oceans. Tsunami are fast-moving ocean waves, usually caused by underwater earthquakes or volcanic eruptions, that retain their destructive energy over long distances and cause widespread damage when they hit a coastline.

Astrophysicist Jack Hills and colleagues presented findings from the first phase of their study at the January meeting of the American Astronomical Society. This phase looked at tsunami produced by the impacts of moderately large asteroids, about three miles in diameter, in the middle of large ocean basins. The modeled results estimate that such an asteroid hitting the mid-Atlantic would produce a tsunami that would swamp the entire upper East Coast of the United States and drown the coasts of France and Portugal. Regions with little continental shelf are more susceptible to the impact of tsunami, while gradual continental shelves tend to reflect the tsunami back into the ocean.

An abstract for the AAS presentation, called "Down-to-Earth Astronomy: Tsunami from Asteroid-Comet Impacts," is available at *http://www.aas.org/publications/baas/v29n5/aas191/abs/S033007.html*.

Access ParaScope from Concurrency's home page

IEEE Concurrency's home page (*http://computer.org/concurrency/*) now includes a link to ParaScope, a comprehensive listing of parallel computing sites on the Internet. The list is maintained by David A. Bader, assistant professor in the University of New Mexico's Department of Electrical and Computer Engineering. You can also go directly to the links at *http://computer.org/parascope/#parallel*.