

SC06 APPLICATIONS OFFER A GLIMPSE AT THE POWER AND THE PROMISE OF BIG FAST NETWORKS

National LambdaRail Supports 40 Gigabits to Visionary Researchers

Cypress, Calif. - November 13, 2006 -Visionary researchers from around the globe are demonstrating advanced research and demanding applications made possible by high performance networks. Live at Supercomputing 06 (SC06) Florida, National LambdaRail and Florida LambdaRail have collaborated to bring gigabits of bandwidth to the convention floor for dramatic application demonstrations.

Fourteen projects provide a peek into the future with applications ranging from disaster prediction and recovery to unique user-controlled networks for high energy physics and healthcare.

"SC06 brings together some of the top scientists from around the world whose work relies on advanced cyber-infrastructure," said Tom West, NLR's President and CEO. "Every year we see new and exciting applications that clearly demonstrate the need for the capabilities that NLR and its partners provide. Together with US regional optical networks like Florida LambdaRail and international optical networks like SURFNet, optical research and education networks continue to provide the plumbing to support the visions of researchers around the globe."

Some of the featured demonstrations include:

* Caltech (CACR) is showing the latest WAN infrastructure and Grid-based Web Services to demonstrate movement and analysis of TeraByte-scale event datasets for particle physics.

Optimized transfers of data over 10Gbit/sec networks linking servers and disk systems will be shown using the latest processors, PCI-Express NICs, RAID arrays and firmware.

* CANARIE is showing how User Controlled Light Paths (UCLP) promise to overcome several limitations in previous digital mediated distributed modes of collaboration that necessarily strive for low-bandwidth solutions due to limited bandwidth considerations. They utilize existing fibre network infrastructure provisioned and controlled by UCLP software designed to enable end-users to create their own discipline or application-specific IP network whose topology and architecture is optimized for their particular applications needs and

requirements.

* The Center for Computation and Technology at Louisiana State University is showing the capabilities of co-scheduling and advance reservation of both compute and network resources across two national testbeds (US's Enlightened Computing and Japan's G-lambda.)

* EVL (Calit2/CEOA) is showing its SAGE, the Scalable Adaptive Graphics Environment that manages "windows" on tiled displays, enabling users to manage and display data and streaming media from a variety of data sources much like Tom Cruise used in the movie "Minority Report."

* NASA is collaborating with the Dynamic Resource Allocation via GMPLS Optical Networks (DRAGON) Project (funded by the National Science Foundation) and other partners to demonstrate research into Lambda agile switching. Lambda agile switching is the ability to change an optical signal wavelength in an optical services switching platform among any of a set of connected optical interfaces, and optionally transform the signal from one optical wavelength to another.

* Purdue University is showing that 4k video streams, eight times more detailed than HDTV at 1080p, are now within the reach of several scientific communities. A resolution of 4096x3072, with 24-bit color, running at 30 frames per second, produces just under 10Gbps of network traffic.

* RENCI is showing the North Carolina Forecasting System (NCFS). This new system shows how, in the midst of a hurricane, flood or severe storm, emergency response teams could interface with a high-resolution, near real-time computer model and determine what neighborhoods were likely to be affected, how far inland storm surges would reach, how water runoff and flooding might be impacted by development, and the safest evacuation routes based on constantly changing conditions.

About National LambdaRail

National LambdaRail, Inc. (NLR) is a major initiative of U.S. research universities and private sector technology companies to provide a national scale infrastructure for research and experimentation in networking technologies and applications. NLR puts the control, the power and the promise of experimental network infrastructure in the hands of our nation's scientists and researchers. Visit <http://www.nlr.net> for more information.

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