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Welcome to CENIC Today, the monthly newsletter of the Corporation for Education Network Initiatives in California.

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#### CENIC News

##### President's Message

Earlier this month CENIC held its 9th annual conference. From the feedback we've received, it appears we achieved a good balance of sessions geared to policy, technology, educational applications, research applications and international networking. The conference began with a keynote from Susan Kennedy, commissioner of the California Public Utilities Commission. Her presentation focused on the recently issued report on Broadband. The full report may be found at [http://www.cpuc.ca.gov/static/industry/telco/reports/020814\\_broadband\\_report.htm](http://www.cpuc.ca.gov/static/industry/telco/reports/020814_broadband_report.htm). I would like to focus the remainder of this month's message on broadband and CENIC's One Gigabit or Bust(TM) Initiative.

The focus of the CPUC report and the objective of CENIC's One Gigabit or Bust Initiative are, of course, complementary or very similar. When CENIC launched the Gigabit initiative our motivations were multiple:

- Help stimulate broadband deployment so that students, faculty, teachers and researchers of our member institutions would have access to improved networking from their homes. As educational institutions have invested in on-campus networking and as CENIC has provided robust, high bandwidth networking to the educational community of the State, the gulf between services and resources available while on campus to those available from home in many cases became quite large.
- Help highlight to policy makers and others the importance of broadband deployment to the economic future of the State and to the quality of life of our populace and the importance of equity in the availability of services broadband offers.
- Help highlight the hindrances to broadband deployment that, if reduced or otherwise addressed, could assist the State's residents benefit from broader availability of high speed networking to the communities in which they live.

Through a series of roundtable workshops over the last two years, we have engaged individuals from various backgrounds and interests in discussions on these topics. While not everyone agrees with everything expressed in all of the sessions, it is clear that California is nowhere near the leader in broadband deployment in the U.S, but perhaps more importantly compared to other nations we are even further behind. As California competes in a global economy, many are concerned that we will not have the important

broadband infrastructure to help sustain a robust economy. In several months we will be issuing a report that highlights what we've learned from the Gigabit workshops and that points to directions that can be taken to address the issues that have arisen during these discussions.

In the meantime, we are pleased to see that increased focus of attention is being paid to broadband since the Gigabit initiative began. Among this is legislation that can be useful to furthering the interests of broadband deployment in the State. There are several bills introduced into the legislature this year that are helpful to continuing the dialog on broadband and to addressing issues that have arisen during the Gigabit Workshops and during the development and discussion of the CPUC report. Among these are:

**AB955, Coto**, that requires mapping of the deployment of broadband by CENIC tract.

**AB 901, Ridley-Thomas**, that requires each local agency develop a community telecommunications plan.

**SB 850, Escutia**, that requires the Secretary of Business, Transportation and House to develop a strategy for making broadband telecommunications services accessible to all areas of the State.

These bills are likely to be modified from their current versions but those interested in the Gigabit Initiative and broadband should be aware of the bills and feel free to participate in advocating for positions you think are useful.

CENIC will continue to be active in encouraging growth in broadband, particularly for the benefits it brings to students, teachers, faculty and researchers across the State. Watch for the announcement of the report on our One Gigabit or Bust Initiative accomplishments during the last two years and our recommendations for moving the broadband agenda forward.

Source: Jim Dolgonas, CENIC

### **NOC Report**

#### ***Customer Satisfaction Survey:***

As announced in the last issue of CENIC Today, CENIC has initiated a Customer Satisfaction Survey and sends a request to complete the survey upon resolution of each trouble ticket. After having tallied the first month's responses, we can report the following results:

Since implementation of the survey in late February, there have been 87 resolved tickets. Of these tickets, we've received 9 completed surveys. While admittedly a small sample size (approximately 10%), here are the major findings:

Most respondents (8 out of 9) were satisfied with service, with 7 of the 8 reporting that they were "very satisfied."

Only one respondent (1 out of 9) reported unhappiness with service, and the unhappiness was due to length of time to resolve his problem. In this case, there were multiple extenuating circumstances, some of which were specific to the campus, that exacerbated the problem and delayed resolution.

All respondents (9 out of 9) expressed satisfaction with the timeliness of NOC communications regarding status.

Our thanks to those who have taken the time to respond to this short survey. We encourage everyone to do so whenever you are prompted. We will continue to monitor responses daily, contact respondents as requested, and assess completed responses on a monthly basis.

#### ***CalREN Video Services (CVS):***

CENIC has successfully developed interoperability between CVS and the Internet2 Commons, by reconciling differences between the two dialing plans on a regional CVS gatekeeper. This will allow CVS sites to join the I2 Commons and participate in IP-based video conferences with Internet2 members throughout the country via the Commons without the burden of maintaining separate H.323 equipment and configurations for CVS and I2 at the campus level.

University of California sites will soon begin transition to CVS. Since UC sites are already using H.323 for videoconferencing, it is anticipated that this transition will go quickly and without many of the technical difficulties encountered with sites that have had to make the transition from H.320 to H.323. If you have questions about UC transition to CVS, please contact Kelly Stack at [kstack@cenic.org](mailto:kstack@cenic.org)

Source: Sherilyn Evans, CENIC

### **CENIC 2005 - The View from Inside**

The annual CENIC conference, CENIC 2005-Pathways to Discovery, was held March 7-9 in Marina del Rey. This is the second year at this location and the weather was much more enjoyable! This was especially helpful due to some technology that was used for network connectivity - more on this later.

Monday and Tuesday mornings started with Keynote addresses. Monday, and the conference, started with a talk by Susan Kennedy, a Commissioner on the California Public Utilities Commission. She spoke about California's broadband initiative and ways to encourage its deployment.

kc claffy, a principal investigator from the Cooperative Association for Internet Data Analysis (CAIDA), presented a fast paced talk on the future of the Internet and the problems that need to be addressed for a healthy net future.

Other talks on Monday and Tuesday followed two tracks, one discussing "Technology Issues", while the other stressed the "Using the Technology". The presentations for most of these talks can be found by clicking on the talk's title at <http://www.cenic.org/events/cenic2005/agenda.htm>. Several presentations in the "Using the Technology" track are available for streaming as well!

There were vendor sponsored receptions both Monday and Tuesday evenings. These were well attended and were a good opportunity for talking with other colleagues.

Wednesday was given over to general discussions about large scale networks, International and domestic. It was heartening to see that connectivity to the Pacific Rim countries and South America are beginning to be developed and deployed. Of course, there are still a few issues yet to be resolved. A second talk Wednesday talked about the high speed nationwide Research Networks and how they are being used to further research across the US.

The conference closed with a discussion of how CENIC's network and the needs of Homeland Security overlap and compliment each other. This is a very interesting topic which we'll likely hear more about in this next year.

The conference network was a full gigabit connection to the CENIC backbone. This was accomplished via a free space optic link from the hotel to nearby USC Information Sciences Institute and CENIC's backbone. The technology is much more stable and faster than previous generation. The laser technology does have trouble with heavy fog and low angle sun. Luckily, the system worked fine for the conference and was a good demonstration of the technology.

Plans for next year's conference haven't been finalized but it looks like the site is likely to be in northern California. The dates will likely be similar, the second or third week of March. Look for an announcement for a 'Call for Proposals' early in the Fall. These meetings continue to be a key source of information about networking and how networking enables education in California and beyond!

CENIC 2005 was sponsored in part by generous donations from the following companies:

Titanium Sponsor: Cisco Systems

Gold Sponsors: Juniper Networks & Radware

Silver Sponsors: Canon, Level(3), Mirage Networks, Movaz Networks, SBC & Verizon

Source: Phil Reese, Stanford University

#### **CENIC Announces Cal State University Campus Access Infrastructure Project**

The Campus Access Infrastructure Initiative (CAI) is a CSU system-wide program that will greatly improve CSU campus and other CSU site connectivity to the CalREN backbone. The end result will be multiple paths from each campus to the CalREN backbone, to improve robustness and performance. The project will involve installing the infrastructure required to connect each campus' local area network (LAN) to CENIC's CalREN-DC wide area network. The CSU Chancellor's Office's main Long Beach and remote WestEd facilities are included in this connectivity upgrade project as well. CAI will address the CSU's growing requirement for improved network reliability by providing circuit redundancy and path diversity. In addition, network capacity will be dramatically increased.

A project team has been assembled consisting of both CSU and CENIC staff with CENIC providing dark fiber design and overall project management services. Each CSU site will receive two GigE connections via some combination of either a leased circuit and/or a CENIC-managed fiber connection. A minimum of eleven sites will get their first GigE connection this calendar year while dark fiber connections will begin getting delivered starting mid 2006. A project description and draft schedule will soon be made available online at <http://www.cenic.org/projects/index.htm>.

Source: Ed Smith, CENIC

#### **CENIC Participates in Panel on Future Technologies**

On March 16, Brian Court, CENIC's Director of Network Engineering and Design, participated with IT industry leaders in a panel discussion hosted by TechBiz Connection on Internet2 and Future Technologies. Topics of discussion included Internet security, RFID, and the roles of government, entrepreneurs, and the consumer in driving technology innovation.

To find out more about this panel, visit <http://www.techbizconnection.org/events-2005-03.html>

Source: Brian Court, CENIC

#### **National Networking News**

##### **New Industry Helping Banks Fight Back**

A bustling new sector of the technology industry is helping companies cope with a surge in online financial fraud known as "phishing," which uses e-mail to lure people into giving up their financial data at counterfeit bank and e-commerce Web sites.

But the fledgling industry as a whole has adopted divergent approaches to combating the problem, and there are signs that federal regulators could soon step in and mandate specific technologies. As a result, many banks have put off adopting the new services until the market matures. In the meantime, some security experts say, a few banks are resorting to hacker-like tactics in their own defense.

Source: Washington Post, <http://www.washingtonpost.com/wp-dyn/articles/A6367-2005Mar4.html?referrer=email>

#### **Gates, Governors: Upgrade High School**

Implored by Microsoft chairman Bill Gates and others to redesign America's high schools to meet the challenges of the new century, governors and policy makers from nearly every state in the nation met Feb. 26 to March 1 to hash out a plan to keep America's high school students from falling behind their counterparts in other industrialized nations, among other goals.

At a time when only 71 percent of U.S. students graduate from high school and less than one-fifth of the nation's ninth graders go on to earn a college degree, Virginia Gov. Mark Warner, a Democrat and chairman of the National Governor's Association (NGA), called on his colleagues in every state to redesign America's high schools for success in the 21st century.

Source: eSchoolNews, <http://www.eschoolnews.com/news/showStoryts.cfm?ArticleID=5536>

#### **Ed-Tech Funding in Jeopardy**

President Bush's 2006 budget proposal asks Congress to cut more than \$1 billion in total education spending and would eliminate entirely the \$500 million Enhancing Education Through Technology (EETT) state block-grant program, the primary source of federal funding for school technology

The \$2.5 billion proposal, announced Feb. 7, includes a 1 percent across-the-board reduction for all discretionary spending programs and would earmark \$56 billion for the U.S. Department of Education (ED) in 2006, down from more than \$57 billion in 2005. If the President's budget is approved by Congress, it would mark the end of five consecutive years of increases in education spending.

Source: eSchoolNews, <http://members.eschoolnews.com/esnmar05.pdf>

#### **Supercomputer Dedicated To Bioengineering and Computational Biology Installed**

The University of California, San Diego, with support from the National Institutes of Health and the Whitaker Foundation, has installed a supercomputer dedicated to solving a wide range of challenging biological problems. The 210-node Dell PowerEdge Linux cluster capable of 2.6 trillion mathematical operations per second, the second most powerful computer cluster on campus, will be used to analyze everything from the behavior of protein molecules and subcellular structures such as nerve synapses and cardiac muscle cells, to multicellular tissue and the whole heart.

Peter Arzberger, principal investigator and director of the National Biomedical Computational Resource (NBCR), said the Department of Bioengineering and NBCR Dell Rocks Cluster will be quickly integrated into a computational grid to provide the resource to as many UCSD researchers as possible. Eventually, the cluster will also be made available to computational biologists and bioengineers across the country as part of a new paradigm often referred to as grid computing.

Source: This Week @ UCSD, [http://ucsdnews.ucsd.edu/newsrel/general/bioeng\\_cluster.asp](http://ucsdnews.ucsd.edu/newsrel/general/bioeng_cluster.asp)

#### **U.S. Department of Energy Selects National LambdaRail For Next Generation Backbone Network**

National LambdaRail (NLR), a consortium of leading U.S. research universities and private sector technology companies, today announced that the U. S. Department of Energy's Energy Sciences Network (ESnet), which supports the large-scale science and large-scale collaborations of DOE's Office of Science, will use National LambdaRail's unique nationwide optical network infrastructure to implement an important part of its next generation backbone network.

ESnet connects scientists at all major DOE sites with high performance speeds, as well as fast interconnections to more than 100 other networks. These sites include some of the world's most prestigious research, such as Argonne National Laboratory, Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, the National Energy Research Scientific Computing Center, Oak Ridge National Laboratory, the Pacific Northwest National Laboratory, Sandia National Laboratories and universities around the nation

Source: I2-News, <https://mail.internet2.edu/www/arc/i2-news/2005-03/msg00000.html>

#### **Hack Your Network**

It's a dangerous world out there - especially for IT organizations charged with protecting valuable data from would-be cyberthieves and vandals. During a less complicated time in IT's history, internal networks were simply walled-off from the outside world - serving communications needs among employees, but rarely beyond. But today's enterprises can no longer isolate their networks from the outside world; e-commerce, supply chains, mobile computing and many other requirements of business in the 21st century simply won't allow it to happen. The only path that security managers can realistically follow now is to harden their networks, applications, and operating systems as best they can, accept that there will always be some level of risk, and go on conducting business.

Source: Network World Fusion, <http://www.nwfusion.com/research/2005/032105-ethical-hack.html?ts>

#### **Lafayette Hits Snag in Fiber Build**

On Wednesday, a state district judge ruled that the Lafayette Utilities System (LUS) must follow a different portion of state law to issue \$125 million in bonds to pay for its planned fiber-optic telecommunications business. The ruling opens the door for a special election to decide whether the LUS can borrow the money necessary to fund the project.

The utility system, which built a fiber network to service its utilities business, has been offering wholesale bandwidth services to at least 11 Internet service providers, and providing retail broadband services to city agencies, since 2002. Now the LUS wants to expand this network, and provide residents and businesses with cable, phone and high-speed Internet services over fiber connections into homes and businesses.

Source: CNET News.com, [http://news.com.com/Lafayette+hits+snag+in+fiber+build/2100-1034\\_3-5589315.html?tag=cd.top](http://news.com.com/Lafayette+hits+snag+in+fiber+build/2100-1034_3-5589315.html?tag=cd.top)

#### **Report: Hacker Attacks on Macs Rising**

Hacker attacks on Apple Computer Inc.'s Macintosh OS X operating system, thought by many who use the Mac to be virtually immune to attack, are on the rise, according to a report from anti-virus software vendor Symantec Corp.

"Contrary to popular belief, the Macintosh operating system has not always been a safe haven from malicious code," said the report, which was issued Monday. "It is now clear that the Mac OS is increasingly becoming a target for the malicious activity that is more commonly associated with Microsoft and various Unix-based operating systems."

Source: MSNBC, <http://www.msnbc.msn.com/id/7267986/>

#### **About CENIC**

CENIC is a not-for-profit corporation serving California Institute of Technology, California State University, Stanford University, University of California, University of Southern California, California Community Colleges and the statewide K-12 school system.

CENIC's mission is to facilitate and coordinate the development, deployment and operation of a set of robust multi-tiered advanced network services for this research and education community.

More information about CENIC can be found at <http://www.cenic.org>.

#### **Subscription Information**

You can subscribe and unsubscribe to CENIC Today via the web at: <http://lists.cenic.org/mailman/listinfo/cenic-today>

Website questions: [webmaster@cenic.org](mailto:webmaster@cenic.org)  
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