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CENIC News

President's Message: The Latest CALEA Developments

I continue to receive requests for information on the status of CALEA, the wiretap law that the FCC intends to apply to private networks such as CalREN and those operated by educational institutions. So, I thought it would be helpful to provide an update this month.

On May 3, 2006, the FCC adopted its second Report and Order regarding the implementation of CALEA for "facilities-based, broadband Internet access providers and interconnected VoIP services". In it, the FCC denied petitions to suspend or extend the May 14, 2007 compliance deadline. The FCC also did not intervene in the standards development process, essentially not wanting to be involved in defining compliance.

On May 5, 2006 oral argument was heard on the appeal of the FCC's Order extending CALEA to facilities-based, broadband Internet access providers (as contained in the first Report and Order). It appears that the three-judge panel was skeptical of the FCC's analysis and position. The Court of Appeals is expected to render its opinion in August. The outcome of that opinion could significantly change the FCC's direction in applying CALEA to private networks. However, even if that should occur, it is likely that Congress might amend CALEA to explicitly apply to "Internet access providers".

The bottom line is that not much has changed. The schedule for compliance has not changed, and we still do not know what compliance means. While many do not believe that Congress, in passing CALEA, ever intended for it to apply as the FCC now intends, we really don't know what position the courts will take on that issue. So, I think we are in the middle of a movie and can't predict how it will all end, though the ending can have a big (viz. expensive) effect on the education and research community. Stay tuned for the next update.

-- Jim Dolgonas, CENIC

CalREN Video Services Debuts New CVS Scheduling Desk in June

Through CalREN Video Services (CVS), CENIC provides videoconference services for certified sites on our network. Thanks to CVS, CENIC Associates enjoy convenient, reliable videoconferencing for collaboration, classes, and exchange of information.

And starting in June, CVS users will find that service even more convenient. Through the new CVS Scheduling Desk, powered by the Polycom Conference Suite, campus videoconference administrators will enjoy the ability to schedule their own videoconferences directly. Videoconference administrators will be able

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to select sites dynamically, create recurring conferences, and manage existing conferences, including changing conference dates, times, and participant sites.

During June, we recommend all videoconference administrators take advantage of CENIC's online training, which can be found at <http://training.cenic.org/>. This training requires a userid and password; to obtain these, please contact CENIC via email to scheddesk@cenic.org at your earliest convenience so that you can begin to enjoy the added features and flexibility of the new CVS Scheduling Desk.

To learn more about CalREN Video Services and how your campus can take advantage of the benefits of high-quality Video-over-IP over CalREN, please visit our Web site at <http://www.cenic.org/services/cvs/> or contact CVS via email to scheddesk@cenic.org.

-- Sherilyn Evans, CENIC

UNAVCO to Use CENIC's CalREN for EarthScope Seismic Observatory Project

On May 15, CENIC and UNAVCO announced that CalREN is being employed to transmit data generated by the EarthScope project, a multi-state network of diverse geophysical instruments that will significantly expand capabilities to observe the structure and ongoing deformation of the North American continent.

One of the components of the NSF-funded EarthScope project is the Plate Boundary Observatory (PBO), a geodetic observatory designed to study the three-dimensional strain field resulting from deformation across the active boundary zone between the Pacific and North American plates in the western United States. The observatory consists of arrays of Global Positioning System (GPS) receivers and strainmeters which will be used to deduce the strain field on timescales of days to decades and geologic and paleoseismic investigations to examine the strain field over longer time scales.

A total of 103 strainmeters and 853 GPS stations are slated to be installed as part of the PBO by September 2008, over half of which will be located in California. As a result of an agreement between UNAVCO and CENIC, some of the strainmeters and GPS stations in California will connect through various CalREN K-12 node sites and their data transmitted over CalREN to the UNAVCO data archives in Boulder, CO.

CENIC's California Research & Education Network Supports Historic US-India Summit on Education, Research, and Technology

On June 1, CENIC announced that CalREN was used to enable a HDTV videoconference between the President of India, Dr. APJ Abdul Kalam, at the Presidential Palace in Delhi, and 250 attendees at yesterday's US-India Summit on Education, Research, and Technology at the University of California, San Diego.

In order to facilitate the high rate of data exchange that this event required, CENIC provided 1 Gigabit of bandwidth across its high-performance CalREN-XD network from San Diego to Los Angeles, plus connectivity through its provision of the Pacific Wave international peering facility in Los Angeles.

To learn more about these two stories, visit CENIC's Press Releases at <http://www.cenic.org/about/releases/releases.htm>.

CalREN Update: Network Projects and Activities

The Campus Access Infrastructure initiative (CAI) is a collaborative multi-year program to provide redundant, diverse network connections to CalREN for all Cal State campuses and Chancellor's Office sites, and May 2006 has been a busy month for implementing this initiative.

At Cal State Long Beach, acceptance testing has been completed, and a maintenance window has been scheduled to provide the campus with a new Gigabit Ethernet circuit, which will make CSU Long Beach the latest campus to receive such a circuit. San Diego State University, which is already connected to CalREN via CENIC-managed fiber, is scheduled to receive its second Gigabit Ethernet circuit in early June. Once this diverse circuit is brought online, SDSU will enjoy complete connectivity according to the Campus Access Infrastructure initiative standard. Fiber construction work for both the California Maritime Academy and San Jose State University was completed this month, and CENIC's Network Operations Center is working together with the campuses to "light" the fiber so these sites can begin to use their new network paths. The Moss Landing Marine Laboratories, a Cal State-owned research facility used by several campuses in the central coast region, has ordered a Gigabit Ethernet circuit as well, so be sure to stay posted on further developments related to the Campus Access Infrastructure initiative in future issues of CENIC Today.

The coming year will be a busy one for the K-12 segment, as CENIC is currently collaborating with K-12 representatives on planning for those sites identified as requiring a circuit upgrade during the 2006-07 fiscal year. CENIC is looking forward to working with the K-12 representatives to ensure that California's elementary and secondary schools enjoy the most advanced connectivity to CalREN.

And finally, the Naval Postgraduate School in Monterey, CA will enjoy Gigabit Ethernet connectivity to CalREN in June. For those readers with an interest in personal computing history, they may recognize the NPS as the institution at which the operating system pioneer Gary Kildall, famed for the CP/M operating system and personal computing's implementation of the PL/I programming language, was a faculty member. The NPS was initially created in 1909 in Annapolis, MA and moved to its current home in Monterey in 1951. They are the newest institution to join CalREN, and we are delighted to have them on board. We look forward to empowering their achievements in the future.

For further updates on these and other network projects, be sure to keep in touch with CENIC Today.

-- Ed Smith, CENIC

Focusing on Wireless as a Viable One Gigabit Broadband Strategy -- Final Report from CENIC's NSF-funded Workshop

In September of last year, CENIC held a workshop examining the following question: "If deploying ubiquitous one Gigabit connectivity to every business, educational institution, and home were your goal, what would need to be done to make it a reality?" The goal of this workshop was the development of next-generation wireless broadband, specifically looking at the research topics that need to be addressed to obtain wireless

functionality in the range of one Gigabit per second by 2010. The workshop also addressed how federal, state, and local policies would need to be changed to encourage that development.

If you'd like to learn more about this workshop, as well as familiarize yourself with the benefits and challenges of using wireless to implement Gigabit connectivity, visit CENIC's homepage at <http://www.cenic.org> to find the workshop's final report. Wireless is an exciting new arena in the field of high-performance connectivity, particularly for rural areas, and CENIC will be sure to keep you posted on any news and updates of interest to us and to our Associates.

National Networking News

Peering Brings IP Services To Wider Audience

Peering is poised to break down the biggest hurdle preventing the widespread and low-cost use of cutting-edge services based on IP (Internet Protocol), said speakers at the VON Europe conference in Stockholm. Those services include integrated video conferencing, media sharing, high-quality audio, and secure, integrated instant messaging.

[...]

Peering is the process of VOIP service providers connecting to each other directly to route calls, circumventing the PSTN (public switched telephone network). The process eliminates some of the costs involved with connecting to the PSTN but also increases voice quality partly because the calls don't have to be converted back and forth from IP to TDM (time division multiplexing), the standard used by the telephone networks.

Source: InfoWorld, http://www.infoworld.com/article/06/05/17/78408_HNpeeringvoip_1.html

Michigan to Require High School Grads Earn Online Credits

Michigan Governor Jennifer Granholm signed legislation that would add the completion of an online course to the state's requirements for a high school diploma. The rule is part of a legislative package, signed by the governor last month, to revamp the state's high school graduation requirements. Students will be required to take an online course or have the "online learning experience incorporated" into each of 16 credits required by the new Michigan Merit Curriculum, which includes a spread of secondary school learning disciplines.

UC Berkeley Profs Campaign to Bridge Faculty "Digital Divide"

Professors at the University of California at Berkeley have proposed that the university provide a baseline computing standard for all faculty and instructors to correct what they see as a "digital divide" on campus between science and liberal arts professors.

Source: Campus Technology Magazine, http://www.campus-technology.com/news_article.asp?id=18442&typeid=150

NSF Middleware Initiative Release 9 Provides Tools That Enable Online Collaboration And Resource Sharing For Research And Education

Providing new event diagnostics, privilege management, and portal-building tools, the ninth release of the National Science Foundation Middleware Initiative (NMI-R9) makes further progress in addressing the challenge of collaborating online in a shared cyberinfrastructure environment. NMI-R9 is available to the public for downloading under open-source licenses at <http://www.nsf-middleware.org>.

Source: the National Science Foundation, <http://www.nsf-middleware.org/Lists/NMIR9/pressrelease.aspx>

World's Most Powerful, Millimeter-Wavelength Radio Telescope Dedicated in California

On May 5, astronomers from the University of Maryland, the University of California, Berkeley, the University of Illinois at Urbana-Champaign and the California Institute of Technology dedicated the world's most powerful, millimeter-wavelength radio telescope in Inyo County, California.

Formed from a linked array of 15 radio telescope dishes, the Combined Array for Research in Millimeter-wave Astronomy, or CARMA, will give scientists an unprecedented look back in time to learn more about the birth of galaxies, stars, planets and even the universe itself.

For more information, visit <http://www.mmarray.org/>.

Source: National Science Foundation, http://www.nsf.gov/news/news_summ.jsp?cntn_id=106948&org=NSF&from=news

GridNets 2006: Third International Workshop on Networks for Grid Applications

Cooperation between Grid middleware and network infrastructure driven by a common control plane is a key factor to effectively empower the global Grid platform for the execution of network-intensive applications, requiring massive data transfers, very fast and low-latency connections, and stable and guaranteed transmission rates. Big e-science projects, as well as industrial and engineering applications for data analysis, image processing, multimedia, or visualization just to name a few are awaiting an efficient Grid network support.

The Gridnets 2006 workshop will provide a focused and highly interactive forum where researchers and technologists will have the opportunity to present and discuss leading research, developments, and future directions in the Grid networking area. The workshop will take place on October 1-2, 2006 in San Jose, CA. The paper submission deadline has been extended to June 7, so you still have time to be a part of this important event.

For more information, visit <http://gridnets.org/2006/>.

Governor's Budget for 2006-07: California's Community Colleges Win

Spending on higher education would increase from \$14.2 billion to \$14.8 billion under the governor's revised spending plan. The biggest winner would be community colleges, which would see an increase of \$80.4 million in general fund and Proposition 98 funds in the revised budget, up a total of \$686.9 million from the previous year. Funding for the University of California and California State University systems remained virtually unchanged from January.

Source: SFGate.com, <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2006/05/13/MNG94IRGNO1.DTL>

San Diego District Receives \$2.24 Million Grant

San Diego City Schools recently received a \$2.24 million state grant. The district will use the grant to implement the third phase of the district-developed Enhancing Science Education Through Technology (ESETT) program, which integrates technology into middle school science curriculum and expands learning opportunities in inquiry-based science education.

Funding will come from the California Department of Education (CDE), made possible by the No Child Left Behind (NCLB) Enhancing Education Through Technology (EETT) competitive program. The funds will provide technology for science education to more than 12,300 students at 12 middle schools. The grant will also add 40 teachers to the program.

Source: Sandi.net, http://www.sandi.net/news/news_releases/2006/0322_edtech_grant.html

About CENIC

California's education and research communities leverage their networking resources under the umbrella of a nonprofit corporation known as CENIC, the Corporation for Education Network Initiatives in California, in order to obtain cost-effective, high-bandwidth networking to support their missions and answer the needs of their faculty, staff, and students. CENIC designs, implements, and operates CalREN, the California Research and Education Network, a high-bandwidth, high-capacity Internet network specially designed to meet the unique requirements of these communities, and to which the vast majority of the state's K-20 educational institutions are connected. In order to facilitate collaboration in education and research, CENIC also provides connectivity to non-California institutions and industry research organizations with which CENIC's Associate researchers and educators are engaged.

CENIC is governed by its member institutions. Representatives from these institutions also donate expertise through their participation in various committees designed to ensure that CENIC is managed effectively and efficiently, and to support the continued evolution of the network as technology advances.

For more information, visit www.cenic.org.

Subscription Information

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Website questions: webmaster@cenic.org
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