University Expertise Showcased During CENIC Conference

By Joan Ackerman

The Corporation for Education Network Initiatives in California (CENIC), which designs, implements and operates CalREN, the California Research and Education Network, a high-bandwidth, high-capacity network that is specifically designed to meet the unique requirements of California’s education and research communities, hosted its 14th Annual Conference “Full Speed Ahead” at the Hyatt Hotel in Monterey from March 8-10, and NPS participated fully in the entire slate of activities.

Emphasizing the importance of participating in “Full Speed Ahead,” Dr. Christine Haska, Vice President of Information Resources and Chief Information Officer said, “Conferences such as CENIC strengthen our partnerships with organizations that are vital to our collective efforts, ensuring even greater success in the future.”

An entire afternoon of presentations at NPS and a tour of the MOVES Institute, followed by a reception and poster session on the Quarterdeck, were included as part of the program. On Monday, March 8, CENIC guests filled the Mechanical and Aerospace Engineering Auditorium to capacity, where Dr. Karl van Bibber, Vice President and Dean of Research, began his plenary address by quoting the late Dr. Richard Hamming, after whom the NPS supercomputer is named. “The purpose of computing is insight, not numbers,” he said. Offering his reflections on high-performance computing, visualization and networking, Dr. van Bibber concluded by stating, “Computation is one of the pillars – along with theory and experiments of scientific discovery – that has been elevated to the status of capturing and exhibiting an underwa-

The Extensible 3D (X3D) Earth project, presented by Dr. Donald Brutzman of MOVES and student Li Dale Touetelotte, is based on a standards-based 3D visualization infrastructure for visualizing all manner of real-world objects and information constructs in a geo-

At the start of the reception, NPS Executive Vice President and Provost Leonard Ferrari thanked CENIC “for allowing the Naval Postgraduate School to participate in the 2010 CENIC Annual Conference,” recognizing that “NPS is one of many institutions in the region that benefit from CENIC.” He also acknowledged the member institutions who were participating in the poster session.

The ePortfolioCA Project and Noyce Scholar Program were presented by the K-20 Educational Technology Collaborative through California State University at Monterey Bay. Provost Donald Fischer of the Defense Language Institute, Dr. Jack Franke of Emerging Languages and Dr. Tamas Marius, Language Technologies Manager, presented Scaffolding Language Learning with Technology, Technology Tools in Proficiency-Based Syllabi for Foreign Language Education, and Online SCOLA Services in Support of Foreign Language Education, respectively. Mike McCann on X3D Earth for Ocean Exploration, Danelle Cline on AVED Application and Paul McGill on Ocean-Bottom Broadband Seismometer to a Seafloor Cabled Observatory: A Prototype System in Monterey Bay, headed the team from the Monterey Bay Aquarium Research Institute. Bob Cole and Lynn McDonald of the Monterey Institute for International Studies presented on TEDx Monterey: Be the Solution, and Dr. Sharon Colton of Monterey Peninsula College summarized the Microsoft-endorsed Communicating with SharePoint.

NPS was well-represented in the mix as well. Posters covering areas of interest for CENIC guests included everything from modeling the arctic ice melt and maritime research to cyber protection and turbopropulsion.
At breakout sessions during the conference, Dr. Simson Garfinkel of Computer Science discussed *Fast Disk Analysis with Random Sampling*, a new method for rapidly characterizing the forensic contents of a hard drive or other storage devices using random sampling, making it possible to rapidly determine with a high degree of confidence whether or not large storage devices have been properly cleared of data from previous use.

Dr. Alex Bordetsky, Associate Professor of Information Systems and an Associate Chair for Research at the Department of Information Sciences at NPS, and Director of the NPS Center for Network Innovation and Experimentation (CENETIX), presented *Testbed for Tactical Networking and International Collaboration in Maritime Interdiction Operations* discussing the core of the Tactical Network Topology (TNT) experiments high-value target and Maritime Interdiction Operation (MIO) experimentation. Bordetsky outlined the unique testbed that provides a platform for the collective learning of achieving synergy between man and machine through ubiquitous networking and collaboration, enabling sustainability and evolution of the TNT experimentation campaign.

Dr. Tristan James Mabry, NPS Executive Director of the Joint Foreign Area Officer Skill Sustainment Pilot Program and a Research Assistant Professor in the Department of National Security Affairs, and Jonathan Russell, Director of Academic and Media Systems presented *Building FAOweb: Developing Regional, Cultural and Language Expertise Through the Web*, which outlined the goals, timeline and design of FAOweb, developed using open source technologies like Sakai Collaborative Learning Environment and LifeRay.

At the conclusion of the conference, Haska said, “The work that was showcased by the NPS presenters clearly underscores NPS’ world-class reputation as an institution of higher education.” Jim Dolgonas, President of CENIC, acknowledged the tremendous changes made since CENIC held its third annual conference in Monterey in 1999, when NPS wasn’t even a member of the organization. Today, as he looks towards CENIC’s future, Dolgonas says he sees “an increase in fiber to provide higher bandwidth to institutions in remote regions, low-cost and scalable cloud infrastructure and computing services, and an upgrade on our backbone from 40 to 100 gigabits.”

While noting the technology sponsors, major technology industry and higher education representatives that filled the seats at “Full Speed Ahead,” Dolgonas also emphasized the value of NPS to CENIC and to this particular conference when he said, “NPS has demonstrated what the conference is all about – a sense of community, a sense of sharing, examples of experimentation … and the opportunity for presenters to share with others what they have learned.”

A highlight of the conference included two demonstrations of ultra-high-resolution video streaming – a recorded video stream of otters in Monterey Bay and a live stream from Japan with Atsushi Takahara of Nippon Telegraph and Telephone Network Innovation Laboratories, inventors of the only three cameras in the world capable of recording at this resolution.