The 12th TechEd International Conference and Exhibition was held in Ontario Convention Center, Ontario, California, March 25-28, 2007. The conference was held over three days with a day of pre-conference programs and is among the largest of such conventions and one that has sustained itself this long. The participants seemed to be primarily regional community college and K-12 representation than a national or international roster. There were many half-and full-day workshops prior to the start of the conference www.techedevents.org/2007/conference/

The keynote speaker on the day I attended was John Garamendi, Lieutenant Governor for the State of California, who talked about a Los Angeles Times' article (dated) on educational support as a national security issue. He made the comparison of Treo and Blackberry use as a challenge or opportunity - if these technologies allow wireless web and text access, what is their use in teaching? As a government and elected official he sees technology as an opportunity and questioned how should the state government interact with technology in education or should government "stay out of the way?" What applications are forthcoming and what role should government play in funding issues? He acknowledged the need to differentiate communities.

A second pair of speakers was part of a special presentation titled "Three decades later: what do we well and what we can do better." The presentation went in tandem with speakers talking then commenting on each other's topics. Speaking were Jeanne Hayes, President of the Hayes Connection and Founder of Quality Education Data, and Kenneth C. Green, Founding Director of The Campus Computing Project and Visiting Scholar at Claremont Graduate University. Hayes spoke about America's digital schools and Green on the impact of technology in education. Green used a metaphor of education development as coding, where binary thinking (ones and zeroes, yes or no) is influencing the direction of technology use in education. Green talked about how adoption of technology moves from "cute" to "convenient" to "compelling" to "compulsory." The implementation of technology in education and pedagogy caught in a balance between "aspiration vs assessment and accountability" by administrations and funding authorities. Expectations of electronic consumer culture influence on education introduce "pedagogic mistrust" of technology issues expected to solve education challenges. Focus needs to return to technology important instruction/learning and learning outcomes. Educators held to measures of assessment/accountability but generally lack data to determine the effect of technology in teaching. Little strong research correlates impact of technology on education and its influence. Despite three decades of spending there is no strong research demonstrating that technology necessarily translates into standardized test score results. The Federal government is pressing for national assessment and productivity measures in teaching standards that introduce data-driven decision-making. Green compared the assessment environment with a quote by Margaret Spellings, US Secretary of Education, "In God we Trust, and from everyone else we want hard data."

Hayes described using "assessment as feedback" and taking a technology triage that can provide planning a safe boundary for decision-making. Educators should ask themselves, "What do you do for September? What is important to do by September 2008? What about 2-3 years out? After three years? Fall terms in the future?" This ordering of assessment criteria can provide windows for determining effectiveness and student assessment at stages of a large and long process.

Hayes and Green traded comments on how data about students can be a source for data mining as the changing culture of how data is collected and used, moving from "data as a weapon" to "data as a resource." Examples of data as resource included the use of students' ePortfolio, "where proxy can use the type of material posted to document student progress." Hayes described how interactive whiteboards and response device "clicker" systems could collect response data of student involvement in class discussions, lectures and group work.

Hayes discussed how online learning and for-profit education is growing, citing a Sloan Center report that the numbers of online courses taken by students is increasing. We are seeing niche online K-12 and online high school options appearing. Blended learning, mixing home school, charter and public education are emerging. Into this mix of online and in-person teachings are teachers and faculty who are finding professional development a challenge. In a public high school in Los Angeles, how can $100 per student for supply technology parity with for-profit education with access to greater funding? Hayes offered educators in the audience a visualization challenge: "Can I see myself in the situation where technology will make a difference?"

A challenge with bringing technology into education situations is having a budget to support new purchasing with hardware and technical support. This "performance development" needs to take a difference perspective in funding
expectations. Many school districts rely on bond measures to raise capital for purchase and deployment of technology into schools. The effect of funding technology development on long-term bonds is to apply 30-year debt payment for a three to five year period when technology will be effective.

A question from the audience asked the speakers to look into a crystal ball and offer predications of what future technologies might include. Green talked about how wireless connectivity is pressing for development of more mobile applications. He likes how digital photography combined with tagging and other Web 2.0 applications. Both speakers talked about how technical applications advantage personalized learning. Green compared technology planning for the future with a quite by hockey star Wayne Gretsky, who when asked how he managed to be in the right place on the ice to score said it was about “skating to where the puck will be, not where it is.” The presentations are available as podcasts at www.techdevents.org/2007/conference/Keysnotes.asp

Interview with John Fitzpatrick, Director of Strategic Marketing for Higher Education, Educational Testing Service (ETS)

I had the opportunity to speak on the TechEd 2007 exhibit hall floor with John Fitzpatrick, a Director of the Higher Education Division, and Gina Montoya, Assessment Solutions Advisor, about ETS and its testing services. We spoke about how the Educational Testing Service's Information and Communication Technology Literacy Assessment (ICT) has been in use for almost two years and tests student ability to use the internet to complete tasks in several different proficiencies.

John Fitzpatrick said the ICT test evaluates students in seven different areas on their ability to access information as well as manage, evaluate and define it. It also tests the students on integration of the information into their work and their ability to communicate and create the proper responses from their research material.

The ETS worked to create the ICT assessment test with California State Universities including, Purdue University and the University of Portland, Fitzpatrick said. The University of California Faculty Senate has directed a subcommittee to consider use of the ICT Literacy test for testing information literacy in the ten-campus University of California system. Fitzpatrick said the test could be used to determine a student’s ability to find reliable information on the internet and apply it to his or her work.

Fitzpatrick went on to say that the ETS is considering developing tests for students at every level of education, from grade school to the workforce. The idea would be to track a student’s progress and assign a score, to offer to potential employers. “It’s not a test that every student will need to take, per se,” he acknowledged, but noted that there has been “an overwhelming interest” in the exam among community college administrators.

He added that institutions might use the test to evaluate third-year students’ research skills before they finish a major, or in distance learning. He added that companies might want to test the computer skills of potential employees in an information and technology intensive workplace. In April following the TechEd 2007 conference, ETS changed the name of ICT Literacy Assessment to the iSkills™ assessment.

When asked about what new testing arenas ETS may be exploring, Fitzpatrick described the K-6, K-12 and global higher education markets as potential opportunities. With the development of online testing in traditional and proctored situations, these education markets could be areas for new testing products, such as tutorials and online assessment tools. For ETS the core remains freshman and sophomore student testing for higher education and advanced junior/senior students for college admissions and reading comprehension.

TechEd 2007 includes concurrent morning and afternoon to highlight technology for media creation, eLearning, Workforce Education and Interactive & Collaborative Learning Communities. A program “Staying ahead of the curve: supporting faculty and their technology” was about the implementation, development, planning and administration of institution-wide learning systems. Larry Edwards, Oklahoma State University (OSU), Oklahoma City, lead this session that looked at how some schools, colleges and universities venture into learning technologies with insufficient planning, coordination, or prioritization. OSU-Oklahoma City has long been a leader in distance education, especially in online courses and in interactive television. Recent upgrades of campus computer labs, new installations of multimedia stations in a number of classrooms, the addition of an Academic Technologies production studio, new wireless laptop computer labs, new wireless notebook labs, the use of streaming video, renovations and upgrades of interactive television classrooms, etc. have all vastly increased the technology available to faculty members. Edwards described how a Title III grant has many of the technology additions and upgrades possible. In addition Title III has provided funding for a Student Portal which encourages a sense of community among online students and provides them with additional tools to interact with faculty members. Other student support services have also been upgraded through the use of technology. Students can enroll online, pay their bursar’s bills online, financial aid has been automated and self-help computer terminals have been set up in the enrollment area. All of this has enhanced the technical capacity that the institution can bring to bear on instruction and student support. However, it has also increased faculty concerns about the support they receive for the use of technology in their classes.

Restrictions on administrative rights to install software, problems in loading faculty and students in online courses, breakdowns in the connectivity of interactive sites and training for the changeover in course management systems, demands on overloaded IT and administrative technologies (AT) staff are just a few of the issues that have caused faculty concerns. In Fall 2006, the Faculty Senate sent a resolution to the campus president, Dr. Jerry Carroll, expressing concerns about these issues. The resolution stated that only the campus president had the authority and perspective to successfully deal with these issues. In response the president set up an AT/IT Task Force. That group had to identify both the macro- (including structural and communication) and micro-issues (such as administrative
right) and made recommendations to the president and vice-presidents' council about solutions to those problems. The presentation traced the history of these issues, the charge of the Task Force, outline of its recommendations, trace the implementation of those recommendations and provide an overview of the current situation at OSU-Oklahoma City regarding the use of technology to teach and support students. Several examples of the technology in place at OSU-Oklahoma City were also showcased. The session is available via podcast at http://download.podango.com/mp3tracker/14988/file.mp3

Another session entitled “Looking to the future of core administrative applications” and presented by Colin Currie, Princeton University, explored how to look at the present state of core administrative systems consider vended, custom and community source, anticipate what is coming in the future, and makes a case for cross-institution collaboration. The presentation was based on two primary sources. The first is an article by Currie, the Director, Administrative Information Services, Office of Information Technology, titled “The Open Source Congress” in the July/August 2006 issue of Educause Review. The second source was content of a discussion panel titled “The future of the higher education enterprise application” at the May 2006 EDUCAUSE Enterprise Technology Conference for which I will be the moderator. The panel discussion sought to identify the pros and cons of vended vs homegrown vs open source options for administrative systems with an eye on how we anticipate things shifting in the future.

(1) Definition of core administrative systems in Higher Education

• Human resources/benefits/payroll
• Student systems
• Financials systems
• Others

(2) Options for core systems and their pros and cons

• Packaged software
• In-house designed/developed
• Open source

(3) Exploration of Open Source options

• Previous initiatives
• On-going systems
• Future options

(4) Requirements for success

• Broad understanding of shared requirements and opportunities
• Cross-institutional collaboration
• Forward and original thinking
• Interoperability across different systems

(5) The notion of Higher Education Congress and its role in moving open source forward

• Definition of what information is universal
• Agreement of format of basic elements
• Creative thinking of how to solve the problems of the broadest possible set of our community
• Planning for collaboration and sharing of systems
• Economies and efficiencies for development of these systems

Michael L. Bettino, Cerritos College, Norwalk, California presented “A successful roll-out campaign of the SAKAI course learning environment.” Cerritos College has long been a leader among community colleges in innovation and the use of technology in the classroom. Founded in 1955, it is one of the largest and most dynamic single-campus community college districts in the Los Angeles, California area. The college serves more than 23,000 students, more than 75 per cent of whom are members of ethnic minority groups, a reflection of the diversity of the community Cerritos College serves. To meet the needs of its faculty and students, Cerritos College developed its own course management system in 2000, but soon discovered that a more dynamic, scalable and affordable platform was needed. After much research, the College joined the Sakai Educational Partners Program in 2005. Sakai (http://sakaiproject.org) is a community source project founded by the University of Michigan, the University of Indiana, Massachusetts Institute of Technology, Stanford University, the Open Knowledge Initiative, the Hewlett Foundation and the Mellon Foundation. This allowed Cerritos College to participate in a large, self-sustaining community of institutions that share the Sakai Project™ open source vision for leveraging the economics and innovation of common academic software. As members, they sought not only to avail themselves of the expertise of the SAKAI educational partners project (SEPP) membership, but to develop and distribute their own open source applications and enhancements. To this end, Cerritos College has developed modifications to the Sakai open source code that allows the use of Microsoft SQL Server 2005. This has profound implications for institutions of higher education running Microsoft-based servers. The potential impact is particularly great for community colleges, many of whom lack the staff resources to modify such open source software to better meet their institutional needs. This is the primary reason for the lack of community college involvement in open source development. Cerritos College is only one of two community colleges in SEPP’s 100-plus partnership membership. Cerritos College has begun the roll-out phase of Sakai in Fall 2006. It is branded as TalonNet, a play on the Falcon mascot. The presentation will cover the various efforts that have been deployed to assure faculty buy-in and early adoption. This has included a very heavy training schedule and numerous presentations. The marketing campaign for student use has been intensive with presentations, training opportunities and

Table 1
Web 2.0 applications for Macintosh computer users

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<th>Instant messaging</th>
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the development of a new mascot — TalonMAN. This presentation will show the use of TalonMAN in multimedia presentations, posters, etc. and has a cartoon series running in the campus newspaper “Talon Marks” (see: http://media.www.talonmarks.com/media/storage/paper327/news/2007/01/17/Cartoons/Cartoons-2632668.shtml). In addition this presentation explored gorilla marketing efforts that have really paid off. Cerritos College has made a major commitment to the Sakai community and is positioned to assist any other institution in the development, deployment and marketing of this open source course learning environment. More information is available in a podcast at http://download.podango.com/mp3tracker/14842/file.mp3 (Table I).

A session entitled, “Where the Future of Education is here and now... StudioThirtySeven.com” demonstrated how screencasting, instant messaging and podcasting combine to enhance classroom instruction and extended learning for high school mathematics students. George Cheung, RSP Educator for the Covina Valley Unified School District in California, developed a teaching website for 9-12 grade RSP students. The site Studio37.com (StudioThirtySeven.com) uses screencasting as video by taking advantage of software installed in Macintosh computers for teaching. Mr. Cheung teaches algebra to special education high-school students with in-class and web-based course presentations.

Another one of the more interesting sessions was “Bring the universe into your classroom with remote telescopes” with Vivian White of the Astronomical Society of the Pacific. Ms. White, Project Coordinator of the Bay Area Project ASTRO (www.astrosociety.org/baprojectastro.html), discussed how she works to connect students with the excitement of astronomy using remote observing activities. Telescopes on the other side of the world provide live daytime access to the planets and beyond. The session demonstrated how remote telescopes can be used as a tool in astronomy education for students from K-12 and beyond. More than just looking up in wonder, this live tool can be useful in teaching about Solar System dynamics for younger students and galactic neighbors for older students. In the workshop, White presented activities that can be modified to use in grades 5-12, depending on the depth your students would like to explore. Combining hands-on activities with this on-line opportunity and your students will understand astronomy better than any book can explain it. Student projects take on a completely new dimension with real pictures that come directly to the classroom. White described how to use Slooh.com™ (www.slooh.com/), one of the least expensive and most easy-to-use interfaces for bringing remote astronomy to the public. While the demonstration used the technology of Slooh telescopes, the lessons can also be applied to other remote and robotic observatories. There is no astronomical data processing skills needed for this level of investigation. This new technology came online in 2003 and allows users to see an image develop as the telescope collects light from distant objects. These telescopes are located off the coast of Africa in the Canary Islands and thus are in darkness during American schooldays across the country. This allows for in-class observing sessions from one or multiple computers, where the teacher runs the “mission” and the students are able to observe. The interface is both simple to use and visually stimulating. Students are able to create their own missions or piggyback on another member’s observing session. A family friendly, monitored online chat room allows students to ask questions and get advice on observations and objects. Daily guided shows take students on tours of the night sky with astronomers from around the world. With this resource, teachers will be able to navigate successfully a mission to a planet, nebula, galaxy or other celestial object. So much more than just taking pretty pictures, they will see how this tool can be used in the classroom to teach concepts required by national and most state standards. Students are able to monitor phases of the Moon and its features. Educators are able to show by observations that the Solar System is heliocentric, just like Galileo did when looking through a telescope for the first time! You are able to track the motion of Jupiter’s moons, see different colored stars and learn what that means about stellar composition. Compare many galaxies that can only be seen through a telescope to determine the different types. The audience members learned the background they need to help students understand what they are seeing, as well as interactive, kinesthetic activities to back up their observations with hands-on learning.

Overall, TechEd provided a varied mix of workshops and sessions for educators and technology support staff to explore a variety of novel approaches merging pedagogy and technology. The 2008 TechEd Conference will be held April 13-16, 2008 in Ontario, California.

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