

CAMPUS TECHNOLOGY

Empowering
the World of
Higher Education

September 2011

CT Forum
2011
Page 20



Do For-Profits Do IT Better?

Despite recent controversy, for-profit schools' advanced use of technology offers valuable lessons for traditional institutions. Page 30

**EXTREME
MAKEOVER:
IT GOVERNANCE**
p. 36

**CT2011 CONFERENCE
HIGHLIGHTS**
p. 12

MEET GROWING DEMANDS WITHOUT GROWING RESOURCES.

It's not as impossible as it sounds. We have everything to help you make the most of your data center. Best-in-class technology. A highly trained Virtualization Assessment Team. Experts who get budgeting requirements and purchase cycles. So your infrastructure is efficient and better supports your school. All you have to do is call or click.

800.767.4239 | CDWG.com/virtualization



NetApp® FAS2040

CDWG 1862482

- Lower costs by consolidating onto an efficient storage pool
- Simplify and automate common and complex tasks
- Effortlessly create more frequent backups in minutes



Hard drives sold separately



IBM® System x3650 M3 Rack-mount Server

CDWG 2325878

- Quad-Core Intel® Xeon® processor E5620 (2.4GHz)
- Memory: 6GB std., 288GB max.
- Hard drive: None ship std., 16TB max.
- Gigabit Ethernet



VMware® vSphere™ 5

- Enables users to run business-critical applications and respond faster
- vSphere™ accelerates the shift to cloud computing for existing data centers
- Underpins compatible public clouds, allowing for the only hybrid cloud model

Contents

vol. 25 no. 1

September 2011

In This Issue

- 4 Login / Is IT Digging Its Own Grave?
- 6 CT Online
- 8 In Box
- 10 Campus + Industry
- 41 Index
- 42 Trendspotter / Can Tech Bolster the Academy?

Focus

- 12 CT2011 Conference /
Caution: Dangerous Curves Ahead
by John K. Waters
- 18 Webinars / The Talking Head Is Dead
by Alicia Brazington



36

Features

24 Immersive Learning>> Is There a Second Life for Virtual Worlds?

Some say the virtual real estate bubble has burst, but next-gen technologies and niche applications may breathe new life into virtual environments.

by Rama Ramaswami

30 COVER STORY IT Trends>> For-Profit Schools: They Get IT

Traditional colleges may think they have nothing to learn from for-profits, but when it comes to advanced use of technology, look no further.

by John K. Waters

36 Governance>> Extreme Makeover: IT Edition

With a new IT governance model that puts faculty front and center, the University of Michigan hopes to reclaim its reputation as a next-generation institution.

by Dian Schaffhauser



30



EDITORIAL DIRECTOR Therese Mageau
EXECUTIVE EDITOR Andrew Barbour
SENIOR EDITOR Rhea Kelly
EDITOR Mary Grush
SENIOR CONTRIBUTING EDITORS
 Linda Briggs, Dian Schaffhauser, Matt Villano
CONTRIBUTORS Alicia Brazington, Rama Ramaswami, Dian Schaffhauser, John K. Waters

CREATIVE DIRECTOR Scott Rovin
GRAPHIC DESIGNER Erin Horlacher
DIRECTOR, PRINT PRODUCTION
 Jenny Hernandez-Asandas
SENIOR PRODUCTION COORDINATOR
 Jennifer Shepard

EXECUTIVE PRODUCER, WEB David Nagel
EXECUTIVE MANAGING EDITOR Judi Rajala
ONLINE CONTENT MANAGER Kanoe Namahoe
WEB DESIGNER Brion Mills
WEB APPLICATIONS SPECIALIST Elliot McDonnell
eMEDIA ASSISTANT Sarah Rajala
EDITORIAL INTERN Joshua Bolkan



PRESIDENT & CHIEF EXECUTIVE OFFICER
 Neal Vitale
SENIOR VICE PRESIDENT
 & **CHIEF FINANCIAL OFFICER** Richard Vitale
EXECUTIVE VICE PRESIDENT Michael J. Valenti

SENIOR VICE PRESIDENT, AUDIENCE DEVELOPMENT & DIGITAL MEDIA
 Abraham M. Langer
VICE PRESIDENT, FINANCE & ADMINISTRATION
 Christopher M. Coates
VICE PRESIDENT, INFORMATION TECHNOLOGY & APPLICATION DEVELOPMENT Erik A. Lindgren
VICE PRESIDENT, ATTENDEE MARKETING
 Carmel McDonagh
VICE PRESIDENT, EVENT OPERATIONS
 David F. Myers

CHAIRMAN OF THE BOARD Jeffrey S. Klein

REACHING THE STAFF
 Staff may be reached via e-mail, telephone, fax, or mail. A list of editors and contact information is also available online at campustechnology.com/pages/contact-us.aspx.
E-MAIL: To e-mail any member of the staff, please use the following form:
 FirstInitialLastName@1105media.com.

CORPORATE OFFICE
 (weekdays, 8:30 am to 5:30 pm, PT)
 Telephone (818) 814-5200;
 Fax (818) 734-1528
 9201 Oakdale Avenue, Suite 101,
 Chatsworth, CA 91311



Is IT Digging Its Own Grave?

At CT2011, IT leaders confronted the challenges that beset their organizations and the institutions they serve.

Listening to CIOs at Campus Technology 2011 discuss the state of IT in higher education, I got a sinking feeling that some of them might be digging their own graves.

Without doubt, IT has to change—there is broad agreement about that. Nearly 60 IT leaders at an executive summit moderated by Stephen Laster, CIO of Harvard Business School, all recognized the imperative of outsourcing commodity IT so they could better support the strategic missions of their institutions.

It was a message echoed by Gerry McCartney, CIO of Purdue, who urged attendees to stop being the equivalent of TV repairmen and return to the business of improving education. “Somewhere in our pasts, however dormant, however dulled that ember now is, there is a belief that IT can actually make things better through change,” he said.

It was a clarion cry for IT to become innovators again—to reinvent the IT organization as a campus leader. But we also have to remember that this battle standard is being raised as institutions across the country are slashing budgets. In her keynote, Ellen Wagner, executive director of WCET, pointed out that higher ed institutions historically hunker down in the face of economic woes, shying away from anything that smacks of risk.

So, in this era of fiscal collapse, what’s going to happen once IT starts to outsource commodity services in preparation for a more innovative role on campus? We can all predict the next question from the CFO: “What is

it you do again?”

Unless your IT group already has a seat at the table—unless it is part of the strategic team that is charting the school’s future—the next gift from the CFO may well be a pink slip. Put simply, you outsourced your job at a time when the university has no desire to start tinkering with new roles for IT. First and foremost, it wants to save money.

McCartney proposed a simple test for CIOs to determine where their organization stands in the campus pecking order: “If your president came into the room now, would he be able to identify you?” he asked.

If your answer is no, outsourcing commodity IT starts to look a lot like a shovel. Because if you haven’t played a strategic role up to this point, you can’t expect to be invited to play one now. So where do we go from here?

A possible way forward was proposed by Casey Green, founder of The Campus Computing Project. In Green’s view, IT’s future must be built on exactly the same foundation that has kept him in business for so long. Data. Big data.

No other group on campus is in a better position than IT to gather, extract, and manage data. And no other group is better able to turn that data into the knowledge needed to help administrators make informed decisions about every aspect of campus operations. Big data holds the key. As for that seat at the table, remember one thing: Knowledge is power. **CT**

—Andrew Barbour, Executive Editor
abarbour@1105media.com



LEARN

Pearson online learning solutions give you the foundation to engage technology-immersed students more effectively so they can gain knowledge, earn a degree and secure a position for a successful career. Construct a solid foundation for your online learning program growth and for your students' educational expectations.

By giving your students and faculty award-winning course content with **CourseConnect**, and providing an opportunity for communication and collaboration with a reliable and proven online learning platform in **Pearson LearningStudio**, you can ensure they are always learning.

If you're ready to build a broader curriculum and rapidly expand your online program with Pearson, visit www.pearsonlearningsolutions.com/online-learning

CTOnline

campustechnology.com

WEBINARS campustechnology.com/webinars

Lecture Capture Deployment Models: Comparing Total Costs of Ownership

Senior Analyst Alan Greenberg of Wainhouse Research shares three primary deployment models of lecture capture, a proven method for comparing TCO for different solutions, and how to select the best solution for your institution.

Past, Present, and Future: The Evolution of Enterprise Moodle in Higher Education

Academic technologists discuss how adopting Moodle has impacted instructional and e-learning goals, and what they expect from Moodle 2.

Conquering a Sea of Syllabi

Implementing an online syllabus platform enabled two institutions to better organize, share, and analyze course information among multiple campuses, a large adjunct faculty, and full menu of online offerings.



Product Focus

Buyer's Guide to Interactive Classroom Tools

Sponsored by GovConnection

Visit campustechnology.com/0911_interactive for a complete buyer's guide to the latest interactive whiteboards, projectors, touch displays, and other tools.

Trending Articles on CT

Teaching With the iPad (and Angry Birds)

campustechnology.com/0911_ipad

The Future of Blackboard campustechnology.com/0911_blackboard

There's a Tatt for That campustechnology.com/0911_tatt

Viewpoint

Becoming Pioneers Again

Purdue's (IN) VP of IT and CIO believes IT innovation is essential to the future of universities.

campustechnology.com/viewpoint



Plus...

Follow us on Twitter:

twitter.com/campus_tech

Connect with us on Facebook:

facebook.com/campustechnology

Join our network on Delicious:

delicious.com/campustech

Events Calendar

Sep 27 - 29

Campus Technology Forum
campustechnology.com/ctforum
Long Beach, CA

Oct 18 - 21

Educause 2011
educause.edu/e2011
Philadelphia

Oct 23 - 26

National Association of College
Auxiliary Services
2011 NACAS Annual Conference
nacas.org
Orlando, FL

campustechnology.com/calendar

EDITORIAL ADVISORY BOARD

GEORGE R. BOGGS
President & CEO (Retired)
American Association
of Community Colleges

GARY R. BROWN
Director, The Center for Teaching,
Learning, & Technology
Washington State University

WAYNE A. BROWN
VP for Information Technology
Excelsior College

RONALD DANIELSON
Vice Provost for Information Services & CIO
Santa Clara University

RICHARD H. EKMAN
President, Council of Independent Colleges

LEV S. GONICK
VP for Information Technology
Services & CIO
Case Western Reserve University

MARY JO GORNEY-MORENO
Associate VP, Academic Technology
San Jose State University

M.S. VIJAY KUMAR
Senior Associate Dean, Undergraduate
Education, and Director, Office of Educational
Innovation and Technology
Massachusetts Institute of Technology

FRED MOORE
President, Buena Vista University

EDUARDO J. PADRÓN
President, Miami Dade College

JOEL SMITH
Vice Provost & CIO
Carnegie Mellon University

BRIAN D. VOSS
Vice Chancellor for IT & CIO
Louisiana State University

BARBARA WHITE
CIO & Associate Provost
University of Georgia

JIM WOLFGANG
Director, The Digital Innovation Group
Georgia College & State University

1105 MEDIA
Education Group

PRESIDENT AND GROUP PUBLISHER
Wendy LaDuke

WEST COAST SALES DIRECTOR
Mark D. Buchholz

EASTERN REGION SALES MANAGER
M.F. Harmon

CENTRAL REGION SALES MANAGER
Tom Creevy

SENIOR SALES ACCOUNT EXECUTIVE
Jean Dellarobba

EVENT SALES MANAGER Stephanie Chiavaras

EVENT SALES MANAGER Patrick Gallagher

EVENT SALES REPRESENTATIVE
Deborah Carroll

MARKETING DIRECTOR Karen Barak

MARKETING DIRECTOR Michele Werner

CLIENT PROJECT COORDINATOR Jenna Horton

eMEDIA PROJECT COORDINATOR Mallory Bundy

Windows®. Life without Walls™.
Fujitsu recommends Windows 7.



LIFEBOOK® T901 Tablet PC

Here's the end of:
"Sorry, losing
your notebook
is like losing
your identity."

LIFEBOOK - featuring the ultimate in data and theft protection.

LIFEBOOK® notebook and Tablet PCs, powered by the 2nd generation Intel® Core™ i7 processor, offer rock solid security with features like fingerprint sensor and smart card reader to protect your sensitive business data from prying eyes. Give performance, IT intelligence – and the bottom line – a boost.

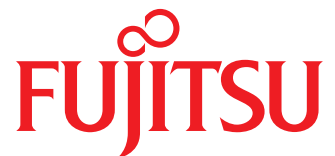
LIFEBOOK

With the 2nd generation Intel® Core™ i7 processor.

www.shopfujitsu.com

Not all features available on all products.

Copyright ©2011 Fujitsu America, Inc. Fujitsu, the Fujitsu logo, LIFEBOOK and "shaping tomorrow with you" are trademarks or registered trademarks of Fujitsu Limited in the United States and other countries. Microsoft, Windows, and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and other countries. Intel, the Intel logo, Intel Inside, Intel Core and Core Inside are trademarks of Intel Corporation in the U.S. and other countries. All other trademarks are the property of their respective owners.



shaping tomorrow with you

LMS Challenges

In CT's July feature "Quo Vadis, LMS?" (campustechnology.com/articles/2011/07/01/quo-vadis-lms-trends-predictions-commentary.aspx), a panel of technologists, educators, and vendors discussed the future of the learning management system.

The largest challenge to the LMS is the seismic shift in how students learn and the desperate need for instructors and systems to adapt to a learning style that is innately collaborative, connected, constructive, and interest-driven. As Michael Wesch pointed out in his keynote address [at Campus Technology 2011], few students raise their hands when asked if they like school. On the other hand, the whole room goes up when asked if they like learning. To harness this great potential, LMSs have to shift their focus from instructor-provided content and discussion forms based on instructor questions to a wider and more open framework. Much of the onus is on the LMS, but equal responsibility is on the instructional designers and instructors working with this new generation and the ever-growing methods that promote learning.

Suzanne Kissel
Chapel Hill, NC

Comment posted on campustechnology.com

"LMSs have to shift their focus from instructor-provided content to a wider and more open framework."

After years teaching multiple sections via WebCT, the greatest issues I face are attrition and exam security, followed by lack of participation. I spend more time on my two online classes than on my traditional on-campus classes because I am available via web and cell most days of the week.

Bonnie Holt
Contra Costa College
San Pablo, CA

Comment posted on campustechnology.com

With or Without Walls

"LMS, Tear Down This Wall!" (campustechnology.com/articles/2011/06/29/lmss-must-tear-down-this-wall.aspx) was an online companion to CT's July feature, "Quo

Vadis, LMS?" In it, **Portland State University's (OR) Gary Brown** called on LMSs to move beyond the classroom and integrate seamlessly with the learning opportunities presented by the web.

I agree to tear down some walls—but not all. Most modern LMSs are not modeled according to the traditional instructivist classroom, but offer a wide array of virtual group rooms and tools for socio-constructivist collaborative learning. Many students need training in how to collaborate online. They need some rooms accessible only to the participants, in order to experiment and ask "stupid" questions without the risk of being scorned or exploited by a stranger. There is also a need for a room where teachers and learners can interact without the whole world watching.

Ake

Norway

Comment posted on campustechnology.com

Physical classrooms aren't going anywhere. Until our brains are digitized and planted firmly in some self-perpetuating *Matrix* (heaven forbid), in this world we will continue to be physical beings, with a physical network to go with the virtual one. The web has extended our reach to one another, and

computers have improved (if complicated in some ways) our efficiency, but well-run schools have always looked outside the institution at the broader world, and experiential, real-world learning has long been a part of the natural growth of education. Change certainly comes fast these days, but knocking out walls only tends to bring structures down. Let's continue to open windows and doors instead.

Anonymous

Comment posted on campustechnology.com

The use of the LMS is dependent on the design of the learning activities within it. I have seen very poor uses of LMS systems, mainly by those teaching face-to-face, and



I've seen very good uses by those who have a real need to use the systems, especially in the areas of distance education. But the one overriding factor in all of this is the design of the learning experience—not the design of the LMS. The LMS is just a tool.

Andrew Chambers
Sydney, Australia

Comment posted on campustechnology.com

Teaching With Tech

In "Teaching With the iPad (and Angry Birds)" (campustechnology.com/0911_ipad), CT reported on a workshop led by **Marian University (WI)** at Campus Technology 2011: "iPads: Applications and Uses in Education."

Please keep pushing for use of the iPad or any technology. I am a non-traditional student at **Cleveland State University (OH)** who is returning to college after many years working in business/technology. I'm shocked at how I've been told by some professors that my desire to use technology is not acceptable. One professor refused to receive assignments by e-mail and I once had to drive 30 miles to hand in an assignment. I understand some departments are limited by their funding, but if they can't keep up with technology then I cannot see how they will produce viable employees.

Liz
Cleveland

Comment posted on campustechnology.com

E-mail us at editors@campustechnology.com, or join the conversation on the web at campustechnology.com. Letters are edited for length and clarity.



Count On Us for Support Throughout the IT Lifecycle

We're Your All-Access Pass to an Optimized Infrastructure

» We've got IT covered, from inventory planning to asset disposition—and everything in between. Whether you are looking for a new approach or want help navigating the ever-changing licensing landscape, GovConnection offers the services and support to help you reach your IT goals.

- Configuration and Integration
- Deployment Services
- Software Upgrades and Data Migration
- Disposition Services
- Asset Management
- Printer Assessments
- VDI (Virtual Desktop Infrastructure) Assessments
- Software Licensing Solutions
- Streamlined Purchasing Processes
- Upgrade Protection Plans
- Locked-in Price Protection

 **Contact an Account Manager to learn more today.**

acer



lenovo

NETGEAR®
Everybody's connecting.®

1-800-800-0019

www.govconnection.com

[Follow us on Twitter!](#)

GovConnection®
tools for higher learning™

Campus+Industry

TECHNOLOGY HAPPENINGS IN HIGHER EDUCATION

NEWS

EMERGENCY-NOTIFICATION OVERHAUL. The University of Illinois is using a new emergency-notification system that incorporates phone, text, e-mail, social networking, digital signage, and browser-based pop-ups, designed by Rave Mobile Safety. The system provides enhanced profile information for first responders when emergencies are called in, including a picture of the user, mobile number, GPS location, and other personal details; a reporting tool also allows members of the campus community to report crimes via text message. According to the university, the system will cost \$62,500 per year.

EXPEDITING IT. A college system in Houston is seeing big returns on its three-year-long construction of a private cloud infrastructure to expedite delivery of IT services to its 62,000 students and 4,800 employees. The Lone Star College System uses products from VMware, EMC, and HP in a transformed enterprise that replaced an aging infrastructure. The institution has reduced delivery time of new IT services from several months to less than a week, improved uptime dramatically, and will save at least \$600,000 in future capital expenditures for hardware replacements. "Our private cloud allows us to meet the needs of the business and add strategic value to the organization," says Vice Chancellor and CIO Shah Ardalan. Read more at campustechnology.com/articles/2011/08/01/at-lone-star-cloud-computing-rides-to-the-rescue.aspx.

RAKING IN THE GREEN. Butte College (CA) now generates more electricity from its solar arrays than it consumes and will deliver power back to the electric grid. The two-year college estimates that it will save between \$50 million and \$75 million over 15 years by eliminating its electricity bill, receiving payment for excess electricity produc-

tion, and avoiding future electricity rate increases. Campus officials expect to use these savings to improve student offerings and increase enrollment. The college operates 25,000 solar panels that generate more than 6.5 million kilowatt-hours of electricity per year—enough to power about 920 average-sized homes.

LAUNCHING PERSONAL CLOUD.

Indiana University and Citrix Systems have partnered to create a "personal cloud" for students, faculty, and staff, allowing users to access applications and data from any computer, tablet, or smartphone. The initiative, code-named IUAnyWare, will use Citrix XenDesktop with FlexCast technology to deliver a personal computing environment as a cloud service. For localized cloud storage, Microsoft SharePoint will be used. Read more at campustechnology.com/articles/2011/07/18/indiana-university-and-citrix-in-cloud-partnership.aspx.

IP COMMUNICATIONS. Northwestern University (IL) is moving to an IP-based 900 MHz voice and integrated-data system for the Evanston and Chicago campus police, facilities management, events staff, sports-facilities management, and other support and operations staff. The Motorola Astro 25 system will be simulcast from three dispatch positions with MCC 7500 IP consoles and 911 call-taking, as well as an MIP 5000 for remote-dispatch functionality. The new system will also include radio programming over the air, text messaging



Courtesy of Indiana University

INDIANA U STUDENTS will soon be able to access applications and data from any computer, tablet, or smartphone.

with XTS 2500 portable radios, and an expansion from six channels to seven.

ANDROID TABLET PILOT. This fall, the University of Southern Mississippi will distribute Android-based tablets to outstanding students as part of a pilot program to determine the impact of the devices on academic achievement. For the pilot, 1,000 students enrolled in the university's Honors College, McNair Scholars post-baccalaureate program, and the Southern Style leadership group, among others, will receive Samsung Galaxy Tab 10.1 tablets. The devices will be loaded with Blackboard Mobile Learn, the mobile version of Blackboard's flagship learning management system, enabling two-way communication between students and teachers, access to gradebooks, blogs, and discussion boards, and student-to-student e-mail communications. **CT**



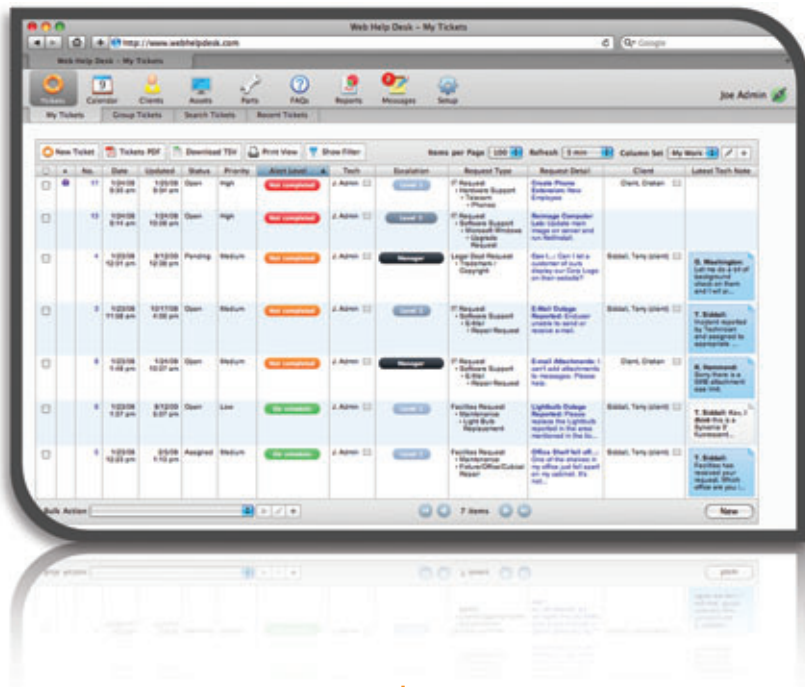
For daily higher ed tech news, go to campustechnology.com/news



*Help
Has
Arrived.*

Web Help Desk

Powerful Software for Service Management



Web Help Desk is the leading cross platform service management solution for support professionals seeking to simplify and control their increasingly complex service management environments.

Contact us today to learn more.

www.WebHelpDesk.com

Caution: Dangerous Curves Ahead

At CT2011, IT leaders took a long, hard look in the mirror and recognized that they must evolve or face irrelevance. Then they rolled up their sleeves to map the road forward.

IT DEPARTMENTS STAND at a major crossroads, and the road they elect to follow will have a profound effect on their role on campus—even their very existence. That was the buzz among the 800 attendees at the 18th annual Campus Technology conference, held in July at Boston's Seaport World Trade Center. The cloud and the new normal of eroded budgets have changed the landscape forever, and are forcing CIOs to rethink every facet of their operations. It was a message hammered home by the conference's keynote speakers, and echoed again at more than 50 workshops and sessions. Here, *CT* highlights some of the major takeaways from this year's event.

THE FUTURE OF IT: MAKE OR BREAK

"Higher ed IT is going the way of the TV repairman, eventually becoming anachronistic maintainers of commodity systems—if university and college technology managers

and chief information officers don't reclaim their rightful place as innovators." That was the stark admonition of William G. "Gerry" McCartney, CIO at **Purdue University** (IN), during a luncheon keynote to pre-conference workshop attendees. To remain relevant in tomorrow's world of commoditized IT, he encouraged his audience to embrace a new kind of university "hybrid."

"If we are only consumers of products, we are in a weak, weak position," he said. "For us, 'hybrid' surely must mean that somehow we figure out how to be *producers* of products. We need to explore, not only how to create products, but how to bring them to market."

McCartney used Purdue as an example, which, under his leadership, developed the country's largest cyberinfrastructure for campus faculty and became a world leader in tools for scientific collaboration. His IT group developed DiaGrid, the nation's largest academic distributed computing grid, and the classroom apps Signals, Hotseat, and Mixable, which he said they hope to commercialize.

Ultimately, McCartney warned, if university IT is to regain its status as a center of innovation, IT groups are going to have to change what it means to be a vendor and a supplier in this marketplace.

The theme of innovation was picked up two days later by Ellen Wagner, executive director of WCET (WICHE Cooperative for Educational Technologies), during a keynote entitled "Making It Real: The Adoption of IT Innovation in Higher Edu-



MICHAEL WESCH'S MUCH-ANTICIPATED KEYNOTE inspired attendees to move beyond information literacy, to meta-media fluency and true digital citizenship.

Renew Your **FREE** Subscription to **CAMPUS TECHNOLOGY**

**PRINT
OR DIGITAL
FORMATS
AVAILABLE**

Visit www.CampusTechnology.com/renew
Enter Priority Code: CMR



Claim your free issues today by visiting
Enter Priority Code: CMN

CAMPUS TECHNOLOGY

**Practical Tips • Hot New Trends
How-to Articles • Product Reviews**

**PLUS Subscribe
to any of our FREE Newsletters!**

CT News Update | IT Trends | Smart Classroom
C-Level View | Campus Security | Campus Cloud Computing
Campus Mobile Learning

Visit: www.campustechnology.com/enews

ation.” While guiding attendees through the processes that can help spark innovation, she also recognized the terrible drag that cost cutting has had on institutions everywhere. The innovation cycle in higher education, she said, is hitting “the new normal” of tight budgets, and the result is that IT is “too tired, too poor, or too afraid to innovate.”

To avoid stalling in the face of severe headwinds, Wagner encouraged her audience not to seek “instant perfection,” but instead to take “baby steps toward a solution.” The “secret sauce” that takes innovation from the realm of the imagination to the real world, she said, is effective implementation and execution.

Wagner’s keynote was paired with the 2011 Campus Technology Innovators award ceremony, recognizing 10 exemplary colleges and universities and their vendor partners who have deployed extraordinary technology solutions to campus challenges (read about the award-winning projects at campustechnology.com/innovators). The winning teams also shared their stories of innovation in numerous breakout and poster sessions throughout the conference.

.....

DIGITAL CITIZENSHIP

Amid the soul-searching surrounding IT’s evolving role on campus, an inspiring keynote reminded conference

THE SECOND COMING OF ONLINE EDUCATION

The burgeoning demand for online education has outstripped higher education’s ability to support it. This was the message from Kenneth C. “Casey” Green, founder of The Campus Computing Project, who shared insights from the 2010 Managing Online Education Survey of colleges and universities, which was conducted in partnership with WCET.

According to Green, we’re now about 10 years into a kind of second coming of online education, following the dotcom surge of the previous decade, which was driven more by “aspiration than expertise.” But, in most schools, the managerial expertise and organizational structure needed to support online education properly are lagging behind, and higher ed is struggling with a lot of core managerial issues.

“We’re fumbling our way through this environment in terms of the organization,” Green explained, “because it’s an overlay of technology as an implementing resource on the academic programs.”

Green said that there appears to be a lot of “ad hockery” in higher ed IT that produces hollow programs he called “Potemkin campuses.”

“What concerns me is that, in response to demand—which is explosive—and in the absence of resources, we are trying to respond by offering courses with no infrastructure,” said Green. “We see this in the survey data: Yes, we’re adding courses. Are you also adding folks to do academic advising? No. Support for students? No? It’s a Potemkin village. We’re building the facade by offering the course, [but without] the infrastructure to support our students and faculty. And that’s a recipe for disaster for everybody.”

attendees of why they work in education in the first place—and the critical role of educators in a wired world.

Michael Wesch, associate professor of cultural anthropology at **Kansas State University**, told a packed house that the world is heading toward “ubiquitous computing, ubiquitous communication, ubiquitous information at unlimited speed about everything, everywhere, from anywhere on all kinds of devices.” And within this new world, he added, traditional classrooms are out of place.

“It strikes me now that we have to move from knowledgeable—that is just knowing a bunch of stuff—to actually being knowledge-able—able to find, sort, analyze, criticize, and ultimately create new information and knowledge,” he said.

During his much-anticipated presentation, Wesch shared his personal experiences studying the impact of the introduction of writing to a remote, indigenous culture in the rain forest of Papua New Guinea. That single event changed the culture dramatically and, coincidentally, led Wesch to his current field of study.

No less a cultural change is hitting our students today, Wesch suggested. Our students are being bombarded with images and information—not a new insight, he acknowledged, but one



THE IPAD WAS EASILY the most prominent computing device in the hands of attendees this year.

Stanley Rowin

Good to go

Everything from timely retention management to flexible fundraising, from dynamic learning management to actionable business intelligence, from cost-effective continuing education to a new take on mobile.

Great solutions for your entire campus community

- ~ Jenzabar e-Racer[®] - learning management
- ~ FinishLine[™] by Jenzabar - retention management
- ~ Higher Reach by Jenzabar - continuing education
- ~ FrontRunner by Jenzabar - fundraising & advancement
- ~ Jenzabar Capture - business intelligence
- ~ JICS Go[™] - student-centric mobile

Learn more at www.jenzabar.com/Advantage



JENZABAR[®]

to which we are responding inadequately. The common wisdom that we need to teach critical thinking is just the beginning of a solution, he said.

"If we stop at critical thinking, we haven't gone far enough," he explained. "In this environment, critical thinking helps you filter the things that are coming at you, but you also need skills [to help you] find and sort information."

And just as importantly, added Wesch, students need to know how to contribute to the online conversation as digital citizens of a digital democracy. To make their voices heard in this new world, students need to learn how to edit video, collaborate with others, and produce their own compelling content. As an example of the power of the medium, Wesch showed mashup videos produced on a shoestring (such as a spoof of a Dove commercial) that

A NEW BUZZWORD that you will be hearing more about is "Big Data." It just might be the salvation of the IT Department. As IT services become increasingly commoditized, IT's role on campus will be to help campus administrators make smart, informed decisions. Enter "Big Data."

have actually persuaded multinational corporations to end environmentally damaging practices. He also shared his famous 2007 video, "The Machine is Us/ing Us," which he created in a small Kansas farmhouse. It became a YouTube

CAMPUS TECHNOLOGY 2012

Next year, the Campus Technology conference returns to the Seaport World Trade Center in Boston, July 16-19. Watch campustechnology.com/summer12 for details.

sensation: To date, the video has been viewed nearly 9 million times and translated into more than 10 languages.

Within this new universe of learning and communication, traditional classroom learning is outdated and unhelpful, Wesch claimed. The idea that the only source of relevant knowledge is the professor at the front of the room runs counter to everything today's students know of a wired society. For Wesch, teaching and learning should involve searching for answers to problems for which no one—neither the teacher nor the students—knows the answer.

"We stand at a crossroads right now," Wesch concluded. "We're starting to realize that, while all of this [technology] seems to promise new possibility for freedom, we're also seeing new forms of control emerge. We see new possibility for community, new types of connections. And we also see people using these technologies to isolate themselves more and more. These tools can help to create a richer, more engaged democracy. But they can also become the ultimate tools of distraction.... We, as educators, have a double responsibility at this moment, not only to make of this what we want it to be, but to create students who can make something better of all this."



Stanley Rowin

CHOCK-FULL OF VENDORS' LATEST WARES, the exhibit hall gave attendees a hands-on look at new technologies and direct access to company execs.

TEACHING: CLIMBING INTO THE CLOUD

In a workshop session titled “21st Century Education in the Cloud,” education consultant John Kuglin argued that all educators, but especially those in post-secondary roles, must learn how to make the most of cloud-based resources in their teaching practices.

“In the past 12 to 18 months, there has been an explosion of technologies that have really changed the way we can work as 21st century educators,” Kuglin said. “And it’s up to you to take stock of them, kick a few tires, and figure out how you might be able to deploy them at your school.” Kuglin highlighted a slew of cloud-based tools, many of which are available for free or nearly free to educators, including Wikispaces, SlideRocket, CoveritLive, Dropbox, Pogoplug, Screencast-O-Matic, MindMeister, and Google Earth.

In response to a question about security concerns, Kuglin answered, “I understand that it’s an issue, but we cannot continue to hide behind the safety issue, not if we want to offer competitive educational services. The old paradigm was university computer, university employee, university network. Boom, boom, boom—we’re secure. But the old days are gone.”

SECURITY: SWIMMING WITH THE SHARKS

During a talk about web security trends and threats on today’s college campuses, Paul Judge, VP and chief research officer at security firm Barracuda Networks, shared some disturbing statistics. Among them: One in 10 URLs on Twitter will successfully execute a “drive-by download,” a program that is automatically downloaded to your computer without your consent or knowledge. A botnet (a collection of compromised computers connected to the internet) dubbed Mariposa infected 13 million computers in its lifetime, including computers at half of the Fortune 1000 companies.

“You have to keep in mind that higher education is just as vulnerable to modern cybersecurity threats as the enterprise,” Judge said. **CT**

John K. Waters is a freelance writer based in Palo Alto, CA.

Did you miss this year's event? Go to campustechnology.com/summer11 for archived presenter materials (click on “presenter materials” in the conference program menu) as well as video recordings of select sessions.

American Public University

When your graduates succeed, your college does too.
And you’re one click away from making it happen.



Introduce your talented graduates to an affordable quality education that will take them to the next level. American Public University has been nationally recognized by the Sloan Consortium for best practices in online education. To provide your students with a seamless pathway, contact us about APUS’s block transfer partnership agreement.

Learn more about one of the best values in online education at studyatAPU.com/campus-tech

APU is a member of the regionally accredited American Public University System (APUS).



Text “APU” to 44144 for more information. Message and data rates may apply.

Art & Humanities // Business // Education // Management // Public Safety & Health // Science & Technology // Security & Global Studies

The Talking Head Is Dead

Proponents of webinars urge colleges to move beyond the talking head and utilize the tools' collaborative features to their full extent.

JIM WOLFGANG, DIRECTOR OF digital initiatives at Georgia College & State University, gets frustrated with campus customers who barely tap the capabilities of the powerful webinar tools at their disposal.

"When you've got a Lamborghini and use it just to drive to the corner store for milk, you've got it all wrong," asserts Wolfgang. "It's crucial that people learn how to do more and reach more people with what they've got."

Conventional webinars bring together small groups of people over the web, typically with a talking head presenter using a voice feed and PowerPoint slides. To Wolfgang, this is the equivalent of the milk run—and he's on a mission to change that. He wants to see more webinars reach their full potential, fostering collaboration and reaching previously inaccessible audiences.

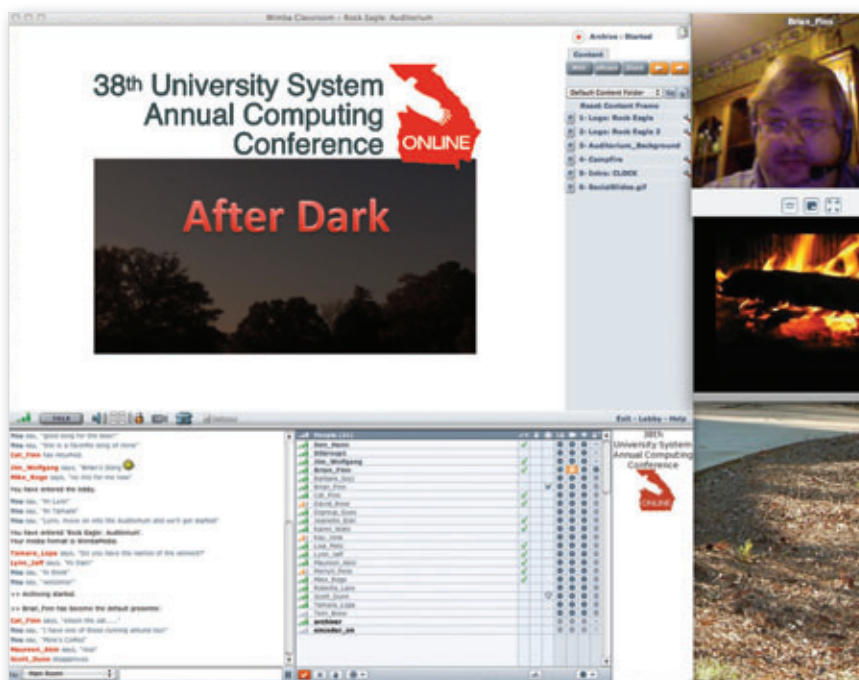
And it appears that he's making headway. For 37 years, the University System of Georgia held a popular annual computing conference at a rural retreat. With budget chopping in full swing, however, the only way to save it was to take the entire conference online. To win over more than 700 technology professionals from 35 institutions, Wolfgang's team promoted the gathering—previously held at the Rock Eagle 4-H Center, amid the pines of the Oconee National Forest—as an event that *happened to be online*, not as an online event. "The difference is not just a change in semantics," notes Wolfgang. "It's a philosophy of thinking about technology."

After accepting a Wimba (now Blackboard Collaborate) invite, participants entered the virtual lobby and chose one of four presentations taking place in virtual rooms named after those at the actual conference center. Chat text reminders and countdown timers notified attendees when presentations were about to begin.

Speakers chimed in from all over the country and used an array of collaborative solutions, including:

- Breakout rooms, in which participants splintered into groups to address subtopics
- Chat text, to facilitate conversations with participants
- Whiteboards, for jotting notes and graphics
- Questionnaires, a flip-chartlike approach for brainstorming and recording ideas
- Web tours, for introducing sites and encouraging exploration
- Screen sharing, allowing audiences to see the presenter's desktop

Some favorite activities from the traditional live event also graced the virtual lineup. Between sessions, for example, guests could take part in a trivia contest made possible with polling technology.



THE UNIVERSITY SYSTEM OF GEORGIA created an online version of its annual rural retreat, complete with interactive presentations, chat conversations, and a virtual campfire.

And afterward, they could sit around a campfire and view fireworks in the night sky, pushed to their desktops using file sharing.

“Without collaborative tools, we wouldn’t have even tried to pull off Rock Eagle online,” insists Wolfgang. “We had as many people participate online as we did at the face-to-face conference, because they knew it wasn’t going to be just a talking head event.”

Venturing Abroad

GCSU’s language departments are taking webinars to the next level, too. Language Café is an international effort that was the 2010 brainchild of assistant professor Aurora Castillo in collaboration with Ana Botero from **EAFIT University** in Medellín, Colombia. Language Café allows Castillo’s Spanish-grammar students to meet online with Botero’s English-conversation students, using microphones and breakout rooms in Blackboard Collaborate to practice their skills.

In January, UIC used Citrix Online GoToWebinar to host its first community webinar in an attempt to reach a wider audience of prospective students and parents. The event surpassed the organizers’ modest goals, reaching several times the number of people who usually connect with the university through campus visits and college fairs, which are limited largely to northern Illinois.

To get the word out—a key challenge—UIC enlisted the help of numerous local agencies, including Chicago Public Schools and the Chicago Public Library, which promoted the event and allowed participants to use their internet-enabled computers. With this approach, the university signed up more than 200 remote online attendees, and sponsors hosted 100 more.

“Online webinars are a great way for us to reach a broader group of students and families,” explains Kevin Tynan, executive director for marketing and communication at UIC. “Visiting hundreds of high schools each year can be labor intensive and expensive.”

Students who’ve taken years of Spanish say they have learned more at GCSU’s online café than anywhere else.

At the start of the semester, Castillo and Botero paired off their students and had them log into language lab computers, standing by to guide conversations and calm nerves. The student partners then used chat text to set up a meeting time that would take place outside class hours on their personal computers.

For these meetings, students logged into the Language Café room and dragged their on-screen icon to a virtual café table. There, they talked for about an hour about an assigned topic, including cultural differences, food, religion, music, and lifestyles. Every other week, a written essay about the discussion gauged their comprehension.

Web cameras will be the next step in bringing these distant learners closer together. Castillo also plans for pairs to listen to music or watch a movie synchronously to spark discussion. Although students are separated by thousands of miles, buffering speeds are expected to vary only by about 90 seconds.

Owing to the effectiveness of live voice conversation, students who’ve taken years of Spanish say they have learned more at the online café than anywhere else. Being able to collaborate with native speakers half a world away is enabling students to learn at a level offered only, perhaps, by a semester abroad—without the need for a plane ticket.

Getting the Word out

The **University of Illinois at Chicago** is the largest university in the Chicago area and one of the most racially diverse in the country. Financial aid is an imperative for many students, yet disseminating information about the aid program has been challenging for the university.

Presenters were given 10 to 15 minutes each to deliver their material, and a WBEZ radio spokesperson moderated the discussion, including a lively Q&A session. “We found that attendees were very engaged, sending in questions or chat messages and interacting with the moderator and presenters,” says Tynan.

The anonymity of submitting questions by chat text provided an unexpected benefit: It encouraged more candid dialogue from students and their families, some of whom had personal situations requiring discretion.

“We derived many marketing benefits from the financial aid webinar,” says Tynan. “We had a record of registered attendees, an archive of the webinar, and live video clips that we posted on the UIC website and on YouTube.” The university’s success in forging hundreds of new relationships from a single online event convinced its organizers that webinars can—and should—become a complement to traditional outreach endeavors.

It’s a lesson that GCSU’s Wolfgang is adamant that colleges and universities across the nation should embrace. The webinar, he says, is much, much more than a way to connect people across town for a monthly meeting. What’s needed is a change in thinking and a willingness to try webinar tools’ capabilities in new and imaginative ways.

“If you’re not going to do it right, don’t do it at all,” he asserts. “You don’t want to create a model that people shouldn’t be following.” Today’s webinars, he believes, are prime opportunities for interactivity and reaching new audiences. “That’s doing it right,” he says. **CT**

Alicia Brazington is a freelance writer based in Portland, OR.

CAMPUS TECHNOLOGY FORUM

SHARING SOLUTIONS TO ECONOMIC CHALLENGES

SEPTEMBER 27 - 29, 2011 • Long Beach, CA

**SAVE \$200 OFF YOUR ONLINE
CONFERENCE REGISTRATION!**



**SPECIAL OFFER FOR
CAMPUS TECHNOLOGY
READERS!**

**REGISTER USING
CAM200 AND SAVE \$200**

Join your colleagues in higher education to share solutions on the technologies that help you do more with less in these challenging economic times. Learn how you can save budget dollars with cloud computing, data center consolidation, virtualization and distance learning. You'll hear case studies from your peers who have adopted mobile learning systems, web apps, e-textbooks and more.

This special Campus Technology reader premium saves you \$200 off of conference registration packages!*

* Valid on Conference and Conference + Workshop Registrations only. Not Valid on Complete Workshop, Conference and Hotel Package. Offer good through 9/26/11. Only one code may be used during registration.

PLATINUM SPONSOR



PRODUCED BY

**CAMPUS
TECHNOLOGY**



Register online today!
Use Code **CAM200** when you register!

TOP 5 REASONS TO ATTEND

CONFERENCE KEYNOTES: Learn from innovative and influential campus technology leaders Johanna Blakley, of USC's Annenberg School for Communications & Journalism, and Timothy Chester, of Pepperdine University, as they discuss key issues and new realities facing today's academics.

BREAKOUT SESSIONS ADDRESSING HOT-TOPIC AREAS: Leadership Challenges and Opportunities, Pedagogy and Instructional Resources, Infrastructure and Learning Environments, IT in Changing Economic Times, Industry Directions and more!

PRE-CONFERENCE WORKSHOPS: Small sessions offer in-depth explorations of the technologies and techniques that help you make the most of diminishing resources while still maintaining institutional excellence.

VARIETY OF CONFERENCE SESSION FORMATS: keynotes, workshops, breakout sessions, poster sessions, and featured industry "deep dive" sessions.

INTIMATE, COLLEGIAL SETTING: Easy access to speakers and the opportunity to network in a supportive environment of highly motivated professionals looking for shared solutions to budget challenges.



EXPLORE TRACKS AND WORKSHOPS

Then go to campustechnology.com/ctforum/program for the complete schedule.

TUESDAY WORKSHOPS: CLOSE-UP AND HANDS-ON

- eText: Features, Applications, and Program Implementation
- Education 3.0: Data, Creativity, and Personalization
- Building a Social Learning Framework
- Moving Your Practices to the Cloud: Using New Approaches to Reach Today's Students

TRACK TOPICS FOR WEDNESDAY – THURSDAY SESSIONS

- Leadership Challenges and Opportunities
- Pedagogy and Instructional Resources
- Infrastructure and Learning Environments
- IT in Changing Economic Times
- Industry Directions

Virtualizing With Vigor

Moving from the traditional to the virtual computer lab can be tough. Dell has a plan.

Even on well-equipped college campuses, virtualizing computer labs can be a nightmare. Thankfully, Dell has a new strategy to make the ordeal easier. Dubbed Dell Virtual Labs, the approach offers the very latest and greatest in application management and support. Senior Contributing Editor Matt Villano recently spoke with John Mullen, Dell's vice president and general manager for education, state and local government, to learn more about the new take.

Campus Technology: With more than a thousand PCs in different locations on the average college campus, why is virtualization so important?

John Mullen: Many schools have PC populations in this neighborhood—and more—and one of the key benefits we see is the ability to reduce the management burden with a virtual environment. The technology greatly improves the ability to manage patches, swap hardware, update software, and manage user profiles. It frees up the IT staff for more strategic projects, and makes the management of the PC environment more efficient. It also helps to provide remote access to the resources, regardless of whether that device is an actual PC in a lab, a notebook in a dorm room, or a tablet or a mobile device halfway around the world. When students

want to access these applications to complete their coursework, the virtual environment makes that capability a reality. Obviously, this has implications for learning outcomes with traditional students, but it also has a huge impact for at-risk students, transfer students, and distance learners.

CT: Can virtualizing change the physical layout of a traditional lab environment?

Mullen: Higher education is always in need of more classroom and building space. By virtualizing labs, a lot of schools are able to consolidate satellite labs and free up real estate for classrooms, offices, and things like that. Labs are becoming more collaborative learning spaces, where students can bring their own devices, connect to a host of different types of audiovisual equipment, and share information with other students. All this contributes to a greener environment by utilizing space more effectively. Finally, virtual labs offer a significant savings on electrical power. One school, West Virginia University Law School, recently did a one-for-one change-out of its lab PCs for thin clients, and it reduced the energy bill by half.

CT: Total Cost of Ownership (TCO) is a



priority for academic technologists these days. How can virtualization lower TCO?

Mullen: TCO is important, but I'm not convinced that virtualization alone is the answer. When we do TCO evaluations for our customers, we see a legitimate cost savings over a three- to five-year period, but those customers expecting to see acquisition cost savings immediately following implementation are likely to be disappointed.

CT: Not every application lends itself to virtualization. To what extent is it tough to put all these pieces together?

Mullen: That's the interesting point

of virtualization—there's a lot going on. There are different types of virtualization software, such as Citrix or VMware. There are certain requirements in the data center to help operate the virtual environment. Applications always are in various stages of readiness for virtualization, and performance can be affected. Staff needs to be trained and understand the solution so they can manage it. We've seen a lot of our customers struggle to fit all of these pieces together, and there have been endless numbers of pilots in higher education to figure it all out. We thought there was a real opportunity there for us to go and do the homework necessary to bring to market a solution stack that represented a tested framework. That's exactly what we've done with Dell Virtual Labs.

CT: How does this approach make the process easier?

Mullen: We've invested more than 50,000 hours of testing to identify the best solutions for higher education virtualized client environments. We've tested MATLAB, Adobe Creative Suite, Autodesk AutoCAD, and a number of other popular software packages on our solution stack, and we now know how to help our customers easily virtualize these complex applications. We take the cost and complexity out of the solution, getting our schools up and running much quicker than they could by themselves. And we use this as a starting point, recognizing that there will always be a need to further customize a solution to the customer's environment and to leverage their existing investments as much as possible. One of the biggest benefits of this strategy is that we subscribe to open standards. Because of this, we're finding

that we're able to fit most of our customers' existing environments into this virtualized solution without having to bulldoze the technology they've already invested in.

CT: Yours is not the only virtualization strategy in the marketplace. What sets your approach apart from the others?

Mullen: We provide and support the entire solution. We're able to troubleshoot a multivendor desktop implementation. We have the ability to take one call and find someone who understands how to troubleshoot, not just the server or the software, but all the components that fit together in this integrated stack.

CT: Generally speaking, where would you say most higher education campuses stand on the subject of virtualization today?

Mullen: It's really mixed. There are some schools that are way out in front and have done a very good job of embracing virtualized client environments on their campuses, and there are others that haven't even started yet. Anecdotal evidence indicates higher education is somewhat further ahead in this area than our commercial customers. Our customers continue to ask us for more help in this area, so we're moving full-speed ahead in driving the types of innovation that'll support their objectives down the road.

CT: How does a hardware vendor justify empowering customers with a scenario in which they need less hardware?

Mullen: It seems ironic, doesn't it? We're really in the business of providing our customers with solutions, regardless of what technology that leads to. We understand that desktops and notebooks

are no longer the sole answers, so we've made a huge investment in software, services, people and capabilities that help our customers—particularly K-12 and higher education customers—deploy, set up, manage, and maintain solutions that meet their instructional and institutional demands. It's about doing the right thing for our customers, enabling their mission.

CT: What's next from Dell in the area of virtualization?

Mullen: There are lots of opportunities to take this whole concept of simplification and reduce complexity even further. We've looked into hosting virtual desktops and providing a service to our customers where they pay on a per-user basis each month. We're also exploring this idea of access anywhere, anytime. Ultimately, we'd like to be able to have a student or faculty member use any one of his or her devices and see the same content on any device at any time. It's a complex solution and it's going to take some work, but once we can get to that point, we will really see the maximum benefits available through this exciting virtualized era.



The power to do more

dell.com/hied/vl

Some say the virtual real estate bubble has burst, but next-gen technologies and niche applications may breathe new life into virtual environments.

is there a SECOND LIFE for virtual worlds?

By Rama Ramaswami

Looking back at predictions about virtual worlds, the first question that comes to mind is, “What were they thinking?” Just a few years ago, virtual worlds were credited with the power to transform the universe. In 2005, *Forbes* quoted a **Wharton** (PA) professor as prophesying that virtual economies and virtual currency trading could “redefine the concept of work, help test economic theories, and contribute to the gross domestic product in the US.” In 2007, research firm Gartner predicted that, by 2011, 80 percent of all active internet users would have some type of “avatar,” or virtual self. Another outlandish prediction, this one from market research firm DFC Intelligence, forecast that, by 2012, virtual worlds would produce \$13 billion in revenues, 40 percent of which would come from trading virtual assets. ▶

Bruce Gardener



**FOR
SALE**

Used since the late 1990s in military and medical applications, virtual worlds first gained mainstream media attention when Linden Lab released *Second Life* in 2003. While other worlds, including open source environments, have launched since then (examples include *OpenSim*, *Blue Mars*, *Open Wonderland*, *Open Cobalt*, and *Unity*), *Second Life* remains the largest general-purpose virtual world—with its own currency, Linden dollars, which can be used to buy, rent, or trade land and goods. (For an overview of some early educational uses of *Second Life*, see “Just Ask the Avatar in the Front Row,” *CT* May 2007; campustechnology.com/articles/2007/05/just-ask-the-avatar-in-the-front-row.aspx.)

Yet, in the eight years since its debut,

using 3D immersive technologies; the inherent limitations of virtual worlds in conveying certain types of content; budgetary restrictions—the list is long. It has hardly helped that Linden Lab did away with educational discounts for the software this past January.

Pedagogy and Planning

“Part of what went wrong is that a lot of people tried to replicate a real classroom in *Second Life*, instead of asking, ‘What can I do that I cannot do in real life?’” says Reneta Lansiquot, an assistant professor of English at **New York City College of Technology** (City Tech). Her advanced technical-writing courses require students to use *Second Life* to design and write instructional manuals

Palomäki writes. “Two challenges have been identified. First, determining situations in which virtual world learning presents value beyond what traditional education can provide. Second, determining how to effectively utilize and adapt these worlds to support learning.”

In other words, is it worth going to all that trouble? Being selective makes all the difference, asserts David Smith, a City Tech entertainment technology professor and colleague of Lansiquot. “Although *Second Life* comes with a lot of promise, people underestimate the sweat equity involved,” says Smith, who is the mastermind behind CityTech Island, the school’s campus in *Second Life*. “They don’t realize how much work it is. There are certain

A recent survey by the Pew Internet & American Life Project found that only 8 percent of online teens and 4 percent of online adults visit virtual worlds.

Second Life has lost much of its vitality. Most commercial companies have quit their virtual world operations. A recent survey by the Pew Internet & American Life Project found that only 8 percent of online teens and 4 percent of online adults visit virtual worlds. And, after an initial rush to set up campuses in *Second Life*, many colleges and universities are quietly tapering off their usage. Judith Doyle, an associate professor at the **Ontario College of Art & Design** (OCAD University) in Canada, notes that “there is a drop in the popularity of *Second Life* as an environment for teaching.” Likewise, Mario Guerra, an educational technologist at the **University of Texas** at Austin, says that “it’s been a down year for virtual worlds at UT.”

University faculty point to a number of reasons for the decline in interest: lack of technical support for maintaining virtual environments; a steep learning curve in

for such topics as the solar system, hydroelectric power, the human brain and lungs, and tornadoes. But she’s quick to point out that *Second Life* is most effective when it’s added to regular classroom instruction: “It doesn’t take the place of good pedagogy and good lesson planning.”

If anything, online courses require more rigorous preparation, and are more time-consuming to develop, than their real-world counterparts, writes Finnish scholar Eero Palomäki in his 2009 thesis “Applying 3D Virtual Worlds to Higher Education,” one of the rare academic papers on the subject that describes, step by step, what it takes to produce a college course using 3D virtual worlds as a tool. It’s not a task for the faint of heart: Any educator who takes this route must grapple with, among other things, bandwidth limitations; firewalls; intellectual property rights; technical competencies like scripting and building; subscription and maintenance costs; the costs of hardware, software and other equipment such as headsets; and the lack of interoperability with other technologies.

“A major question in using virtual worlds in education is finding appropriate value-added educational applications,”

things it’s going to be very useful for, and other things it’s not. It’s certainly not useful for simulating a real classroom.”

Daniel Jack Livingstone, a lecturer and researcher in game technology and computer science at the **University of the West of Scotland** (UK), strikes a similar tone of caution, noting that adopting virtual worlds without looking carefully at their drawbacks is “a recipe for disaster.”

OCAD University’s Doyle is outspoken about the shortcomings of *Second Life*, contending that its basic values are at odds with those of higher education. Two elements in particular pose problems for teachers, Doyle says: the political structure and the idea of real estate ownership. “The metaphor of individual ownership is based on a consumer-driven, capitalist model and doesn’t reflect the collaborative environment we try to create in the school,” she says. “Students don’t identify with the clothing, the architecture, or the shops as part of their own experience, especially when they’re used to sharing models like open source code and wikis. This cognitive or cultural disconnect is part of the problem.”

Another source of discomfort, Doyle continues, is that the entire structure of

RESOURCES

For links to the products and vendors mentioned in this article, visit campustechnology.com/0911_virtual.

TECHMENTOR
CONFERENCE

LAS VEGAS

October 10-14, 2011

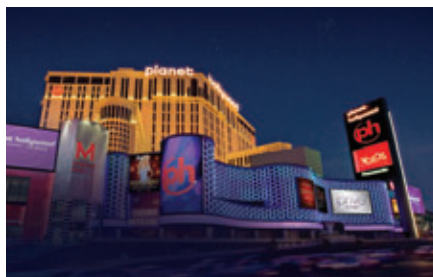
**Planet Hollywood
Resort & Casino**

IN-DEPTH TRAINING FOR IT PROS

Unleash the IT Superhero in YOU at TechMentor

TechMentor Las Vegas is a 5 day event for IT Professionals who are seeking real-world, in-depth and unbiased technical training. This boutique conference will provide you with immediately-useable information that can help you conquer any IT obstacle and master Windows Server 2008 R2 and Exchange 2010.

- » Connect with IT Experts
- » 50+ Sessions
- » 8 Focused Tracks
- » Deep Dive Content
- » Extended MCITP Boot Camp
- » Tutorials



REGISTER TODAY: TECHMENTOREVENTS.COM/LV

GROUP RATES AND DISCOUNTS AVAILABLE. USER CODE: TMAD2

SUPPORTED BY



PRODUCED BY



MEDIA SPONSOR



Second Life is built around real estate purchasing. “People own their assets and every last thing they build. It’s difficult to marry this with the IT structures of the school. Identifying what’s owned by the school and what’s owned by the student creates a huge administrative problem.”

Virtual Fantasy, Real Problems

And then there’s real life, which has a way of disrupting the best-laid virtual plans. For the 2009-2010 academic year,

as part of its Transforming Undergraduate Education program, the **University of Texas System** funded—with much fanfare—a virtual 49-island archipelago in Second Life for cross-campus collaboration and instruction. Billed as the first of its kind in the world, the \$250,000 project involved 16 campuses. The virtual archipelago included three islands per campus and one central location for administrative activities; each island cost \$700 and carried a \$1,770 annual maintenance fee, according to public

statements issued at the time.

To date, few of the project’s 11 ambitious goals (which include collaboration, virtual learning directly tied to course objectives, and the creation of at least one virtual research site by all non-undergraduate campuses and medical and health institutes) appear to have been met. “The university put a lot of money into the virtual real estate and trained a point person on every campus,” says UT’s Guerra, the project’s current principal investigator. “It wanted to cre-

MAKE IT WORK

THOUGH VIRTUAL WORLDS like Second Life have lost some luster, educators and technologists say they still have value for higher ed. Here are four ways universities can make the most out of virtual environments:

1) Use virtual environments as one element of a blended-learning curriculum. This is what most colleges are doing right now—adding virtual worlds to a course here and there and combining them with other technologies, disciplines, and face-to-face instruction. Patrick O’Shea, assistant professor of instructional technology at **Appalachian State University** (NC), uses augmented reality in several of his courses, as well as virtual classes set in Teleplace, 3D collaboration environments similar to those in Second Life. “I like the idea of having mixed face-to-face and distance education classrooms,” says O’Shea. “It’s not yet possible to read body language and those kinds of things in virtual worlds.”

At **New York City College of Technology** (City Tech), students from various disciplines come together to work in Second Life. As part of a 3D project about the structure of a cell, for example, biology students provide information on and monitor the accuracy of biological processes, while students in entertainment technology, computer science, advanced technical writing, and advertising and graphic design help write scripts and construct models.

2) Collaborate like crazy. Hardly an app these days doesn’t claim to be collaborative, but virtual worlds allow a degree of sharing

that can’t be found in run-of-the-mill online media. For Judith Doyle, an associate professor at the **Ontario College of Art & Design**, the collaborative aspect of virtual worlds is perhaps their most attractive feature. As the chair of the college’s Integrated Media program, Doyle pushes the envelope in her use of cutting-edge technologies. OCAD’s campus in Second Life is the virtual home of its Hybrid Media Lab, which allows students in the Integrated Media program to collaborate with artists around the world to create virtual artwork and installations. It’s possible for OCAD instructors to run a workshop on sculpture for students in Peru, for instance, or teach multimedia production to communities in Jamaica.

“You can very successfully use Second Life as a collaborative environment,” says Doyle. “It allows you to make connections between remote locations.” And it’s uniquely suited to distance learning, she adds, since it combines so well with other electronic media practices such as film, streaming video, and animation.

3) Simulate business environments. The best way to prepare students for the working world is to allow them to fully experience what it’s like—and as an inexpensive simulator, a virtual environment is hard to beat. “The fact that Second Life is made up of a lot of different communities, economies, philosophies, and social structures allows it to become a microcosm of what’s going on in the natural world,” says David Smith, entertainment technology professor at City Tech. “So a business class may be able to use it to develop market-

ing techniques, sell products, and so on.”

Appalachian State’s O’Shea says he’s “trying to simulate the professional activities that students will face when they leave school.” For instance, he has built a series of virtual libraries for students to manage. He throws students curveballs—graffiti on the walls, for example—then observes their reactions: “How would they deal with the problem? Those are the kinds of things I see happening in virtual worlds.”

4) Sit tight: The technology will improve. Don’t abandon your virtual campus just yet, educators advise. “Immersive 3D environments are going to continue to get stronger and stronger, but a few things need to happen first,” says Smith. “Second Life is an amazing resource, but it is owned externally and educators have no access to the source code on the server side. But there are several movements to develop open source components. We won’t see development in this technology until it is like the traditional internet, with billions of pages. This sort of ubiquity is required for it to really move forward.”

Mario Guerra, an educational technologist at the **University of Texas at Austin**, also sees technological advances coming via open source development. While the **University of Texas System** is sticking with Second Life for another year, it’s looking into alternatives. “I think that’s where education is going to go—open source, whether it’s hosted outside or by the school,” he says. “That’s where we’re headed.”

ate a community within the university system that would help each individual campus, and to see if there was any collaboration among campuses. We didn't see as much collaboration as we wanted."

Students didn't jump at the chance to build virtual worlds either, Guerra adds. "When virtual worlds don't tie into the coursework, they don't work. Students don't understand the connection."

Given the economic downturn and a grant that lasted only a year, some UT campuses have stopped using Second Life, Guerra says. In his view, the main reasons are users' lack of knowledge of the technology, along with inadequate technical support. "A lot has to do with the learning curve of using Second Life," Guerra says. "But a lot also has to do with the enthusiasm of the instructor. An instructor who knows Second Life and has the gadgets can teach well. It's harder for someone who doesn't know the system. We do provide some support, but not much."

Cutting-edge technology is critical to an enjoyable and effective virtual world experience, and few universities have the resources to provide it or the staff to support it. "Technical problems are currently a major issue related to virtual world usage," notes Palomäki in his thesis. "Using adequate computers and equipment are only one side to this problem. Another is the availability of IT support for the educators and students."

Cutting-edge technology is critical to an effective virtual world experience, and few universities have the resources to provide it or the staff to support it.

The Next Big Thing

Ultimately, virtual worlds might find their sweet spot in medical and therapeutic applications. Among the growing body of scientific research on the effect of virtual environments on brain function, some evidence suggests that virtual worlds might be helpful in rehabilitating patients with brain injuries. Walt Scacchi, a senior research scientist at the **University of California, Irvine's** Institute for Software Research, is developing a protocol for what

WAR OF THE WORLDS

ARE THERE ANY SERIOUS ALTERNATIVES to Second Life? It depends on whom you ask—and what you measure. Anthony Curtis, professor of mass communications at the **University of North Carolina at Pembroke**, estimates that there are more than 100 virtual worlds on the internet. However, the amount of activity within these worlds, including Second Life, appears to have stagnated. According to Linden Lab, the developer of Second Life, new user registrations were flat in the first quarter of 2011, the number of simultaneous users was just 80,000 on average, and user hours were down from the previous year.

While some educators are disillusioned with Second Life, they're wary of jumping to other platforms, noting that many alternatives lack Second Life's technical sophistication. Commercial virtual worlds include Kaneva, Twinity, Active Worlds Educational Universe, and Blue Mars; open source options include OpenSim, Open Cobalt, The Education Grid, and Open Wonderland. None of these has found much traction among educators or, for that matter, the general public: *Hypergrid Business* reports that the 40 largest OpenSim public grids had a total of about 200,000 individual users in July, although the magazine acknowledges that precise numbers are hard to come by.

Many educators prefer open source virtual worlds, with OpenSim by far the favorite, because it is compatible with the architecture of Second Life. The **University of the West of Scotland** (UK), for example, is closing its island in Second Life in favor of OpenSim. And at **Stanford University** (CA), OpenSim simulations are a linchpin of the institution's biomedical research.

"I'm a big fan of the open source movement in general, but there has to be a critical mass of people willing to take up the development process," says Patrick O'Shea, assistant professor of instructional technology at **Appalachian State University** (NC). "I can see OpenSim taking off—it can be a cost saver and it also personalizes things. The philosophy of using virtual environments is starting to take hold. A lot of institutions are starting to see the weaknesses of asynchronous applications like Blackboard. So they're going to turn to personalized applications."

he calls "tele-rehabilitation" through game-based virtual worlds. He contends that virtual environments can support tasks such as remote observation; tele-consultation; role-playing and identity switching through avatars; device data collection; device software updates; and collaborative product or

creative potential of these new tools."

Motion capture will add reality to simulations and enhance the reliability of research projects, adds Doyle. In studies of distractibility, for example, the ability to track eye movements in virtual environments—such as how long people look

prototype development.

For OCAD University's Doyle, the future of virtual worlds will be determined by their capacity to record motion—and that's improving all the time, she says: "Motion capture is going to become more ubiquitous and affordable than it has been. People can record their movements and upload them to virtual worlds. It will be possible to create an avatar that reflects your own personality and gestures, and that will maximize the

at a certain object and how quickly they return to what they're supposed to be doing—can help determine how users respond to various types of content. In turn, this can reveal which instructional techniques are most effective. "This motion stuff is going to be big," Doyle predicts. "It's like the invention of indoor plumbing." **CT**

Rama Ramaswami is a business and technology writer based in New York City.

Traditional colleges may think they have nothing to learn from for-profits, but if you look at their use of technology, one thing is clear—

**FOR-PROFIT
SCHOOLS:**
they
get **IT**

By John K. Waters

THE **FOR-PROFIT SECTOR** of higher education has generated some disturbing headlines recently. Widely publicized charges of predatory recruiting practices have prompted new regulations and provided fuel for scorching criticism of the entire business model. But while the spotlight is focused on what for-profits are doing wrong, are we overlooking what they're doing *right*? Can nonprofit colleges and universities learn something from their beleaguered brethren? ▶





Courtesy of Kaplan University

Notwithstanding the recent enrollment dip reported by the larger for-profits (a likely result of bad publicity and congressional scrutiny), this market sector has grown significantly over the past three decades. According to the National Center

kind of academic agility,” notes Ruki Jayaraman, dean of the College of Undergraduate Studies at **Argosy University** (multiple locations). “We implement technology quickly and effectively, and, perhaps more importantly, we abandon it

definitely do what we are doing,” she says. “But some traditional faculty, who have not been exposed to technology, are afraid. You have to get in front of any technology initiative and socialize people into it.” At for-profit schools, such socialization is often

According to some estimates, for-profit colleges spend more than 10 percent of their operating budgets on technology infrastructure, while not-for-profits spend less than 3 percent.

for Education Statistics (NCES), undergraduate enrollment at private, for-profit four-year institutions increased fiftyfold between 1980 and 2009, from 23,000 students to 1.2 million, and undergraduate enrollment at private, for-profit two-year institutions grew from 100,000 to 400,000. The US Department of Education says for-profit schools now account for about 12 percent of all higher education students.

While many factors have contributed to the extraordinary growth of the for-profit sector, it’s clear that technology has played a key role in allowing these schools to pursue a business model built largely around flexibility.

“We are living in an on-demand world, and higher education needs to embrace that,” says Charles Flader, executive director for academic technology at for-profit **Kaplan University**, which serves nearly 54,000 students online and approximately 7,900 on 11 campuses in various states. “Our students are pushing us all the time, demanding that they get the same technology experiences here that they get in other parts of their lives. We spend a lot to make sure they get that.”

According to some estimates, for-profit colleges spend more than 10 percent of their operating budgets on technology infrastructure, while not-for-profits spend less than 3 percent.

“The way we use technology supports a

when it no longer serves us.”

Argosy is one of the larger for-profit schools, and one of the more traditionally academic. Formed in 2001 with the merger of the American School of Professional Psychology, the **University of Sarasota’s** (FL) business and education programs, and the **Medical Institute of Minnesota**, the school now has 19 campuses across the country and supports a large online program.

Argosy makes extensive use of a learning management system, e-books, an online library, and a wide range of digital assets—all of which support the company’s ability to deliver courses to a non-traditional student who can’t study for a Psych 101 exam until after the kids are in bed. And the IT infrastructure, which is owned and operated by the parent company, Education Management Corporation, “is huge,” says Jayaraman.

“This flexible-delivery modality is essential to us,” she adds. “I don’t want to speak for all for-profits, but we are quick to deploy any technology that is useful for our students. We are constantly on the move. And we couldn’t do it without such a robust infrastructure.”

Flexibility is a trait that traditional schools will have to develop if they hope to appeal to a wider market. “The idea that everyone is going to be able to physically attend a traditional, brick-and-mortar institution for two or four years, full-time, doesn’t reflect the reality of modern life,” says Flader. “Our students have jobs, families, lots of demand on their time.”

Could not-for-profit schools achieve such flexibility? Jayaraman, who worked at a traditional school before joining Argosy, believes they can. “The nonprofits could

easier, however, given that tenure is not an issue and many of the faculty are adjuncts who also work in the business world.

Single sign-on is also critical, cautions Jayaraman. If Argosy’s students and teachers were unable to access the school’s multiple systems via a single authentication action, she says, the system would be unworkable: “It’s a highly integrated system.”

Structured Flexibility

While traditional institutions will be familiar with the technology used by for-profits, the “structured flexibility” of the for-profit sector might be harder to emulate, says Kathy Kurz, a partner at Scannell & Kurz, a higher ed consulting firm specializing in enrollment management and planning.

“The for-profits have a limited number of majors and a limited number of course offerings for each major, because the faculty is teaching to a curriculum that was probably set at corporate headquarters,” explains Kurz. “It’s a lockstep curriculum that allows them to deliver a program flexibly, in an unregimented way that’s convenient for their students. Ironically, when the not-for-profits try to become more responsive to their customers, which is a good thing, they tend to try it within their old paradigm—lots of faculty flexibility and control—and they often tie themselves in knots.”

Kaplan, which offers more than 125 academic programs, is an excellent example of the kind of structured flexibility that Kurz believes traditional colleges struggle to implement. Kaplan spent the last four years developing and implementing a course-level assessment program that now allows the school to update its course

RESOURCES

For links to the schools, consultants, and government reports mentioned in this article, please visit campustechnology.com/0911_forprofits.

offerings on an ongoing basis. Each course has between three and eight course outcomes, which show students exactly what they need to achieve.

“One of the big things we’ve done as an organization is to help our students clearly identify the learning outcomes they need to have and the course-level framework that helps them to achieve that goal,” says Flader. “This methodology allows us to institute what you might call a measurable-improvement loop. We redesigned more than a thousand courses for 62 degree programs. We put that technology foundation in place, so that we can make sure those courses and degree programs stay as good and current as possible. It’s become a cornerstone of all our programs.”

To keep those course offerings up to date, though, means understanding what your students want in the first place. Indeed, in the high-stakes world of for-profits, a company’s ability to respond to market demands can spell the difference between success and failure. “The world has become very competitive,” says Flader, “and we’re constantly called upon to position and reposition ourselves with the right skills to be successful.”

Julie Bryant, associate vice president for retention solutions at Noel-Levitz, an Iowa-based consultancy group, believes that not-for-profits might learn from the way for-profits use student-satisfaction data to drive improvements.

“Traditional not-for-profit institutions do student-satisfaction surveys, but there’s a very strong commitment among for-profits to survey their students regularly,” says Bryant. “There’s a clear understanding among for-profits that they need to be especially responsive, because of the turnover potential in their student population. They really are committed to gathering that data for planning purposes.”

Bryant is responsible for the Noel-Levitz Student Satisfaction Inventory, a proprietary instrument designed to measure student satisfaction and priorities. There are versions for career, private, and public schools. A growing number of for-profits are now using tools like the Noel-Levitz survey in collaborative ways across multiple campuses—an approach not readily emulated by not-for-profits.

“A campus in one location might be

able to serve students in a particular way, and that model can be applied to another location within the same system,” Bryant explains. “It’s definitely a benefit for for-profits that stand-alone traditional institutions may not have, because they don’t typically work collaboratively with other institutions in their state or region.”

Marketing and Recruitment

Student-satisfaction data can be gathered

only after a student is enrolled, however. Persuading a student to attend in the first place is a different game—and one where for-profits have definitely taken the lead over their traditional counterparts. According to Kurz, at least some of the growth in the for-profit sector is a direct result of its “incredible responsiveness” throughout the recruitment cycle.

“When a student inquires at a for-profit, he’s going to get a response within a couple

campuscruiser

AFFORDABLE HIGHER EDUCATION SOLUTIONS IN THE CLOUD

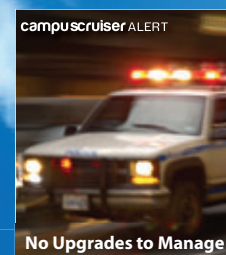
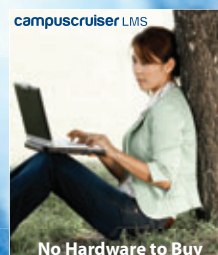
CampusCruiser is higher education’s only source for an affordable and scalable on-demand solution suite.

Since 1995, colleges have relied upon CampusCruiser to deliver innovative solutions, backed by unrivaled customer support. CampusCruiser’s award winning products are higher education’s only source for an affordable and scalable on-demand (SaaS) solution suite.

“We examined several offerings and concluded that CampusCruiser would be the best fit for our students, faculty, and staff along with integrating well with existing systems. The technical benefits that the software provides will suit our stakeholders’ needs and serve us well into the future.”

— **William A. Brichta, Vice President for Technology & CIO, Delaware Valley College**

For more information contact us at sales@campuscruiser.com, or call 877-450-9482, option 2 | www.campuscruiser.com



of hours,” she says. “But when some of the not-for-profit schools get a similar inquiry, they might not respond for *months*. The for-profits know that they can’t afford to be that unresponsive—that students are their lifeblood—and

take another cue, says Kurz.

“Clearly the for-profits have paid more attention to marketing the outcomes for their students than the not-for-profits, which is not to say that not-for-profits don’t have really good

lotte, NC. Most for-profits continuously evaluate their marketing programs, he says, and generic branding is avoided because its usefulness in securing enrollments has proved uncertain. Furthermore, for-profits are not afraid to

“The idea that everyone is going to be able to physically attend a traditional, brick-and-mortar institution for two or four years, full-time, doesn’t reflect the reality of modern life.” —Charles Flader, Kaplan

they use the available technology to connect fast. Even the not-for-profit schools that do get it—that understand that they need to be more responsive—are not necessarily using the technology as effectively as they could be. It’s a surprising mindset that we see all too often. We have not-for-profit clients that are still manually keying in SAT scores!”

Of the approximately 2,000 for-profit colleges operating today, some are niche specialists that offer career-focused training programs in everything from computer-network security to medical billing and computer-aided design. It’s from these career-training programs that traditional colleges and universities might

results to demonstrate—if they would just gather the data and share it,” she notes. “The fact is, a lot of students who go to liberal arts colleges may get onto a career path that has tremendous pay-back potential down the road. They may not have been trained for a specific job, but they’ve certainly been trained to think and reason and exercise their creativity. For many employers those are quite desirable capabilities.”

Even if traditional schools don’t have outcomes data to use in their recruitment efforts, they can still learn from the targeted marketing approach of for-profits, claims John Dysart, president of The Dysart Group, a higher education consulting firm in Char-

invest in television, radio, and print advertising to attract adults. (Who hasn’t seen the “I am a Phoenix” television commercials?)

But it’s through the web and social media that for-profits are most effectively reaching high school seniors, Dysart says. In fact, for-profit colleges are spending huge amounts online to market their programs via social media, search engine marketing, and relationship marketing. As an example, the largest share of the **University of Phoenix’s** \$222 million marketing budget for 2007 was spent online, according to *Advertising Age*.

“[For-profit] schools can be much quicker to utilize technology for communicating with students,” notes Dysart. “While traditional schools were still using snail mail, many for-profits introduced e-mail. And while traditional schools have adopted e-mail, for-profits are much more likely to utilize text messaging, QR codes, and social media.”

Kaplan’s Flader agrees. “We are making more of an effort in non-traditional paths where students might discover us,” he says. “We’re participating more in things like MIT OpenCourseWare [a web-based publication of MIT course materials]. We’re trying to find some additional paths where students who are self-learners are looking for opportunities. I and others have been pretty encouraged by the feedback we’re getting from students.” **CT**

John K. Waters is a freelance writer based in Palo Alto, CA.

THE STUDENT DEBT CRISIS

CRITICS HAVE SLAMMED the for-profit sector for abusing federal financial-aid funds and producing students who carry thousands of dollars in debt with little to show for their investment. Education committees in Congress have been looking into charges of waste and fraud by for-profit colleges, whose students represent more than 40 percent of student-loan defaulters and receive nearly \$9 billion in federal Pell Grants, according to the Department of Education.

The for-profits argue that their students default at higher rates because they are generally poorer and face more life challenges than the average college student at a traditional college or university.

In June, the Obama administration released details of a controversial rule that would cut federal aid to for-profit colleges whose students graduate with too much debt and essentially worthless degrees. The Association of Private Sector Colleges and Universities, which represents more than 1,650 colleges, promptly filed a lawsuit in the federal District Court in Washington, DC, seeking to block the new “gainful employment” regulations.

In July, a group of 20 small for-profits published a “code of conduct,” agreeing to post online the cost of tuition, their graduation rates, and whether students in their academic programs will qualify for licensing in their fields.

Visual Studio[™] LIVE!

EXPERT SOLUTIONS FOR .NET DEVELOPERS

OCTOBER 17-21, 2011
Redmond, Washington

Sponsored by
Microsoft



5 DAYS OF TRAINING @ MICROSOFT HEADQUARTERS!



Keynote Speaker
Jason Zander

*Corporate Vice President
of the Visual Studio Team
in the Developer Division*
Microsoft

IF YOU'RE LOOKING FOR HARD-HITTING .NET DEVELOPER TRAINING, this event is for you. Join industry pros and Microsoft insiders at Visual Studio Live! Redmond for relevant, applicable and up-to-date education that will help you overcome development challenges.

Critical products and practices you'll learn about at Visual Studio Live! Redmond:

- Visual Studio 2010 / .NET
- Data Management
- Mobile Development
- Silverlight / WPF
- Developing Services
- Cloud Computing
- Programming Practices
- LightSwitch
- Web / HTML 5

SUPPORTED BY:

Microsoft



Visual Studio
MAGAZINE

PRODUCED BY:



PLATINUM SPONSORS



GOLD SPONSORS



MEDIA SPONSOR



VSLIVE.COM/REDMOND

Use Promo Code SEPT1

EXTREME MAKEOVER: IT EDITION

With a new IT governance model that puts faculty front and center, the University of Michigan hopes to reclaim its reputation as a next-generation institution. *By Dian Schaffhauser*

AIR-TRAFFIC CONTROLLER might be a relaxing second career for anyone who's coordinated IT operations at a large research university. Just ask administrators at the **University of Michigan** in Ann Arbor. As at most big universities, IT operations on the academic side are decentralized on a major scale. When a faculty member in one of Michigan's 19 schools or colleges identifies a need that can be served by technology, that school's own IT group researches and implements the solution. As a result, the institution excels at redundancy: A 2010 Accenture consulting project counted more than 40 e-mail services running on campus; 26 lecture capture systems; 42 ways to stream media; and 28 approaches for sharing documents. ▶





During good times, such an approach might be acceptable. But in an economic downturn, nobody tolerates that kind of waste. So, a little over a year ago, Michigan began a process to impose structure on the chaos. A new consultative-governance model was established that promises to transform how IT is funded and delivered to academic units, while ensuring better alignment with campus priorities.

Of course, the university expects to hit a few potholes along the way. IT leaders

tion was looking for change—specifically, says Patterson, for ways to introduce next-generation technologies that would give the university a leadership advantage.

“Frankly, we’d been in a period of pretty intense competition for top researchers, especially from the private universities that have big endowments,” explains Patterson, whose 18-year career at Michigan includes a stint as the university registrar.

Even as the academic units ran amok with IT, Patterson implemented a fairly

for each domain. Each steward puts together focus groups, committees, or other structures to enable interested faculty members to discuss ideas and initiatives—including those that cut across academic programs.

Besides faculty representation, the major IT providers within the campus are also represented, as are students and administrators. Together, they form what is known as the IT Council, with a potential membership of 17. Decisions made by the council at its monthly meetings are vet-

The new rationalizing of IT resources could save the University of Michigan \$25 million to \$35 million a year.

must treat the low-grade fever of anxiety gripping the IT staff, even as they figure out how to maintain tech services without interruption. And, perhaps most challenging, they must rely on the new faculty-led governance model for future IT decisions, even though it’s not fully tested. As one participant put it, “We need to build the bridge while we walk across it.”

If successful, Michigan’s governance initiative may provide a playbook for other large universities with faculty-led cultures that need to optimize IT spending. At the very least, the work being tried at Michigan will provide fresh ideas on how to involve faculty and other campus constituents in IT decisions.

Inside the Clockworks

Until Laura Patterson was appointed CIO in March 2009, nobody had held overall responsibility for campuswide IT for at least a decade. With the state’s budget woes spilling over into higher education, however, the University of Michigan’s administra-

robust governance model on the administrative side. When the economic downturn struck, Michigan administrators saw an opportunity to rally deans around the idea of running academic IT more like it was done on the administrative side. “As one person said, ‘We don’t want to waste a good recession,’” recalls Patterson.

To prove that this wasn’t simply a mechanism for cutting IT costs, the deal came with an alluring reward: The provost told deans that their units could keep any savings. “The dean may choose to invest in new technologies or in new faculty,” explains Patterson. “It’s the dean’s prerogative.”

Before any rewards could be handed out, though, the governance structure had to be put in place. Interestingly, the new structure does not match the university’s organizational hierarchy. Rather than giving each of the 19 schools and colleges a seat, the governance council is set up according to four mission domains: teaching and learning, research, knowledge, and patient care.

A “highly respected” faculty member acts as a steward

ted both by a university IT executive committee, which meets quarterly, and a university capital committee.

A Starting Place

As one of its first decisions, the IT council hired Accenture to do an IT inventory and to analyze current investment. “We wanted a third party doing the analysis so that it did not represent the bias of any group on campus,” Patterson says. The analysis consisted of pulling “huge amounts of data” out of the university’s enterprise, financial, and human resources systems, then taking that data to each college and school to find out where it needed correction. In putting together its analysis, the consulting firm conducted more than 200 workshops and interviews.

The goal was to learn how much each unit was spending on IT and how many people it employed to handle its IT operations. As part of the audit, adjustments often had to be made to address differences in how staff members were classified. “A unit would say, ‘We also have five people over here doing web development, but

Example of U of M Governance Timeline

JUL-DEC 2009:
ITS AND DIGITAL MEDIA COMMONS DEVELOP
IDEA FOR SAKAI NEXT-GEN DEVELOPMENT



MAR 2010:
BUSINESS CASE LAID
OUT TO RESEARCH,
TEACHING & LEARNING,
KNOWLEDGE PRESERVATION,
AND IT EXECS (GOVERNANCE
MODEL NOT YET FULLY FORMED)



SEP 2010: PROJECT PRESENTED
TO UNIVERSITY IT COUNCIL

SEP 2010: BUSINESS CASE AND
FUNDING REQUEST REFINED

SEP-OCT 2010: PROPOSAL TO
TEACHING & LEARNING DOMAIN STEWARD
AND IT UNIT STEERING COMMITTEE

they're all classified as communications specialists," explains Patterson. "Or, 'You have someone here listed as a business systems analyst, but really she does report writing for the dean.'"

Research areas were especially difficult to nail down, adds Patterson: "Researchers get a grant; they use the grant to purchase hardware; they hire a graduate student to administer it. A lot of that doesn't show up in the enterprise systems because of the way it's coded."

When the final tally was done, Accenture pinpointed a list of redundant projects that it believed could be delivered campus-wide by shared service providers. The definition of a shared service provider encompassed four primary organizational structures: central IT, external providers, IT within a given unit, and IT delivered by two or more units working together.

According to Accenture's estimates, the new approach could save the university a remarkable \$25 million to \$35 million a year. Those savings would come on top of a planned \$7 million reduction in expenditures by IT Services for fiscal year 2011.

After Accenture presented its recommendations to the executive officers, the provost immediately took it to the deans. The deans' response, she recalls: "'Let's do it.' It was so compelling."

Through 2010 and into 2011, the IT Council developed a prioritized list of short- and long-term initiatives, and the campus started to implement various projects, including a next-gen Sakai development project (see graphic below). To plan each of these initiatives, the IT Council put together a team of people from central IT and the schools and colleges. The team's finished proposal was then taken back to the governance committees and the deans to secure buy-in.

The hope is that the IT Council will serve

as a transparent mechanism for fostering ideas that might otherwise never see the light of day. "Undoubtedly, some really valuable things aren't advanced because their champions don't know how to do it," says Deborah Ball, dean of the School of Education and the steward of the teaching and learning domain. "The IT Council could help promote ideas based more on their merits than because their promoters happen to know how to persuade people with money."

For Dan Atkins, associate vice president for research cyberinfrastructure, the IT Council has the potential to rectify some of the university's weaknesses in academic computing, particularly high-performance computing—weaknesses engendered by years of siloed thinking and development.

"People created entire vertical stacks of computing stuff—their support staff, their software—which leads to redundancies and loss of economic efficiencies," says Atkins, who serves both as the research steward and the chair of the IT Council. "More importantly, it puts up barriers to collaboration and interoperability. There are situations where the technological barriers from one unit to another are demonstrably stifling collaboration between them."

In Atkins' view, the university's old approach to technology was also not very strategic. The Accenture inventory found that the College of Literature, Science, and the Arts, for example, had 168 different rooms with various kinds of computer equipment that were consuming excess power, screwing up air-conditioning systems, or sitting unused.

"We wanted to go to more of a horizontal infrastructure," Atkins explains of the thinking behind the IT Council, "where we have a common networking infrastructure



ONLINE EXCLUSIVE:

As part of its new governance model, Michigan is sharing IT services across academic units.

University administrators share their best practices for a service catalog.

campustechnology.com/0911_catalog

to the extent possible, where we have a common server capability, where we start thinking in terms of services as opposed to machines and other hardware, and where we start looking for those services being available not necessarily on campus but other places too."

The Pain—and Promise—of Change

Considering that centralized projects have already worked their way through the new governance model, it would be easy to conclude that the university's various schools and colleges have shelved their individual IT goals. Nothing could be further from the truth. "We have to keep emphasizing the point that we want IT in every school and college," stresses Patterson. "We are not trying to centralize."

Patterson also does not want to sugar-coat the difficulties that come with instituting a new governance model. "I don't want to mislead," she says. "There's resistance and anxiety—a very high level of anxiety."

This anxiety is especially prevalent among IT staffers themselves. An IT employee who is used to providing a service to a college, for example, may find himself moved to a group that now delivers the same service across the university. Some employees find such changes deeply unsettling.

"Some people have said, 'I will leave the university before I work in central IT.' And we have already had some people leave," Patterson acknowledges. "This has been—and will be—the hardest part. What we're



really trying to do is get the right person in the right place doing the right thing.”

The eventual goal is for these shared services to make up the contents of a service catalog and request system. But the list of available computing services could become as stale as static HTML if the schools and colleges aren't persuaded to use it. That's why buy-in will be so essential among the IT groups distributed among the various academic units. As

Patterson notes, “Rather than the unit IT person saying, ‘I've got a faculty member who needs x; I'm going to research it and then buy or build it,’ we want the unit IT person to say, ‘Gosh, can I get this from the shared service provider?’”

Ultimately, though, there are no rules for academic-governance practices at Michigan. Some requests might go to a unit's IT steering committee, which is more focused on shared infra-

structure. Others, such as a faculty proposal for classroom instruction, might go to the teaching and learning steward. “We left it totally up to each mission domain to determine how best to bring its community together,” says Patterson. “There are different paths depending on the technology.”

As a result, she notes, there's no guarantee that the university won't find itself with 40 e-mail systems again. In hopes of heading off that possibility, the university recently installed an enterprise architect who will work with unit IT steering committees and IT providers to make sure that decisions about service offerings can hold up to scrutiny.

“We're trying not to be heavy-handed, because we know it wouldn't work here,” Patterson explains. “We just don't operate through mandates.”

To gain acceptance on campus, Patterson also believes that the governance process itself needs to speed up. “We're too slow in getting decisions made,” she says. “One of the things we definitely need to modify is the decision process. We must figure out how we're going to be more nimble.”

The metaphor of building the bridge as they cross it is an apt one for Michigan faculty and administrators. The governance structure is being used not just to define the next generation of technology but also to build the very mechanism to implement it. “One of the things we keep reminding people is that the processes—and even this governance model—are emergent,” Patterson declares. “We feel as if we took a risk by recruiting these high-profile faculty members to work with us. We keep saying, ‘It's emergent. We'll modify it. We'll tweak it as we go along.’”

Even in the face of the heavy lifting required to build the bridge, Patterson remains hopeful. “Michigan is very, very big on interdisciplinary research, so our faculty work across their academic units,” she says. “But our IT has actually been a barrier. If we can change this IT platform, then we will advance the university's work in pretty amazing ways.” **CT**

Dian Schaffhauser is a senior contributing editor of this magazine.

RECAPTURING MICHIGAN'S COMPUTING EDGE

DAN ATKINS IS NO STRANGER to collaboration. Among other projects in his 40-year career, he has set up both a research “collaboratory” at the National Science Foundation (NSF) and a national alliance to link academia, social investors, and community organizations to explore digital opportunities. Now associate vice president for research cyberinfrastructure at the **University of Michigan**, Atkins believes that the new governance structure is essential for fostering a similar collaborative environment on campus. That's why he agreed to become the steward of the research domain—one of four faculty-run domains—and to volunteer for a two-year stint as the chair of the IT Council.

Atkins believes the university was falling behind competitively in its computing capabilities compared with other research institutions. “Although we have faculty here doing outstanding work involving use of high-performance computing, most of this was occurring on external machines,” Atkins says. “We did not have as rich a culture of computational discovery as one would expect for a university of this size and research excellence.”

Atkins hopes the new governance structure will change that: Not only will it encourage people to find more commonality across fields, he believes, but it will encourage sharing of computing resources. The current centerpiece of Atkins' endeavors is Flux, a state-of-the-art computer cluster. The project is an IT Council-anointed joint effort involving a rich mix of disciplines: Atkins' office; the university's Center for Advanced Computing; IT Services; the College of Literature, Science, and the Arts; and the Medical School. All have contributed money and resources to ensure that Flux continues to grow.

“One of the things we're trying to do is remove barriers and create better resources that will encourage people to relax the thresholds of adoption,” Atkins states.

A shared campus resource like Flux will give faculty a taste of multiprocessor computing power, provide them with the tools and support they need to get started, and act as a stepping-stone to greater computing resources that may lie outside the university, such as NSF's TeraGrid or the Blue Waters petascale computing project at the **University of Illinois at Urbana-Champaign**. “We'll let people get hooked on the local facilities and capabilities, and then some will evolve into ever-more ambitious use of high-performance computing,” Atkins declares.

“In the past, a faculty member would have had to figure out what he wanted, purchased it, installed it—all that,” he says. “Now he can get an account number and in five minutes have access to a 10,000-core machine.” Because of the support given to the Flux project through the governance structure, faculty members are being awarded Flux time and discouraged from purchasing their own high-performance computers.

Atkins is quick to point out that the concept of resource sharing isn't the same as having a “centrally managed” IT infrastructure. For example, the campus unit with the greatest competence in operating a computer cluster is the College of Engineering. As a result, the college—not central IT—is managing Flux for the rest of the campus.

>> Sales Contact Information

Wendy LaDuke
 President and Group Publisher
 P 949-265-1596
 C 714-743-4011
 wladuke@1105media.com

Mark D. Buchholz
 West Coast Sales Director
 P 949-265-1540
 C 714-504-4015
 mbuchholz@1105media.com

M.F. Harmon
 Eastern Region Sales Manager
 P 207-883-2477
 C 207-650-6981
 mfharm@1105media.com

Tom Creevy
 Central Region Sales Manager
 P 847-358-7272
 C 847-971-5621
 tcreevy@1105media.com

Jean Dellarobba
 Sales Account Executive
 P 949-265-1568
 C 949-357-7564
 jdellarobba@1105media.com

Stephanie Chiavaras
 Event Sales Manager
 P 508-532-1424
 C 617-784-3577
 schiavaras@1105media.com

Patrick Gallagher
 Event Sales Manager
 C 617-512-6656
 pgallagher@1105media.com

Deborah Carroll
 Event Sales Representative
 C 203-814-7408
 dcarroll@1105media.com

Corporate Headquarters:
 1105 Media
 9201 Oakdale Avenue, Ste. 101
 Chatsworth, CA 91311
 1105media.com

Media Kits: Direct your media kit requests to Michele Werner, 949-265-1558 (phone), 949-265-1528 (fax), mwerner@1105media.com.

Reprints: For single-article reprints (in minimum quantities of 250-500), e-prints, plaques and posters contact PARS International, 212-221-9595 (phone), 1105reprints@parsintl.com, magreprints.com/QuickQuote.asp.

List Rentals: This publication's subscriber list, as well as other lists from 1105 Media, Inc., is available for rental. For more information, please contact our list manager, Merit Direct: 914-368-1000 (phone); 1105media@meritdirect.com; meritdirect.com/1105.

COLLEGE/UNIVERSITY INDEX

Appalachian State University (NC).....28-29
 Argosy University (multiple locations) 32
 Butte College (CA) 10
 Cleveland State University (OH).....8
 Contra Costa College (CA) 8
 EAFIT University (Colombia) 19
 Georgia College & State University..... 18-19
 Harvard Business School (MA) 4
 Indiana University..... 10
 Kaplan University (multiple locations).....32-34
 Kansas State University 14
 Lone Star College System (TX)..... 10
 Marian University (WI)..... 8
 MIT (MA) 34
 New York City College of Technology..... 26-28
 Northwestern University (IL)..... 10
 Ontario College of Art & Design (Canada) ...26-29
 Portland State University (OR)..... 8
 Purdue University (IN)..... 4, 6, 12
 Stanford University (CA)..... 29
 Texas Tech..... 6
 University of California, Irvine..... 29
 University of Georgia 18
 University of Illinois at Chicago..... 19
 University of Illinois at Urbana-Champaign ... 10, 40
 University of Michigan.....36-40
 University of North Carolina at Pembroke 29
 University of Phoenix (multiple locations)..... 34
 University of Sarasota (FL) 32
 University of Southern California..... 42
 University of Southern Mississippi 10
 University of Texas at Austin..... 26-28
 University of Texas System 28-29
 University of the West of Scotland (UK)..... 26, 29
 Wharton School (PA)..... 24

COMPANY INDEX

Accenture.....36-39
 ActiveWorlds.....29
 Barracuda Networks.....17
 Blackboard.....6, 10, 18-19, 29
 Citrix Systems 10, 19
 Delicious.....6
 DFC Intelligence.....24

Dropbox..... 17
 Education Management Corp..... 32
 EMC 10
 Facebook.....6
 Gartner..... 24
 Google..... 17
 HP..... 10
 Kaneva 29
 Linden Lab 26, 29
 Microsoft 10
 Moodle.....6
 Motorola 10
 Rave Mobile Safety 10
 Samsung 10
 Screencast-O-Matic..... 17
 SlideRocket..... 17
 Teleplace 28
 Twitter.....6, 17
 Unity 26
 VMware..... 10
 YouTube..... 19

ADVERTISER INDEX

American Public University17
www.studyatapu.com/campus-tech
 Campus Technology 13
campustechnology.com/renew
 Campus Technology Forum20-21
campustechnology.com/ctforum
 CDW-G C2
cdwg.com/virtualization
 Dell, Inc.22-23
dell.com/hied/vl
 Fujitsu America 7
shopfujitsu.com
 Gov Connection, Inc. 9
govconnection.com
 Jenzabar Inc.15
jenzabar.com/advantage
 NetSupport, Inc.C4
netsupportdna.com
 Pearson Education 5
pearsonlearningsolutions.com
 Sony C3
sony.com/projectors
 TechMentor Las Vegas.....25
techmentorevents.com/lv
 TimeCruiser Computer Corp.33
campuscruiser.com
 Visual Studio Live!.....35
vslive.com/redmond
 Web Help Desk11
webhelpdesk.com

Campus Technology (ISSN 1553-7544) is published monthly by 1105 Media, Inc., 9201 Oakdale Avenue, Ste. 101, Chatsworth, CA 91311. Periodicals postage paid at Chatsworth, CA 91311-9998, and at additional mailing offices. Complimentary subscriptions are sent to qualifying subscribers. Annual subscription rates payable in US funds for non-qualified subscribers are: US \$29.00, International \$44.00. Annual digital subscription rates payable in US funds for non-qualified subscribers are: US \$39.00, International \$39.00. **Subscription inquiries, back issue requests, and address changes:** Mail to: *Campus Technology*, P.O. Box 2166, Skokie, IL 60076-7866, e-mail CAMimg@1105service.com or call 866-293-3194 for US & Canada; 847-763-9560 for International, fax 847-763-9564. **POSTMASTER:** Send address changes to *Campus Technology*, P.O. Box 2166, Skokie, IL 60076-7866. Canada Publications Mail Agreement No: 40612608. Return Undeliverable Canadian Addresses to XPO Returns: P.O. Box 201, Richmond Hill, ON L4B 4R5, Canada. © Copyright 2011 by 1105 Media, Inc. All rights reserved. Printed in the USA. Reproductions in whole or part prohibited except by written permission. Mail requests to Permissions Editor, c/o *Campus Technology* magazine, 9201 Oakdale Ave., Ste. 101, Chatsworth, CA 91311; e-mail: rkelly@1105media.com.

The information in this magazine has not undergone any formal testing by 1105 Media, Inc., and is distributed without any warranty expressed or implied. Implementation or use of any information contained herein is the reader's sole responsibility. While the information has been reviewed for accuracy, there is no guarantee that the same or similar results may be achieved in all environments. Technical inaccuracies may result from printing errors and/or new developments in the industry.

Trendspotter

Can Tech Bolster the Academy?

Academic research needs technology to remain competitive and cost-effective. By Mary Grush

Amid the current backdrop of economic woes, higher education institutions are grappling with operational challenges that can shake their identities to the core. But that doesn't mean academia should sacrifice its research work. *Campus Technology* interviewed Johanna Blakley, deputy director of the Norman Lear Center at the University of Southern California's Annenberg School for Communication & Journalism, for her views on how institutions can use technology to support the academy.

CAMPUS TECHNOLOGY: What is the Creativity & Collaboration in the Academy project?

JOHANNA BLAKLEY: In spring 2010, the Office of Research Advancement at USC asked the Norman Lear Center to lead a series of meetings on "Creativity & Collaboration in the Academy," and to ask faculty how to keep USC at the forefront of research, particularly in the use of new technology to enable collaborative research.

One reason the Lear Center was tapped to lead this effort was because of our work over the past 10 years on our Creativity, Commerce & Culture project, which explores new ways of framing the artistic, legal, and ethical issues facing creative industries and individual artists in the digital age. We believe that the challenge for academia is similar to the one faced by music and publishing. We would like to play a part in making sure that academia doesn't find it as hard to adapt to new technology as these industries have.

CT: Do digital technologies already play a significant role in academic research?

BLAKLEY: Unfortunately, new technology has not had as much of an impact on the academy as it should have. Part of the problem is tenure guidelines: Collaborative work and digital publishing are often given short shrift in the tenure review process. USC has just revised its guidelines in order to make sure that scholars who embrace new models for research and dissemination are rewarded for their trail blazing rather than punished for it.

CT: Which research technologies could help keep the academy productive in spite of the poor economy?

BLAKLEY: Crowdsourcing is easier said than done, but I'm optimistic about open transcription tools, for instance, that allow amateurs to contribute to labor-intensive scholarly efforts. DotSUB, the open translation system, is incredibly inspiring to me. And I think most of us were pretty surprised by the success of Wikipedia. It should serve as a reminder that the academy can also take advantage of the tremendous human capital available online in order to pursue complex research initiatives that would be too

costly without an engaged volunteer workforce.

CT: Do you foresee any big changes relevant to the academy that IT planners should be aware of?

BLAKLEY: I hope lots of big changes are coming! I hope universities listen more intently to their IT people! And I'd really like to see more IT professionals spend more time connecting the dots between tools for teaching—the typical emphasis—and tools for academic research. I think pedagogy is too often the sole focus. It's partly because students demand a more technologically sophisticated environment, as well they should. But, as we all know, many powerful faculty members are resistant to new technology. Many of them would prefer to continue conducting research as it was done a century ago. It can be an uphill battle, but I hope that IT planners will make the extra effort to

get faculty excited about new tools that could revolutionize the scope of their research. **CT**

Editor's note: Johanna Blakley will give the opening keynote, "Fostering Creativity & Collaboration in the Academy," at CT Forum 2011, Sept. 27-29 in Long Beach, CA. For more information, visit campustechnology.com/ctforum.



BLAKLEY

SONY
make.believe



Shift your perspective. Expand your options.

Sony projectors with extreme lens shift let you enjoy design flexibility that's unmatched whether you're planning new construction, renovating a room or simply changing out a projector. So you'll preserve the aesthetics of the space without sacrificing superb image quality. Easy maintenance and worry-free operation are a given, with automatic backup from twin lamps that cost less, use less electricity and have a remarkable recommended replacement time of 8000 hours*. Best of all, Sony's aggressive pricing now delivers HD for the price of standard definition. And isn't that a nice new perspective on value.

Visit sony.com/projectors to find out more.

*In Standard mode, using lamps alternately. Expected maintenance time, not guaranteed. Lamp performance will vary based on operating environment and use.
© 2011 Sony Electronics Inc. All rights reserved. Reproduction in whole or in part without written permission is prohibited.
Features and specifications are subject to change without notice. Sony, the Sony logo and the Sony make.believe logo are trademarks of Sony.

