

CAMPUS TECHNOLOGY

From the
Syllabus
Media Group

December 2004 \$9

SYLLABUS2004 CONFERENCE YEARBOOK

>> A virtual tour through the July 18-22 meeting in San Francisco

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Syllabus2004 Conference Yearbook

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Full Circle

Our best days on the job are at the annual Syllabus Conference, when we meet with our audience, face-to-face.

When speaking about the Syllabus Conference—as I do often—I describe it as the pages of our magazine come to life. The stories that we publish become sessions and keynotes. The advertisements become booths in the Exhibit Hall. Best of all, the labels pasted to the magazine's printed cover (or the e-mail addresses that speed the digital edition to its destinations) become a representative congress of our larger community, in-person.

Without a live event in the mix, the relationship between those who produce a magazine and those who subscribe to it is largely one-way. We write, you read. At the conference, the circle is completed. We learn from you what works and what doesn't. We hear firsthand about your issues on campus and the solutions you've worked through. For all of us at Campus Technology, the best days on the job are in late July at the annual Syllabus Conference, when we meet with our audience, face-to-face.

With this, our Syllabus Conference Yearbook Issue of *Campus Technology*, we turn the tables, bringing you the conference captured in print. The content and context of Syllabus2004 are provided on the pages that follow, giving you a true taste of the collegial, informed, and stimulating gathering that traces its roots back to **UC Santa Cruz** (CA) in 1994. You'll get a very real sense of the proceedings, keynotes, panel discussions, Executive Summit, vendor expo, and everything that makes the Syllabus Conference so special to its participants, year after year. Importantly, our editors have worked hard to impart the level

of activity and learning that took place this year during our Day at Berkeley—now a field-day tradition that began in 2003 at **Stanford University** (CA), and one that will continue in 2005 at **UCLA** (CA).

A look through this Conference Yearbook will show how high Syllabus2004 has set the bar for future events. In that regard, our team is already hard at work, preparing. I know our audience will tell us how we did, when they come to life in Los Angeles next July, at Syllabus2005. **CT**

—**Mark Sande, Publisher**

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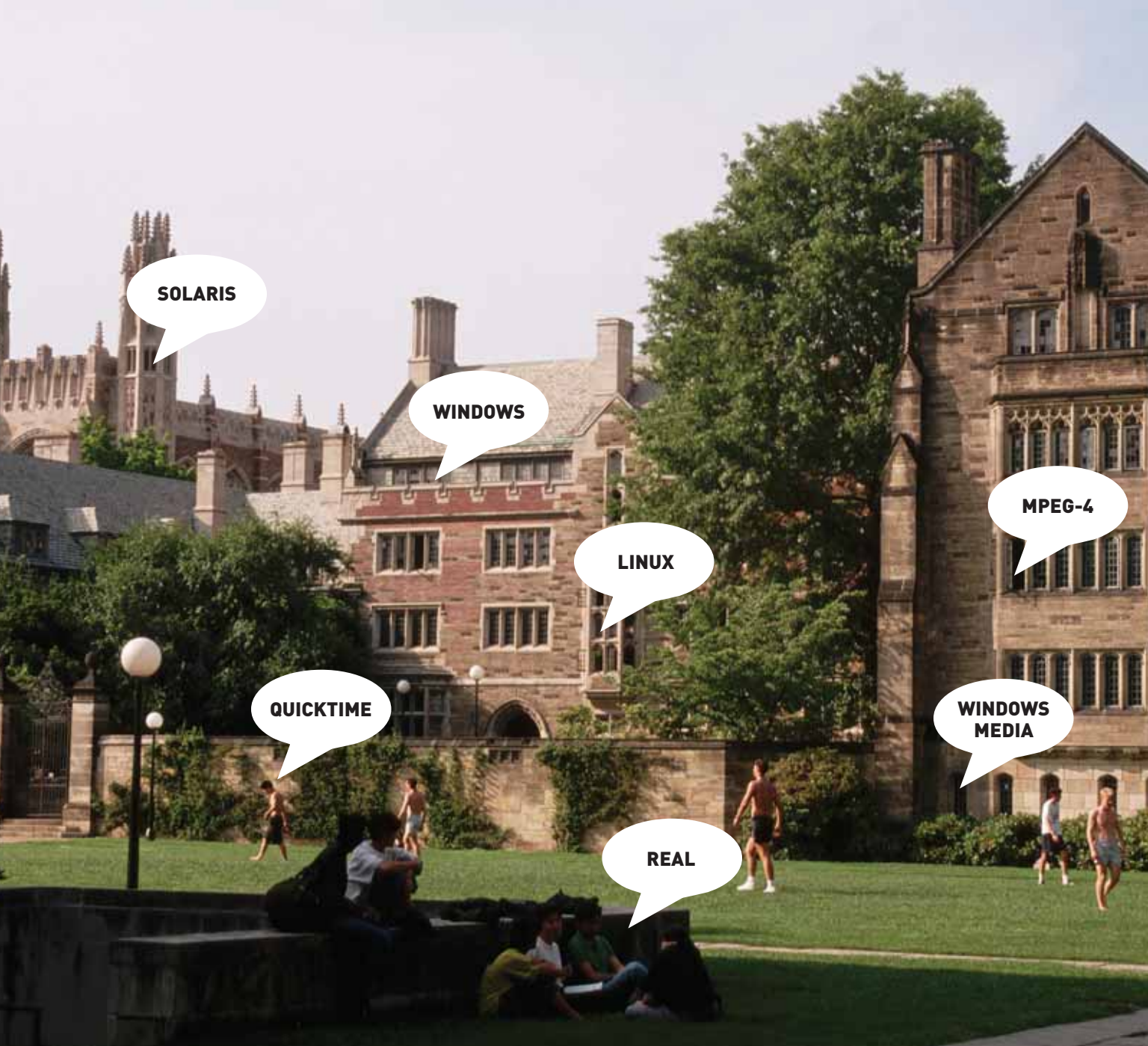
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BIG TACKLING the QUESTIONS

Our keynoters take on fiscal challenge, the future of the Internet, and CMS.

► UC's Turbulent Times and the Role of IT

UC's Kristine Hafner connects the dots between growth and fiscal challenge—and they lead to IT.



*With a perspective gained only by working in the president's office at one of the largest educational organizations in the world, UC Associate VP for Resources and Communications Kristine Hafner gave Syllabus2004 attendees the "big picture" about the role of IT in higher education. In the following excerpt of her July 19 keynote, Hafner examines how the **University of California** is wrestling with strategic planning during a time when enormous growth projections clash with a nearly \$2 billion budget shortfall. Can IT help?*

Things are at a turning point for the university. We are at a place where we've really never been before. California was

a steaming economy up until 2001, at which point it crashed. The state as a whole lost \$12.5 billion in revenue. In 2002, the university was still in a very steady state, projecting even growth, moving ahead, with a budget that would essentially reflect that growth. Now, though the state is beginning to project slight increases in revenue over time, we have an enormous structural problem in that the spending will always, at least for the foreseeable future, outstrip what the state is projecting in revenues. That backdrop is problematic for the University of California as a whole.

At the university, we now have almost a \$1.6 billion shortfall, at the end of the fiscal year '03 to '04. The budget that is on the table now will take another \$372 million out of the university's budget, bringing us to almost a \$2 billion shortfall. We have plans to cut freshman enrollment

for the first time ever, we are cutting faculty spending, we are raising fees across the board, and we are delaying the opening of the new **UC-Merced** campus. And yet, the University of California is one of the biggest contributors to the state of California's economy.

Who really suffers as a result of this picture is, of course, our students. Student fees get ever larger. More and more of the responsibility for the funding gap, the structural deficit that we have, is placed on the shoulders of the students.

Back in 1999, the University of California as a whole pulled together a group of leaders across the system, and produced a report that looked ahead at where we needed to go with our administrative systems infrastructure. When we published the new business architecture report in 2000, we were just at the beginning of an enormous growth curve in enrollment. The report asked: How are we going to accommodate the amount of new growth, when we understand that the administration of the university will *never* be funded in step with enrollment growth? Even then, what we saw was increasing risk, as the student enrollment grows and the administrative infrastructure probably stays funded at the same level.

We needed to look at a different, more scalable model to ensure that students coming to campus get the support that they need. The new model was inspired by several things: the recognition that you have to look at re-engineering business processes from a number of different points of view; that technology has to be a critical enabler for a new way of doing business; and that people need to have tools accessible to them at the desktop, out in the departments where 80 percent of the work gets done (and 80 percent of the costs occur).

Out of all of that, in the framework that we created, you'll see the portal in the center. Most of our campuses have embraced integrated portals, to bring applications and tools and technologies together at the desktop. But we also realized that you have to address the underlying business processes and the policies associated with them in order to be more effective and efficient.

So, we move business to the Web through integrated portals. We also look at the training and skills development of people in those areas and foster enabling technologies. We have provided more integrated financial information. UC has 10 different financial systems with distributed general ledgers, so we have a huge issue of how we get information from our campuses up to a central reporting facility. The idea is to do some corporate data warehousing development that pulls data from the campuses. Finally, we track performance of our academic and

business units over time. These components together created the new business architecture context.

The framework was not prescriptive. There was a lot of excitement around the fact that leadership across the institution came to agreement on this set of principles, creating a framework; each campus could then figure out what it means for them. Each of the campuses has taken the concepts and molded them into their own campus-based, new business-architecture project, to fit their own culture; this is one of the great successes.

We made a report to the Board of Regents in 2004, addressing what has happened with the new business architecture, and how we are looking forward. The budget picture I mentioned earlier explains why we see a slightly different focus now. Leadership now is concerned less with using the technology to drive process change—now, it's: *How do we manage our risk? How do we cut money out of the budget? How do we become more efficient?* And how do we do things one time and not 10 times, for 10 cam-

pus? We are looking for leverage. As a large institution, how do we leverage our size and purchasing power? Will this model hold us steady through both huge growth and through retrenchment (which is really where we are right now)? Is the model scalable enough to be successful?

And we realized that the regulatory burden enormously affects our ability to be effective and efficient; we are saddled with so many processes. That's another indication that our focus has shifted because of the times.

Many new, system-wide initiatives came out of this new architecture, particularly with respect to the role of technology. Self-service via the Web is an overriding theme that all of our campuses have embraced. So, centrally, in the Office of the President, we find benefit systems, and payroll systems...these are systems that are centrally developed. We are moving those things to the Web so that employees throughout California can access and update their own information. And we want to have the same types of Web services available for students. Pathways is a Web-based tool that is being used by about 90 percent of our admissions applicants—a single application interface via the Web. UC for Yourself is a suite of tools for employees—the whole UC community—that we are continuing to enhance. The issue of electronic forms—automating workflow, digital signatures, and how to move from paper-based processes to automated processes—these are the major themes; self-service processes to be delivered via the Web.

Another area that the university as a whole is pursuing is this notion of common solutions. It's very difficult at the University of California to have prescriptive solutions or to mandate that all the campuses go in one direction. Really

UC's Turbulent Times At-a-Glance

10 campuses
5 medical centers
3 national labs
200,000 students
Proposed budget of \$14.5 billion
Potential shortfall of \$2 billion

what we are saying here is that we are looking for the collective interest, and where it is better for us to do things together one time than it is to do them 10 different times in 10 different ways. For example, as large research institutions, we have the issue of how we report effort on federal contracts and grants. This past year, five of our campuses and the Office of the President jointly funded the development of a new effort-reporting system. Also, we are doing a lot with not only jointly developing, but also sharing of Web content and training tools, and all of our campuses are really invested in moving things to the Web. Another example is our federated identity management project, in pilot, and for which we now have three campuses and the Office of the President working closely together (this is a Shibboleth project) to demonstrate that we can have a federated identity management model for the University of California as a whole.

Finally, how do we leverage the size of our university? One example is that we have involved all of our campuses, the medical centers, and the laboratories in a consortial software licensing effort. We have seen enormous financial benefits—a \$100,000,000 in savings already—from our new software licensing consortium. We are also doing strategic sourcing on other levels—desktop technologies, for example—to try to aggregate the spending. Some of the campuses are looking at consolidating and recentralizing things that were decentralized years ago. This is a challenge, and in some cases, controversial. But people are realizing now that we have created such a complex environment to manage, particularly with the security concerns that we have—that it can actually be considered an unmanageable environment. There is a lot of thinking now about the idea of changing the model; not recentralizing, but centralizing what makes

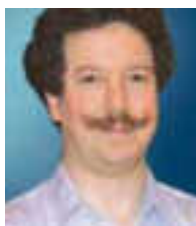
sense, and leaving decentralized what makes sense. The California Digital Library (CDL) is a fantastic example: It does not replace the campus libraries, but augments and partners with the campus resources to create a common set of digital resources that are there for everyone—including the public of the state of California.

Yet another great example of taking our resources and pooling them in support of something larger is CENIC, the organization that provides network services to the university. UC was one of the founders, along with the Cal State system, the community colleges, **Stanford, Cal Tech, and USC**. There is a whole range of network services that we've invested in and continue to enhance. The capability that is here for our research and teaching enterprise is absolutely phenomenal. California is also part of National LambdaRail, the national fiber optic infrastructure supporting the research enterprise.

So, for the new business architecture, we had taken a very broad look at what we needed to be doing going forward, and yet, we realize that it's still a challenge within the university and among the leadership to determine *just what is the role of information technology*? Let's recognize that we are truly an information-based organization, and that we need to represent that in how we speak to not only our core competencies, but where we are heading in the future. If we don't start focusing on having the right information technology infrastructure in place, it's going to be harder for us to talk about how to map that to the institutional mission. It is not always clear to the leadership of our institutions in general that IT needs to be at the table and needs to be an integral part of the planning in our institutions as we move forward, particularly now in the year 2004.

▶ Can the Internet Survive?

MIT's Jeff Schiller reflects on the governance of the Internet, and the endurance of the global network as we know it.



As MIT's network manager since 1984 and a longtime participant in national networking initiatives and the international networking community, MIT network manager Jeff Schiller has seen it all—from the early research of the ARPANET, to the everyday communications of today's global Internet. In this July 21, 2004 keynote, Schiller looks at the governance of the Internet and its future survival, and asks: Who's in charge here?

We have a real issue coming up with the Internet. You hear about the latest computer worms and spam, and you think,

"Can the Internet survive?" But there is a deeper threat. The Internet has many stakeholders. I'm from the early generation; the guys who helped build the Internet. We had a certain culture about us; a certain set of ethics, which, unfortunately, are not shared by the majority of today's Internet providers—lots of users share these values, yes, but not the providers.

The Internet was born on January 1, 1983. That was the day when the ARPANET muckity-mucks said, "Thou shalt speak TCP/IP, or thou shalt not speak at all." That forced us to change from the old technology, Network Control Protocol (NCP), which allowed computers to talk to one another on the ARPANET. But in those days, a port on the ARPANET cost \$80K—and those were bigger dollars. And,

you could connect exactly *one* computer on the port. But with TCP/IP, that one port could connect an entire campus.

So, once the Internet was started, we had exponential growth. By 1988, when the Internet worm first showed up, 60,000 computers were connected to the Internet, of which roughly 6,000 were infected. It was the first time the Internet made it into the mainstream press. And it was the first time I could explain to my parents what I did for a living.

Then, around 1991, we had about a million hosts on the

I like to describe the Internet as the cliff we are always running to. But we are putting up scaffolding and building the cliff faster than the guy running at it can go. Occasionally we got pretty close, and we kind of held on with our fingers to the edge, but we always made it.

The IAB remained self-selecting until an open, participatory body—the Internet Engineering Task Force (IETF)—grew out of the IAB. All you have to do to participate in the IETF—and it's true today—is to join the mailing list of its

“It’s mind-boggling: The Internet has become the communications infrastructure for the *planet*.”

Internet. After that, it became too hard to count the growing numbers. Today, when we talk about how many people use the Internet, we refer to percentages of populations of countries. Like China. It’s mind-boggling to a geek like me that the Internet has become the communications infrastructure for the *planet*.

The original culture of the Internet was largely one of Internet researchers. We didn’t have security problems—except for the occasional researcher’s child having fun with mommy or daddy’s modem. Interestingly enough, the purpose of the original Internet was, at first, to allow researchers in one location to talk to a computer someplace else; then, it evolved into the ability to move data from one computer to another. But using it as a way to communicate between people was, in fact, always forbidden: E-mail in those days was the *forbidden* application. Today it is the *killer* application. So, if today you say that peer-to-peer (P2P) is the *forbidden* application, then you can complete the sentence...

But what I really want to focus on today is governance: how do we govern the Internet? We don’t know the answer; this is a work in progress. It is the kind of problem that wars are fought over; it’s no measly little thing.

Originally, governance was provided by ARPA. They chartered the Internet Activities Board (IAB), a panel of principal investigators who took ARPA funds to do networking research. Later, ARPA tried to phase themselves out when the Internet stopped being cutting-edge research. NSF stepped in: The Internet’s first transition was from a group of network researchers trying to figure out how to build networks, to a bunch of researchers trying to use the network to further other disciplines.

At that point, the IAB became independent, with an invitation-only membership; for the most part it was run as a self-serving boys’ club. Yet they did a wonderful job, spending hours cogitating over the end-to-end model of networking, and how to do routing so that the network could get bigger. The challenge of the Internet was always, can it scale? And the protocols have, in fact, evolved to do just that.

working groups and go to its meetings if you want to.

So who owns the Internet? The answer is, everyone and no one. Every organization controls its little piece. We all control our network; ISPs control theirs. So we have ISPs that have a fixed rate per month and an acceptable use policy. AUPs can be reasonable, or they can be horrible. Think of *Rollerball*—an awful movie, in which there was depicted a future where corporations ruled the world. What is the primary value of a corporation? It is expedience, and the primary reason for a corporation is to make money for its shareholders. So when you see a cute company logo, such as, “We make living better...” —No, that’s not their primary job; the primary consideration of the company is to make money, not *how* they make the money. Bottom line: It becomes governance by contract.

Take a look at your typical cable modem AUP. It may say something like, “You may not run any server we don’t like,”—but they don’t tell you what those are—and, “We can terminate your service for no reason, whenever we like.” These are the kinds of clauses you’ll find. Internet providers are not common carriers; they don’t have to provide service, and they can deny service for whatever reason they want.

One ISP put words in its contract that said, “We can read your e-mail.” And it’s actually broader than that: It said that, “We can monitor all of your traffic, including e-mail.” And then it went so far as to say, “But if in the process of reading your e-mail we learn of some intellectual property you have, we automatically get rights.” That was in the contract—and it wasn’t a small organization, it was IBM.net. Now, I can speculate that they were probably worried about somebody bringing a suit against them, saying, “Hey, IBM, that technology you just came out with, we really own that and you must have learned about it by reading our e-mail.” So they were probably trying to neutralize that kind of defense. Still, there it is.

Another ISP actually had in its acceptable use policy that you may not disparage them. So, if I put in a posting somewhere that “I have service from this ISP and it stinks,” I have

violated the AUP—at their sole discretion, mind you. In fact, everything in that AUP was “at their sole discretion.”

Let’s look at Internet constituencies. You have Internet service providers, and Internet users that I call residential users, and enterprise Internet users, universities, governments, media companies, technology vendors... Who is represented? Governments are represented, because they have the guns. Enterprise users have their forums. Internet service providers have NANOG in this country (really global). And you have the IETF, which brings together Internet service providers, technology providers (like Cisco), enterprise users, media companies... But guess who’s missing? You have nobody representing Internet users.

Coming back to the point of my talk—*Can the Internet Survive?*—media companies think the P2P nature of the Internet is evil. They want to be content providers, and they want users to sit on their couches. In fact, a cable vendor in its AUP says that I can’t run a Web server on my machine at home. Forty bucks a month? You don’t get to have a Web server. Now, their interest, of course, is just trying to share the bandwidth equitably, and I don’t really object to that. But media companies have a different spin: They don’t want me to be able to host a Web site unless I pay a lot of money. So I get scared when I think about media companies buying cable modem vendors. Maybe the motivation

of the ISP will shift from making sure that the bandwidth is shared equitably, to “making sure we protect our media business.” And, of course, the thing they really want to go after is P2P file-sharing, which they consider a threat.

This changes the Internet; it is no longer the Internet that we knew it to be. This path leads to the end of the Internet and the ability to come up with new, innovative applications, whether it’s audio, video, interesting instructional technology... Imagine if you would, that you want to do some kind of innovative distance learning, and reach out to consumers, through some interesting application that wasn’t a Web browser, but you can’t because only Web browsers are allowed. That’s the end of the Internet. What can we do? We have to keep Internet P2P, even when it hurts. Even though on your campuses, P2P file-sharing is not pleasant; it uses up bandwidth, and it costs you money. But if you try blocking it, you’re taking a step toward that tombstone. We must maintain the end-to-end connectivity principle.

Push back on ISPs that overreach. Negotiate. Amen, that we still have competition. There may be a shakeout in ISPs in our future, and we may not have the competition we have today. Let’s use that power of competition while we have it. You don’t have to buy from a lousy ISP. Put it in your contract that they will not monitor your traffic. Do not bow to pressure from media companies.

▶▶ Digital Learning Cultures in the Information Landscape

Clifford Lynch considers the shifting relationship between scholarship and CMS.



As executive director of the Coalition for Networked Information, Clifford Lynch has an exceptional view of the changing landscape of information in the digital realm. In these excerpts from his July 19 keynote at Syllabus2004, Lynch takes a look at the changing relationship between scholarly communications and the course management system.

Let me sketch the familiar landscape in higher education, circa 1990. We had academic computing, which went through a strange sort of hollowing out and distribution process during the '80s and early '90s. As we moved away from centralized academic computing, many institutions became involved in supporting distributed workstations and infrastructure components like the network. We had administrative computing, which had a big infusion of

money in the late '90s, partially because of the Y2K boogie man. And then we had library computing, which I would say by the early mid-'90s was legitimately recognized as another leg of the computing stool. That included online catalogs, circulation systems, interlibrary loans—a set of rather stable functionality that had been in place. We had, starting again in the early '90s, a certain amount of construction of what were called digital libraries—mostly digitized special collections. You had eReserves coming online. This was basically a pretty static world; lots of incremental evolution, but not too many new species being introduced.

Sometime in the late '90s things really got strange. All of a sudden, fundamentally new things got loose in this environment. You can see them reflected in the organizations' responses to them. The learning management systems were very prominent. As so often happens, these things came in a bit stealthily. But, very rapidly, they

became institutionalized. We started seeing administrative pronouncements that pushed these more and more prominently into infrastructure. They rolled out very quickly—faster than we had designed policies to manage them.

At about the same time, we moved on from our first modest efforts in licensing digital content from publishers, and digitizing local content, to the point where by the

against that artificial wall initiatives at some of our universities to more directly engage undergraduates with faculty research, to construct learning experiences and environments that are much more discovery-based.

That leads me to wonder if learning management systems shouldn't be thought of as just the beginning of a something that generalizes collaboration environments in

“The wall separating teaching and learning from scholarship is extremely artificial.”

late '90s institutions started to build up really massive collections of journals in digital form, and digitized monographs and special collections. In the last few years we've seen the establishment of a set of programs called institutional repositories. These are basically distribution and stewardship services that universities have established to: (1) collect faculty work for dissemination and management; and (2) record the cultural life of the campus.

The faculty work reflected a set of trends that we've seen captured in discussions of cyber infrastructure in support of science and engineering and of parallel efforts in support of humanities and social sciences. In the UK and most of Europe they talk about eScience and eScholarship, which I think somewhat better captures the issues here. The fundamental nature of scholarly practice and scholarly communication is changing. It has already undergone a phase change in most of the sciences and engineering. The change is more fragmentary in the humanities and social sciences, but the nature of this change is that it exploits computation and collaboration enabled by technology. It exploits digital content and very sophisticated large-scale sensor systems and builds heavily on datasets, computation, and simulation as an integral part of the scholarly process. The broad palette of scholarly communications is now much more than our traditional system of scholarly publication can handle.

Institutional repositories represent a place to store and manage this material; to make it be “not at risk” in the sense of keeping it alive and accessible. These kinds of systems have also shown up and transfigured the information landscape.

Are we being too narrow in our definition of learning management systems? Today, we think of learning management systems as support tools for teaching and learning processes highly connected to the formal instructional activities of our institutions. But the clear distinction, the wall separating teaching and learning from scholarship, is extremely artificial. In fact, if you look at our graduate programs, that wall mostly doesn't exist. You see pushing

which both learning and research can take place. Perhaps terms like “environment”—which invite us to think about environments populated by a range of tools from a range of sources—may be a better future picture of where these learning management systems evolve, rather than having scholarly collaboration systems as yet a new silo, distinct from learning management systems.

Here are a couple of questions we need to ask about learning management systems: Where do they fit, and what are the interfaces? I can tell you, for example, that libraries didn't pay much attention to the development of learning management systems for quite some time. Then, about two years ago, a series of issues showed up that got the libraries' undivided attention.

All of a sudden, we started to hear complaints from faculty who wanted to integrate material—either material that they captured, or often times, material that the institution had licensed, that was part of the digital collections that were hosted by the library. They wanted to bring that into the course environment, and that process turned out to be rather awkward. It also implicated the lack of systematic authentication/access management systems at some of our institutions. Also, that if some of this material was licensed and you wanted to use it within the context of the course management system, you got into the issue of having to fire off multiple authentication and authorization mechanisms.

Those were some of the problems brought out, but part of the solution got the libraries really nervous. At least on the commercial side, you started to see positions getting established at some of the learning management system vendors that dealt with the licensing of content. All of a sudden, deals were being cut to license content that lived in the silo of the learning management system—things that historically might have comprised course readers or databases out of which course readers could have been constructed. The libraries realized that they had spent 10 or more painful years developing expertise in writing and negotiating licenses for digital content on behalf of the institutional community.

Now, here was another potential silo, where a different

group, not synchronized at all with the work the library was doing, might be re-licensing the same material, and might be doing it under a set of terms that were inconsistent with the policy positions that the library had painstakingly hammered out on areas ranging from preservation to privacy. Resources were too scarce, the policy problems around digital content were too complex, to make this vulcanization of the acquisition of digital content acceptable. This suddenly got libraries deeply engaged in the question of learning management systems.

Now, I will say that we're still at the beginning of a set of policy positions that I suspect are going to get additional reconsideration. Let me just point you at one that I think is rather interesting. Textbooks had been something that students purchased, handled by the university bookstore or other bookstores in the vicinity of the university. And there was this whole nastiness about the used textbook market, which the publishers hate. Textbook prices, by the way, have been running up quite a bit over the past years. I would direct your attention, in case you missed it, to a report that a number of student groups put out earlier this year, called "Rip-Off 101," which was a study of some of the publisher practices of putting out what were fundamentally spurious new editions of textbooks, in which they did exciting things like renumbering exercises—destroying the resale market for used copies or earlier editions. There's a lot of irritation about the price of textbooks.

There are also issues about the cloud of digital materials: study guides, stuff that goes in learning management systems, supplementary exercise materials, and faculty support

to what other library services we need to extend into the world of LMS. For example, do we need a button in the course management system course site, to directly issue searches into library catalog systems—rather than opening another window? Do we need direct linkages for virtual reference? There are experiments underway in these sorts of things. Another set of issues is whether we need a librarian presence, essentially as a member of courses that are hosted on the learning management system, in the same way that teaching assistants and faculty have a presence. There has been some work on that area in some institutions.

But at some level, those seem to be the easy questions. The really ugly policy questions go the other way: the export of material from learning management systems. What is exportable? Where is it exported? For what purpose and how long? Who gets to see it? Who is responsible for it? I would suggest that this complex set of issues is much more difficult at a policy level than simply extending library services and content into our learning management systems or our scholarly collaboration environments, going forward.

So...these are interfaces not just to make content importable; equally important, they are to make content exportable and manageable. We need to recognize that one of the key results of the deployment of learning management systems, whether they are being used to support fully net-based teaching and learning, or whether they are intended to complement or supplement to face-to-face teaching and learning activities, is that they are forcing us to engage with a new, very complex type of digital information object that has legitimacy and importance as a record, as a teaching and

“The really ugly policy questions [involve] the export of material from LMS.”

material that surrounds them. As we start looking at more and more reliance on these learning management systems, I think we are going to have to reopen the question of the institution's involvement in the licensing and management of contracts surrounding textbooks (in some cases). This is an area that libraries have really stayed out of. Yes, they may buy a single copy of a textbook as part of their reference collection, but typically they make no attempt to get involved in the licensing of textbooks as opposed to reserve material to support classes. This is just one example of how I expect things to get re-negotiated as we go forward.

It's clear we need a set of linkages and interfaces that facilitate the incorporation of digital content from a vast multiplicity of sources, both by reference and by copy, into our learning management systems. There is also a lot of discussion about what other interfaces we need to make to library services, and I would say that the jury is still out as

learning tool, as a new mode of scholarly communication.

Circle back to my comments about the notion of a learning management system as opposed to a broader scholarly collaboration environment. As we look at these broader scholarly collaboration environments, we recognize that the act of collaboration, of working together and analyzing data and authoring together, simultaneously produces a record that we can annotate, share, archive, distribute, recall, and that that indeed is a new genre of scholarly communications. There is a significant lesson there, for how we think of LMS.

We are in a very different information landscape today. This is a landscape where we are challenged to break down the walls of siloed information services and siloed information and data resources. There is no system, no potential silo, more important to focus on than learning management systems—and the relationship to scholarly communication environments. **CT**

Education



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Exploring at Berkeley

Syllabus2004 attendees take their quest for knowledge to UC-Berkeley, one of the world's leading academic institutions.

Since 1868, UC-Berkeley has attracted visitors and students worldwide to the central campus of the University of California, nestled among 178 acres of majestic, wooded Northern California beauty. What better setting for a day of learning and exploration as attendees walk the campus and partake of vigorous on-site sessions and stimulating discussion groups? Syllabus2004 at Berkeley allowed attendees to see and experience the latest education technology in action with leading scholars and technologists.



Berkeley is known for its architectural and historical landmarks, such as Wheeler Hall and the soaring Campanile (Sather Tower).

THE BERKELEY CAMPUS IS RENOWNED for its libraries, labs, research and publications, and the distinction of its faculty and students. The faculty includes eight Nobel Laureates, 124 members of the National Academy of Sciences, 19 MacArthur Fellows, 81 Fulbright Scholars, three Pulitzer Prize winners and more Guggenheim Fellows (138) than any other university in the US. ▼



CONFERENCE ATTENDEES JOURNEY on one of the nine buses that ferried them from the Hyatt Regency in San Francisco to the UC-Berkeley campus. ▼



OPENING KEYNOTE. Clifford Lynch, executive director of the Coalition for Networked Information (CNI), and adjunct professor at UC-Berkeley, delivers the opening keynote address, "Digital Learning Cultures," at the Hyatt Regency; the conference moves to the UC-Berkeley campus immediately afterward. ▼



BERKELEY WELCOME ADDRESS. Christina Maslach, vice provost of Undergraduate Education at UC-Berkeley, welcomes the Syllabus2004 attendees. ▼



BERKELEY OVERVIEW AND KEYNOTE. Kristine Hafner, UC's associate VP of Information Resources, Office of the President, delivers the Berkeley keynote, detailing IT's role in the university system's financial and strategic picture. ▼



Hitting the trail. Attendees put on their walking shoes as they move from session to session around the UC Berkeley campus.



▲ **ON-SITE SESSIONS.** Karen Miles (left) and Judy Stern (right), Berkeley Educational Services instructional technology specialists in Multimedia Authoring and Faculty Training, share their experiences with attendees in "Technology Training for Faculty: Meeting Diverse Needs," in the Maude Fife room at Stephens Hall, below. ▼ **CT**



THE EXPERTS DISCUSS

Syllabus2004 attendees examine new challenges and issues with the help of campus peers and pros.

►► Is Open Source in Your CMS Future?

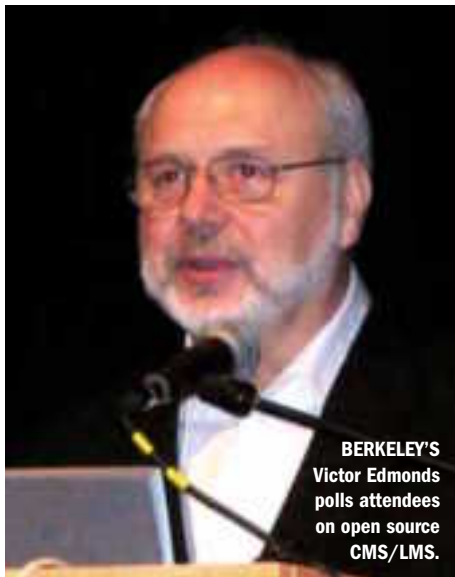
A venerable panel—and an audience technologically equipped for interaction—take on the big questions about open source.

As course management systems have matured, they have encompassed wider functionality, and been integrated with numerous other campus systems. As with most large and complex systems, the unbundling of service and software components can produce greater opportunities for efficiencies and customization. No wonder, then, why open source efforts in general, and specifically Sakai, may be the wave of the future for CMS.

The following discussion of this topic was excerpted from a July 19, 2004 plenary panel at Syllabus2004. Victor Edmonds, director of Educational Technology Services for **UC-Berkeley** (opposite page, left) moderated the discussion, and utilized TurningPoint “personal response” software from Turning Technologies (www.turningtechnologies.com), to engage attendees in interaction during

the conversation. Session panelists were (above right, left to right): Charles Kerns, educational technology manager for the Sakai project at **Stanford University** (CA); Phillip D. Long, senior strategist for the Academic Computing Practice, **MIT**; Mara Hancock, associate director, Learning Systems and Multimedia Services, Educational Technology Services, **UC-Berkeley**; Brad Wheeler, associate VP and dean of Information Technology at **Indiana University**; and Kathy Christoph, assistant vice chancellor, Academic Affairs, **University of Wisconsin-Madison**.

Victor Edmonds: This is a dream panel—an all-star team of leaders in open source course management systems. Today, we’ll pose some questions that are probably on your minds, too, as you ponder whether open source CMS is right



BERKELEY'S
Victor Edmonds
polls attendees
on open source
CMS/LMS.



THE 'DREAM PANEL' (left to
right) Kerns, Long, Hancock,
Wheeler, and Christoph take on
audience concerns and
challenges.

for your campus. Let's poll the audience—do you see open source CMS in your future, say, in two years? Our response system shows that 48 percent say they will be continuing with a commercial product, 13 percent adopting Sakai, and 19 percent saying they will wait and see. Panel, should we close down Sakai? How do you react to these numbers?

Brad Wheeler: I'm not surprised. Many people we talk to are waiting to see if it's a realistic thing. As far as Sakai goes, the public release was five days ago [July 2004], so it seems, since we are six months into a 24-month project, waiting to see is reasonable.

Mara Hancock: I'll address the 48 percent staying with the commercial product. In looking at some of the primary concerns around migration and change management, I can see why this would be a big issue. One of the issues cited in an ECAR report about the reason why people weren't adopting course management systems to begin with, was the fear that the systems were going to be changed on them continually. Knowing that you've told your faculty you are going to be going with something, staying with that is kind of an honorable thing right now, so people are trying to stick with that.

Phil Long: I'll offer a different take on the 48 percent, namely, to remind people that one of the critical goals of the open source movement right now is to offer choice. The nature of what commercial products will be in two years, if Sakai has the influence that we hope it will, is that there will be a lot of adoption by the commercial vendors of some of the architecture, design, and interface definitions and the like that are going to be represented in Sakai as a reference model. So, I'm not at all surprised; in fact, I wouldn't know

in two years what the landscape of commercial products is going to be like. My hope is that it will be itself a much more diverse environment, with strong influences from the work that Sakai is doing.

Charles Kerns: I feel the same way. I think that the CMS has become part of the basic infrastructure. Most people have to be conservative. You have to make sure that you don't lose any faculty data, ever. And you have to think about the feature set that you now have, and which of your constituents use different features—you do a kind of gap analysis. Also, you have to think about the user interface: do we have some people sort of married to their first UI, the way we did with certain word processing programs? I don't think that's a student problem, but I think it's that "last 10 percent over the fence" problem you have when you make a change. The other concern is the opportunity problem: We have a whole set of new tools coming that open source offers us, a new marketplace for tools, and we are really going to have to think in terms of policy about adoption in a different way than we have in the past. So, I think that everybody needs to be conservative in thinking about maintaining their base—they want to be sure that Sakai has that base.

Edmonds: Kathy, you at the University of Wisconsin had to make a decision not long ago about adopting a new course management system, going in a new direction. How does this all look from that point of view now?

Kathy Christoph: The University of Wisconsin system made a decision to move from two commercial products, to one product that is different from those two. Talk about the pain of migration... I think there are two factors,

when you consider 48 percent of our audience today saying that they will stay with their commercial product: One is, two years is *not* that far out—it actually takes about that much time to decide what your goals are and to put your processes in place even to select a new direction. Secondly, that migration is extremely painful, so it's a big decision to move. Plus, at this point [July 2004] we don't even know what Sakai does. Five days ago [was the public release], so how much experience could we have?

Kerns: We're surprised that 13 percent of our audience say that they are going to adopt Sakai; we've just released it and we don't know what the feature set is going to be on 2.0. It's an amazing amount of trust in the team, which makes me very excited that people are looking to us for that product.

Hancock: One thing to note is that the percentage of institutions continuing to grow in-house course management systems has gone down dramatically. And probably, if I can make an assumption, they have moved over to either “adopt Sakai” or “wait and see.” So, I think that if you take the “adopt Sakai” and “wait and see,” and put those together, it's actually quite an impressive number to rival the 48 percent.

Wheeler: The parallel there would be the commercial marketplace—we all saw it consolidate to largely a duopoly with a few other credible challengers around, and so now the same thing is going on in the home-grown market, as these things come together.

Edmonds: What's the number one value of any CMS?

Kerns: If you look at usage among our faculty, its biggest use is delivering information or materials and documents to students. But I think that everyone believes that that's not the value of the product. It does help faculty, giving them more time, but we used to call this the wheelbarrow problem. I think you have to solve the wheelbarrow problem, because people expect that sort of low-level stuff. But, the value is when you can move beyond that and really use it for teaching and learning.

Wheeler: The new frontier for improving teaching and learning with technology is probably discipline-specific tools. It's a sure thing to provide a generic syllabus, receive homework in drop boxes, and do all those pedestrian functions. Those are valuable efficiencies. On the other hand, the drill-and-practice tool that generates unique sets of math problems so that students can practice and learn and discern what they are missing with math, is probably the real value in learning math. Or, consider the tool that provides all sorts of videos of different kinds of dance, or a game about the periodic table of the elements for learning chemistry. Discipline-specific innovation is probably the next frontier.

Certainly, our experience has been that you can ignite faculty innovation around that by buying off time, through grants, and passing out the cookies, so faculty and their graduate students will do wonderful things. But what they do is completely unsustainable, from a technology basis, and these things can't be shared. Even if someone writes the greatest physics-tutoring tool, we can't share it with another university for a variety of reasons. So, to Cliff Lynch's point [in his keynote, July 19, 2004, excerpted on page 8], I think this flexible suite of tools—where faculty can write things, and focus on topics that extend learning in their discipline, or use the CMS to support their research or scholarly output (after all, we call Sakai a “collaboration and learning environment”) solving this core problem in ways that are economically viable, and having the hooks to let people innovate and move their tools around and share them—that's probably where the next big wave of value is.

Christoph: I don't see that the current course management systems now offer a flexible suite of tools for faculty. I think that's what we're all *hoping* for as the number one value. One of the ideas behind open source is that there will be many tools available, and we can choose the ones we want.

Long: By having a suite of tools, and allowing individual choice among faculty to pick the ones they want and not the others, in some sense you promote what any good technology evolution does—in that you make the technology that's underneath this, in some sense disappear. And you get to focus on the problems of the discipline in ways that enhance the learning of that discipline. The extent to which we can, through the thoughtful engineering of an environment that's modular and flexible, destroy the notion of a monolithic tool that's providing all of this, we'll be doing *all* of ourselves a favor.

Edmonds: Twenty-one percent of our audience said they think one value of open source CMS is saving money. Panel?

Long: First of all, I'm very sorry that so many of you think that's a likelihood, because you'll be sadly mistaken. I guess the point that is salient here is that it is less of an issue of saving money, because in the end, I don't think there is a savings to be had. I think it is really *where* in the investment continuum you're going to be putting your money; whether you're going to be putting it up front in license fees, and annual fixed costs for renewal and code updates and things like that, along with a base of integration costs that are going to be ongoing at some level, for the foreseeable future... Or, whether you're going to be putting the money that you would have put in those licensing fees and the like into your staff, into collaborations with others around your institution and colleagues' institutions to do the development, or the shared development, or the co-development, of the tools and things

that are going to be helpful to you...

And you are still going to be doing the integration stuff, so that's not going to go away. But, you'll be doing integration by looking at an API that you can see the other side of, as opposed to wondering what on earth they were thinking when they were writing it. I think it's not an issue of cost

them, that when we can't make changes on a vendor product, we can make changes on an open source product. And that's not just we who are affected; it may be the other 48 institutions that belong to SEPP [Sakai Educational Partners Program]—and I anticipate that number is going to continue to grow.

“I’m very sorry that so many of you think **saving money with open source is a likelihood, because you’ll be sadly mistaken.”** *—Phil Long, MIT*

savings; it's an issue of where you think you can bank on the best value for the placement of your dollars. In some sense, I think there is a certain degree of a paradigm shift in what you think and what you expect out of your staff, in terms of being able to deal with these kinds of things. There is a development responsibility when you are building these things, and it is different than release engineering. If your staff is composed primarily of top-quality release engineers who are taking and customizing a product, as opposed to a group more accustomed to doing development, there may be a shift in training that's necessary before you can consider this as an option or as something you'd like to pursue.

Hancock: We found, in talking with our instructors, that they really do value us paying attention to what their drivers are and what their needs are. So, for an institution, and especially an organization that is not only in the business of developing, but also supporting faculty in training and use of those tools, it's really important that people see that we are responding to their needs, and that they see that we are developing tools that match their workflow. That's one of the challenges of a project like Sakai, where we start—not so much on the framework side, but on the tools side—to synchronize around those issues with other institutions. There's likely to be some tension around those requirements that we are all going to have to learn to work through.

But I think collaboration with our peers is one of the big reasons why UC-Berkeley ended up going in this direction. Because it's not just “nice” to collaborate, and get along and share things; it really reflects some of the key values in higher ed. I was amazed, coming from the corporate side, how open people here were open in sharing their tools and experiences, and I think this really matches that. But also being able to leverage our resources, for those who don't have a large amount of resources in the development side of the house—especially for teaching and learning—this allows us to actually start to be able to compete; to provide something for our faculty that's really valuable for

Kerns: Customization is really important. I've been developing custom-built tools for departments and faculty for 20-some years. If you look at what's available now, and what's transferred out of the initial location, I think it's about two out of nearly 40 that I've worked on. So, we've built things, customized for our group, but then it's never shared, and because it's never shared there isn't a sustainable community to keep it going—and then it dies. This has really been the history of education technology, not only on the practitioner side, but if you go to the research area, there are numerous tools that would be very interesting to us that have never gotten out of their model test sites. There were never communities that could actually support them. I'm excited now that we have a bed to put these tools in, which will link into an administrative system, and that we have an organization that can build community. It's customizing for our situation, but it's also customizing in a way that will let other people come in and actually build community around a tool. There have been tools for problem-based learning, and for case-based learning, and there have been specialty tools for policy analysis, yet it's very hard to sustain these. I'm looking forward: How do we move beyond the community of developers into the community of users?

Wheeler: The core challenges for IT in higher ed are building sustainable economics, so we can base-fund high-level quality services, year after year—not with hat in hand every year. Instead, I mean sustainable economics and sustainable innovation. You can get the economics if you quit changing things, but if you quit changing things in our business, you're dead. So we've got to find a way to pull both of those things together. At IU, we've reached the clear and rational understanding that we could never innovate fast enough to keep up with all the things, where this is going—especially in teaching and learning and connecting to systems. What we needed was to find a mechanism to work with like-minded partners who wanted to accomplish similar goals in similar timelines. More than anything, Sakai is

a resource coordination mechanism. We have a common architecture, common framework, and IU gets to leverage some of the work that Berkeley has done. For us, that's a big part of the long-term value. This approach, community source, goes after sustainable economics and sustainable innovation. The collaboration is difficult and painful—and valuable, when you learn how to do it.

Edmonds: Brad, could you tell us a little more about the term “community source”?

Wheeler: I was at a gathering of our finance directors, and instead of being interested in saving some money on licensing fees with open source, they were horrified. So, we got to listening and talking with them some more, and what we found out was, they had this vision of open source as funny-looking people in strange parts of the world, uploading by dark of night changes to their mission-critical software. So we thought it was useful to have a term that better describes what we do, coming together in higher ed as consortia, with projects, with discipline, with staff, with commitment. That dispelled a misperception of open source.

Edmonds: What's the biggest worry about open source?

Long: I think there's an issue that is often times associated with open source, and that is, as wonderful as the community interaction and benefits are, there is the question of will we burn out, or will our institutions stay on point? Will we continue to do the work that needs to be done to keep this alive? But the false dichotomy that is suggested here is that open source does not have commercial support. One of the things that has been an important attribute of what has gone on in the Sakai space, *is* that it is, in fact, extremely dependent on commercial support and contracts. There are a tremendous number of vendors interested in and potentially willing to take your money to be supporters of integration, deployment, or development work that you either want to outsource, or simply don't want to worry about and you want a number to call. They

are there, and I suspect that they will be growing rapidly. In the Sakai space there are already four vendors that are certified and identified as being available to provide support for implementations, even though Sakai has been on the street for all of five days.

Christoph: And I don't think that we should ignore the fact that there is a community of people ready to support open source also. I know when I first started looking at open source, some of our library support people told me that 85 percent of the software currently underlying our library systems is open source. And they swear that they get better support with that than with the vendor-supplied products. We don't have a support mechanism for Sakai yet, but I think we have promise of having a good one.

Kerns: We also have the situation where fixes to the code can happen much faster. You don't have to wait for somebody to prioritize it, and it has a central development group. So, besides getting the support of telling you what to do, you also have the support of getting things fixed. I think that open source has a better record of fixing things and promoting patches than the commercial products do.

Christoph: Working with community source really changes the dynamics of our organizations and what our staffs do and how we manage. I'm very excited about that, because many of us have opportunities to collaborate with other institutions, much like we are doing at a conference like this, but in open source we are going to have many more of our staff also working together. Our staff know the needs of the faculty, and they will be able to work with other institutions daily, more than they ever have in the past. When I look at my organization and the level of the people, the CIO, and even occasionally our chancellor, having to deal with commercial companies to get simple changes, I think, “What a way to spend your time!” I would much rather go to my colleagues at the table and say, “We've got this problem; do you have it too? Can we figure out a way to solve it?” So I think that's a very exciting future.

▶▶ Pushing Technology into the Background

Services for Useful Collaborations

The “gee whiz” factor is finally gone from the transmission and display of data bits, and it should be.

Today's students can rightfully expect technology to serve their needs effectively and unobtrusively. What are the collaborative tools and services your institution should

offer, and how can these operate ubiquitously in the background—behind the walls and in the air? In the following excerpt from a July 20 plenary panel at Syllabus2004, three

panelists and their moderator attack these questions. In the photo, from right to left: William H. Riffe (moderator) associate provost for Distance, Continuing, and Executive Education, **University of Florida**, with panelists Lois Brooks, director of Academic Computing, **Stanford University**; William Griswold, professor, Department of Computer Science and Engineering, **University of California-San Diego**; and Lonnie Harvel, research scientist, Electrical and Computer Engineering, **Georgia Institute of Technology**.

Bill Riffe: Today we'll be talking about a number of technologies and their impact on each of the campuses represented here. Let me begin by giving you a short background of some of the things that have gone on at the University of Florida. We have now about three thousand to four thousand people studying for degrees online—not just taking courses—most of them at the master's level or professional doctoral level, and some in Ph.D. programs. We've discovered that we can blend a lot of our technology into the background for almost all of these students. The applications range from video streaming and just downloading files, to collaborative software and facilitated sections where they meet together as a cohort, physically. If you choose the right partners and build the right systems, you can end up having technology that really and truly blends into the background. Now we'll hear from our panelists—

Lonnie Harvel: Among other things that I do at Georgia Tech, I'm the associate director of the Arbutus Center for Distributed Engineering Education. At the center, we are trying to find ways to bring together both the students who are resident in the classroom and the students who are receiving courses—either synchronously with geographically different locations, or asynchronously through streaming media. We are trying to find the tools and technologies that blend them all together. We are also trying to find the tools and technologies that serve them both, instead of concentrating on them as separate groups. That's the reason we use the term “distributed” education. We are trying to blend local and distance, and time them together in such a way that the factors of time and geography don't matter as much.

For a technology to actually move into the community in such a way that it's not in the foreground anymore, that technology has to be useful—believe it or not, that's the hard part. And ubiquitous—the technology has to be there when the students need it, and it's going to have to be general enough. It also has to be sustainable.

It has to be useful. There is a quote I like from a recent article in the *Journal of Academe*: “‘Build it and they will come’ may work for dead baseball players, but in general, it does not work for students.” You actually have to take the time, energy, and effort to determine what are the needs of your student community. What is the place that you want to

embed technology, and why? And how will that actually help the students? Just creating technology as a nifty idea is no longer acceptable, and in many cases offends the students. “I don't need this—why are you asking me to do it? How does this help me get a better grade? It doesn't increase my understanding. I don't care if you published it!”

So the first thing is to identify a real need. That means you may be falling back on a lot of disciplines that may not be yours. You may have to look at doing an ethnographic study. If you are a technologist, but you don't have someone from the learning sciences or education involved, your chances of success are not too great. Likewise, if you are a learning sciences and education person but you're trying to do this without technologists involved, your chances of success aren't all that great. We have to pull these pieces together.

It has to be ubiquitous. Especially when we're talking about technologies that we're just now exploring, we have to remember to use the technology to such an extent that we actually understand how it's being used. And we have to do it to the point where students begin to perceive value. A lot of times, we just use them in one class and try to generalize over multiple classes—but this makes me think our petri dishes are too small. We need to ask ourselves as researchers, what is the critical mass necessary to evaluate a particular technology? We also have to ask, what is the payoff for students? We hear grumbling like, “That was great, but now I have to attend another class that doesn't use that tool. Why can't I have it now?” In our case, the students found the technology not as valuable if they only had it in one class—but there was a massive jump in perceived value if the students had the technology in *two* classes. That was a payoff for them. And once we got a technology to the point where we captured an entire curriculum, the students loved it. The problem was, we couldn't sustain it.

It has to be sustainable. In our case, my joke was: It took two faculty members, six graduate students, and four undergraduates per classroom to support the technology. We are working to get to a level of scalability and supportability that we haven't reached yet. But WebCT and Blackboard have seen a lot of the same kind of thing. The value grows, the more courses you use.

Enterprise-level systems are needed; they have to be stable, scalable, and supportable. Commercialization is actually a really good thing, because most of us are researchers and we don't want to support the technologies after we've already published our papers. We want somebody else to do that. Commercialization will step in, usually after you have demonstrated some need.

William Griswold: Today I'm going to be talking about technology in the classroom—not for distance learning. I noticed that participation in my classrooms was dropping over time—I presumed, due to increasing class size. At the same time, we were presented with a really

"There is a tension between innovation and supportability," Stanford's Lois Brooks tells the audience. "When we hit that sweet spot between them, we've done our jobs well."



great opportunity. UCSD had deployed several hundred—now over a thousand—802.11b access points on the campus. We have virtually ubiquitous wireless coverage on the campus. And we received a gift from HP of several hundred wireless PDAs, which we could give to our students and do something interesting. Here was an opportunity to do something about participation in the classroom.

My students and I introduced an application called *ActiveClass*. It's an application just for in-class communication, in particular, the participation element in the lecture setting. Students could ask questions via their wireless PDA, professors could post polls, and students could give feedback to the professor. The idea was that there could be a silent and anonymous aggregated conversation, a kind of back channel—an aggregated broadcast channel, not a one-to-one instant messaging channel. We designed it to be click-driven, so that any text that had to be entered, like asking a question, could then be clicked on to interact with it. And we designed it for the small-form factor, for PDAs. It was Web-based for ubiquity, and it used a stand-alone design, not integrated with other technologies—it was just for in-class participation.

In order to assess the technology, we gave PDAs to more than 350 students in three different classes, allowing them to fully incorporate the PDAs in their lives outside the classroom as well. Because there was so much going on, we used an ecological perspective, which didn't dichotomize the technical, social, or physical elements of the classroom—it's analytically neutral. It was able to look at everything that was going on and show the competitive and cooperative forces that give rise to practice. This broadened our analysis from just the students, to all of the stakeholders in the classroom.

One of the things we saw was that the professor took to

calling *ActiveClass* the "virtual student," a very interesting turn of phrase. It had the important quality of showing that this brand-new technology had become just another student. So instead of moving from four to five pieces of classroom technology, the change was from 150 students to 151—a small change and not overwhelming. And it had the interesting quality of deflecting criticisms from real, individual students, to the virtual student.

The anonymity fostered a more diverse mix of questions. This might have been overwhelming in terms of quantity, except that the professor could prioritize from a list of submitted questions. And the instructor was not alone in this—the students could vote on the questions, moving them up in priority for a broad appeal. The fitness gradient for questions had improved, because it was now based on the questions themselves and on what all of the people thought of them. The TAs were also able to participate in ways they couldn't before, helping out in a variety of ways—so everyone was a winner.

And there was much more going on than the study surrounding questioning. The material layers change much more slowly than the practice layers or the software layers. We tried and couldn't even get a change made to a building that hadn't been built yet. Classrooms change at the speed of decades or even centuries. Will all our classrooms still look the same in 100 years? Can we really think about pushing technology to the background? I say, no, we have to think in terms of bringing it solidly to the foreground. We saw that in order to make *ActiveClass* succeed, with all of the great new wireless technology, we had processes of negotiation and adaptation going on—in the foreground, actively by all the participants. And if you really think about it, it is not so much about foreground or background—it's about fit. Do the spaces and the tools

that we construct fit the activity? It's not that they actually disappear, but they become so much a part of us that we are very comfortable with them and forget that they were ever separate from us in the first place.

Lois Brooks: I love tools. I love blogs, Wikis, instant messaging... because they allow people to do what they want to do without technology being the most important thing going on. My version of background is that technology doesn't slow you down, it lets you do what you want. I'll use a case study about a class we are working with now. At Stanford, my focus is on deployment and support. So I'll talk about what innovation means from the back-of-the-house point of view; what it means to be transparent and what we have to do to get there.

We have a new requirement in our first-year writing program we call the Program in Writing and Rhetoric. This year, they are adding the requirement that the students will need to do media—visual work—as part of their rhetoric. They are creating still pictures and video as part of this, and also have an oral requirement. The student will be working with digital for oral practice and presentation.

What this means for us, from the IT shop point of view, is that we are continually figuring things out. There are a lot of parts, both physical and information space, that we need to work with. We need to have wired spaces for the students and their laptops, equipment so they can shoot their video and do their audio, and equipment so they can render and digitize. We need software available for the students so they can do their work, scratch space for the media, and then delivery and presentation space so their instructors can get to things. And of course, support goes with all that. For every new pedagogical practice that comes up, there's a soup-to-nuts set of tasks that you have to do, and if you can nail all those down and make them work well, in time, when people need them, for the start of school, for the start of the class that day, then technology becomes transparent and the purpose for using it moves to the front. That's not easy.

We also are doing the new technology and the new practice, we simultaneously have the old things going on that we've always done. We have to keep the old things going because we don't change everything all at once. In the case of our class, it means that we need computer clusters working with all the new software that the students need, at the same time that we need to start looking at licensing models for getting software out to the student desktops.

Imagine, when you are teaching, if no matter whether or not your students have a computer, you know that they can get to the software they need for the class when they need it, and do what they need to do. Wouldn't that be wonderful? That, to me, would be transparency.

The other thing we need to consider is that we are always looking at a continuum, that we don't change everything at

once. In the case of our class, the teaching space—the person-to-person interaction—happens at Wallenberg Hall, a very high-tech new facility we have at Stanford that allows for, among other things, students to work within teams and do peer editing on screens up in front that they all share. In the continuum, then, we start looking at whether we can pull some of these pieces of high-end technology out into the student computing spaces—the clusters and the dorms—to allow students to use them on their own time. To make that happen, we need to move from a high-touch facility, with a lot of support, into a pretty bulletproof space so that things work at midnight or two in the morning when students are doing their work.

If we want something to work, we can't change it, we have to nail it down so that somebody can actually support the thing. And if we want to innovate, it has to change. As soon as we lock something down and say, "It's going to look just like this" it's obsolete, and somebody will want to change it in their classroom. There is a tension between innovation and supportability. When we hit that sweet spot between them, we've done our jobs well. Our faculty and students have an expectation that when we roll technology out to them, it will work. The tolerance for downtime is fairly low. If you lose the first half of a class trying to make the projector work, for example, it's all over.

So what do we need to do to make this happen? First of all, we need really smart staff. The challenge for us, as the people who need to make this all happen, is that we need to be one step ahead of the faculty and students if possible, to understand the technology and how to support it and make it work. That's one of the keys to hitting that sweet spot. The other key is to have a lot of these wonderful little technologies—blogs, IMs, and so on—available for people so that they can mix and match as they choose and create a custom classroom and teaching environment out of tools that we know how to support and use. So, we start the process of allowing people to enter the technology that exists in ways that are unique to them.

Finally, security—this is so difficult and so important. For security to work, it means that it has to be usable. People have to be able to secure things without a lot of hoops that they have to go through. Who you are and what context you are in—are you in a class and can you see those things? Are you in a class working with ad hoc peer group, and you want just your peer group to see what you are doing, or your oral tutor, but not your professor? Then on the day you choose, you say, "Now my professor may see this, because my work is ready," or, "My advisor can see this work, too." How do you make the security structure work in such a way, that as the students move through their learning in the classroom, with the faculty, or with their own groups, it works seamlessly for them? That's transparent technology. It's not something that I think any of us have achieved in the way we really want to. **CT**

Walking the Floor

Syllabus2004 showcased up to 40 technology firms, in the largest vendor hall in the history of the Syllabus conferences.



THE EXHIBIT FLOOR IS OPEN for business, as attendees browse the aisles or head to vendor destinations, short lists in hand.

UNICON IN FULL FORCE: Exhibiting the second year in a row, portal provider and servicer **Unicon** (www.unicon.net), reports a positive and engaging experience with Syllabus2004 in the “friendly and upbeat vendor [exhibit] area,” according to a Unicon spokesperson. “We were able to showcase both the portal technology and groupware solutions,” he adds, noting that administrators, IT professionals, and faculty visiting the booth expressed surprise at how quickly and affordably an institution or a group within an institution could create an online community to aggregate all the tools required to collaborate online. Unicon’s *Academus Portal* and *Collaborative Groupware* solutions were well received by the audience, booth staffers report, and the products generated conversations around fostering effective online communities, say Unicon reps.

Attendees also told booth staffers that Unicon’s affiliation with Sakai (www.sakaiproject.org) was a draw for them. Unicon is one of four companies affiliated with the official Sakai Commercial Affiliate (SCA) and is a member of the Sakai Education Partner Program, which means the company is on the ground floor of planning, developing, and rolling out one of the most-watched open source projects in higher ed. Unicon is currently evaluating the possibility of providing software products similar to those it offers around the open source *uPortal* (www.uPortal.org) campus portal solution.

Presentation Draws Collaboration

Also in its second year exhibiting at Syllabus2004, **Xerox** (www.xerox.com) demonstrated its Web-based enterprise content management software *DocuShare*. With over one million user seats worldwide, say Xerox spokespeople, at least 11 percent of the company’s *DocuShare* customers are in education. The *DocuShare* team reported good traffic and leads, and added that Syllabus2004 was a “valuable opportunity to meet and speak with higher education technology customers.”

“The show gave our sales team a chance to speak firsthand with people in this market and gain a fresh perspective on what they need today, and what they’ll need into the future,” says Dave Ferretti, DocuShare worldwide sales director.

And interestingly, the Xerox team said that exhibiting allowed them to view and try other hot Internet technologies for higher education such as spam filters, live presentation tools, and even software designed to discourage cheating on exams. In attendance with Xerox was **WaterWare, Inc.** (www.waterware.com) a Silicon Valley-based integrator and developer of custom Internet hosting services.

Another highlight of Xerox’s involvement was a case study presentation on Internet collaboration by the California Commission on Teacher Credentialing (CCTC; www.ctc.ca.gov), a Xerox *DocuShare* customer. CCTC is a state agency dedicated to establishing preparation program standards and credentials for teachers across the state. Phyllis Jacobson and Helen Hawley, consultants for the CCTC, described how they have pioneered an entirely Web-based process for year-round panel reviews by teachers and administrators. They were able to demonstrate the *DocuShare Interact* applications live, and trade ideas with audience members about other uses of collaboration software in higher ed and in the educational administration realm.

Ready, Set, Sprint!

First-time exhibitor **Sprint** (www.sprint.com) is recognized for developing, engineering, and deploying network technologies, including the first nationwide all-digital, fiber-optic network in the United States. Booth representatives offered attendees a firsthand look at the various cell phone devices from their product line—always a draw for exhibition-floor attendees looking to “play” with new devices.

Presentation Security Feature

Mitsubishi (www.mitsubishi-presentations.com), best known in higher ed for its projectors, displayed an array of projectors and related presentation products for attendees. The discussions around the various products focused on security, and highlighted protected menus and alarms. The Mitsubishi reps displayed DLP and LCD installable products and mobile “travel” projectors that sound an alarm when the equipment is moved. Mitsubishi reps reported positive and valuable feedback from attendees regarding product offerings and technology.

Giveaways! Giveaways!

Always a good draw, the Syllabus2004 Prize Hunt was in good form on the exhibit floor, exhibitors and attendees alike reported. Attendees received a stamp on their Prize Hunt form from each vendor booth visited. After the form was filled, conference goers were eligible to enter a drawing for prizes donated by companies such as **Anker Publishing** (www.ankerpub.com), **Hitachi** (www.hitachi.com), **O'Reilly & Associates** (www.oreilly.com), **Sprint** (www.sprint.com), **Sonic Foundry** (www.sonicfoundry.com), **Spectrum Industries** (www.spectrumfurniture.com), and **Thomson Learning** (www.webtutor.thomsonlearning.com). Prizes ranged from educational books and DVD players to Palm Pilots.

Mobile Platforms in the Classroom

Wireless technology is transforming the learning experience at universities and classrooms around the globe. However, traditional laptops can cause distractions and create barriers in the classroom, say **Motion Computing** (www.motioncomputing.com) representatives. A Gold sponsor, the mobile computing and wireless communications provider offered a hands-on experience with its Centrino-based tablet PCs in the company's Technology Suite and at the Motion Computing booth. In general, reps report, attendees seemed impressed by the simplicity and functionality of the tablet PCs.

Score One for the College Board

According to spokespeople for **The College Board** (www.collegeboard.com/splash), the organization's *Accuplacer* program delivers comprehensive assessment, placement, and guidance tool-over the Internet. Attendees had plenty of opportunity to learn about *Accuplacer*'s computer-adaptive tests and computer-scored writing samples, at Syllabus2004. The tests cover the areas of reading, writing, ESL, and mathematics. *Accuplacer* also provides the option of delivering tests in other subject areas.

Get Smart with rSmart

Those rSmart people really “r” smart: On the heels of the



SRO AT THE MATCHWARE Technology
Classroom as audience and staffers
brainstorm multimedia authoring issues.

‘hot’ open source CMS movement, **rSmart** (www.rsmart.com)—a full-service provider of open source solutions and co-founder of the Open Source Portfolio Initiative (OSPI)—facilitates and participates in the implementation of open source projects.

“We were able to connect with the attendees and demonstrate what open source is all about,” says Kari Clark, director of Marketing Communications for the company. Sales Assistant Nichole Rushton, and Shelley Smith, ePortfolio consultant, gave a demonstration of the OSPI electronic portfolio.

Interactive PowerPoint

Attendees are still talking about **Turning Technologies'** (www.turningtechnologies.com) *TurningPoint* software, not just demonstrated at the vendor (and conference sponsor's) booth, but also employed off-site at an interactive panel discussion at UC-Berkeley. With the *TurningPoint* software, panel attendees were able to vote instantly on topics raised by panel moderator Victor Edmonds, who reported that the technology had “a powerful effect on his ability to stay in touch with the audience.” *TurningPoint* allows users to transform lectures and presentations into powerful, two-way experiences, says Tony V. DeAscentis, the company's VP of Marketing and Sales.

Attendees Glimpse Life without Spam

Adam Symes is marketing manager for **Roaring Penguin** (www.roaringpenguin.com), a provider of intelligent computing infrastructure for enterprise technology deployment. He reports: “We were pleased with the conversations we had at the booth as [the attendees] gave us further insight into the challenges faced by campuses, when it comes to keeping junk mail off of their mail

servers." Symes says attendees who stopped at the Roaring Penguin booth showed real interest in learning about how the company's *CanIt-Pro* software allows campuses to create custom e-mail filtering solutions to match the requirements of their campus. Roaring Penguin reps report that attendees also talked about the challenges of upholding digital information and privacy issues at their colleges.

Syllabus2004 Exhibitors

Many thanks to all exhibitors who showcased their technology solution and connected with Syllabus attendees. See you next year!

CommTouch Software (www.commtouch.com)
Computer Comforts (www.computercomforts.com)
eInstruction Corp. (www.einstruction.com)
Ektron, Inc. (www.ektron.com)
Epson (www.epson.com)
GTCO Calcomp Inc. (www.gtccalcomp.com)
Hitachi America (www.hitachi.com)
Insight Public Sector (www.insight.com)
MatchWare (www.matchware.net)
Mitsubishi (www.mitsubishi-presentations.com)
Motion Computing (www.motioncomputing.com)
NEC Solutions (www.necsolutions-am.com)
NetBotz, Inc. (www.netbotz.com)
O'Reilly & Associates Inc. (www.oreilly.com)
Perseus Development Corp. (www.perseus.com)
PolyVision Corp. (www.polyvision.com)
Questionmark Corp. (www.questionmark.com)
Roaring Penguin Software (www.roaringpenguin.com)
rsmart (www.rsmart.com)
Sonic Foundry (www.sonicfoundry.com)
SP Controls (www.spcontrols.com)
Spectrum Industries (www.spectrumfurniture.com)
Sprint PCS (www.sprint.com)
Sputnik (www.sputnik.com)
TechSmith Corp. (www.techsmith.com)
Tegrity (www.tegrity.com)
The College Board (www.collegeboard.com)
Thomson Learning (www.webtutor.thomsonlearning.com)
Turning Technologies (www.turningtechnologies.com)
Turnitin (www.turnitin.com)
Unicon (www.unicon.com)
Xerox DocuShare (www.xerox.com)
Xythos Software Inc. (www.xythos.com)

TO EXHIBIT AT SYLLABUS2005
 in Los Angeles, Contact Anne Morris
 at (818) 734-1520 x 219, or
 send e-mail to amorris@101com.com.

Creative Content

Educational advisors Adam Martingano and Martin Igano from **Matchware** (www.matchware.net), software provider of Web and multimedia authoring tools, demonstrated easy ways for attendees to create comprehensive Flash Web sites in a matter of minutes with interactive navigation and object animation. No surprise, then, that this vendor's Technology Classroom had an impressive turnout—a full house with no chairs to spare. Participants were able to brainstorm and expand on frameworks for written documents, presentations, and class lectures.

Maintaining E-Mail Security

E-mail users are constantly bombarded with endless spam mail, forcing them to spend an inordinate amount of time deleting unnecessary junk. **CommTouch Software** (www.commtouch.com), an anti-spam software provider (also presenting in the Technology Classroom), talked about solutions to this growing e-mail epidemic. Needless to say, over-spammed Syllabus attendees sat up and took notice.

Learning on Demand

Those attendees who sat in on **TechSmith's** (www.techsmith.com) interactive Technology Classroom experienced solutions to create software-training tutorials, and enhance PowerPoint presentations, whiteboard applications, and much more! The educational software provider's reps were happy to work with the enthusiastic Exhibit-Hall cruisers.

Ideal for the Classroom

As they do at so many technology exhibitions, the **Epson** (www.epson.com) reps presented a wide range of products applicable to classroom instruction and presentations, and were happy to demonstrate the latest features to Syllabus attendees. Conference goers looking for the latest in "smart classroom" and academic computing technology were not disappointed.

Evaluation Upgrade

Remember the days of paper-based teacher evaluations and performance feedback? Well, those days are over. Representatives from **Perseus** (www.perseus.com), a provider of Web survey and enterprise feedback management solutions, spoke with attendees about ways to implement Web-based surveys at their organizations and institutions, in order to gauge employee/student satisfaction, performance, and course feedback. According to a Perseus spokesperson, "As students graduate and move into their careers, we see many of them coming back to us and introducing our technologies into their respective companies." What better evidence of a technology that is "working" for higher ed? **CT**

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CAMPUS TECHNOLOGY

SESSION HIGHLIGHTS

If you attended these selected sessions, revisit important talking points here; if you missed them, grab some great ideas.

▶▶ Just What Do They Know?

Assessing Student Technology Skills: A Case Study

Mary Beth Graham, Assistant Professor, Carroll Community College (MD)

According to the June 1996 report entitled, *Getting America's Students Ready for the 21st Century: Meeting the Technology Literacy Challenge*, published by the US Department of Education, "Technological literacy...has become as fundamental to a person's ability to navigate through society as traditional skills like reading, writing, and arithmetic." Technology is certainly recognized by higher education as important; however, do we really know what technology skills our students possess, and how effectively they can apply these technology skills to real-world situations?

Measuring Technological Competence

In the past, we have approached students' needs for "computer literacy" by requiring them to take a computer literacy course or pass a computer literacy test. But is this enough? We see students using computers all the time. But what are they really doing? In many cases, they are e-mail-

ing, instant messaging, or searching for MP3s to download. Most can easily navigate the Internet or use the latest word processor. But, do students possess the skills that will allow them to use technology effectively in their careers? Are they *learning* or *improving* these technology skills as a result of their higher education?

Why student learning outcomes assessment? The 108th US Congress' Committee on Education and the Workforce recently published its report entitled, *Views and Estimates for FY 2005*, wherein it announced its intention to "work with President Bush to implement a series of education initiatives...by holding schools accountable for improving student academic performance." As part of the its efforts to reauthorize the Higher Education Act, "the committee will work to address the rising tuition costs and hold institutions of higher education accountable to students, parents, and taxpayers..." On the state level, a recent progress report

issued by the Maryland Higher Education Commission indicated that “within the next few years, greater attention is likely to be given to the results of assessment activities as key stakeholders inquire about the quality of learning that is taking place in college. Accreditation organizations are asking campuses to provide information about the outcomes of assessment efforts.” This report further states that “at the 2002 Governors’ Conference on Higher Education in Maryland, there was a consensus that assessment of student learning is not an optional activity.”

What does this mean to us? If your institution desires reaccreditation, you will need to assess what students are learning, not just what you are teaching. So, it is not sufficient to assume that our students have the minimal technology skills by completing a computer literacy course. Rather, we must treat technological competency as a core competency for the college student—as important as math and reading—an area of skills and knowledge that students will learn and refine throughout their college career. Our challenge? Develop expected learning outcomes (i.e., what we expect our students to learn throughout their college career), develop ways to assess these outcomes, and implement the process.

Carroll's Technology Assessment

In order to meet these challenges, **Carroll Community College** (MD) embarked upon the task of developing and implementing a plan to assess technological application as a core competency. This assessment would go beyond the simple head count of which students took technology-related courses, and even beyond the typical survey where students would rate themselves on a scale of 1 to 10 across various areas of technology skills. Rather, it would measure how well students could apply their technological skills. The challenge? Find an effective, low-cost way to accomplish just this.

Where it began. In 1996, Carroll Community College formally defined areas considered to be core competencies, to be measured across the entire institution:

- ▶ Technology
- ▶ Library/research
- ▶ Oral communication
- ▶ Mathematics
- ▶ Reading
- ▶ Writing
- ▶ Scientific reasoning
- ▶ Metacognition

Within each of these core areas, specific skills were identified that would be measured to assess students’ competence. Measurement would take place not only at the course, departmental, and program levels, but across the entire institution, regardless of the specific curriculum. Ultimately, all courses would seek to provide significant educational experiences to improve these areas of core competency. As the



ATTENDEES HEAD OFF to their first sessions, ready for a full day of information sharing.



MARY BETH GRAHAM drills down into student learning outcomes assessment, for her session attendees.

year 2000 approached, Carroll's Outcomes Assessment Committee charged faculty and staff with the responsibility of forming subcommittees in order to develop and implement assessment plans for each of the predefined Core Competency areas.

The Technology Assessment Group

One subcommittee, the newly-formed Technology Assessment Group (TAG), was charged with developing and implementing a technology assessment plan that would measure student competency in Technological Application—the ability to effectively use computer terminology, software, and hardware. This overall definition was broken down into four areas: **1)** Creating electronic documents (word processing, desktop publishing), **2)** Organizing data (spreadsheet, database management), **3)** Communicating electronically (e-mail), and **4)** Presenting/communicating thoughts and ideas (presentation management). Our plan needed to address the following questions:

Is there any currently existing data? The only data available showed student completion of one of several computer technology courses that satisfied the computer literacy requirement. The problem: This showed student's grades for only one course, and truly didn't measure student learning as a result of taking this one course.

What assessment tools will be used to evaluate student

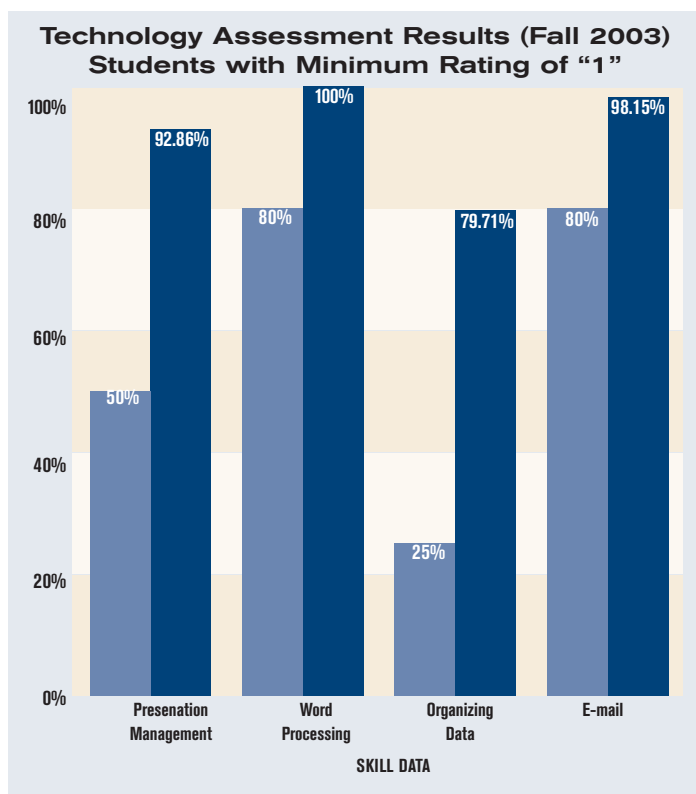
achievement of the core competency? First, we needed to determine what specific skills should be measured (i.e., what skills are important and valued). This was quite a task. After a great deal of research, taking into account Microsoft Office Specialist (MOS) objectives and other user certifications, the TAG committee developed its own list of word processing, spreadsheet, etc. skills that were important indicators of technological competency. Skills were identified as Level 1 (basic skills) and Level 2 (more advanced skills). Students would then be rated at a Level 0, 1, or 2 based upon the results of the assessment. Next, the TAG committee had to choose an assessment instrument (MOS, IC3, Tek.Xam, or a home-grown instrument?) The largest issue affecting this decision was cost. For example, the per-student cost for a MOS exam for one area (word processing, for example) could cost anywhere from \$50 to \$75. Given the intended sample size of 400 students, the cost would be prohibitive. So, although an existing instrument would be easiest to implement, we opted to develop our own assessment instrument, at least for the initial assessment.

What methodology will be associated with data collection? Since this was only an initial assessment of students' technological application core competencies, it was decided to assess 100 students within each of the technology areas, for a total of 400 students. Courses and sections were chosen so that a majority of the students sampled had completed 30 credits or more at our college, and the sampling would evenly represent the various disciplines across the institution. Instructors for each section were asked to partner with us in developing their own in-class assessment that measured specific technology skills, but also would add to the overall learning experience for the course. Ultimately, this would allow the assessment to be seen as relevant to the student and would allow for assessment of the student's ability to apply technology skills to real-life scenarios. Plus, the instructor would be less likely to "lose" the class time to an assessment that had no relation to the course itself. Assessments would be developed during Spring 2003 semester, modified as necessary over the summer, and implemented during the fall semester.

What preliminary assessments can be made about the evaluation of data? The TAG committee developed initial standards, or preliminary expectations, for the technology core competency assessment. These standards were based upon the expected percentage of students who would be evaluated at a Level 1 competency.

Assessment Completed and Lessons Learned

The technological application core competency assessment was completed in Fall 2003. It proved to be a time-intensive process, which was completed by all assigned faculty—most of whom did so in a very positive, helpful manner. This leads to the discussion of the key questions:



“Measurement would take place **across the entire institution**, regardless of the specific curriculum.”

Would we conduct the assessment in the same manner again, using a home-grown instrument? Perhaps. There were definitely challenges faced in relying upon faculty to provide leadership in developing assessment activities for their own classes. Some faculty required more assistance than others. But in the end, all of the assessment activities developed by faculty were successful in providing an assessment of students’ technological competencies that also related well to the course material. The issue of cost is still relevant. To date, the cost of some of the well-known assessments (MOS, etc.) continues to rise.

Where do we go from here? After the initial comparison to expected results, the assessment results will be analyzed in detail to determine which areas of technological application require the most attention. As needed, development opportu-

nities will be provided for faculty and staff. In order to fully assess student learning, this assessment process should be implemented for both incoming students as well as students who have completed 30 or more credits. Of course, the instrument and methodology will need to be modified for future assessments, based on analysis of this first assessment.

Implications for Other Institutions

Is Carroll Community College’s technology assessment the model for other institutions? Maybe, maybe not. It is presented here as a case study of how one college began the process. We have not reached the ultimate goal of adequately assessing student learning in the area of technological application, but we are at least one or two steps closer.

► Online Pedagogy

Catalyst for Transforming the Teaching-Learning Enterprise

Karen Gersten, Associate Dean and Managing Director of Distance Learning, and Laura J. Evans, Dean and Vice Provost for Continuing Education, Roosevelt University (IL)

We present here the complex process of developing an academically and financially successful fully online program from both faculty *and* administrative perspectives, based on the case example of one private, tuition-driven institution. While this institution faced many common challenges in its attempt to initiate a fully online learning program—including resources and resistance from faculty and administration—it has met its goals of achieving learning outcomes, student and faculty satisfaction, and fiscal success through a student-centered model based on online pedagogy. We discuss here major elements of the process that resulted in an online program that has proven successful and sustainable over time.

Case Study: RUOnline

Roosevelt University (IL) in Chicago is an independent, private institution with a highly diverse student population. Administrators there gave little attention to online learning prior to 2000, and when they did, they focused on fiscal viability rather than on quality of learning. Everything changed for Roosevelt in June 2000 when the McCormick Tribune Foundation offered a generous two-year grant to initiate a fully online learning program. An administrative-faculty triad based in a non-traditional college was appointed to plan, design, and implement an online initiative to launch no

later than 2002, when the grant funding would expire.

RUOnline premiered in Fall 2001 with 77 enrollments in seven courses. Three years later, the program yields approximately 700 enrollments in over 40 course sections each semester. The program offers one complete degree each at the bachelor’s and master’s levels as well as certificates and courses in several academic areas.

Through these programs, it has attracted new student populations to the university. Most importantly, it has moved both the faculty and administration from resistance to acceptance, and it has improved the quality of teaching and learning in both online and face-to-face formats.

Measuring Online Success: Some Guideposts

Many online programs have entered the academic arena. Some have become well-known and successful, some have maintained static enrollments, and others have ceased to exist. To embark on a successful online initiative, it is important to identify markers of success, to set targets in each of these areas, and to craft a strategic plan that defines an institutional approach to achieving and sustaining success. For RUOnline, primary measures of success included:

- Recruiting new student populations to the university
- Aiding student retention through student satisfaction

- ▶ Achieving fiscal sustainability
- ▶ Contributing to the university's overall strategic plan

Recruiting new student populations. Through targeted marketing campaigns, RUOnline increased overall enrollment each semester since its launch in Fall 2001. More importantly, its enrollment changed from students who live and work near one of the university's physical campuses to students in more than 15 states, including one student in Alaska and a member of the military stationed in Korea.

Retention through student satisfaction. It is one thing to attract new student populations; it is quite another to retain them. RUOnline focused on students and their attainment of academic goals in every aspect of program planning, from

initiative focused on student success and the university's historic mission of access. RUOnline adopted this institutional focus and based its strategic vision in pedagogy and in extending the mission of access beyond the university's physical borders. To do this, RUOnline founders read available research literature and studied a range of online programs including the most notable successes and the most profound failures because we could learn from each school's experience.

RUOnline also sought external benchmarks against which it could evaluate its effectiveness. Initially, RUOnline used a research-driven list of quality markers for online education developed by the National Education Association and Blackboard Inc. [Institute for Higher Education Policy,

"In fiscal 2004, RUOnline generated 10 times its operational budget in tuition revenue."

course design to faculty training to student service. This focus on student learning resulted in a high level of student satisfaction; in Spring 2004, 92 percent of fully online students who responded to an end-of-term survey said they learned as much or more in their online classes than in face-to-face classes. Because students are satisfied with their fully online learning experience, 90 to 98 percent have completed their courses each semester, and over 90 percent of students who begin online certificate or degree programs re-enroll in subsequent semesters. In addition, students who relocated after beginning their studies at a physical campus have been able to complete their Roosevelt University degrees as a result of the online program, increasing the university's overall retention rates.

Fiscal viability. A program cannot be considered successful unless it is financially sustainable over time. The goal for RUOnline was to be financially self-sustaining no later than 2005, three years after the end of the grant period. RUOnline surpassed that goal. Not only is the program self-supporting; it is highly profitable. In fiscal year 2004, RUOnline generated 10 times its operational budget in tuition revenue, and its contribution margin increased from 22.56 percent in fiscal year 2003, to 50.51 percent in fiscal year 2004.

Achieving Online Success: Essential Elements

Supporting the university's strategic plan. Strategic planning is the first and most fundamental step in implementing and sustaining a successful online program, and its success rests on its integration with institutional vision and mission, and coordination with the university's strategic plan. Roosevelt University went through a major strategic planning

2000] and addressed each of the 24 benchmarks in the areas of institutional support, course development, teaching/learning, course structure, faculty support, and evaluation and assessment. RUOnline also used research on best practices in online learning, including Chickering and Gamson's 1987 principles of effective teaching for the online environment [Chickering, A.W., & Gamson, Z.F., "Seven Principles for Good Practice in Undergraduate Education," *American Association of Higher Education Bulletin*], Chickering & Ehrman, 1996 [Chickering, A.W., & Ehrman, S.C., "Implementing the Seven Principles: Technology as Lever," *American Association of Higher Education Bulletin*] and Cross's 2003 analysis of teaching and learning in the next century [Cross, K.P., "Teaching and Learning in the Next Century," *The National Teaching and Learning Forum*]. Currently, RUOnline uses the Statement of Commitment by the Regional Accrediting Associations for the Evaluation of Electronically Offered Degree and Certificate Programs (Higher Learning Commission, 2003) and 2004 research conducted by Carol A. Twigg through the Center for Academic Transformation, to guide its practice.

RUOnline: Pedagogical Practices

Student engagement. Connectivity is the key to RUOnline's success, and connectivity goes far beyond bandwidth. RUOnline attempts to achieve student engagement—a major factor in student success—by connecting students to course content, to the faculty member, to other students, and to Roosevelt University. Connections in each of these areas address principles of best practice identified by most current research, and at the same time, send a powerful message that RUOnline values *personal* connection over computer power. Connectivity centers every aspect of RUOnline on student:

- ▶ Learning, resulting in high levels of student satisfaction
- ▶ Achievement of learning outcomes
- ▶ High course completion and retention rates

Simple questions; profound results. Achieving student engagement begins with a course design process based on three simple questions:

- ▶ What am I trying to do? (learning outcomes)
- ▶ How am I trying to do it? (course content and teaching methodology)
- ▶ How do I know if I did it? (assessment)

These simple questions refocus faculty from course content to student learning. The questions begin with the individual course, but they extend far beyond, influencing all teaching and learning conducted at the university. After defining course-specific learning, faculty consider how the learning outcomes of one course impact the academic program it serves, the college in which it is housed, and the mission of the university. This process and the research and strategy underlying it are detailed in a course development document given to each faculty developer.

Instructional design principles based in student learning. RUOnline bases its course design on certain fundamental principles shown to help students achieve learning outcomes. Individual design principles and their combina-

who empowers students to become increasingly autonomous learners. Group spaces, virtual classrooms, and whiteboards are tools that encourage active learning, but the faculty member's role is pivotal.

Institutional Transformation

At Roosevelt University, faculty, students, administration, and curriculum have changed as more university constituents become involved with RUOnline.

Faculty. Many faculty, initially resistant to the concept of fully online learning, now embrace the student-centered concepts on which RUOnline is based and apply those concepts to all their teaching—online, face-to-face, and blended.

Administration. Because the initiation of fully online learning was externally funded, the university administration adopted a wait-and-see attitude until the program required investment of university resources. Because RUOnline demonstrated its fiscal viability far ahead of schedule, because numerous university constituents clearly benefited from the program, and because the university gained some national recognition for the academic integrity of its online programming, online education became regularized into the university's scheduling

“RUOnline sought external benchmarks against which it could evaluate its effectiveness.”

tion focus on helping students comprehend information, connect new learning to existing knowledge, and apply new concepts to concrete situations. Among these design principles are:

▶ **Chunking content** into small blocks of material allows students to absorb and retain information more easily by aiding short-term memory.

▶ **Visual interest** attracts and maintains student engagement, emphasizes levels of importance and relationships among elements of course content, and deepens the learning process. White space, graphics, colors, fonts, and lists are all ways to engage students in the learning process.

▶ **Formative assessment** provides information to students and faculty as the online course progresses. Students can gauge their learning and make strategic changes they might need to ensure their success, and faculty can modify the course as dictated by student learning. This complements summative assessment that can be used to evaluate student progress and issue grades.

▶ **Participatory/active learning** is key to online success. For students to take an active role in the learning community, the faculty role shifts from course leader to course facilitator who communicates passion for the content to the students and

process, “online” was added to Chicago and Schaumburg in the university's logo, and online learning is a major component in the university's current strategic plan.

Students. As a result of online learning, new students are attending Roosevelt, current students are taking more credit hours per semester, students who relocate or whose work and family demands make it impossible to attend on-campus classes are completing their Roosevelt degrees, and when given the choice, students are opting for online classes over their campus-based counterparts. In the two fully online degrees, online enrollments comprise 43 percent and 46 percent of total program enrollments, more than either of the two physical campuses. Students see multiple benefits of online learning as exemplified in the following student comment:

“I thought about how I almost didn't start down this road of going back to school because of the cost and thinking I'm just too old. It made me realize how much I would be missing out on. I would never have the opportunity to meet so many people from so many backgrounds and occupations, and hear about such utterly amazing accomplishments! I love getting to know other people and this is a really great way to get a glimpse into people's lives with-

out feeling intrusive. My life is truly being enriched because of RUOnline. My lifestyle doesn't allow for me to get back to school any other way."

Curriculum. Most compelling is the transformation in curriculum review and the desire to improve the quality of instruction. Rather than an individual orientation, faculty are working together to review courses, learning outcomes, best practices, and assessment tools, and to ensure each course's fit in the programmatic mission. The result: a more energized faculty and a more contemporary and consistent curriculum.

Conclusion

RUOnline is in its infancy, and its impact on Roosevelt University is just beginning to be realized. Nonetheless, it already has had a profound impact on the way people at Roosevelt teach and learn. As program participation increases and administration attends more closely to online programming, RUOnline will continue to influence how Roosevelt engages in the business of higher education. As RUOnline evolves, however, one element will remain constant—the core value of student-centered learning.

► Outsourcing: Build or Buy

Jason LaMar, Interim Director of Information Services, Ohio Wesleyan University

Aaron Thomason, Technology Specialist, University of Central Arkansas

William Riffe, Associate Provost and Dean, University of Florida

Once more we tackle the debatable question of whether institutions of higher education should "build or buy" technology solutions. You'll find that there is not a quick, pat answer that we can apply to this argument. Every institution, every technology is different, and as such might be better suited for one or the other. In certain instances where an institution requires a highly specialized, "custom-built" technology solution, building it in-house *may* be necessary.

My institution, the **University of Central Arkansas**, has no mechanism by which individual colleges can collect data electronically from faculty and students. Our institution has an IT department to service the campus-wide technology needs (student and faculty e-mail, Web registration, help desk support), but the IT department has its hands full.

Colleges are left on their own to figure out how to manage their own databases and collect what they need for accreditation and program improvement. In this decentralized architecture, colleges have to tackle the "build or buy" question themselves. My college could not find software off the shelf that would fit our exact needs, and in our minds outsourcing such a project loomed large as costing more than we could afford. For us, then, it was "build or bust."

Owning a Solution Outright

One of the perks of choosing to build is that you own what you create, and I'm speaking about the feeling of "ownership" as much as I am speaking about the actual hardware and software. There are no ongoing licensing fees or inflated, outsourced maintenance costs, either. You are going to incur costs no matter which solution you build, but when you choose to build instead of buy, you get to continuously toss around functionality and design enhancements. You'll no doubt want to establish procedures for seeing new features realized, but having the ability to tweak and fine-tune with minimum cost gets all your constituents involved in the development of a system that actually might accomplish your technology objectives. It's exciting to build, but your first concern should be with which technologies.

Open Source or Microsoft?

If you are going to build in-house, Microsoft (www.microsoft.com) offers a broad range of solutions that will integrate well with one another. Furthermore, thousands of third-party solution providers offer products that are meant to work within the .NET framework. Most faculty and students are familiar with Microsoft Office and Microsoft Internet Explorer, and these play a huge role in any data-



OUTSOURCING IS SCRUTINIZED by (left to right)
Aaron Thomason, Jason LaMar, and Bill Riffe.

collection portions of your solution. From a programmer's perspective, you always want to build with what you know; but from a college's perspective, you want your solution built with something that is intuitive and easy to learn. You can build an intuitive client with either Microsoft or open source solutions, but you will build faster and more manageable code with Microsoft .NET.

Since the debate of this presentation is "build or buy," I will simply say that I have been totally amazed by what is possible with Microsoft solutions. One of the biggest perks is that there are so many examples from which to learn. If you have to build in-house, that means you have to *train* someone in-house, and the availability of books and online help is by far in favor of Microsoft solutions.

Lowering Costs

Total cost of ownership is often the crying point for those who choose to outsource. There are some technology services that make sense to outsource, but more for peace of

mind than for lowering costs. Outsourcing has its place, but to apply the same cry—that cost of ownership would be too high for building an in-house developed solution—is ridiculous. There are many ways that you save by building a solution in-house.

For instance, you can lower costs by utilizing existing personnel to implement and build the system. Your system should improve efficiency enough to justify reassigning personnel to help in its construction. If you can't get past this point, then I'm afraid you have no business considering building anything. For those of us who easily got past personnel assignment changes, however, you'll find comfort in the fact that you can build over time. Rome wasn't built in a day, so take the time to plan on giving time to your developers. Going slowly in developing means you can build up to things that may require more money than you can spend up-front. Taking your time also saves you money because you can find viable alternatives that are less expensive.

If you go with Microsoft solutions, for instance, you'll

Outsourcing in a Nutshell

The following are derived from various sources, including Educause publications, previous Syllabus conference speakers, and other higher education technology sources.

Definition of outsourcing. A long-term (greater than one year) contracting between a customer and a vendor in which the customer contracts all, or a major portion, of an organizational operation or function to the vendor. Can also include any measurable organizational activity that is contracted for any period of time to a third party.

Primary reasons for outsourcing. Lack of critical in-house IT skills, access to more advanced technologies, and reduce operating inefficiencies.

Moving ahead with outsourcing:

► **Develop a cost structure model** that includes an estimate of full-time employees (FTEs) required to perform the set of tasks associated with the agreement, an "uplift" factor (i.e., profit margin), corporate overhead, management fees for equipment purchased by the outsourcing vendor, hardware and software costs, and an inflation factor.

► **Recognize that outsourcing decisions** can be driven by cost, the need for speed to market, institutional capabilities, and the "worry factor" associated with critical projects.

► **Understand campus factors**, establish rational decision points, and identify qualified vendors.

► **Prepare a comprehensive, detailed request** for proposal (RFP) and carefully negotiate contract.

► **Assign senior talent to administer** the contract, including regularly scheduled service level and contract reviews to ensure proper oversight.

Outsourcing: Do...

► **Spend time** defining appropriate service levels.

► **Hire** a full-time contract administrator.

► **Use or hire** an experienced negotiator during contract negotiations. Remember that outsourcing vendors do this for a living.

► **Maintain a core staff** of specialists to maintain knowledge of key systems and to support bringing services back in-house at the end of the agreement.

Outsourcing: Don't...

► **Sign long-term contracts** (example cited of a 10-year agreement for outsourcing administrative systems).

► **Enter into an outsourcing agreement** without a plan to insource services at the end of the agreement.

► **Ignore or underestimate the impact** of outsourcing agreements on institutional culture (e.g., salary differences, conflicting loyalty, fear of being fired).

Campus leadership concerns:

► **Costs.** Cost of delivering IT services on campus is rising rapidly due to increasing demand for services, growing numbers of users, increased complexity of system integration, rising expectations of client service.

► **Services.** Rapid evolution of and dependence on complex IT requirements through advanced en-

terprise resource planning (ERP) systems, broadband networks, online student services, and Web-based instructional and course systems, including content management systems (CMS).

► **Staffing.** Transition from relatively few IT users who understood the systems to virtually everyone on campus, regardless of knowledge, has required significant changes in technical support and infrastructure maintenance.

► **Competitiveness.** A core concern, driven by media coverage of most-wired schools and popular press focusing on rankings and problem.

Debunking campus myths:

► **Higher education processes** differ considerably from those found in the private sector, and my institution is markedly different from all other institutions.

► **Campuses need to remain self-sufficient**, and we can't outsource IT because it is strategic.

► **If we believe that a function is not performing** well, we should outsource it.

► **Outsourcing IT will improve our competitiveness** in distance education.

► **Campus IT costs are low** because everyone pays on the margin.

► **IT budgets must operate** within traditional fiscal-year boundaries.

► **We can save the most money** by paring down the largest budget lines.

► **We will identify the low-cost bidder**, then negotiate their price even lower because they should be "good citizens" and support higher education.

find a hefty educational discount on all of their products. Actually, you'll find some of the largest discounts on the server software. Moreover, Microsoft bundles software and provides many free add-ons. For example, if you purchase a license for SQL Server 2000, you'll get Microsoft Reporting Services for free. This saved my college \$24,000, as we were close to purchasing a similar product when we learned of this add-on. Maintenance costs are lower overall, but if you run a central database server, you'll need to budget for replacement hardware every three years. You can save money by using the older server as a test-and-development server.

Concerns

This brings me to the concerns you should have if you pursue the "build" option: **1)** You will be forced to think about failures, backup and recovery plans, testing, and deployment issues. Also keep in mind that a system that is con-

stantly upgraded will need to be built to be scalable. **2)** It takes time to learn the right way of building a solution. You should expect things to take considerable time, initially. You aren't trying to build a solution overnight, so be sure to take small steps. **3)** You're going to hit a brick wall if you cannot retain on-staff those who build and manage the system. It's always good policy to have two or more people who know your system inside and out. **4)** Finally, and I believe most importantly, you have to maintain the courage you had in the first place to tackle building an in-house solution. Tons and tons of encouragement will help.

I speak from personal experience when I say that building technology solutions for my college has been one of the most exhilarating and yet also one of the most challenging things I have ever done. When I look at some of the systems we have put together ourselves, I don't think there is any way that what we did could have been done by outsourcing.

Balancing Online Course Deadlines with the Need to Remain Flexible

Cindy Kenkel, Instructor, Northwest Missouri State University

"Sometimes life gets in the way" is a phrase many of us can relate to. Proponents of online education have been touting the benefits of asynchronous learning environments since its inception. However, these benefits generally refer to a student's ability to complete the weekly or semiweekly assignments during a time period that allows them to fit nicely into a regular schedule, often accommodating full-time jobs and families. Generally, strict deadlines are still mandatory, but perhaps taking this flexibility to the next level will allow students to overcome obstacles or curve balls they encounter during the semester.

During the Fall 2003 semester, my online Human Resource class had 32 students (several of whom encountered obstacles that would have sent many traditional students to request a delayed grade or late drop request) who completed the course with higher than passing grades and an obvious mastery of the material.

Let me give you an idea of what my course involves: Most weeks, the course requires three to seven hours of outside reading, quiz taking, threaded discussions, and either a simple or extensive application assignment. Fifteen chapters were covered in a 15-week time period, along with three unit tests and one comprehensive final. Grades on the comprehensive final compared positively to the results of a traditional on-campus class completing the same material.

What transpired over the course of the trimester serves as

a petri dish of situations that easily fit into the "life gets in the way" category. For instance (I'm not making this up), one student who has a full time job and is a mother of seven, had three children staying in the hospital, each for a week, and eventually ended up in the hospital herself after an unrelated serious car accident. In between, she changed jobs and still managed to complete every one of her assignments. On several occasions a deadline had to be extended by a day or two, but her dedication and my willingness to encourage her to take care of her family first, paid off. In addition, one class member lost a grandfather, another had a seriously ill father, and a third had complications with the birth of his second child; yet all managed to complete the coursework, barely missing a beat.

Just to add variety to the mix, I also had a student called up to report to the National Guard two weeks prior to the end of the semester. He, too, completed the course successfully. Another student with a new baby managed to complete the course while sending her husband back to Iraq to protect our country.

Of course, our experiences were not all bad. We also had a student who works the night shift as a supervisor at a local factory (also a mother of two) complete the course while training for a marathon. Adding significantly to class discussion were students in full-time professional positions, working in excess of 60 hours each week.

Is Your Online Course Really Flexible Enough?

Adhering to the weekly course outline is critical to maintaining lively threaded discussions and ensuring cramming is the exception rather than the rule in online courses. However, remaining flexible is also imperative. The students I mention above could easily have become discouraged and given up had they not been allowed the opportunity to make up their work. In a traditional classroom, students will request accommodating their needs if an illness or other situation conflicts with their scheduled course time. In an online situation, however, I've found the students are less likely to request a brief extension, assuming my answer will be, "You've had all week, why did you wait until the last minute?"

I have asked the students to provide in their own words their perception of how this learning experience was made possible despite their obstacles and roadblocks. As you read their responses, please consider how you will maintain control over the schedule while also meeting the needs of your diverse group of students.

Select Student Comments

"Online classes have given me the opportunity to be able to complete my degree. The flexibility and structure of these classes make it possible for me to continue my education while holding down a full-time job. I work in a fast-paced industry where my hours are never the same, and most of the time they exceed 50 hours per week, so going into a standard classroom setting was not an option for me to complete my degree. I have been taking online classes for the past three years and my current class, Human Resources, has been one of the most flexible



NMSU's CINDY KENKEL and panelists listen as attendees talk about the balance between elearning deadlines and students' needs.

The great thing is, I did all of this from a local library in the town in which I was staying."

"I drive an hour and a half every day to go to work, and then work the night shift. Due to this complicated situation, online classes were a must in order to keep up this schedule. My other online course was actually very unorganized. The tests were scheduled for one week and then wouldn't be available. It was kind of a 'whenever you get it done, you do' course. I like having the one week to do everything. I feel you know ahead of time exactly what you need to get done, and have all week to do it."

"The assignments have not been any easier than in a normal classroom setting however, they have been much more enjoyable to me, because I can spend time with my family, and then do my schoolwork on my time, when it is convenient to me. [The instructor's] flexibility had a tremendous

"In an online situation, students are less likely to request a brief extension."

classes I have taken. Having the assignments due by Sunday night really helped me out. Working all the hours I do, being able to get a textbook read and homework done by Friday was almost impossible. This flexibility made doing a good job on an assignment easier and allowed me to really grasp the concept better. I never felt rushed in class and was able to learn more in the process..."

"This learning experience was possible because of the flexibility online classes provide to me. I travel a lot for work and being able to access class by Internet is sometimes my only means of attending class. I went out of town for nearly 10 days in November and I didn't miss out on anything. I was able to review and keep up on everything that was discussed in the class just like I had never been gone.

impact on the performance of the students: Although we knew what was expected of us, [the instructor] also understood that the majority of us were non-traditional students with many responsibilities and could not always make school a top priority."

"I certainly appreciated that the threaded discussions did not have to be done on any day or time in particular, but were due by the end of the week, like the other assignments. I typically have no time to think, breathe, or anything else until Sunday afternoon/evening because of my job and other commitments; therefore, the flexibility of this course was wonderful for me. I have taken other online courses that are flexible, but not as flexible as HR was. With the added flexibility, I felt much less stressed-out during the semester. Of

course, I enjoyed this class more than others because I use the things that we learn, with my job. I cannot stress enough how important the flexibility was and how much I appreciate being able to basically do my homework when I have the time. I'm guessing that the majority of online students are in situations similar to mine (working adults with families and lots of other commitments) and we really, really need that flexibility! I actually had a very traumatic experience early in the semester, but was able to get through it and keep up with class because of the flexibility."

Faculty Weigh In

To best evaluate how your level of flexibility matches other faculty, I developed a brief questionnaire and requested feedback from 42 faculty members who teach online classes at **Northwest Missouri State University**. Twenty-four surveys were returned from faculty with one to five years' experience teaching online courses and one to 37 years in teaching traditional courses. Questions were designed to measure a faculty member's unique teaching style and level of flexibility.

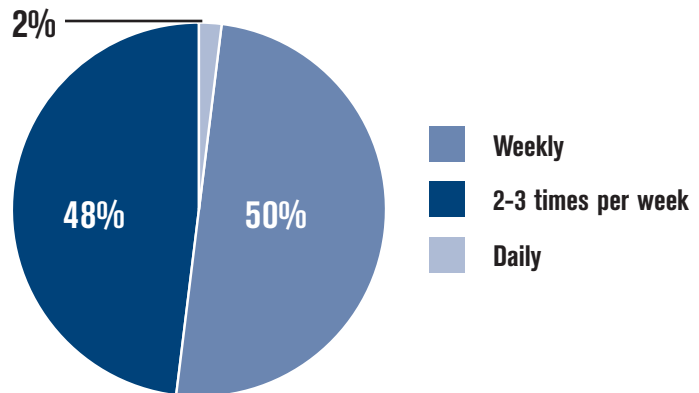
Recommendations

Key findings from the questionnaire, along with student feedback, have been used to support my three basic recommendations.

1—Prepare lessons in advance so students can be working ahead if their schedule allows. Seventy percent of faculty polled indicated they post all assignments and deadlines at the beginning of a course, while another 20 percent indicate major course assignments and deadlines are posted at the beginning of a course. Only six out of 24 faculty indicated assignments and deadlines were posted less than one month prior to due dates. The majority of faculty also indicated they encourage students to work ahead on assignments and material if they wish. Thirty percent indicated they strictly regulate the access of course material so all students are completing projects at roughly the same time.

2—Allow at least one week for students to finish threaded discussions, projects, and activities (many students need the entire weekend to complete a unit). While 75 percent of faculty log on to the course five times per week or daily, only one of the faculty members expects students to log on daily. Half indicate they expect students to log on weekly; 48 percent expect students to log on two to three times per week. Tests were rarely open for students to work on ahead of time, and 13 faculty members indicated they only open tests three days or less. Thirty percent of the faculty indicated academic dishonesty was

How Often Do Professors Expect Students to Log On?



their major concern or drawback related to an online course. Concerns for monitoring academic honesty outweighed the need for flexibility in this aspect. Tests do not need to be open for more than three days, but ideally, one of these days should be a Saturday or Sunday.

3—Add a statement to your syllabus or announcements indicating students should contact you if a serious family or work situation prohibits them from meeting a course deadline. Most faculty (100 percent) indicated they would treat a missed test or course assignment in the same manner they would for traditional in-class students. The most common response indicated faculty will allow make-up of an exam or major project if a student provides evidence that the deadline was not completed on time due to an emergency.

Although this level of flexibility has been offered, 78 percent of faculty indicate students never or rarely fail to turn in a major course project. One faculty member stated, "Online students are more apt to make deadlines automatically. They do not complain as much as the sometimes pampered on-campus students."

Final Thoughts

Six faculty mentioned not connecting with the students in the online environment as a major drawback compared to a traditional classroom. Comments were: "Lacks in-person interaction." "More impersonal." "Do miss personal, face-to-face interaction." "Face-to-face is missing." Perhaps noticing when a student who normally meets each deadline hasn't logged on in his or her usual pattern (just as you would notice an empty seat in traditional class) will help fill this void. Rather than waiting for the student to request an extension on a deadline, initiate the dialog over e-mail or pick up the phone and call to see if "life has gotten in the way." **CT**

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A Meeting of Minds

Higher ed IT leaders from across the country spend a day at Syllabus2004 sharing challenges and visions.

The second annual Executive Summit convened campus technology leadership from a range of institutions around the nation for a full day of big-picture thinking. Topics ranged from Course Management Systems, Security, and Privacy, to Budgeting.



A highly interactive format draws Summit attendees. MIT Assistant Provost and Director of Academic Computing Vijay Kumar takes the floating mike, and adds his comments.

DELIVERING THE RESULTS of an exclusive Summit survey of participants is the first order of business, and opens the meeting. Researcher Mary Fallon presents her findings, including a ranking of key IT issues and an analysis of anecdotal interviews completed a few weeks prior to the event. Casey Green then offers commentary and perspectives from his own Campus Computing Survey and other current research. ▼



THERE'S ALWAYS TIME for informal discussions like this one between University of Florida associate provost for Distance/Executive/Continuing Education Bill Riffie, and Casey Green (foreground). Isn't that how all the really important work gets done? ▼



TWO PLENARY PANELS fuel debate. "Making the Case: Campus IT Investment and ROI," moderated by Bill Riffe, center, is a complex topic taken on by panelists Brad Wheeler, left, (Indiana University associate VP for Research and Academic Computing); Ruth Sabeen, right, (UCLA assistant vice provost and director of Educational Technology); and Rich Pickett, not pictured, (University of San Diego director of Administrative Services). ▼



"KEEPING THE FRONT DOOR UNLOCKED: Security Concerns in the Traditionally Open Academic Culture," a panel moderated by ethicist and Carnegie Mellon (PA) professor of philosophy Robert Cavalier, calls on the experience of seasoned technologists Ron Danielson, far right, (CIO, Santa Clara U); Anthony Hill, near right, (CTO, Golden Gate U), and Kevin Wigen, not pictured, CTO and co-founder of Xythos Software. ►



Moderator Bill Riffe leads a lively discussion about the issues that keep Summit attendees up at night.



Participants rank this year's issues...

1	Course Management Systems (CMS)
2	Network Security/Privacy
3	Portal Technologies/eServices
4	Mobile/Wireless/Broadband
5	Budgeting/Infrastructure Replacement
6	ePortfolios/Student Assessment
7	Enterprise Resource Planning (ERP)
8	Cost of Content/Publishing

From the Syllabus2004 Executive Summit Survey Report, "IT Issues and Strategic Viewpoints in Higher Education," July 18, 2004.



► **MORE FOOD FOR THOUGHT.** After time off and a cocktail reception, participants relax over dinner and gain yet another perspective from UC-Berkeley special assistant to the Chancellor for Science and Technology and past White House technology advisor, Tom Kalil. **CT**



► **IN 'MUSICAL CHAIRS' ROUNDTABLE** talks, workgroups of about eight participants each tackle the hot issues, in depth. Above, MIT senior strategist Phil Long, left, and Indiana U's Brad Wheeler, right, lend their viewpoints to the group, below. ▼



IT Issues & Strategic Viewpoints in Higher Education

The Syllabus2004 higher education technology study was presented at the Executive Summit.

The study was conducted among selected IT executives and professionals of director level and above from 52 colleges and universities across the country: doctorate-granting institutions, master's colleges and universities, baccalaureate colleges, and associate's colleges. Recorded telephone interviews were conducted during a 12-week period; anonymity was ensured. Rankings were determined by a weighting system that assigned a value to each topic, from 1 to 8 (lowest to highest), according to level of importance. Assigned values for each ranking were multiplied by the number of participants who gave them that particular ranking. Survey interviews, tabulations, and analyses were conducted by Paul M. Hartrey and Mary A.C. Fallon of Criterium Communications.

2003 - 2004 Topic Rankings: Comparative Analysis

	2003	2004
1	Course Management Systems (CMS)	Course Management Systems (CMS)
2	Network Security	Network Security/Privacy
3	Enterprise Resource Planning (ERP)	Portal Technologies/eServices
4	Portal Technologies	Mobile/Wireless/Broadband
5	Mobile/Wireless	Budgeting/Infrastructure Replacement
6	ePortfolios	ePortfolios/Student Assessment
7	Broadband	Enterprise Resource Planning (ERP)
8	eCommerce	Cost of Content/Publishing

Course Management Systems and Open Source

Six years have passed since course management system vendors began selling products to universities. Today's customers often feel shoved into a corner by their expensive CMS investment because the system is too costly, unstable, inflexible, and too clumsy for most faculty to learn and use effectively. The July 2004 public release of the Sakai Project's collaboration and learning environment software was anticipated to shake up the market by those surveyed, not simply because it offers an open source alternative to commercial products, but because it provides much needed negotiating leverage when talking price to the two CMS firms, Blackboard and WebCT, that dominate the campus market. In addition, colleges are encouraging less dominant vendors to embrace the Open Knowledge Initiative and Sakai standards, to produce products with a greater competitive edge. The next 12 months should be seminal as some major universities assess both Sakai software and their vendor's response as they consider whether to replace one system with another. Key findings from the 14 universities interviewed:

>> While 93% of colleges surveyed buy commercial CMS products, on average only 30% of their faculty use CMS to create Web sites, manage their courses, and integrate the Web into teaching and learning.

>> CMS products from the vendors Angel (www.cyber-learninglabs.com), Desire2Learn (www.desire2learn.com) and eCollege (www.ecollege.com) were uniformly praised by their users. In contrast, WebCT (www.webct.com) and Blackboard (www.blackboard.com) were routinely criticized for skyrocketing prices, bugs, and ease-of-use problems.

>> Vendor performance during the 2003 to 2004 academic year in problem areas was rated as bad or worse than the previous year by more than half of those surveyed.

>> Pricing and scalability are the most important factors when buying CMS.

>> Pricing is the CMS flashpoint. No university expressed satisfaction either with the cost of CMS products from market leaders WebCT and Blackboard or their sales practices.

>> 13 of 14 interviewed believe the release of the Sakai Project's (www.sakaiproject.org) collaboration/learning environment software and the Open Knowledge Initiative standards will positively impact the market by providing an open source option to commercial products that could drive down prices.

>> Slightly less than half of those interviewed don't believe OKI and Sakai will directly impact their college's situation, largely because campus IT can't provide sufficient support for open source applications.

Network Security/Privacy

The balance between openness and security is very tough to achieve. Fifty-two colleges and universities surveyed this year identified network security/privacy as the second most important major issue out of eight. This year's ranking held steady with last year's. Key findings from the 18 universities interviewed:



>> Denial of service and identity theft top the list of concerns. Faculties haven't yet grasped that improved security doesn't hamper research, teaching, or learning.

>> Passwords scribbled on Post-it Notes, and other human errors are as big a threat as viruses and worms.

>> Preventing, detecting, and responding to security breaches is a tougher job than ever before and requires a wide array of technologies at multiple levels coupled with aggressive education strategies aimed at students and faculty.

>> Universities have raised the bar for effective minimum security levels among students, faculty, and staff; compliance, of course, remains a continuing challenge.

>> Balancing mandates of the Family Educational Rights and Privacy Act (FERPA) and the Patriot Act is not an issue.

Portal Technologies and eServices

The promise of Web portals that offer each individual a dynamic and customized window into a university's Web content remains an unfulfilled dream. While the use of multiple portals is gradually becoming part of the higher education Web site structure, none of the 12 universities interviewed offers a central portal that users can tailor to their specific information needs. Only five out of 12 institutions report having portals for a few departments or education programs accessed by students, faculty, and staff. The rest are either in the process of implementing portals for specific professional schools within their universities or are studying the issue.

Reflecting the flurry of ongoing implementation and study, portal technologies and eServices climbed up in importance, ranking third among eight issues for the 52 colleges and universities surveyed this year. Last year, the categories were separate, and respondents ranked portal technologies fourth and eCommerce eighth (last) in importance. Key findings from 12 universities interviewed:

>> Providing single sign-on and linking to administrative systems are by far the two most important factors about implementing portal technologies.

>> Developing interoperability between systems, and clarifying roles and responsibilities to determine who can access systems are the most significant data integration issues IT faces.

>> Buying via eProcurement is very common and performing very well.

>> eCommerce is as prevalent as eProcurement; paying tuition and books is most common use.

>> Overwhelmingly, colleges don't know if their eCommerce solutions have a positive return on investment.

Mobile, Wireless, and Broadband Technologies

Wireless access to campus networks continues to spread as the use of laptop computers accelerates across the campus. Mobile/wireless/broadband technologies ranked fourth in importance among eight issues for the 52 colleges and universities surveyed this year; this result is in line with last year's survey results. Key findings from the 11 universities interviewed:

>> Six campuses have a wireless overlay, and five have wireless regions on campus. While laptop computer use continues to grow rapidly, growth of handheld computers and tablets is negligible.

>> Security and authentication rank as top concerns.

>> Campuses have plenty of bandwidth.

>> Cellular technologies are not part of strategic IT plans.

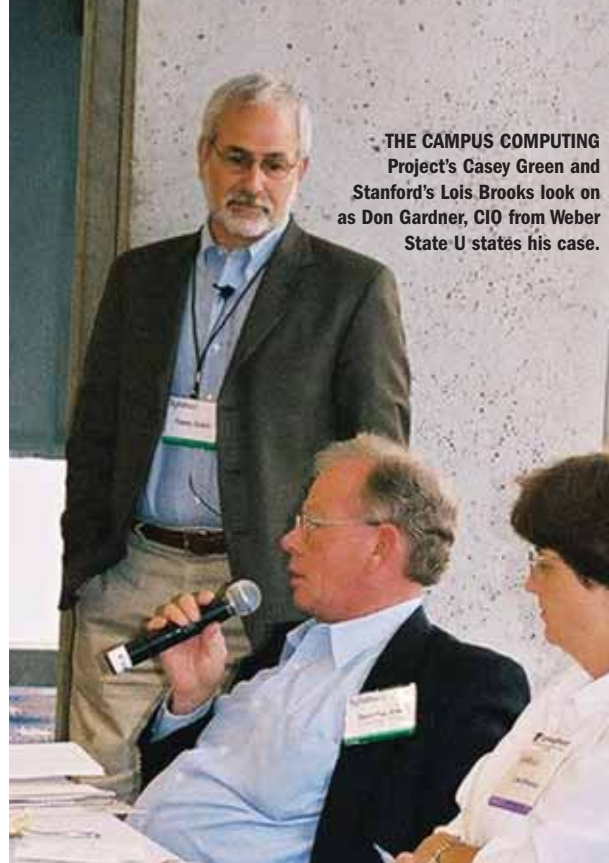
>> Colleges are educating students about file-sharing, not policing for illegal use.

Budgeting and Infrastructure Replacement

After several years of tight budgets brought on by a severe national economic slump, the IT budget picture seems to be improving. Twenty-one higher education institutions report an increase in their IT budgets this year, 16 reported budgets are the same as last year's, and 15 saw their IT budgets decline. Even with increases, college and university IT budgets aren't robust enough to fund everything IT needs to do.

Budget and infrastructure replacement ranked fifth in importance among eight issues for the 52 colleges and universities. This is a new category for the Syllabus survey. Key findings from the 11 universities interviewed:

>> Budgets for network security, portal technologies and eServices, course management systems (CMS) and open



THE CAMPUS COMPUTING Project's Casey Green and Stanford's Lois Brooks look on as Don Gardner, CIO from Weber State U states his case.

source, enterprise resource planning (ERP), and mobile, wireless, and broadband categories were positively affected by this year's budget priorities.

>> 75% of colleges don't predicate information technology spending for academic departments on student enrollment for each department.

>> 66% of colleges do multi-year budgeting.

>> Most colleges allow IT capital expense budgets to deviate by 10%.

>> Colleges report that technology fees are the most common IT budget supplement.

ePortfolios & Student Assessment

The electronic portfolio is an emerging learning technology that has grassroots support from certain disciplines, such as law, education, and fine arts. But ePortfolios won't be universally adopted until course management systems are used universally by faculty to manage teaching and learning, according to the universities surveyed. The institutions surveyed don't expect an all-faculty adoption of ePortfolios for student assessment to happen for five to 10 years, even as a supplement to traditional grading. And while potentially very helpful to the learning process and to college graduates seeking jobs, they won't replace the earned credit system for at least 30 years, if ever, according to the colleges surveyed.

ePortfolios and student assessment ranked sixth in importance among eight topics for the 52 colleges and universities surveyed this year. Key findings from the 14 universities interviewed are:

>> While 10 out of 14 universities report using ePortfolios,

this alternative student assessment method is used by only a few pioneers at these institutions.

>> Protecting student/faculty information and maintaining ePortfolios over time are the two most important issues for survey respondents.

>> Half the colleges surveyed use commercial applications to create ePortfolios. The other half build them using the non-proprietary, open source electronic portfolio software developed by Open Source Portfolio Initiative (OSPI).

>> The current earned credit grading system is too entrenched to be replaced by ePortfolios.

Enterprise Resource Planning

The use of Enterprise Resource Planning (ERP) systems is maturing on campuses as universities meld human resources, student information, payroll, financial records, and other information into a complex backbone accessed in real time, 24/7. ERPs are considered vital to college operations, but for users they can be tough to swallow. The biggest complaint colleges have is that vendors haven't invested enough to make systems easy to use. One sign of market maturity is that ERP ranked seventh in importance among eight issues for the 52 colleges and universities surveyed this year, a significant drop compared with last year when respondents chose the topic as their third most important issue. Key findings from the eight universities interviewed:

>> Seven out of eight colleges bought commercial ERP software.

>> Strong leadership and buy-in at all levels are the top two issues when evaluating ERP systems.

>> Ease of use is the ERP issue that troubles colleges the most. 70% of the colleges buy from an ERP vendor that offers an integrated solution.

>> Migrating legacy data and integrating software from ancillary vendors into the ERP are the most common integration problems.

>> 60% of the colleges believe the consolidation of ERP vendors won't affect them.

Cost of Content/Publishing

While "Generation E" is ready for digital content, neither publishers nor faculty are delivering, report 11 college and university IT executives interviewed about cost of content and publishing. Commercial publishers are very slow to offer libraries of high-quality digital content including textbooks, slides, and other learning aids, despite the vast proliferation of computers and Internet popularity among students and faculty. The tipping point will be solving issues of money and control. The publishing industry hasn't figured out how to make a profit from digital content, and university faculty aren't getting paid much to make their own. Meanwhile, Generation E waits.

Fifty-two universities surveyed overwhelmingly ranked the cost of content and publishing as the least of their concerns among eight issues. More than half of those polled ranked it dead last. Only three institutions ranked it among their top three concerns. This topic is new to the Syllabus survey this year. Key findings among 11 institutions interviewed:

>> About half the colleges say textbook publishers are trying to sell them digital content, but few faculty are buying.

>> Even when faculty do buy commercial digital materials, they supplement, not replace, their own.

>> Only 5% to 30% of the faculty at 11 universities surveyed publish digital materials.

>> Very few universities pay faculty for creating course materials.

>> Faculty get some staff support for creating digital content, but colleges are tightwads about release time.

>> Few institutions use templates, course management systems, or guidelines to ensure faculty publish course content in the same way. **CT**



FURMAN UNIVERSITY'S David Steinour goes a few rounds with the panel.

Syllabus 2005

July 24 - 28, 2005 • Los Angeles, Calif.
With a Day on the UCLA Campus

Share your knowledge and expertise with colleagues from across the country and around the world at Syllabus2005 this coming summer in Los Angeles. Our annual five-day conference—which includes a day's visit to the UCLA campus—will feature informative sessions across all technology areas in higher education and will address needs of administrators, IT professionals, faculty, and instructional technology designers. Syllabus2005 will incorporate a wide range of session types, including in-depth skill development workshops, strategic panel discussions, and practical case studies. Breakout sessions will be offered in five conference tracks focused on key concerns of higher education technology professionals.

In view of the normally large response to the Call for Papers for our annual conference, we encourage you to submit your proposal by the extended due date of December 15, 2004. Overlap among the content areas is natural. Be sure to indicate all tracks in which your proposal may fit.



CONFERENCE TRACKS

TRACK 1:

HIGH-TECH TOOLS FOR ADMINISTRATION

Sessions are designed for higher education administrators and staff that implement and use administrative tools in their functional areas.

- Student records management
- Student-friendly information systems
- Data-driven reporting
- eProcurement
- Recruiting issues and student data
- Financial aid processing
- eAdvising
- Calendar and scheduling
- Help desk management
- Accessible information technologies

Sessions should be appropriate for administrators and their staff, directors of administrative computing, managers, and department heads.

TRACK 2:

IT AND COMPUTING IN THE INSTITUTION

Planning and implementing institution-wide IT systems, and the tools, resources, and strategies that will help.

- Portal integration
- Middleware/legacy systems integration
- Networking applications/Internet2
- Security/authentication
- Privacy and standards compliance
- Wireless connectivity and mobility
- Life cycle management
- Learning Management Systems/CMS
- Open source initiatives and tools
- Web services and service-oriented architectures

Appropriate for IT directors and managers, directors of academic or administrative computing, CIOs and CTOs, as well as computer center directors.

TRACK 3:

INSTITUTIONAL STRATEGIES – A VIEW FOR THE IT VISIONARY

Especially appropriate for higher education executive leadership, sessions feature technologies on the horizon, trends, leadership, best practices, and the tools that inform those charged with guiding the future of academic institutions.

- ERP systems
- ROI and eProcurement
- eBusiness and eCommerce

- Decision technologies/dashboards
- CRM/business intelligence
- Budgeting for IT/capital planning/infrastructure planning
- Partnering with the private sector for IT funding
- DRM/intellectual property issues
- Globalization of education: policies and practices
- Evolving educational models

Appropriate for higher education executives, deans, presidents, vice presidents, provosts, CFOs, Chief Academic Officers, and institutional research directors, as well as all those who interact with technology policy and planning issues.

TRACK 4: TEACHING WITH TECHNOLOGY

Submissions should be focused on delivering education to the student, both on-campus and online. Sessions may also examine technology in classrooms, featuring examples of the best applications of technology for instruction and assessment, along with discipline-specific faculty case studies.

- Technology and pedagogy
- Student assessment

- Technology and student learning
- Virtual/interactive laboratories
- Visualization and interactive 3D modeling
- Web-based content resources
- Learning objects and open resources
- Student technology assistants
- Interactive teaching modules
- Automating feedback to students

Appropriate for faculty and instructors who teach with technology, and the IT staff who support them.

TRACK 5: INSTRUCTIONAL DESIGN — CURRICULUM AND COURSE DESIGN

Designing, producing, and implementing technology-enhanced instructional programs, effective curriculum, and classroom tools.

- Instructional design standards
- Interactive media tools
- Web publishing and design
- Classroom and IT integration
- Curriculum design/redesign
- Faculty IT support
- Human-computer interface
- XML standards in education
- Web development tools
- Instructional delivery systems

Appropriate for instructional technology designers and implementers, curriculum developers, Web designers, instructional media specialists, and all those who create technology-enhanced curriculum and course materials.

ALL TRACKS: TECHNOLOGIES TO WATCH—PRESENT AND FUTURE

Case studies and practical examples highlighting new technologies that will make a difference in the way faculty, staff, and administrators will carry out their roles—now and in the future.

Appropriate for anyone interested in learning about the technologies and tools destined to make a difference in higher education.

HOW TO SUBMIT A PROPOSAL — EXTENDED DEADLINE: DECEMBER 15, 2004

Submit proposals via e-mail per the following instructions. Please be sure to include all of the information requested.

SESSION TYPES

Indicate the type of session for which your submission is best suited:

FULL - AND HALF - DAY WORKSHOPS	{3-6 HOURS}
BREAKOUT SESSIONS	{1-1.5 HOURS}
PANEL SESSIONS	{1-1.5 HOURS}
TECHNOLOGY APPLICATION CASE STUDIES	{1-1.5 HOURS}
POSTER SESSIONS	{1 HOUR}

- I. The title of the presentation
- II. The proposed session type (e.g., breakout session, panel session, etc. — see session types, above)
- III. An abstract of the presentation content (600 words or less)
- IV. An indication of the conference track(s) into which your topic would most likely fall (see track descriptions)
- V. A brief session description suitable for publication (one 75-word paragraph)
- VI. Name, academic title (e.g., Ph.D. or Ed.D.), e-mail address, and phone number for each presenter (please include both home and office phone numbers, if applicable)
- VII. Presenter(s) bio(s) suitable for publication (one 75-word paragraph each — be sure to include current position and affiliation)
- VIII. Any further information that might be helpful in determining the relevance of your topic to the conference.

The final date for submissions is December 15, 2004. Notification of acceptance will be made by March 5, 2005. Proposals will only be accepted by e-mail.

SUBMIT YOUR PROPOSAL BY E-MAIL:

Please include the following in the subject line (where “lastname” is the presenter’s last name): Syllabus2005 – lastname

E-mail your proposal to: speaking@syllabus.com

SPEAKER DISCOUNT: Presenters whose proposals have been accepted through the Call for Papers are entitled to receive a speaker discount.

NOTE: As a condition of acceptance, each presenter will be required to submit, by the first week of June, 2005, a 1,000- to 1,500-word article for publication in the online Syllabus Conference Proceedings. The proceedings will also be considered for publication in related *Campus Technology* print or online publications.

Due to the large number of submissions for our various conference properties, you will not receive a written confirmation of receipt. We encourage you to submit your proposal before the extended due date of December 15, 2004. Accepted speakers will be notified by March 5, 2005.

For conference updates, see www.syllabus.com/summer2005.

Lasting Impressions

Here, from Syllabus2004 attendees:
What they *really* thought about this year's gathering.



ATTENDEES APPRECIATED the strategic keynotes that kicked off the Day at Berkeley.



CONNECTING TO EVENTS and peers—wirelessly—was a boon.



THE EXHIBIT HALL brought vendors and attendees together for in-depth demos.



SYLLABUS/CAMPUS Technology staffers speak with attendees about the new magazine.

NO DOUBT ABOUT IT: Syllabus2004 Conference attendees were enthusiastic about their July 2004 experience in San Francisco and at **UC-Berkeley**, and they took the time to share their comments with us.

Erika Matulich, associate professor of Marketing at the **University of Tampa (FL)**, remarked, "The Syllabus Conference is extremely beneficial and well run overall." Cherie Dodd, Instructional Strategies specialist at Indiana University, agreed: "Overall, [the] quality of [the] conference was good; Syllabus staff and volunteers [were] extremely helpful," she reported.

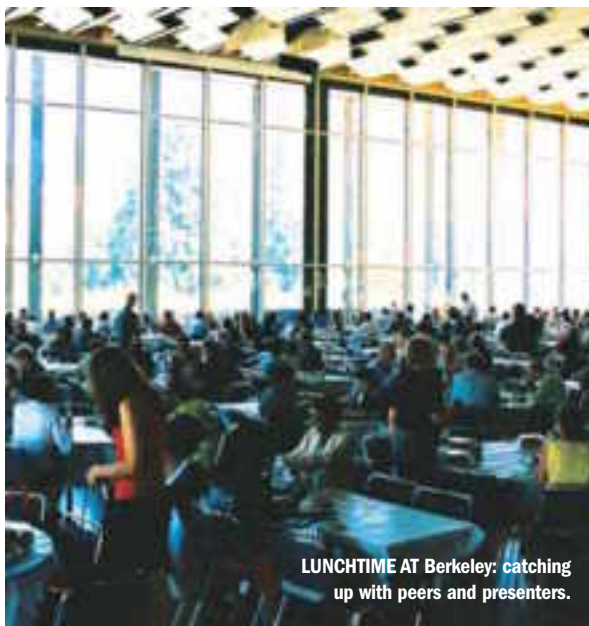
Standouts

"This was my first Syllabus Conference, but not my last!" said Cheryl Bielma, instructional designer at the **University of Missouri-St. Louis**. "The 2004 conference encompassed presenters doing innovative as well as systematic projects. I was especially impressed with Annie Stunden [CIO and director, Division of Information Technology, **University of Wisconsin-Madison**], describing her visuals of the technology infrastructure for Wisconsin Regents during the final keynote ["Wandering the Technology Universe"]. I liked the format of the conference sessions of various lengths/times, and the long break for lunch." Another attendee reacted to the content by saying simply: "Sessions and conference content were great."

Stuart Glogoff, senior consultant for Learning Technologies at the **University of Arizona**, told us, "I tend to go to [the] CNI, Educause, and Syllabus Conferences. This is my second Syllabus, and I hope to go to 2005. I also recommend attending to my teaching colleagues. I find the conference well-organized, and the speakers actually approached the advertised topic. That is not often the norm and I encourage the organizers to continue this. The keynote presentations were excellent!"

Keynotes and Sessions

Keynotes, in fact, were the focus of much enthusiasm—and much rumination. "I was especially excited by ["Cognitively Informed Online Course Design"] Joel Smith [vice provost and CIO of Computing Services, **Carnegie Mellon University (PA)**]," said Bernadette Howlett, instructional designer at **Idaho State University**. "It offered a new perspective on what we are about and what we need to be doing [and] has engendered many ideas and questions. For example: How well can we predict the results of a



LUNCHTIME AT Berkeley: catching up with peers and presenters.



PANELS AND SESSIONS were stimulating and on the mark, said attendees.

teaching intervention? Cost is our major problem, industry-wide. Can we reduce labor by developing shareable courses and content? I see this old question in a different light now."

Erik T. Anderson, director of Educational Communications, the **University of Idaho**, noted, "Good, thought-provoking keynote speakers," and then added, "The A/V and technical support for the conference was very good. Few problems. Good audio! The technology suites and technology classrooms were very useful."

All in all, offered Amy Pate, an instructional designer at **Thunderbird College (AZ)**, "I really loved the conference for the ability that it gave me to see the 'big picture.'"

Peter Silzer, Distance Learning director of the School of Intercultural Studies at **Biola University (CA)**, told us, "As a faculty member, I appreciated the regular emphasis on instructional design issues. [There was] a good blend of topics to help faculty and staff to work together to create better educational programs." Gregory R. Cropp, Academic Support technician at **Regis University (CO)** added, "We're headed for a great technological future and *Syllabus/Campus Technology* will be the national lead for these events. Can't wait to attend the next conference."

Peers and Speakers

Networking with peers was a major focus of attendees. "Syllabus Conferences have been a great way to connect/network with others among the technical education

"There was a good blend of topics to help faculty and staff work together to create better educational programs."

**—Peter Silzer,
Biola University**

field," said one attendee anonymously. "I believe that communication with others within our field assists those in search of answers to their technical needs. A forum [and] software/hardware evaluation site is most needed today. We as educators and technical specialists need to have research resources to better offer today's technology to students in today's job market. Great

conference! Will attend again."

What about first-timers? "This was my first Syllabus Conference," said P. Semrau, a professor at **California State University-Los Angeles**. "I'm really glad I came. Our campus director of Faculty Instructional Support recommended it to me." And Barbara Boyer, another professor at CSULA, told us succinctly, "First Syllabus Conference; overall, enjoyed. Educational, well-organized. Was a speaker: audience responsive; interested; asked important questions. We had the appropriate group at our session. Services to speakers outstanding! Speakers prep room was exceptional! Congratulations!"

Field and Food

The day at UC-Berkeley was a high point for many. "Loved the visit to Berkeley," wrote Darrell Bateman, director of Technology Assessment at **Texas Tech University**. And Erik Anderson from the University of Idaho added, "I enjoyed the day on-site at UCB. That was a nice element not offered at most conferences I attend."

WHO WAS THAT MASKED ATTENDEE?

Syllabus2004 Conference attendees hailed from all over the US and the globe, and represented many sides of their higher education institutions, in myriad functions.

49% of attendees were IT Management or Administration

24% were technology-using faculty

88% of attendees said they recommend, specify, or approve IT purchases (hardware and software)

42% of attendees knew the scope of their institution's IT budget, and of those...

55% reported IT budgets from \$1,000,000 to over \$5,000,000

36% reported IT budgets of between \$1,000,000 and \$4,999,999

76% of attendees use course management software

54% of attendees use content management systems

88% of attendees use security solutions

54% of attendees use tablet PCs or notebook computers

61% of attendees use security solutions

73% of attendees use Web publishing software

63% of attendees use wireless technologies



For others, the food alone was worth the trip: "The food was incredible at the Hyatt Regency—really wonderful, at all events," said Susan Spencer, professor of English, and Technology Research & Development Committee Chair, Liberal Arts, at the **University of Central Oklahoma**. Others commented on operations: "This is the most seamlessly run conference I have ever been to. The Syllabus staff as well as Hyatt staff are among the most professional in their field. (As a student at UCSB, I used to be a conference coordinator for Engineering, so I know.)"

What I'd Do Differently...

Of course, there's always room for improvement, and suggestions from helpful and involved attendees ran the gamut. While many praised the length of the in-depth sessions, two attendees suggested shortening some of the sessions. ("One-and-a-half hours for morning sessions is too long; two 45-minute sessions would be better." "Sixty or 75 minutes should be the maximum.") One attendee enthused, "Thanks for providing the e-mail kiosk stations!" Another was looking for a central place to find dinner partners ("Have a bulletin board where interested parties can indicate they'd like to join others for dinner"). Still another suggested "Birds of a feather 'assessment' group activities." Attendees had various thoughts about the Exhibit Hall, too: "Expo of vendors was very worthwhile and useful, especially demonstrations of software applications," offered one conference goer. But, "Open it a half-hour before lunch," said another.

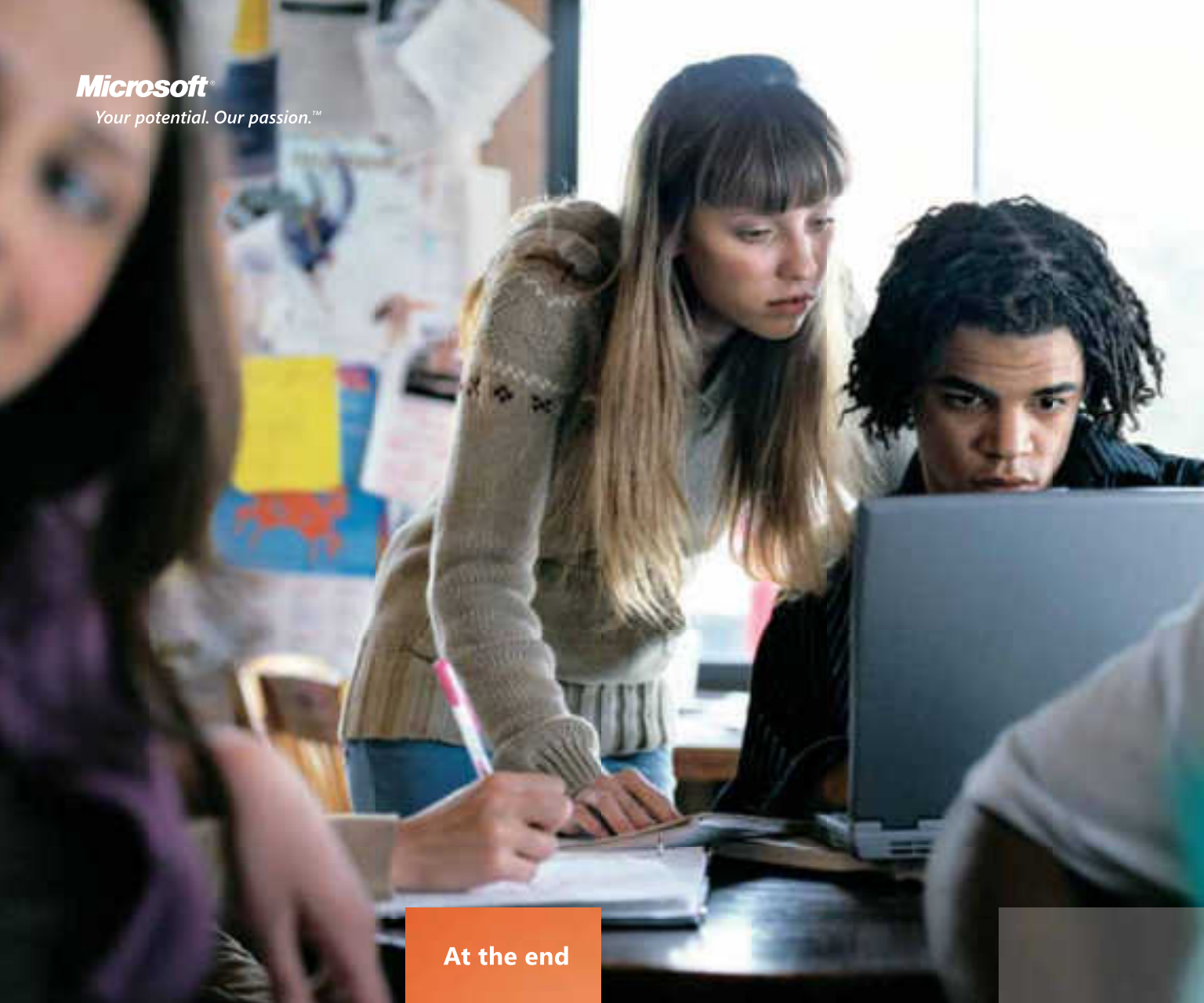
Making a Difference

In the end, though, attendees went back to their campuses with plenty to think about.

One attendee told us, "I did not feel like the conference missed the mark about teaching and learning with technology. Maybe as the field grows, there need to be different conferences and/or stronger stands on teaching and learning versus supporting teaching and learning."

Another attendee remarked, "Given [that] I am with private industry [in the] corporate world, I wasn't sure I could get a lot from the conference. I am glad to say, the translation to business was applicable. I took away many useful learnings and models for understanding online course development and delivery. The expo of vendors was very worthwhile... Conference information was excellent (Web site and packets)... Keynote presentations were very interesting, motivational. Size and location was excellent: compact; built for size of the audience; convenient; high quality. Great lunches too!"

All in all, the consensus was that time spent at Syllabus2004 was time well spent. Robb Fons, manager of Instructional Technology at the **University of Kentucky** College of Medicine summed it up when he left us with a simple: "Great conference." Thanks, Robb! **CT**



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