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eCAMPUS NEWS

Technology News for Today's Higher-Ed Leader

Vol. 1 No. 1 October 2008

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Pirates of the Page

Soaring textbook costs lead to a brand-new battle against illegal student file sharing – probably right on your campus

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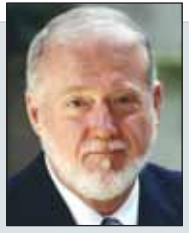
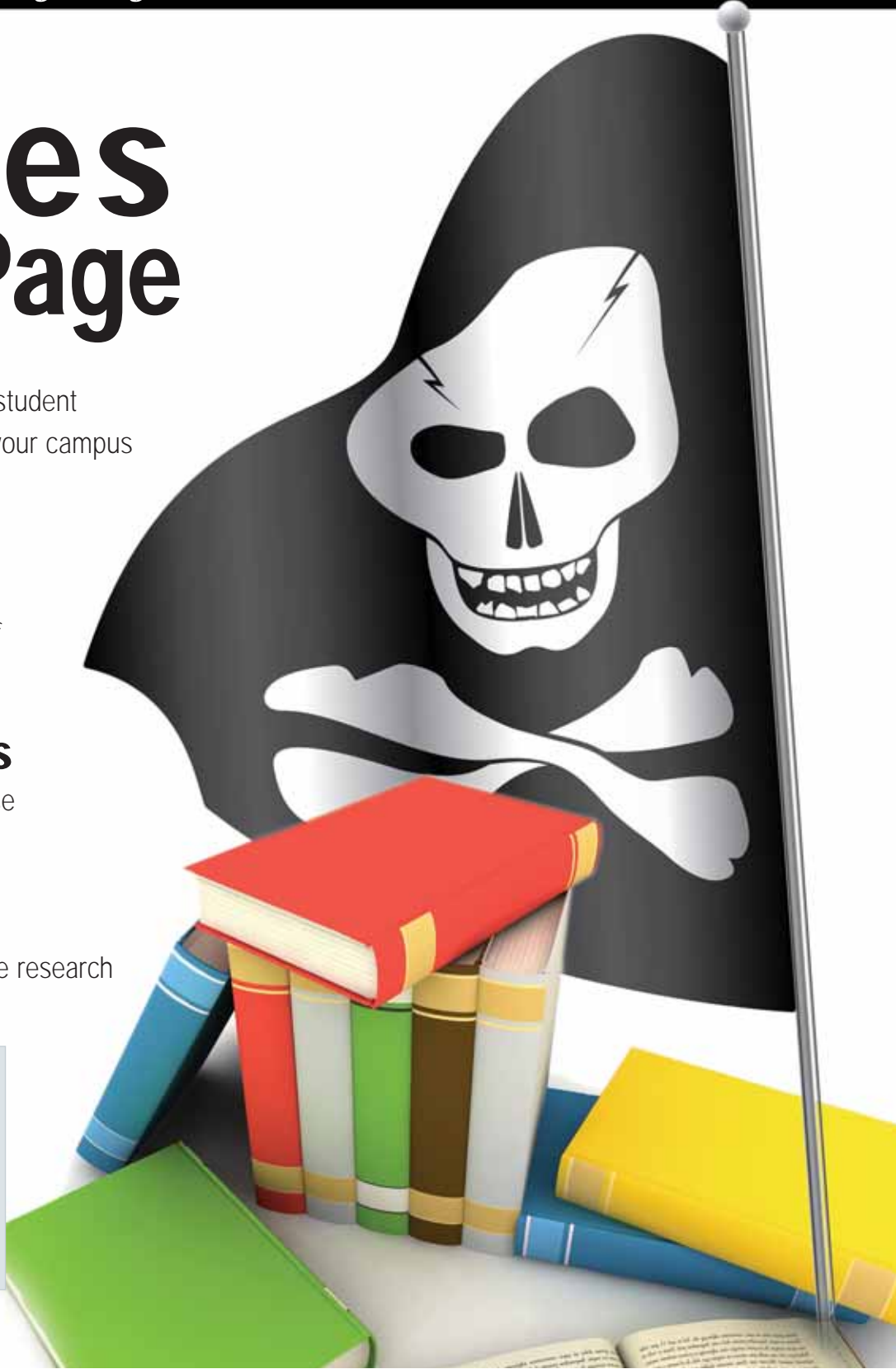
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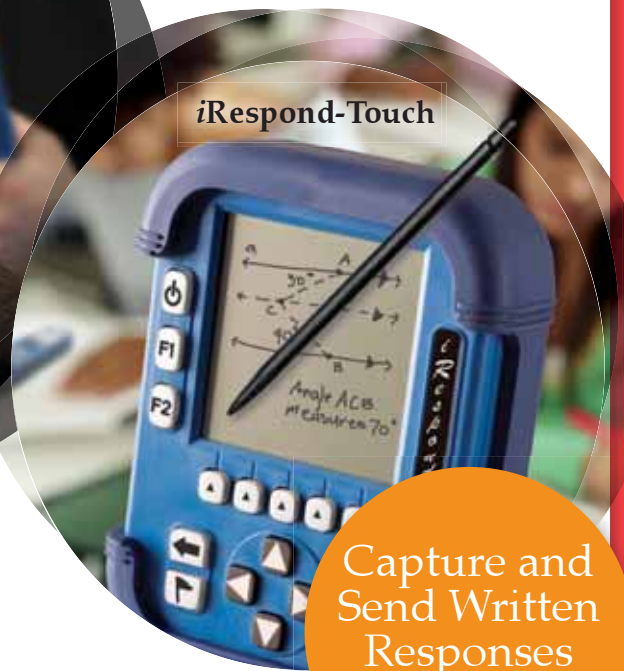
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Excelsior College President John Ebersole:

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eCAMPUS NEWS

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Ruling: Copyrights apply even for free software

In a crucial win for the free software movement, a federal appeals court has ruled that even software developers who give away the programming code for their works can sue for copyright infringement if someone misappropriates that material.

The decision by the U.S. Court of Appeals for the Federal Circuit in Washington, D.C., helps clarify a murky area of the law concerning how much control programmers can exert over their intellectual property once it's been released for free into the so-called "open source" software community.

People are free to use that material in their own products, but they must credit the original authors of the programming code and release their modifications into the open-source community as well—a cycle that is critical for free

software to continue improving.

Because the code was given away for free, thorny questions emerge when a violation has been discovered and someone is found to have shoved the code into their own for-profit products without giving anything back in return.

In the latest case, which involved a computer application that model-train enthusiasts use to program the chips that control their trains, the U.S. District Court in San Francisco ruled that the plaintiff could sue for breach of contract but not copyright infringement.

The distinction is important, because it's easier to recover monetary damages in a copyright-infringement case.

"Traditionally, copyright owners sold their copyrighted material in exchange for money," the court said. "The lack of money changing hands in open-source licensing should not be presumed to mean that there is no economic consideration, however."

Project to rebuild web gets \$12M, bandwidth

A massive project to redesign and rebuild the internet from scratch is inching along with \$12 million in new government funding and donations of network capacity by two major research organizations.

Many researchers want to rethink the internet's underlying architecture, saying a "clean-slate" approach is the only way to truly address security and other challenges that have cropped up since the internet's birth in 1969.

On behalf of the federal government, BBN Technologies Inc. is overseeing the planning and design of the Global Environment for Network Innovations, or GENI, a next-generation network on which researchers will be able to test new ideas without damaging the current internet.

The \$12 million in initial grants from the National Science Foundation will go to developing prototypes for the GENI network.

To test these prototypes, the higher-education Internet2 organization is contributing 10 gigabits per second of dedicated bandwidth, so researchers won't have to worry about normal internet traffic interfering with their experiments. National LambdaRail is offering another 30 gigabits per second of capacity, though it won't be dedicated to GENI at all times.

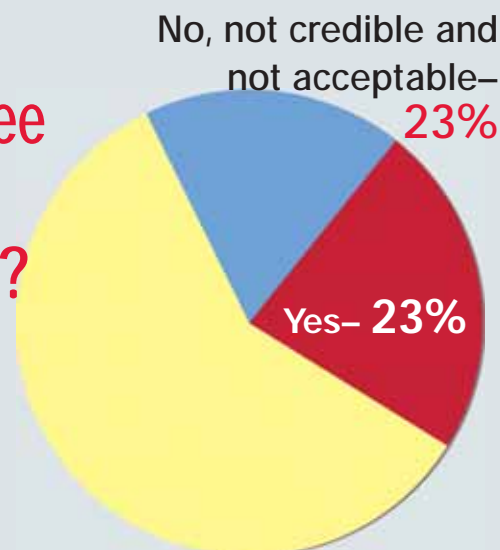
Construction on GENI could start in about five years and cost \$350 million—but Congress still has to approve those funds.

Online degrees are gaining credibility—but not all employers are sold

Online degrees are becoming more credible in the eyes of employers, according to a 2008 survey by research firm Vault.com Inc. Eighty-three percent of employers surveyed said online degrees are more acceptable than they were five years ago, and 19 percent said they've hired a job applicant who only had an online degree. But 18 percent of those polled still believe online degrees are neither credible nor acceptable.

Is an online Bachelor's degree as credible as an offline degree?

No, not as credible, but is acceptable—**59%**



Google unveils new online reference tool

For better or worse, Wikipedia—the online reference site that lets anyone add to its ever-growing body of knowledge—has changed the nature of internet research. Now Google has taken the wraps off a free internet encyclopedia of its own, dubbed "knol" (<http://>

knol.google.com) in reference to a unit of knowledge.

Anyone with a Google login will be able to submit an article and, if they choose, have ads displayed through the internet search leader's marketing system. The contributing author and Google will share any revenue generated from the ads, which are supposed to be related to the topic covered in the knol.

With a seven-year head start on knol, Wikipedia already has nearly 2.5 million English-language articles and millions more in dozens of other languages.

Knol is starting out with several hundred entries. A quick perusal of the site as of press time revealed the vast majority related to health issues, such as seasonal allergies or cataracts. Only a handful of entries—such as “Feminist Analytic Philosophy” and “The Decline of Women in Computer Science from 1940 to 1982”—covered what might be considered academic subjects as of press time.

Unlike Wikipedia, knol requires the authors to identify themselves to help the audience assess the source's credibility.

Google doesn't intend to screen the submissions for accuracy, and instead will rely on its search formulas to highlight the articles that readers believe are credible. Readers can rate each article on a scale of one to five stars, just as they rate videos on Google's YouTube.

'Rezed' is educators' real ticket to virtual worlds

<http://www.rezed.org>

For educators who are ready to take on the growing frontier of virtual worlds, a new online hub—Rezed—now exists to make the journey to alternative realities a little easier.

Launched in beta format in mid-March, Rezed is a virtual-world resource for educators, students, and those simply interested in learning what these increasingly popular worlds are all about. Developed by the nonprofit organization Global Kids through a grant from the MacArthur Foundation's Digital Media and Learning initiative, the site brings attention to learning across virtual worlds

through resources such as weekly best practices, moderated discussions, and podcast interviews with students, educators, and experts in the field.

Visitors to Rezed can learn about several virtual places and topics, such as Second Life, K-8 virtual worlds, virtual gaming in education, research on the sociology and ethics of virtual worlds, and more.

Rezed “is a community that makes accessible and practical the type of research being done by many and connects them with practitioners in the field to inform their work,” said Barry Joseph, director of the Online Leadership Program for Global Kids.



Magazine unveils list of 'top wired colleges'

PC Magazine, in consultation with the Princeton Review, has published a list of what it calls “America's top wired colleges”—and the University of Illinois at Urbana-Champaign (UIUC) tops the list.

The magazine based its rankings on areas such as academics, student resources, infrastructure, and technical support. No. 1 UIUC earned its top ranking by offering courses on topics such as parallel computing and data mining; lending laptops to students; and offering 24-hour telephone tech support, among other reasons.

The magazine's list suggests the technology landscape on college campuses has changed quite a bit in the last two years.

“Of our top 20 schools in 2006, only 8 made the list this year,” it reports. “Villanova University, the former No. 1,

dropped to 15th place. High-tech poster child MIT, the former No. 2, dropped to 20. At the same time, [UIUC] went from No. 6 to No. 1; other climbers included Pomona College (5), Eckerd College (7), and Stanford University (9).”

Rounding out the magazine's top 10 wired schools are Kansas State University (2), the University of Utah (3), Bentley College (4), Boston College (6), Hollins University (8), and the University of Oklahoma (10).

The magazine notes that “advanced classes in technology are nothing new, but what schools offer today is getting more and more varied and eclectic.” For instance, it says, “web design is offered at all the schools in the top 20, but game development, 3D animation, and robotics are finding a place in the curriculums

of several. A few schools also offer classes on hacking and PC security.”

Most of the schools offer at least some lectures online, the magazine notes, and “four schools even send out videos of lectures by eMail.”

Wi-Fi is fairly pervasive on campus, too, with only a few colleges in the magazine's top 20 saying they have less than full wireless coverage at the student union and libraries. Sixteen of the schools even have 100-percent coverage in their dining areas, it says.

“There's a great divide in how much assistance college IT departments will handle,” the report says. “But three schools—Pomona, the Catholic University of America (11), and Bowdoin College (19)—say they have a 24-hour, on-campus repair service.”



John Ebersole

Ed-tech pioneer sees bright future for online classes

Twenty-four years ago, when John F. Ebersole was first briefed on computer-based college classes, he joined the chorus of voices calling it a fad rather than the future of higher education.

Since then, Ebersole, president of Excelsior College in Albany, N.Y., has embraced online learning unlike almost any college administrator in the country, developing a reputation for promoting and improving internet-based classes at several universities over the last two decades.

"I've gone from being a skeptic to an evangelist in the last 20 years," said Ebersole, 64, who was named Excelsior president in January 2006. "I feel there's a lot of validation coming to us from many respected sources."

In his 25 years in higher education, Ebersole has pushed for more comprehensive online courses as associate provost and dean of Extended Education at Boston University, associate provost at Colorado State University, assistant dean at the University of California, Berkeley, and dean and associate professor of the School of Management at John F. Kennedy University in Pleasant Hill, Calif. At every job, Ebersole said he was an advocate for better, more widely available online classes.

It was at John F. Kennedy University in 1984 that Ebersole

was introduced to computer-based college classes. His reservations faded as technology and the internet developed and created an environment that rivaled—and sometimes eclipsed—the classroom.

"The first five years, I was as skeptical as anybody," said Ebersole. "I didn't see the level of interactivity. But the technology today provides for high levels of interactivity and customization to fit people's different ways of learning. In some cases, I think it's clearly more interactive than a classroom."

Ebersole said students often prefer online foreign language classes, because they can go at their own pace and not worry about "holding up the rest of the class." Students also can ask questions that they might be too timid to ask in a regular classroom setting.

Student feedback has dictated the way Excelsior has advanced its online class offerings. About 6,000 of the school's 35,000 students take online classes, Ebersole said. That number—and enrollment in online courses nationwide—will steadily grow as professors warm up to the concept of an internet-based classroom, he added.

"It's ironic in a way that professors who profess to be scholars have, in fact, been rather close-minded about this," Ebersole said. "They have not been willing to go in to the laboratory and give it a try."

Dean of leading education school cites outreach as a key to success



Julie Underwood

The University of Wisconsin-Madison School of Education is a leader in research on gaming's impact on learning (see <http://www.eCampusNewsOnline.com/news/top-news/index.cfm?i=54917>), value-added assessment, and reforming math curriculum—and Dean Julie Underwood wants to make sure everyone knows it.

She's reorganizing the education school to focus more on outreach by adding an associate dean to head this area.

"Connecting with alumni is an increasingly important issue for higher education," said Underwood, the daughter of a long-time K-12 superintendent who taught at UW-Madison before moving on to become dean of Miami University's School of Education first. "Especially using the tools that current students use."

Most alumni networks, she explained, haven't tapped the full power of using online social networks to reach alumni—and gain

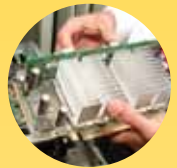
their financial support. And for public institutions in particular, which have seen their state funding erode, that's a problem.

UW-Madison, for instance, receives only 17 percent of its funding from the state—and this figure has declined over the last 15 years. As a result, gifts, contracts, and research grants have taken on added significance.

Underwood, who holds a Ph.D. in educational leadership from the University of Florida and a J.D. from Indiana University, also served as general council for the National School Boards Association before becoming dean of UW-Madison's School of Education in 2005. Her mission is to facilitate research and instruction at the school, which is at the forefront of inquiry into using technology to enhance teaching and learning.

"An institution is only as good as its faculty and staff," Underwood said, adding that a key to her success is to "hire good people, and make sure they can get the job done." But that's not possible without adequate financial support—and in the increasingly important realm of outreach, it appears her efforts are paying off here, too: The school this year embarked on a two-year, \$32 million renovation project made possible by a single donor.

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FCC enforces 'net neutrality' principles

Commission orders Comcast to end 'discriminatory' practices

From staff and wire reports

In a victory for advocates of “net neutrality,” which include many colleges and universities, a divided Federal Communications Commission (FCC) has ruled that Comcast Corp. violated federal policy when it blocked internet traffic for some subscribers and has ordered the cable giant to change the way it manages its network.

In a precedent-setting move, the FCC by a 3-2 vote enforced a policy that guarantees customers open access to the internet.

The commission did not assess a fine, but it ordered Comcast to stop cutting off transfers of large data files among customers who use a special type of file-sharing software.

Comcast says its practices are reasonable—that it has delayed traffic, not blocked it—and that the FCC’s so-called net neutrality “principles” are part of a policy statement and are not enforceable rules.

Republican FCC Chairman Kevin Martin proposed the enforcement action and was joined by Democratic commissioners Jonathan Adelstein and Michael Copps in voting for approval. He was opposed by members of his own party, commissioners Robert McDowell and Deborah Taylor Tate, who both issued lengthy dissents.

The commission’s authority to act stems from a policy statement adopted in September 2005 that outlined a set of principles meant to ensure that broadband networks are “widely deployed, open, affordable, and accessible to all consumers.”

The principles are “subject to reasonable network management,” a concept the agency has not explicitly defined.

While the FCC action did not include a fine, it does require Comcast to stop its



ASSOCIATED PRESS

FCC commissioners hear testimony as they consider how to regulate the internet.

blocking practice by the end of the year. The company also must provide details to the commission on the management techniques it has used and let consumers know details of its future plans.

Martin was particularly critical of the company’s failure to disclose to customers exactly how it was managing its traffic, saying this action “compounded the harm.”

Martin said Comcast managers were not “simply managing their network, they had arbitrarily picked an application and blocked their subscribers’ access to it.”

Comcast spokeswoman Sena Fitzmaurice said in a prepared statement that the company was “disappointed in the commission’s divided conclusion, because we believe that our network management choices were reasonable.”

Martin told the Associated Press (AP) in an interview that the agency will consider fines for future violations, but he declined to speculate on how large they might be.

The FCC’s action arose when bloggers reported that Comcast customers who

used peer-to-peer (P2P) file-sharing software such as BitTorrent were noticing their transmissions were aborting prematurely.

The AP ran tests and reported Comcast was indeed cutting off transfers by masquerading as its one of its customers.

The report led to a complaint by public-interest group Free Press and others that the company was violating the FCC’s net neutrality principles.

“Net neutrality” is the idea that all internet traffic should be treated equally. Many colleges and universities have come out publicly in support of measures to ensure that internet service providers cannot serve as arbitrary gatekeepers to online content.

Comcast has said it did not block traffic, but delayed it, and only among users of the P2P file-sharing programs that were responsible for taking up a disproportionate share of bandwidth. The company has pledged to stop using this practice by the end of the year and switch to a “protocol agnostic” technique that will not single out any particular type of user.

Report: U.S. behind in doubling science grads

Businesses warn of a need for STEM employees, call for more federal leadership

From staff and wire reports

A high-profile push by business groups to double the number of bachelor's degrees awarded in the United States in science, technology, engineering, and mathematics by 2015 is falling way behind target, a new report says.

In 2005, 15 prominent business

and the National Defense Industrial Association, said there has been substantial bipartisan support in Washington for boosting science training, including passage last year of the "America Competes Act," which promotes math and science.

But Susan Traiman, director of education and workforce policy for the

produce an engineer, if you consider K-12 plus four years of colleges," she said.

Some critics have called industry's concerns about the number of science graduates overblown and self-serving. These critics have argued that if there really were a pent-up demand for scientists, more students would naturally move toward those fields without massive incentives from taxpayers.

But William Green, CEO and chairman of Accenture, a giant global consulting company, called such criticisms "nonsense," adding the whole country benefits from competitive companies.

"This is on the top three CEO agendas of every company I know," Green said.

He said Accenture, which will hire about 58,000 people worldwide this year, will spend \$780 million on training.

"I feel like I can step up to the table and say I'm doing my part. Other companies are doing the same thing," Green said. "What I'm suggesting is I really could use more raw material. That's about having federal leadership."

Elsewhere in the world, he sees "a laser focus," both in the public and private sectors, on developing workforces for competitive companies.

The report, by the group Tapping America's Potential, which has grown to represent 16 business groups, also argues that the failure of Congress to pass comprehensive immigration reform has hurt U.S. competitiveness by making it difficult to retain high-skill workers who study at American universities.

While there appears to be, if anything, a surplus in the job market of scientists with doctoral degrees, the case for boosting bachelor's degrees is stronger—particularly for people who go into teaching, where teachers who have college-level subject training generally are more effective.



ASSOCIATED PRESS

Business groups say they need more graduates in science and technology.

groups warned that a lack of expert workers and teachers posed a threat to U.S. competitiveness and said the country would need 400,000 new graduates in the so-called STEM fields by 2015.

In an update published July 15, the group reports the number of degrees in those fields rose slightly earlier in the decade, citing figures from the years after 2001 that have become available since the first report was published. But the number of degrees has since flattened out at around 225,000 per year.

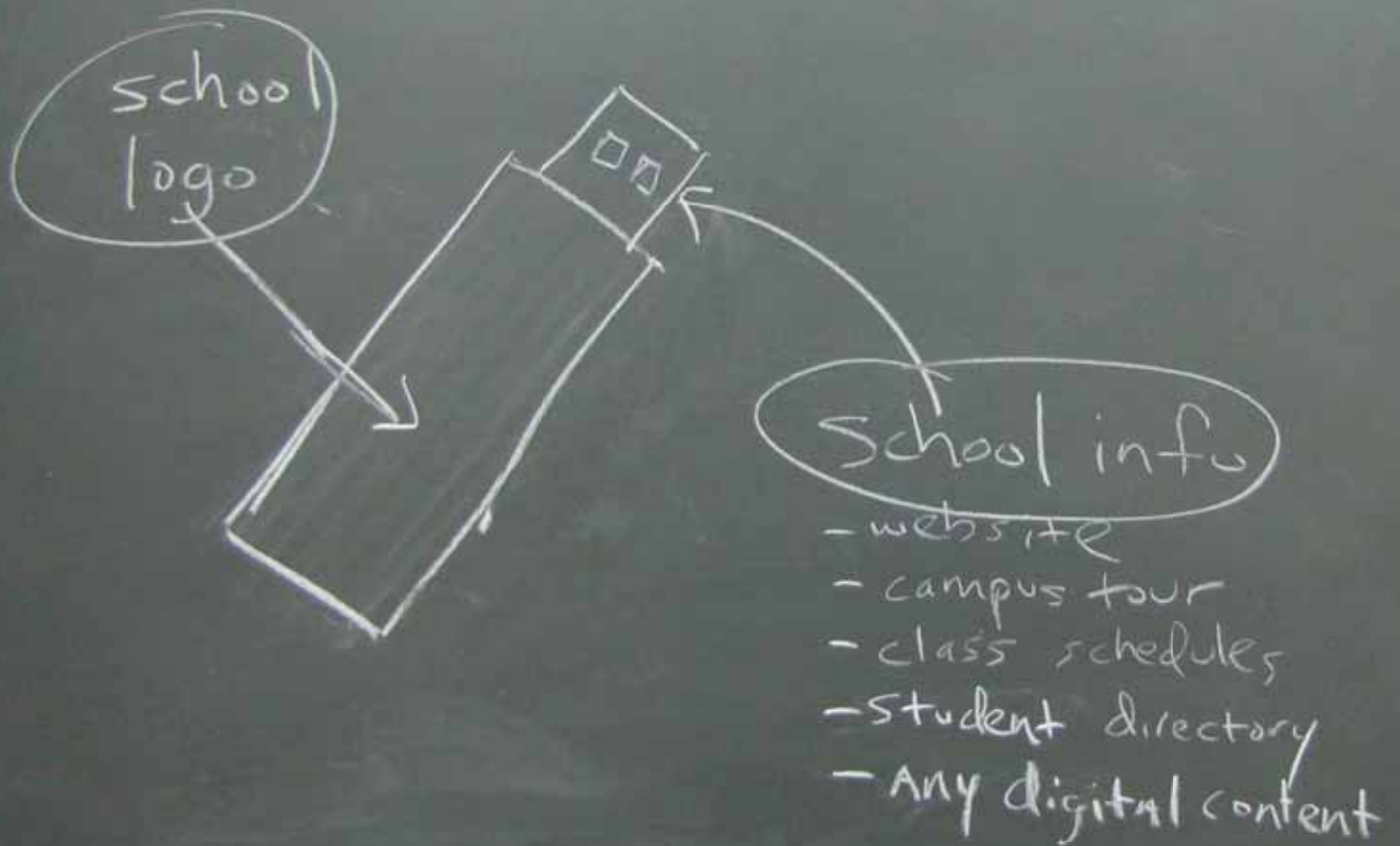
The coalition, representing groups such as the U.S. Chamber of Commerce

Business Roundtable, an organization of corporate CEOs, said there's been insufficient follow-through with funding to support the programs. Other countries, she said, are doing more to shift incentives toward science training.

"The concern that CEOs have is if we wait for a Sputnik-like event, it's very hard to turn around and get moving on the kind of timeline we would need," said Traiman, referring to the Soviet Union's launch of the first artificial satellite in 1957, which prompted a massive U.S. commitment to science investment.

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Consumer groups voice concern over wireless mics

From staff and wire reports

In a complaint filed in mid-July, consumer groups are accusing users of wireless microphones—including educators and others speaking in large lecture halls—of unwittingly violating Federal Communications Commission (FCC) rules that require government licenses for such devices.

In the complaint, the groups accused manufacturers, such as Shure Inc. of Niles, Ill., of deceptive advertising in the way they market and sell high-end wireless microphones to people who are not legally permitted to use them.

The complaint recommends that the government agree to a general amnesty for unauthorized users of wireless microphones.

The legal filing on such a quirky subject raises serious questions for the U.S. government—as well as for users of the devices, such as educators who aim to make themselves heard in front of large classes.

It alleges that after the nation's conversion to digital broadcasting in February, some of these microphones will threaten emergency communications and interfere with commercial wireless carriers, which spent \$19 billion to use the same airwaves as the microphones.

It's unclear how many educators, entertainers, pastors, and others use wireless microphones. Analysts say there might be millions of users—most of whom do not understand that FCC rules require a license and include strict limits on who may qualify for such a license.

High-end wireless microphones operate in the same frequency bands as broadcast television stations. The devices originally were intended for use in the production of television or cable programming or the motion picture industry, according to FCC rules, and users are supposed to obtain a government license.



ASSOCIATED PRESS

For wireless microphone users, new static

The complaint, filed with the FCC by a coalition of consumer groups known as the Public Interest Spectrum Coalition, figures heavily in a steadily escalating battle between broadcasters and the technology industry over who should have access to frequencies that exist between television channels, also known as “white spaces.”

The FCC rarely enforces the licensing requirements on wireless microphones, because there have been so few complaints. The microphones are programmed to avoid television channels. Broadcasters haven't complained, and the consumer groups accused the FCC of “benign neglect” regarding enforcement.

A spokesman for Shure, Mark Brunner, said the FCC understands that “today's uses of wireless microphones provide a valuable and irreplaceable public good, regardless of the licensing scheme.”

FCC spokesman Robert Kenny confirmed that use of the microphones has drawn few complaints, but there could be some going forward “and we recognize that,” he said.

The commission is considering rules that would resolve interference problems among legal licensees, but there are concerns the fix won't address those users who are unlicensed.

Channels 52 through 69 in the UHF television band, currently used by broadcasters, will be vacated on Feb. 17 as full-power stations convert to digital broadcasting. The government sold that section of airwaves for \$19 billion in the FCC's most successful auction in history.

Verizon Wireless and AT&T Inc. bought \$16 billion worth of the licenses. The companies are expected to take years before they begin using them. Other parts of the television spectrum—including frequencies from 763-775 MHz and 793-805 MHz—will be used by paramedics, police, and firefighters.

It's not known how many wireless microphones operate in that range and will be subject to interference.

Some users simply might need to retune their wireless devices to channels outside of these designated emergency communications channels, while others might find they need to purchase new devices.

Shure has been advising its customers to reconfigure their wireless microphones if those devices operate in a band that overlaps the public safety band.

Chris Lyons, manager of educational and technical communications for Shure, said his company stopped selling microphones that use the potentially troublesome frequencies last November.

The consumer groups are recommending that the FCC halt sales of wireless microphones that operate between channels 52 and 69 and create a new “general wireless microphone service” to operate in other parts of the airwaves. They also want the FCC to require microphone manufacturers to replace the older devices.

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PIRATES OF THE PAGE

Soaring costs have led to rampant sharing of textbooks online

By Maya T. Prabhu and Meris Stansbury

The high cost of college textbooks has spawned a new battleground in the fight to keep students from downloading copyright-protected materials over the internet: textbook file sharing.

Several web sites allow—and, in some cases, encourage—students to make available scanned copies of textbook pages for others to download free of charge, often using the same peer-to-peer file-sharing technology that is used to swap music and movies online.

“In the age of Napster and peer-to-peer file sharing for music, young people are used to taking copyrighted material,” said J.D. Harriman, a partner in the intellectual property practice for the Los Angeles-based law firm DLA Piper. “This is not the education we want to give these students from the very beginning—to be copyright infringers.”

Driving this latest trend are soaring textbook prices, which have risen at twice the annual rate of inflation over the last 20 years, a study done by the Government Accountability Office has found.

According to the National Association of College Stores, the average college student spent between \$805 and \$1,229 on books and supplies alone during the 2007-08 school year.

And though pressure from educational publishers prompted the host of a major textbook-sharing web site to pull the plug on its service in July, legal experts say that’s just the beginning of what could become a protracted campaign by the publishing industry to end the sharing of copyrighted texts online—much as the recording industry has tried to do with music file-sharing on college campuses.



So far, publishers have limited their efforts to targeting offending web sites, similar to how the recording industry tried to shut down Napster and other music-sharing web sites earlier this decade.

But if the campaign to curb textbook file-sharing follows the same arc as that of the music industry’s efforts, it’s possible this movement could shift its focus onto the students themselves who download or make available copyrighted texts online—especially as publishers realize how hard it is to keep up with an ever-changing lineup of textbook-sharing web sites.

A growing problem

After more than a year of enabling students to scan, share, and download textbook content online, free of charge, Textbook Torrent—the largest and most high-profile of these textbook-sharing web sites—was no longer online as of press time.

Textbook Torrent reportedly offered more than 5,000 textbooks for downloading in PDF format, complete with their orig-

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inal layout and full-color illustrations. Users of the site could download and share these documents in the same fashion that music and movies have been shared in the past—through the peer-to-peer file-sharing system BitTorrent.

In June, Pearson Education requested that Textbook Torrent remove 78 of the company's titles from the site, and the site administrator complied. Then, in July, the site disappeared from the web altogether.

But that might not be the end of the web site for good. An internet search for "Textbook Torrent" turned up an archived web page with the following message:

"I have some more bad news for you: we've had our server pulled out from

DHT/peer sharing on in your BitTorrent clients, which should keep your torrents ticking along nicely."

Ed McCoyd, director of digital policy at the Association of American Publishers (AAP), released a statement July 22 noting that textbook publishers are actively enforcing their copyrights. The organization hired an outside law firm earlier this summer to search the internet for textbooks that are being offered illegally.

"AAP is vigilant in searching for copyright violations, and when sites are found that infringe, no matter the genre, the association and publishers will notify web site operators and internet service providers about the infringements and request that they be immediately

own intellectual property rights and the rights of their author," Ronald G. Dove Jr., an attorney representing the publishers, said in a press release.

"Businesses and individuals should know that the publishers will continue to pursue legal action against those who violate their intellectual property rights, including those web site operators who may not themselves directly infringe the publishers' rights, but who provide internet marketplaces that permit and assist others in doing so."

Web sites such as Scribd and Demonoid also enable users to upload and share many types of files—and a search of these sites revealed several copyrighted textbooks as of press time.

If the campaign to curb textbook file-sharing follows the same arc as that of the music industry's efforts, it's possible this movement could shift its focus onto the students themselves—especially as publishers realize how hard it is to keep up with an ever-changing lineup of textbook-sharing web sites."



under us. Call it a 'personality conflict' with our former new host—apparently they're not too happy with hosting a BitTorrent tracker, particularly one that has has [sic] been getting so much recognition of late. The good news is that all sensitive information has been securely erased from the server and we were able to back everything up, supplementing our automatic daily backups. What's more, thanks to a generous offer from a fellow tracker administrator, we will be rooming with another tracker until we can find more permanent accommodations [sic].

"Choosing a server in the U.S. was a mistake, and I should have known better. I'm sorry for that. We will be moving to a more permanent server prior to the August/September rush, so be ready for that. ... In the meantime, please turn

removed. This has proven to be an effective approach," McCoyd said.

In February, Pearson Education—along with McGraw-Hill Education, John Wiley & Sons Inc., and Cengage Learning Inc. (formerly Thomson Learning)—settled a trademark and copyright infringement lawsuit against the owner and operator of ValoreBooks.com.

The lawsuit alleged that the site enabled sales of pirated educational materials and foreign manufactured editions of textbooks that were not authorized for sale in North America. As part of the settlement, ValoreBooks was prohibited from selling and distributing any pirated electronic copies of the publishers' works.

"The complaint against Valore and this settlement underscore the firm commitment by these publishers to protect their

One user on Demonoid (www.demonoid.com) was offering 50 architecture books, including copyrighted titles such as *Assessing Building Performance* and *Modern Bamboo Architecture*, in one torrent. Another user was offering several math, science, and engineering textbooks, such as *Quantum Mechanics for Scientists and Engineers* and *How Math Explains the World*.

Scribd (www.scribd.com), a free, web-based document sharing community and self-publishing platform, enables anyone to publish, distribute, share, and discover documents of all kinds. All a user has to do is sign up for a free account and provide an eMail address.

Scribd appears to take copyrights seriously; it has a section that reads, in part:

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"It is our policy to respond to clear notices of alleged copyright infringement that comply with the Digital Millennium Copyright Act. In addition, we will promptly terminate without notice the accounts of those determined by us to be 'repeat infringers.'"

Even so, a quick search of Scribd using the term "textbook" revealed at least a few copyrighted works—including all 2,227 pages of Brunner & Suddarth's Textbook of Medical-Surgical Nursing, 10th edition, which had been viewed 1,075 times as of press time.

Scribd spokesman Jason Bentley said there is no way, either technically or practically, to guarantee that copyrighted material is never uploaded or shared online. But, besides promptly removing copyrighted materials that are called to its attention, Scribd also uses an automated copyright filter that searches each file as it is uploaded for key words that could indicate a copyright violation.

"The filter is still in beta, but improves every day," Bentley said.

Legal alternatives

Soaring textbook costs haven't just spawned a new illicit trade—they've also encouraged a movement toward using free and open textbooks on campus.

Open Text Book (www.opentextbook.org), run by the Open Knowledge Foundation, is an online registry of textbooks and related materials that are free for anyone to use and distribute through a Creative Commons license or similar agreement.

Besides serving as an online repository for free and open textbooks, the site also links to other open-textbook initiatives, such as the California Open-Source Textbook Project, the Free Textbook Project, Rice University's Connexions project, and Wikibooks.

This fall, a start-up enterprise called Flat World Knowledge will conduct what it calls "the nation's largest test of open college textbooks." The nationwide beta test

involves hundreds of students from 15 colleges and universities, who will use Flat World's free and open textbooks in a single class or section at each school. The beta test begins next month and will run through the end of the fall semester, Flat World said.

"The traditional textbook publishing model no longer serves the interests of students, educators, and authors," said Jeff Shelstad, co-founder and CEO of Flat World Knowledge and former editorial director for Prentice Hall's business publishing division.

"Textbooks are too expensive for students and too inflexible for instructors," Shelstad said. "And authors—the major, initial source of value in the industry—are increasingly confused by faster revision demands and their compensation for those revisions. Flat World addresses all of these industry pain points."

Flat World's books will be open for faculty to customize and available to students free of charge online. Flat World and its authors will earn their money by offering supplemental materials to students beyond the free online book—from printed, on-demand textbooks for around \$30, to audio books for around \$25, to downloadable and printable files by chapter. The company also will sell low-priced study aids, such as podcast study guides, digital flash cards, interactive practice quizzes, and more.

Of course, open textbooks will only be successful if colleges and their faculty choose to use them instead of pricier, more traditional options.

Toward this end, the Student Public Interest Research Groups, a nonprofit student advocacy network, has been pushing for open textbooks since 2003, USA Today reports.

The groups' Make Textbooks Affordable campaign has been gathering signatures for an Open Textbook



Statement of Intent, which asks faculty to consider using open textbooks. As of press time, the statement reportedly had collected more than 1,200 signatures from college faculty in all 50 states.

Meanwhile, Scribd's Bentley offered a bit of advice for students.

"The big publishers are far less interested in addressing the root causes of textbook piracy—such as egregious cost—than they are in finding out who you are and making an example out of you," he said.

"Do not assume that, because you have an electronic version of a textbook, it's OK to share it on the internet. Save your sob stories about how you came from a single-parent, blue-collar family on loans and how one required textbook costs more than your rent and food budget combined. That's not the point. ... Don't share your textbooks."



National Association of College Stores
<http://www.nacs.org>

Association of American Publishers
<http://www.publishers.org>

Open Knowledge Foundation
<http://www.openknowledgefoundation.org>

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Colleges must take steps to guard against copyright infringement ... and verify the identity of online learners

NEW ED-TECH RULES

**By Maya T. Prabhu,
Assistant Editor**

Colleges and universities soon will be required to take measures to combat illegal file sharing on campus and ensure that students enrolled in online classes are the ones taking their tests, according to legislation signed into law by President Bush Aug. 14.

The reauthorization of the Higher Education Act primarily focuses on making college more accessible and affordable as it shapes higher education over the next several years. But in cracking down on illegal file sharing and forcing schools to verify the identity of online test takers, lawmakers have saddled colleges and universities with additional expenses that might inadvertently undermine this goal, some experts say.

The Senate approved the measure 83-8 hours after the House passed it on a 380-49 vote. The White House had complained that the legislation creates new costly and duplicative programs, but President Bush signed it nevertheless.

The legislation, which was a compromise between Senate and House versions that were introduced separately, asks colleges and universities to implement network administration technologies that deter illegal peer-to-peer file sharing. These technologies can include bandwidth shaping, traffic monitoring that

identifies the largest bandwidth users, or products designed to reduce or block illegal file sharing, according to the new law. The law allows each institution to determine its own policy and use the corresponding technology.

On July 31, the American Council on Education sent a letter to members of Congress stating that while the measure includes a number of desirable provisions, it also has a number of drawbacks.

"Most notably, it will create an extraordinary number of new federal reporting and regulatory requirements dealing with ... peer-to-peer file sharing. Although some of these have been made less onerous as the legislative process has proceeded, the total volume of new federal requirements remains considerable," ACE President Molly Corbett Broad wrote. "Complying with these requirements will be time-consuming and inevitably will increase administrative and personnel costs on campuses."

Steven L. Worona, director of policy and networking programs for the higher-education technology group Educause, said it was a bad idea for Congress to target institutions of higher education and force them to try regulating file sharing.

"They're asking higher ed to pursue technology-based deterrents, which are widely recognized as immature," he said.

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"Many times the technology will block all traffic from peer-to-peer file sharing services, ... [blocking] files that both students and staff should be able to access."

Another option the law gives schools is to provide legal music downloading alternatives, but Worona said that might not work well, either.

"The commercial alternatives have failed because either they don't have the content the students want or they don't download to [students'] devices," he said.

The law also requires the accrediting agencies of colleges and universities that offer online courses to protect academic integrity by ensuring that the students enrolled in online classes are, in fact, the ones taking exams.

Many online programs do little testing at all, because it's difficult to verify whether students are cheating in an online setting. But new technologies are being developed to place cameras inside students' homes and lock down their computers while they're taking an exam, preventing students from searching files or the internet.

A product developed by Cambridge, Mass.-based Software Secure, for instance, has a small web camera and microphone that point into a reflective ball, which allows the camera to capture a full 360-degree image. (See "Web cameras eye online test-takers": <http://www.eschoolnews.com/news/top-news/news-by-subject/curriculum/index.cfm?i=46466>.)

John Ebersole, president of Excelsior College in Albany, N.Y., said he finds the requirement as passed by Congress to be discriminatory against institutions that offer online courses. The federal Education Department eventually will decide whether and how it will be regulated, mostly likely beginning no sooner than July 2010, he said.

"Right now, everybody needs to stay calm," Ebersole said. "We have time to figure out how we're going to comply. The entrepreneurial community has already been working at this."

As a school that offers many of its classes online, Ebersole said, Excelsior has been



looking into different kinds of technologies it could implement when the time comes to verify online test taking. Some possibilities include a web camera like the one from Software Secure, a system of proctors for online exams, fingerprinting or retinal scanning, or software that assess keystrokes and would detect if someone other than the test taker were answering questions.

Ebersole said the test-verification requirements offer both positives and negatives for institutions with online courses.

"On one level, it's going to bring additional costs to education, which will end up being passed on to students and making access more difficult. But it also offers the prospect of bringing a level of credibility to the online learning community that, at least in the eyes of some, hasn't been there," he said.

The higher-education law also "takes major steps to expand college access and affordability," Sen. Edward Kennedy, D-Mass., said in a statement, noting that every year an estimated 780,000 qualified students don't attend four-year colleges because they can't afford it.

The legislation will give prospective students more information about college tuitions and textbook costs, simplify application procedures, and make Pell Grants—the main federal aid program for low-income students—available year-round.

The new law focuses more on transparency: It requires the Education Department to publish detailed data about college pricing trends on its web site and

requires the top 5 percent of colleges with the greatest cost increases over three years to explain those cost rises.

Textbook publishers must share pricing information with professors and "unbundle" materials, so students can buy only those materials they need for their classes. The practice of bundling textbooks with supplementary materials, such as CDs, is one reason textbooks cost about \$900 per student, per year, according to a recent study.

Among other provisions, the law:

- Strengthens restrictions on lenders, guaranty agencies, and colleges offering or accepting payments and gifts as a condition of making student loans.
- Allows military service members to defer payments, interest-free, on federal loans while they are on active duty. It also provides in-state tuition for service members and their dependents who have lived in a state for more than 30 days.
- Simplifies the federal aid application process and provides more protections and disclosure for students taking out private loans.
- Increases Pell Grants from \$6,000 in 2009 to \$8,000 for 2014, and allows low-income students to receive the grants year-round.
- Creates a new program to expand postsecondary opportunities for students with intellectual disabilities.
- Promotes teacher preparation programs and programs to place high-quality teachers in high-need schools.
- Takes steps to expand the nation's supply of nurses by approving funds to expand nursing school faculties.

Material from the Associated Press was used in this report.



Legislative information
from the Library of Congress
<http://thomas.loc.gov>

Breakthroughs in 'parallel computing' are opening up whole new galaxies for campus research and academic enterprise

Parallel Universe

By Laura Devaney, Senior Editor

A computing strategy well known among geeks and gurus is poised to transform consumer electronics and further enhance campus endeavors, as teams of researchers work to improve speed and efficiency in what is known as “parallel computing.”

Parallel computing involves breaking a large complex problem or task into smaller, discrete components, using multiple computers or processors to address those separate components simultaneously (or “in parallel”), then assembling those disparate results back into unified a solution or outcome, instead of using a single processor to complete each task one after another—thereby allowing computers to work faster and more efficiently. Ideally, parallel computing makes processing faster, because more “engines” are working at the same time.

Earlier this year, Microsoft and Intel announced a joint research initiative aimed at speeding the progress of devel-

opments made in parallel computing. The companies partnered with the University of California, Berkeley and the University of Illinois at Urbana-Champaign to create a Universal Parallel Computing Research Center (UPCRC) at each university.

Microsoft, Intel, IBM, and others already deliver hardware and software that is capable of handling dual- and quad-core-based PCs.

And while the average computer user might not be familiar with parallel computing, researchers say it won't be long before every off-the-shelf laptop or desktop is capable of the technology.

Parallel computing is increasingly moving into consumer electronics: Most laptops have dual-core chips, and more quad-core chips are being sold as well, said Marc Snir, who is co-director of Illinois' UPCRC.

Researchers at the Illinois UPCRC are focusing on how to take advantage of parallelism to extend everyday computing even further.

“Using more transistors to speed up a single-core processor doesn't bring any real return, so the solution that all micro-processor manufacturers are moving toward is putting more cores, more threads, onto one chip, and building a parallel computer onto a chip,” Snir said.

Today, users will see chips with four cores, and each core might execute more than one sequential program, or more than one thread, he said—adding that those numbers are expected to double in the coming years.

This leads researchers to the next step: All the software now running on clients, laptops, and cell phones has been developed to run sequentially. To take advantage of the greater number of cores and increase performance, programmers must write parallel programs for the client environment: programs that break down a processing task into multiple chunks that can be processed simultaneously.

The ultimate goal is to make parallel

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programming synonymous with programming in general, Snir said, because every computer eventually is going to be a parallel computer, and any program ideally will be running in parallel.

Parallelism has been present for years in the worlds of supercomputing, graphic processing, and gaming. The trend traditionally has been aimed at those who needed advanced computing for scientific discovery, said Dan Reed, multi-core computing strategist for Microsoft. Now, it's becoming more common in general computing.

How will applications take advantage of the increased performance offered through parallel computing? A general assumption, according to Snir, is that performance efforts will focus on providing higher-level, more intelligent interfaces to the user.

While more progress is still needed in that area, developments such as speech and image recognition—combined with a more intelligent analysis of information—could be in computer users' future.

For instance, better real-time graphics could replace current interfaces, and, while Snir noted that this is far off, a "portable digital assistant" could know everything a person has done, see what that person sees, and retain information about that person's interactions and goals.

Reed's view of parallel computing's

future echoes Snir's. He said computing systems are becoming much more environmentally aware, not just in a "green" sense, but in terms of their modes of interaction.

"Speech recognition and vision and image recognition [are leading to] a much more natural interaction, where we move from a world where the computer is something on which you type and read responses to one where you think about moving closer to a semi-intelligent system, where it can observe interactions, moods, and information based on contexts—those are more natural, effective interactions," he said.

And to do those things efficiently, the world needs more computing power than it has now.

"That's where multi-core computing comes into play," Reed said. "In the mobile devices we take for granted now, with each substantive increase in computing power, we can start to embed intelligence into everyday objects."

But first, researchers will need to make parallel programming easier, so that it's more accessible to programmers.

That will require more sophisticated programming environments, which Snir likened to a new car.

"Under the hood it's sophisticated, but that sophistication makes the operation easier," he explained. "We want to hide

that complexity under the hood."

Snir said parallelism hasn't become completely mainstream yet, "because it has been the focus of relatively few highly-skilled programmers, and the market [until now has been] small."

Those behind the technology want to make it easy for programmers to continue to deliver what we've "taken as a birth right," Reed said—faster computers.

"If we are going to continue to do that," he said, "we have to change the way we develop software. That has some pretty deep implications on how we teach people how to develop programs, and that speaks to K-20 computing education—not only in rethinking computing and writing software, but also day-to-day issues of how we do it in practice."

Reed said the world has traditionally thought of sequential programming as the norm, and parallel programming as a special case. "We're about to turn that on its head," he said.



HOT LINKS

Berkeley's Parallel Computing Lab
<http://parlab.eecs.berkeley.edu>

Illinois' Universal Parallel Computing Research Center
<http://www.upcrc.illinois.edu>

Stanford to study parallelism, too

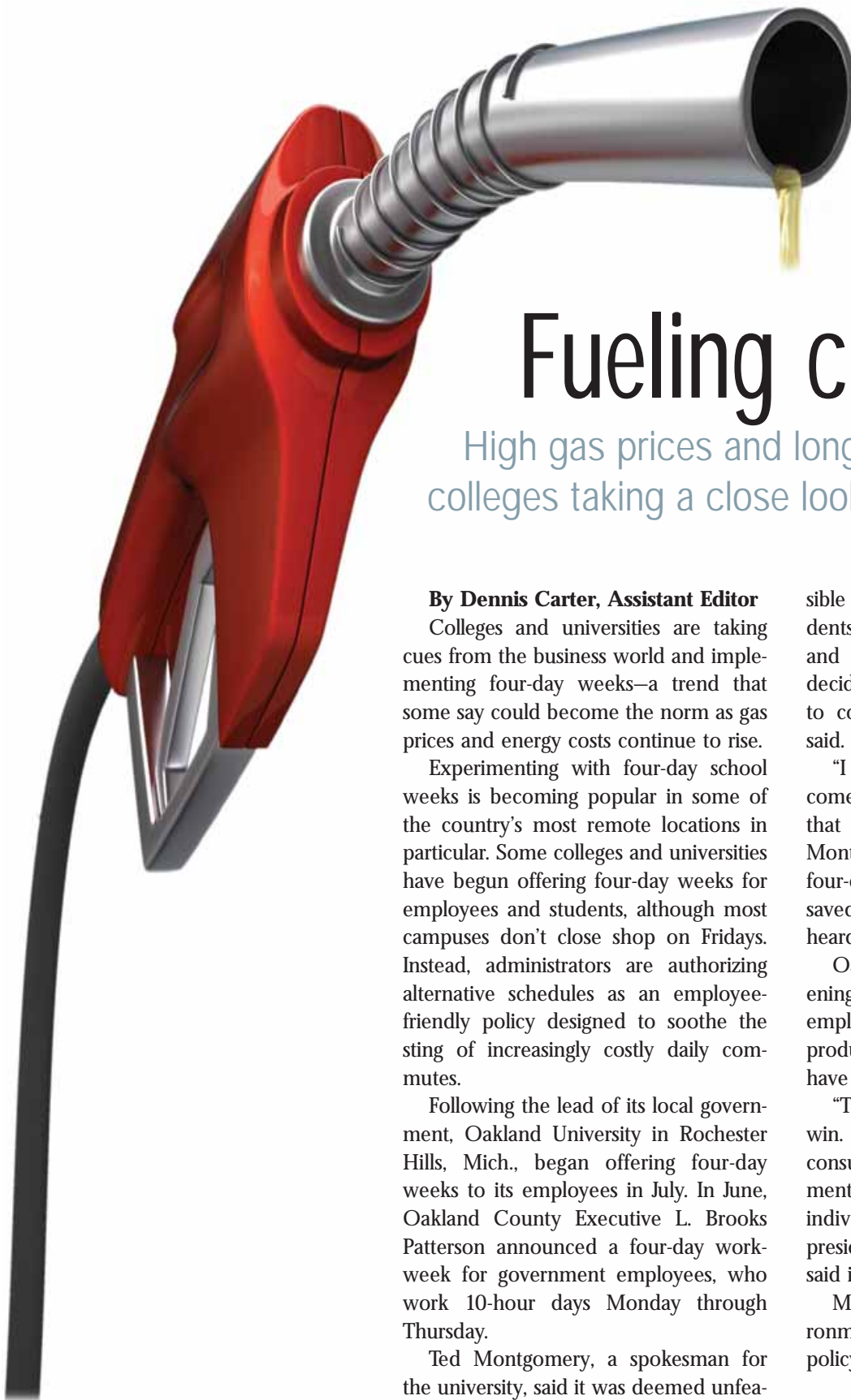
The new Microsoft and Intel-funded research labs at Berkeley and UIUC aren't the only facilities devoted to studying parallel computing: Stanford University also has opened a new parallelism research lab.

Stanford's Pervasive Parallelism Lab (PPL) will develop new techniques, tools, and training materials to allow software engineers to harness the parallelism of the multiple processors that are already available in virtually every new computer, the university reports.

"Parallel programming is perhaps the largest problem in computer science today and is the major obstacle to the continued scaling of computing performance that has fueled the computing industry, and several related industries, for the last

40 years," said Bill Dally, chair of the computer science department at Stanford.

Until recently, computer installations delivering massive parallelism could only be deployed in large-scale computer centers with hundreds to thousands of separate computer systems, Stanford says. With the recent introduction of many-core processors such as the GPU and the multi-core CPU, most new computer systems come equipped with multiple processors that require new software techniques to exploit parallelism. Without new software techniques, however, computer scientists are concerned that rapid increases in the speed of computing could stall—and that's what Stanford researchers will aim to explore.



Fueling change

High gas prices and long commutes have colleges taking a close look at four-day weeks

By Dennis Carter, Assistant Editor

Colleges and universities are taking cues from the business world and implementing four-day weeks—a trend that some say could become the norm as gas prices and energy costs continue to rise.

Experimenting with four-day school weeks is becoming popular in some of the country's most remote locations in particular. Some colleges and universities have begun offering four-day weeks for employees and students, although most campuses don't close shop on Fridays. Instead, administrators are authorizing alternative schedules as an employee-friendly policy designed to soothe the sting of increasingly costly daily commutes.

Following the lead of its local government, Oakland University in Rochester Hills, Mich., began offering four-day weeks to its employees in July. In June, Oakland County Executive L. Brooks Patterson announced a four-day workweek for government employees, who work 10-hour days Monday through Thursday.

Ted Montgomery, a spokesman for the university, said it was deemed unfea-

sible to offer four-day weeks for students. The pilot program ended Aug. 30, and now each department head can decide whether to allow their employees to continue the practice, Montgomery said.

"I don't see why, if all the results come in and there have been no issues, that it wouldn't be continued," said Montgomery, who participated in the four-day week pilot for three weeks and saved about \$120 on gas. "I haven't heard of any problems so far, honestly."

Oakland University officials said shortening the workweek would not just save employees money; it would also bolster productivity, as many national studies have shown.

"The compressed work week is a win-win. The 20 percent reduction in fuel consumption is good for the environment and good for our employees on an individual level," John Beaghan, vice president for finance and administration, said in a statement.

Montgomery said there was an environmental component to the university's policy.

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"We have a little smaller carbon footprint," he said.

While some colleges have resorted to a four-day week, campuses nationwide have seen a spike in online course enrollment as gas prices have risen. Several West Virginia schools, including West Virginia University, Fairmont State University, and West Virginia Wesleyan College, experienced sharp increases in online course enrollment as gas eclipsed \$4 a gallon.

Avoiding a round-trip commute to

Avoiding a round-trip commute to and from campus every day has proved irresistible for many students."

and from campus every day has proved irresistible for many students. A spokesman for Fairmont State University said the college has bolstered its online offerings recently. This past summer, the school offered 72 online classes for 1,451 students. This fall, the university will offer 109 online options for about 2,300 students.

University administrators in Tennessee also have noticed an increasing interest in classes that keep students off the road. Dan Lattimore, provost of the University of Memphis, said more than 1,000 students are taking online classes this summer, compared to less than 700 in 2007. Administrators said while students can save gas money by taking online courses, these classes require self-discipline, because students learn and study from home, not a lecture hall.

Colleges and universities aren't the only schools considering four-day school weeks. K-12 school systems in Kentucky, Minnesota, Nevada, New Mexico, and Utah are among those that have eliminated Friday from the work schedule during the past year.

In K-12 districts that have adopted the nontraditional schedule, school days are lengthy. In the rural White Pine School District in Nevada, seventh- to 12th-grade students start school at 7:30 a.m. and leave campus at 3:36 p.m. For grades 1-6, the day runs from 7:41 a.m. to 3:36 p.m. This more than compensates for the absence of a fifth school day, said Superintendent Bob Dolazel.

Rex L. Facer, an assistant professor of public finance who has studied alternative workweeks at Brigham Young University in Utah, said school officials



began exploring nontraditional work schedules when employees' daily commutes began to have a major impact on their finances. But the numerous studies—including published work Facer has helped research—that show employee production and contentment rises with the option of a four-day week has made the decision easier on many campuses.

"The big driver is gas prices from the employee's perspective," said Facer, a member of the Brigham Young faculty for seven years. "From the campus perspective, it's all about energy costs ... since local schools districts and higher education are huge consumers of energy."

Despite a slight drop in gas prices late this summer, Facer and school officials nationwide don't expect the alternative schedules to disappear. Facer said it wasn't until gas prices were considered dire that employers and schools embraced nontraditional work hours.

"It appears that \$4 a gallon was a magic point," he said. "The interest really did skyrocket at that point."

Facer said his research showed that about one-third of people surveyed pre-

ferred a four-day workweek, while one-third preferred coming in on Fridays. The other one-third of those surveyed said they did not have a preference.

Conversations about implementing a four-day week at Brigham Young University are in their "formative stages," Facer said—a move that would mimic the state government's four-day week policy. Utah reportedly became the first state government in the country to stray from the traditional five-day week early this summer.

The order issued by Republican Gov. Jon Huntsman will affect about 17,000 out of 24,000 executive-branch employees. It will not cover state police officers, prison guards, or employees of the courts or Utah's public universities.

Turning off the lights, the heat, and the air conditioning on Fridays in 1,000 of 3,000 government buildings will save about \$3 million a year out of a state budget of \$11 billion, according to the governor's spokeswoman, Lisa Roskelley. The state also will save on gasoline used by official vehicles, but authorities have not figured out how much.

The Department of Environmental Quality estimated employees in six buildings alone will save themselves more than \$300,000 spent on gas to commute to work.

The four-day workweek also could be good for the state's environment.

"We feel like we can reduce the CO₂ or the ozone by around over 3,000 metric tons, as well as have an impact on our air pollution," said Kim Hood, executive director of the Department of Administrative Services.

In addition, the governor said the new schedule could help recruit younger workers who prefer a three-day weekend.

State officials will evaluate the program after a year and decide whether to extend it.

Material from the Associated Press was used in this report.

High-resolution display magnifies campus research

UC-San Diego to use record-breaking screen for a bevy of research projects

By Dennis Carter
Assistant Editor

University of California, San Diego researchers now have an up-close view of their work, aided by more than 280 million pixels, after the university built the highest-resolution screen in the world.

The California Institute for Telecommunications and Information Technology (Calit2), a research group affiliated with UC-San Diego, announced earlier this year that it has completed work on the Highly Interactive Parallelized Display Screen (HIPerSpace), which features 286.7 million pixels. The display is 31.8 feet wide and 7.5 feet tall, and it includes 14 columns of screens. The second-highest-resolution screen in the world, NASA's hyperwall-2, has 256 million pixels. San Diego's record setter is 30 percent bigger than the university's last high-resolution display, officials said.

Within days after unveiling the HIPerSpace display, research groups from a myriad of disciplines had used the screen to enhance images essential to their work. Researchers can view their largest data sets—which often are too large to display on a standard high-resolution screen—and can zoom in on the smallest details with unrivaled clarity, campus officials said.

For instance, a UC-San Diego team recently visited Florence's Palazzo Vecchio—a premier gothic palace in Italy—and laser scanned the hall, essentially making a copy of the area. Researchers at Calit2 have now developed a computer model that allows viewers to see all 2.5 billion data points that comprise the Palazzo Vecchio in real time.

The display is expected to aid and accelerate research into the structure and functions of the human brain, seismic activity, and climate change predictions, among other fields.

Using the ultra high-resolution screen could

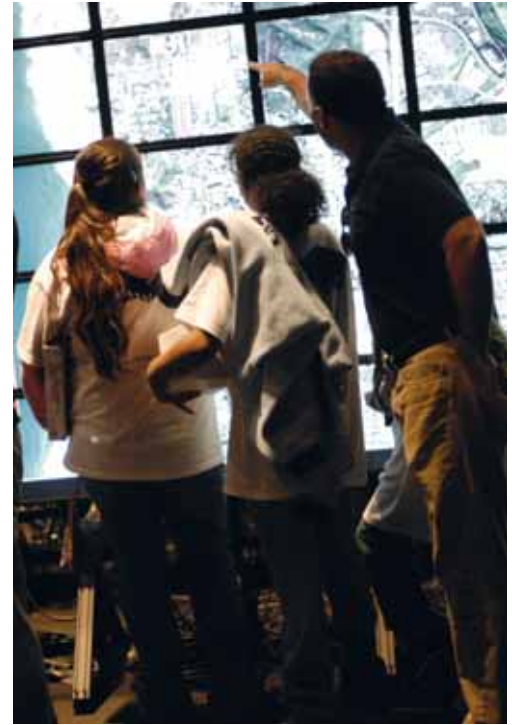
be particularly important to the study of climate change, researchers said, because global warming computer models have been called into question in recent years. In 2007, a study that used NASA's weather satellites concluded that climate change would include fewer droughts than previously predicted. The study also claimed that flooding would be more prominent than previous computer models had shown.

This isn't the first time an American university has delved into the world of ultra high-resolution displays. In 2004, Purdue researchers helped develop a high-resolution screen that measured 11.7 feet wide by 6.7 feet high. That screen has been used for TV news production courses at Purdue and for homeland security purposes, among other functions. The Purdue screen has about four times the resolution of a typical television screen, but nowhere close to the resolution of UC San Diego's display.

HIPerSpace features 70 high-resolution, 30-inch displays from Dell Inc., arranged in 14 columns of five displays each. Each individual display, or "tile," has a resolution of 2,560 by 1,600 pixels—bringing the combined visible resolution to 35,640 by 8,000 pixels.

Falko Kuester, principal investigator of the university's HIPerSpace system, said creating the world's highest-resolution screen was just a step toward a larger goal targeted by researchers.

"The higher-resolution display takes us more than halfway to our ultimate goal of building a half-billion pixel-tiled display system to give researchers an unprecedented ability to look broadly at large data sets, while also zooming in to the tiniest details," Kuester said.



UNIVERSITY COMMUNICATIONS AND PUBLIC AFFAIRS, UC SAN DIEGO

Researchers can zoom in on the smallest details with unrivaled clarity."



HOT LINKS

UC San Diego's
Visualization Group
http://vis.ucsd.edu/mediawiki/index.php/Main_Page

California Institute for
Telecommunications and
Information Technology
<http://www.calit2.net>



Students who use 'clickers' score better on physics tests

From staff and wire reports

Handheld electronic devices called "clickers" are helping college students learn physics, according to a series of research studies.

Ohio State University students who used the response systems to answer multiple-choice questions during physics lectures earned final examination scores that were around 10 percent higher—the equivalent of a full-letter grade—than students who didn't, officials say.

The clickers also appear to have leveled the playing field between male and female students. In clicker classes, male and female physics students performed equally well—but in the traditional, non-clicker classes, male students outperformed female students.

To Bill Reay, professor of physics at Ohio State, these results suggest that clickers could encourage more women to pursue science, technology, engineering, and math disciplines.

"The U.S. industrial sector has expressed an urgent need for more scientists and engineers to enter the workforce, to maintain our technological edge in the future," Reay said. "We need to recruit more students—male and female—who otherwise might not study science. And it turns out that for women especially, clickers can be a valuable learning tool."

The Ohio State researchers reported their results in the *American Journal of Physics* earlier this year.

Around the country, clickers are regularly used to maintain student attention in large lecture halls. Reay said clickers are a good way to help students pay attention and learn in today's classrooms.

"A hundred years ago, not so many people went to college, and classes were smaller. It was easier to engage students in learning," he said. "Now we have a class with 700 students

in it. And the question is, how do you engage 700 kids? Well, clickers can do it."

In clicker classes, multiple-choice questions appear on a large computer screen at the front of the lecture hall. Students use the wireless devices to vote for the correct answer based on their understanding of the lecture. A bar graph shows the percentage of students voting for each answer.

Physics educators have expanded the use of clickers at Ohio State by developing sequences of questions to determine if students really understand the underlying concepts of a lecture. The technique involves offering a series of questions (typically three), each with different wording and structure, but all designed to test the same concept.

"The question-sequence method eliminates common student misconceptions and helps students grasp the underlying concept in a short time," Reay said.

The idea with clickers, he explained, is that both lecturers and students can gauge whether students understand the material in real time. If students don't understand something, the lecturer might try to get them to think about the topic in a different way, perhaps by discussing it among themselves to encourage understanding before moving on to a new topic.

Students aren't required to use the clickers, but Reay said participation over the years has held relatively constant at 90 percent. Small incentives, such as grading clicker questions or offering extra credit, can boost participation to 98 percent.

Students seem to like the clickers, Reay said: "When we conduct our quarterly surveys, we find that the percentage of students enthusiastically favoring use of clickers is higher than 90 percent."

Clickers helped students score 10 percent higher on final exams—and they appear to have leveled the playing field between male and female students."



WEB HOT LINK

Clickers at Ohio State
<http://telr.osu.edu/clickers>

Free laptop-tracking software now available

By Meris Stansbury, Assistant Editor

Two Ph.D. students and their professors have developed an open-source system for tracking the location of a lost or stolen laptop that does not rely on a proprietary, central tracking service—providing some competition for commercial software developers. One leading commercial developer, however, says the open-source version lacks a number of essential features and therefore is less effective in deterring thefts and recovering stolen machines.

Developers of the open-source solution, called Adeona (<http://adeona.cs.washington.edu>), cite two major differences between Adeona and a commercial product.

First is cost. Adeona can be downloaded free of charge. Second is privacy. Adeona's developers say it preserves privacy, because no one besides the owner (or an agent of the owner's choosing) can use Adeona to track a laptop.

"Unfortunately, with current proprietary tracking systems, users sacrifice location privacy," say the software's creators. "Indeed, even while the device is still in the rightful owner's possession, the tracking system is keeping tabs on the locations it (and its owner) visits."

According to its web site, Adeona—named after the Roman goddess of safe returns—is designed to use the open-source OpenDHT distributed storage service to store location updates sent by a software client installed on a laptop. The Mac OS X version of the solution also can capture pictures of the laptop user or thief using the built-in iSight camera and the freeware tool "isightcapture." As with location information, these images are privacy-protected so that only the laptop owner can access them.

Adeona isn't the first solution to provide laptop-tracking technology. Absolute Software sells a similar product: Computrace LoJack for Laptops. According to the company, more

than 70 million computers have a form of its Computrace software built into their BIOS or firmware to prevent the software from being removed by unauthorized users—and buyers can choose whether to activate the software for a fee.

LoJack for Laptops, a service specifically marketed for students, has a starting price of \$39.99. The Premium edition adds an extra service that can remotely delete sensitive files, protecting them from computer criminals.

Absolute also employs a Theft Recovery Team that uses information sent from the stolen computer to investigate, gather evidence, and help local police with recovering a computer. The team reportedly is staffed by former police officers and security professionals.

A statement from Absolute points out what the company calls Adeona's "practical flaws," such as its easily removable software, rudimentary location-based tools, lack of a "data delete" function, and lack of a professional, licensed theft recovery team with established law-enforcement relationships.

Though Adeona's developers admit the program can be easily uninstalled, they say future versions could incorporate mechanisms that would make the software harder to remove.

"A motivated and sufficiently equipped or knowledgeable thief can always prevent an internet device tracking: He or she can erase software on the device, deny internet access, or even destroy the device," says Adeona's web site.

"The Adeona system was designed to protect against the common thief—for example, a thief that opportunistically decides to swipe a laptop from a coffee shop or a dorm room, and then wants to use it or perhaps sell it on online. Such thieves will often not be technologically savvy and will not know to remove Adeona from a user's system."



// Adeona's developers say it preserves users' privacy—and it's available free of charge."



HOT LINKS

Adeona
<http://adeona.cs.washington.edu/index.html>

Absolute Software's
Computrace LoJack for
Laptops
<http://www.absolute.com/computrace-lojack-for-laptops/notebook-security.asp>



Schools sign marketing deals with Victoria's Secret

But some campus officials are balking at first blush

From staff and wire reports

The University of Colorado at Boulder (CU) doesn't allow its logo to go on alcohol or firearms. But underwear from Victoria's Secret? That's a different story.

In July, CU became one of more than 30 universities nationwide to sign licensing agreements with Victoria's Secret, allowing the lingerie company to sell bikini underwear, hooded sweatshirts, pajama pants, and other items with the schools' logos at the company's stores and online.

The collegiate garb is part of Victoria Secret's "Pink" loungewear label, which is more comfortable than sexy or lacy.

CU spokesman Bronson Hilliard said campus officials agreed to the deal because nothing appeared too risqué. But not all higher-ed officials feel the same way.

The University of Minnesota's Goldy Gopher logo won't be appearing on Victoria's Secret apparel, after campus officials decided the clothing line is out of step with the school's values.

"We are not making a judgment in regards to Victoria's Secret," university spokesman Dan Wolter told the Minneapolis Star Tribune. "We just don't feel it is in our institution's best interest right now."

Wolter said there was not enough discussion about how the company's image could affect the school's reputation, and that upon review, "it was simply determined we should opt out of it."

Victoria's Secret had listed Minnesota as one of 33 schools that were part of the company's collegiate apparel line. According to Wolter, the university has used the Collegiate Licensing Co. as its middleman for the past two years and did not deal directly with Victoria's Secret.

"Licensing offers a whole array of opportunities, and we reject a significant number of them," Wolter told the Star Tribune. "This just got caught up in the traffic and wasn't red-flagged."

The University of North Carolina at Chapel Hill also has chosen to stop allowing its name and logo to be used on the new line of college-themed merchandise from Victoria's Secret, reports the Wall Street Journal. And the University of Florida report-

CU's contract says the school will earn at least \$10,000 annually in royalties for the first two years of the deal.

edly rejected a request from the company to visit this fall, because the school doesn't allow companies to do business on its campus.

"There would be no end to it—you would have the whole campus covered with them in no time," school spokesman Steve Orlando told the Journal. "We don't want our faculty and students overrun with commercialization."

Still, the allure of easy money in a time of tight budgets is attractive to some.

CU's contract says the school will earn at least \$10,000 annually in royalties for the first two years of the deal, which could be extended for three more years if the university hits its projected \$12,222 royalty mark in the contract's second year.

Some officials say the clothing line is out of step with their school's values."

Cheating 2.0? Test-posting site raises ethical concerns

By **Dennis Carter**
Assistant Editor

As a student at St. Louis University, Demir Oral met students acing exams partly because they had access to a bank of previous tests from the same professor. Fraternities and sororities had compiled exams from prior years and made them available to students, providing an invaluable study tool during pressure-packed final exams.

So last November, Oral launched Postyourtest.com, starting a free online service that he hoped would democratize the sharing of college exams. And as the site has attracted attention from students nationwide, educators have become wary of the potential for academic dishonesty.

Experts say sites like Postyourtest.com could change the way professors assemble their tests, aware that previous versions of their questions might be available—for no charge—in cyberspace.

"I don't think that should just be available to a few students," said Oral, 23, who operates the web site from San Diego. "That should be available to everyone."

Oral said there are more than 500 tests posted on his web site, with most of them coming from the San Diego area, where Postyourtest.com is advertised. Tests from schools such as the University of Houston, Rice University, Harvard, and Notre Dame also are posted.

While critics compare Postyourtest.com to web sites that sell term papers, Oral said that comparison is unfair. Exams on Postyourtest.com only give students a better idea of what might appear on their upcoming test, he said—they don't supply students with a cheat sheet.

While Oral's site has gained recognition among students, Clemson University's Center for Academic Integrity has warned college

officials of the cheating potential of Postyourtest.com.

Stephen Satris, the interim director of the Center for Academic Integrity, said many college professors distribute identical exams year after year, allowing students simply to memorize answers instead of study the class material and lecture notes. The proliferation of sites that post exams could shake longtime college faculty members from their malaise and force them to create brand-new tests every semester, he said.

"Yes, [web sites like Postyourtest.com are] worrisome, partly because we can be pretty sure that not all instructors are changing their tests every semester, as they should," Satris said. "It should be something of a wake-up call."

Oral, who works as a web designer, said he hopes professors will change their tests often. Having tests from previous semesters still would show students what the professor has focused on in the past, making it easier to sift through the hundreds of pages of test-prep material piled on their desks, he added.

But Postyourtest.com has garnered its share of angry responses from educators nationwide. One college professor from Florida wrote: "If or when your unethical service manages to make its way to Florida or wherever I happen to be, I want to ban the use of my tests. I already change my tests regularly to avoid students passing them around, as do many other professors, so some of your users will have a nice surprise in store for them on test day. Have a nice day."

Postyourtest.com averages between 20,000 and 30,000 hits a month, which has steadily increased since its November launch, Oral said. Students can search Postyourtest.com by state, city, zip code, campus, class, or professor.



“ Sites like Postyourtest.com could change the way professors create their exams.”



HOT LINKS

Postyourtest.com
<http://www.postyourtest.com>

Center for Academic Integrity
<http://www.academicintegrity.org>

Microsoft releases new tools for academics

Free software applications aim to facilitate research

From staff and wire reports

Microsoft's research group has announced a set of free software tools designed to improve the interoperability of programs that scholars and academics use and better meet their research needs.

These free tools include add-on programs for Microsoft Word that simplify the researching, writing, and publishing of articles for scholarly journals; allow users to plot, graph, and solve functions and equations; and more. They also include a virtual workspace designed to facilitate collaboration among researchers at different institutions.

Tony Hey, corporate vice president of Microsoft External Research, announced the free tools at Microsoft Research's ninth annual Faculty Summit on July 28.

The new applications address all phases of the scholarly communication life cycle, he said—collecting and analyzing data; authoring, publishing, and preserving information—and are designed to help researchers share data and knowledge, ultimately making it easier for them to uncover, publish, disseminate, and preserve their research findings.

The following tools are freely available now:

- An add-in that enables authors and editors to open and save Microsoft Word files in the National Library of Medicine's NLM XML format, a file format that is used to publish and archive scientific and technical articles. Beyond its core file format capabilities, this add-in allows users to capture additional metadata at the authoring stage and preserve semantic information throughout the publishing process, which is

essential for enabling search and semantic analysis once the articles are archived at information repositories, Microsoft said. The add-in aims to simplify the authoring, submission, and interaction process between authors and journals.

- A Creative Commons add-in for Office 2007 that allows authors to embed Creative Commons licenses directly into an Office document (Word, Excel, or PowerPoint) by linking to the Creative Commons site via a web service.
- A Microsoft Math add-in that enhances Microsoft Word 2007 with computational and graphing capabilities. With the add-in, users can plot a function, equation, or inequality; solve an equation or inequality; calculate a numerical result; and simplify an algebraic expression. Users also can use a linear format for entering equations into Microsoft Word 2007 and Microsoft Math.
- The Microsoft eJournal Service, a hosted solution that simplifies the self-publishing of online-only journals—facilitating the availability of conference proceedings and small or medium-sized journals, Microsoft said.
- The Research Output Repository Platform, which helps capture and leverage semantic relationships among academic objects—such as papers, lectures, presentations, and video—to provide access to these items in new ways.
- The Research Information Centre. In close partnership with the British



Library, this collaborative workspace will be hosted via Microsoft Office SharePoint Server 2007, allowing researchers to collaborate throughout the entire research process—from locating funding to searching for and collecting information, as well as managing data, papers, and other research objects.

Microsoft researchers partnered with scholars throughout the development of these tools to better learn the needs of the academic community, the company said.

Also during the summit, leaders from Microsoft Research outlined their vision for how Microsoft and academics can collaborate on research projects to develop technological breakthroughs that will define computing and scientific research in the years ahead.

For instance, Hey discussed collaborative initiatives intended to unlock the potential of multicore computing. He said his group will provide \$1.5 million to seven academic research projects as part of the Safe and Scalable Multicore Computing Program, with the goal of stimulating successful research in multicore software.

Microsoft's free tools

http://www.microsoft.com/mscorp/tc/scholarly_communication.aspx

Microsoft Research Faculty Summit

<http://www.research.microsoft.com/workshops/FS2008>

Eye on the Ball

Va. university hopes to get a lift from year-round skiing

Lynchburg, Va.-based Liberty University soon will offer skiing on campus—all year long.

Officials at the Christian university announced in July that a 40,537-square-foot area of the school's Liberty Mountain will be covered with a slippery carpeted surface used in Europe called Snowflex, which imitates the properties of snow. Liberty's artificial slopes reportedly will be the first in the United States.

Plans call for a main slope of 450 to 500 feet, a beginner slope, and a ski lodge. Construction was scheduled to begin in late August or early September, with completion by January.

Chancellor Jerry Falwell Jr. said the year-round ski slope will help Liberty break the stereotype "that Christian education is synonymous with boredom."

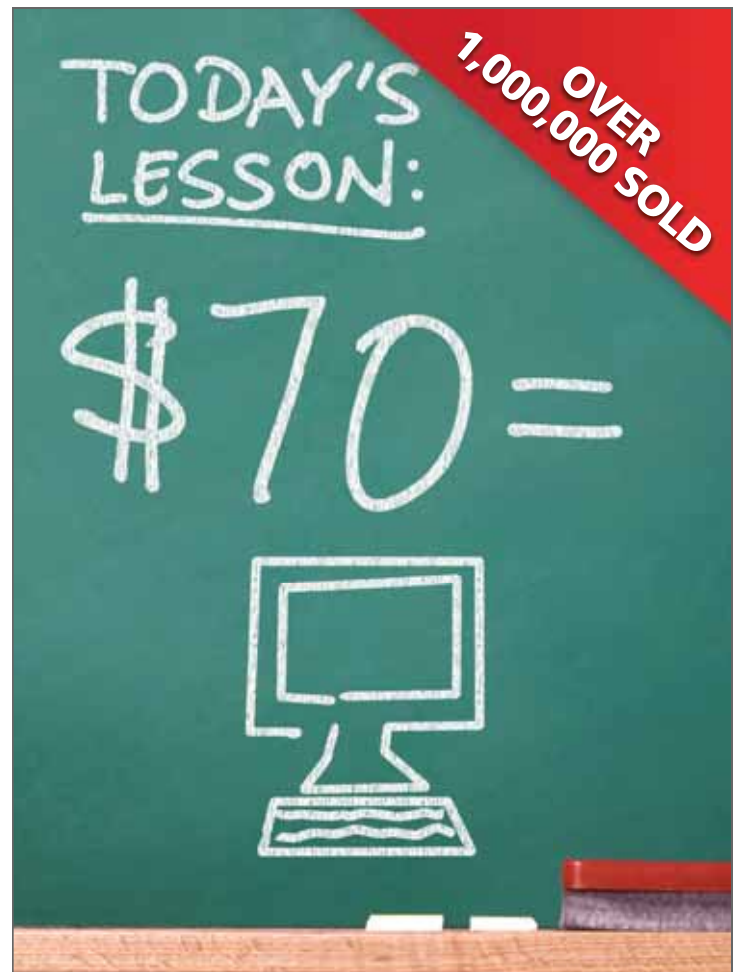
The idea of building a snow-free ski slope on Liberty Mountain began three years ago, when the university hired Alpentech Inc., a Utah-based consulting firm, to investigate



ways Liberty could use its mountain property to meet its academic, financial, and recruiting goals. Besides giving students more recreational and fitness opportunities on campus, the slopes will help establish skiing and snowboarding as club sports on campus.

The school did not disclose the cost of the project, but said it was being funded by a donation.

<http://www.liberty.edu/snowflex>



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