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Information Technology in the News

MODEL SUPPORTS ARCHIVING OF DIGITAL INFORMATION

■ The Center for Technology in Government at the University at Albany has created a toolkit to aid in the preservation of digital content. The project was funded by an $800,000 grant from the National Science Foundation, and the toolkit will be distributed to states and territories as part of the National Digital Information Infrastructure and Preservation Program. Federal laws specify requirements for the preservation of paper documents, but the arena of electronics records remains largely unregulated. According to Brian Burke, the project manager of the Center for Technology in Government, this results in inconsistent procedures from state to state for preserving digital material. Burke noted that librarians and archivists from around the country are "saying at this point there's tons of information that's being lost or predicted to be lost." The toolkit focuses on establishing predictable policies and communication among states and territories so that various agencies can work together to preserve digital content consistently. (*Federal Computer Week*, ⟨http://www.fcw.com/article88434-03-30-05-Web⟩)

FEWER COLLEGE STUDENTS PURSUING COMPUTER SCIENCE DEGREES

■ A report from the Computing Research Association (CRA) shows a significant drop in the number of U.S. college freshmen who say they plan to major in computer science. The CRA looked at data from the Higher Education Research Institute at the University of California at Los Angeles and found that between the fall of 2000 and the fall of 2004, interest in computer science fell by more than 60 percent, and that interest is now 70 percent below its all-time high. Interest among women has fallen even further, said the CRA, dropping 80 percent since 1998 and 93 percent since 1982. The CRA also conducted surveys of higher education institutions and came up with similar results. The report suggests that the United States will have difficulty meeting the demand for IT workers in coming years, increasing the gap between the United States and countries—including India and China—that are producing larger numbers of computer science graduates. "Freshmen interest levels at any given point have been an accurate predictor of trends in the number of degrees granted four to five years later," according to the report. (*CNET News.Com*, ⟨http://news.com.com//2100-1022_3-5681438.html⟩)

REPORT SUPPORTS DISTANCE EDUCATION

■ A program that exempts certain institutions from the "50 percent rule" has been a success and should be significantly expanded, according to a U.S. Department of Education report. The rule, which bars federal financial aid from students attending institutions that either offer more than half of their courses online or enroll more than half of their students in online programs, was implemented to act as a check on diploma mills and other suspect online degree programs. According to the Department of Education report, those schools that have been granted exemptions have seen enormous growth in enrollments, particularly of less affluent and nontraditional students. The rate of growth in access to education for those groups prompted the department to call for an immediate expansion of the program to one hundred institutions, up from the current cap of thirty-five, and for the end of the 50 percent rule when the Higher Education Act is renewed. Although pleased that relaxing the rule has led to increased

e-publishing

DUTCH ACADEMICS LAUNCH OPEN-ACCESS SITE

Dutch academics have announced a Web site that offers free access to scholarly material from all of the country's universities. The Digital Academic Repositories (DARE) project, which started a year ago as a test program, is a joint effort among all Dutch universities, the National Library of the Netherlands, the Royal Netherlands Academy of Arts and Sciences, and the Netherlands Organisation for Scientific Research. DARE includes 47,000 academic articles and other digital resources, including bibliographic information, full-text materials, and audio and video files. Organizers of the project say that no other country allows such widespread and easy access to its academic research. Such open access publishing projects remain anathema to most commercial publishers, but supporters of open access argue that it is the appropriate publishing model, given digital technologies and increasing subscription costs for traditional academic publishing. (*The Register*, ⟨http://www.theregister.com/2005/05/11/openaccessresearch/⟩.

access to education, many higher education organizations said that eliminating the rule would be unwise. Becky Timmons, the director of government relations at the American Council of Education, said, "One enormous opportunity for abuse in distance education is rapid expansion." (*Inside Higher Ed*, ⟨http://www.insidehighered.com/news/2005/04/13/distance⟩)

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CLICKING ON CAMPUS

■ Faculty at hundreds of colleges and universities are using small electronic devices similar to television remote controls as part of their in-class instruction. Commonly referred to as "clickers," the devices allow students to respond to instructors' questions by choosing one of several options or, in some cases, by entering a numeric answer. Answers are transmitted by either infrared or radio frequency signal to a receiver connected to a computer, which logs the responses and can track individual students' responses, as for a quiz, or display responses from the entire class anonymously. Faculty who use the devices say that because the clickers allow students to respond anonymously, they encourage participation from students who might be too shy to answer verbally in class, and they elicit more honest answers on controversial subjects. Stephen Bradforth, a chemistry professor at the University of Southern California, said that after he began using clickers in his classes, attendance and participation increased. He also noted that the devices force professors to think differently about how they teach their courses. (*Wired News*, <http://www.wired.com/news/culture/0,1284,67530,00.html>)

HIGHER ED ORGANIZATIONS CALL FOR TELECOM REFORM

■ A group of twelve higher education organizations has issued a statement outlining its position on several aspects of the anticipated revision of the Telecommunications Act. The group, which has set up a Web site (http://www.broadbandforhighereducation.org/) that advances five principles, is calling on the federal government to take appropriate steps to support the ongoing development of and access to the Internet. The group urges that the Internet be "open to all persons and all lawful content" and stresses that "a level playing field for competing technologies" is vital. The group also supports allowing states and municipalities to implement high-speed networks that would bring broadband access to anyone in those areas, including many who might otherwise not have such access. The group also said the federal government should "renew its leading role in funding academic research and development in future Internet technologies." Mark Luker, vice president of EDUCAUSE, one of the organizations in the consortium, said the initiative is "not only altruistic for all citizens but strategically important for higher education." (*Chronicle of Higher Education,* <http://chronicle.com/prm/daily/2005/06/2005060101t.htm> [subscription required])

STUDENTS SHOW EASE OF IDENTITY THEFT

■ Graduate students at Johns Hopkins University set out to see how much personal information they could collect on as many individuals as possible, using only the Internet and $50. The forty-one students were in a course taught by Aviel D. Rubin, a professor of computer science and the technical director of the university's Information Security Institute. Rubin divided the students into groups of three or four and instructed them to use only legal, public sources of information. The exercise mimicked the activities of data brokers, such as ChoicePoint and LexisNexis, and the students were able to collect and aggregate vast amounts of information, even with limited time and budgets. Although Rubin was pleased that fewer Social Security numbers were among the data collected than he had anticipated, privacy advocates insist that such information remains easy to obtain, posing enormous risk of identity theft. Even without Social Security numbers, the collected data offered a very broad picture of individuals: who they are, where they live, and the activities in which they participate. Such access to personal information worries many, including Senator Ted Stevens (R-Alaska), who conducted a similar experiment by instructing his staff to try to

steal his identity. Aside from information they discovered about Stevens, they were told they could buy his Social Security number for $65. (*New York Times*, <http://www.nytimes.com/2005/05/18/technology/18data.html> [registration required])

JOURNALS USING SOFTWARE TO UNCOVER PLAGIARISM

■ Software designed to uncover plagiarism is increasingly being used not only for student papers, where it got its start, but also for academic journals, where it is turning up instances of self-plagiarism. Although some dismiss self-plagiarism as unimportant relative to plagiarizing another's work, the practice of republishing one's own work in various venues strikes others as similarly objectionable. Christian Collberg, an assistant professor of computer science at the University of Arizona, characterized self-plagiarism as vita padding and said that self-plagiarists who are funded from public sources are misusing taxpayer money. Collberg is working on a software application specifically designed to uncover instances of self-plagiarism. Though not as concerned about self-plagiarism, Cornell University is testing a plagiarism-detection application on an archive it maintains of articles in physics, math, and computer science. Among the 300,000 articles in the archive, the tool has found a few thousand instances that warrant further investigation. (*Chronicle of Higher Education*, <http://chronicle.com/prm/daily/2005/05/2005051901t.htm> [subscription required])

FORMER STUDENT CONVICTED OF STEALING DATA

■ A former student of the University of Texas at Austin has been found guilty of writing a computer program that stole names and Social Security numbers from about 37,000 students, faculty, and others associated with the university. The jury found Christopher Andrews Phillips not guilty, however, of intending to profit from the data he stole. Phillips said he wrote the program as part of his computer training and never had any intention of using the information. The theft took place in 2002 and 2003, when Phillips's program made more than 600,000 inquiries to a UT database, trying to match names with Social Security numbers. UT officials detected the activity and traced it to Phillips, whose computer was seized with the program he wrote and the data it had harvested. Phillips faces up to six years in prison; had he been convicted of the other charges, he would have faced close to thirty years. (*Chronicle of Higher Education*, <http://chronicle.com/prm/daily/2005/06/2005061301t.htm> [subscription required]).

Security | Matters

PENN TO HEAD STUDY OF CYBERATTACKS

A new program sponsored by the Department of Homeland Security will attempt to collect real-time data on cyberattacks in the private sector, with the goal of using such data to prevent future attacks. Led by the University of Pennsylvania, the Cyber Incident Detection Analysis Center will install monitors on corporate networks. In the event of an attack on the network, the monitors, which will cost companies $10,000 annually, will transmit data to the Institute for Strategic Threat Analysis and Response at the university, where the data will be analyzed and made available to researchers at other institutions. Those with access to the data will not be able to see which company it came from, and researchers will not be directly involved in prosecuting individuals responsible for cyberattacks. Charles Fleming, the executive director of the center, said that a pilot program will be carried out before the monitors become widely available. (*Chronicle of Higher Education*, <http://chronicle.com/prm/daily/2005/04/2005042101t.htm> [subscription required])

NSF TO FUND COMPUTER SECURITY RESEARCH CENTER

The National Science Foundation (NSF) has awarded a $19 million grant to create a technology center to study cybersecurity. The project, called the Team for Research in Ubiquitous Secure Technology (TRUST), will be led by the University of California, Berkeley, and will receive the funds over five years. Other higher education institutions participating in the project include Carnegie Mellon University, Cornell University, Mills College, San Jose State University, Smith College, Stanford University, and Vanderbilt University. S. Shankar Sastry, a professor of computer sciences at Berkeley and the director of TRUST, said, "The cybersecurity community has long feared that it would take an electronic Pearl Harbor for people to realize the scale of disruptions possible from a concerted attack by terrorists." The TRUST project will conduct research into computer security in a variety of industries, specifically addressing the integration of technologies among "critical infrastructures." (*CNET News.Com*, <http://news.com.com/2100-7349_3-5666782.html>)