HL

Higher Learning - Technology Serving Education

New Media and Arts Education

Using Email to Conduct a Survey

The Challenge of Distance Education

Sept/Oct. 2002

CONTENTS

www.teachmag.com/higher-learning.html

Is there a relationship between new media and arts education? Ana Serrano, director of the Canadian Film Centre's new media division, says yes. According to Serrano, new media has much to tell us about how we can teach the arts. She begins our feature article by defining what the "spirit" of new media is, dissecting the term into three parts: access, control, and diversity. Serrano explores these aspects using examples from her experience at h@bitat, and shows how we can import the lessons learned from new media into our teaching practice.

If you're looking for some practical suggestions on planning and executing your distance education courses, Cable Starlings offers some excellent advice. An award-winning professor from the University of Alaska Anchorage, Starlings takes his 25 years of experience in the field and outlines what he feels are the challenges distance educators face today, the challenges for their students, and some solutions for both.

For those involved in digital rights management, our spotlight on Adobe Content Server 3 will be of interest. This latest version is specially adapted to librarians' needs, and features several new tools you haven't seen before. Find out why libraries even caught Adobe's attention in the first place, and what the new options can do for you.

Our second spotlight looks at two universities that use email to conduct surveys and collect research. The University of California, Davis uses email to communicate with its student body in a variety of ways. Simon Fraser University in British Columbia recently conducted a community-wide survey for a psychology professor's research study. Find out how their efforts are bringing in outstanding results.

If you found last issue's Spring Software Review insightful, you'll enjoy our Summer Software Review as well. In this follow-up piece, Michel Mersereau evaluates Virtual PC and eZedia MX and assesses their appropriateness to the classroom.

With e-marketing rising as the latest university trend, we also include a brief review of *Steal These Ideas Please! Great Marketing Ideas for Continuing Education*. In addition to a wealth of tips and suggestions that will improve your overall marketing strategy, this handy UCEA publication highlights some useful e-marketing techniques.

And finally, don't forget about all the additional information our various departments bring. Our Projects section in particular focuses on electronic publishing and online databases and provides outlines of six major initiatives currently underway. ■

Jennifer Kavur

WebCT

WebCT is the world's leading provider of integrated e-learning systems. Over 148,000 faculty members at 1,578 colleges and universities are using WebCT's products and services to transform the educational experience for more than 5.8 million students. The company's mission is to be the preferred partner of institutions that are creating total e-learning solutions, from getting started to scaling campus-wide. WebCT is available in 10 major world languages and a quarter of the company's installed base is located in more than 60 countries outside of North America.

Initially developed by computer science faculty under grant from The University of British Columbia in Canada, WebCT's academic heritage and philosophy continue to be reflected in new versions. Both the Standard and Campus Editions of WebCT are user-friendly, give faculty members the pedagogical flexibility to teach their own way, provide tools to enhance interaction between students and faculty, and offer the broadest selection of quality course material and well-designed content from all of the major college textbook publishers. The Campus Edition of WebCT also gives institutions a robust, scaleable product suitable for large-scale implementation across multiple servers as well as features for enhanced scaling and integration with campus portals and student information systems.

WebCT.com, the e-learning hub, offers centrally hosted services that can be customized to meet the needs of individual institutions or academically oriented communities. WebCT.com supports excellence in online teaching and learning with mentoring programs, resources, and access to experts and colleagues in many fields. The company also offers a wide range of services that are designed and delivered by educators with deep campus experience who understand that technology is only part of the solution in creating successful e-learning environments. WebCT's services include implementation and technology planning, software training, faculty and course development, integration and technical consulting, premium support, all of which are customized to meet an institution's particular needs.

For more information, please visit
http://www.webct.com/hl

A DIGITAL REPOSITORY FOR FACULTY RESEARCH

DSpace has officially opened its doors to the MIT community, allowing faculty and researchers to submit material into a digital repository. The simple submission process allows each MIT community to develop its own system for controlling which publications are to be included and who can have access to them. Communities include departments, labs, research centers, institutes, and schools – any entity that has a defined leader and can assume responsibility for setting policies. Each community will make the policy decisions for its collections, within certain guidelines. The guidelines won't limit submissions to any genre or file type, and DSpace will accept a variety of content, including articles, datasets,

theses, videos, and images. A chief concern surrounding the project is faculty participation - whether faculty will use the system, how much they will use it, and how they would like it to work. However, according to Margret Branschofsky, faculty liaison for DSpace, MIT has had "a substantial amount of faculty interest and participation, and expects these early adopters to spread the word to others. Our faculty survey shows an especially high interest in DSpace's promise to provide long-term preservation of research products. We have also found that interest varies depending on the publishing 'culture' of the discipline." DSpace is a joint-project between MIT and Hewlett-Packard. HP provided an initial 3-year grant, along with three members of the development team who worked with MIT Libraries developers. (These members are also involved in a metadata research project with MIT researchers and the WC3.) Branschofsky notes that as DSpace matures, its aims are growing: "DSpace was originally aimed at capturing,

disseminating, and preserving faculty research, but as we proceed with the project we are becoming aware of other needs on campus, for instance a repository for courseware learning objects. We see the DSpace software becoming a part of the MIT digital infrastructure that could be used for many types of content. And when we make the source code available to other institutions, we expect to see even wider applications." DSpace may also explore forms of publishing such as e-journals. For further information, send an email to *dspace-info@mit.edu,* or visit *http://web.mit.edu/dspace.*

BLACKBOARD'S MULTI-LANGUAGE EDITION CATERS TO STAFF AND STUDENTS AROUND THE WORLD

Blackboard has unveiled a new edition of its course management system. Blackboard Learning System ML is a multi-language edition that aims to set new standards in multilingual enterprise learning. Academic staff and students can now experience all

aspects of the user interface in their language of choice, and can switch between languages in a single implementation. For example, a student can select to view his course environment in German, while a peer enrolled in the same course can view the environment in French. Another feature allows users to type or upload content in any language, regardless of the language that the institution downloaded for the user interface to display. The system currently enables Chinese, French, German, Japanese, and Spanish. Dutch, Italian, Korean, and Portuguese are under development. For further information, visit *http://global.blackboard.com/worldwide/ amn/eng/lsml.htm.*

news

CORNELL PLANS TO DIGITIZE ENTIRE LIBRARY CARD CATALOG SYSTEM

After converting nearly 14,000 card catalog titles to digital format, Cornell University Library (CUL) has begun working on new project that will digitize an additional 270,000 and add them to its online database. This will leave the university with less than 240,000 cards remaining in paper form, representing less than 6 percent of its current holdings. (Cornell plans to digitize its last remaining records when new funding becomes available.) The Online Computer Library Center *(www.oclc.org)* is assisting the project, which is funded chiefly by a Mellon Foundation grant. The project completion date is scheduled for December 2004. CUL decided to embark on this large-scale endeavor after realizing that researchers and scholars

were increasingly ignoring holdings that lacked electronic bibliographic records. Karen Calhoun, assistant university librarian for technical services, explains: "Cornell's remaining catalog cards are no longer filed in a prominent location in our main library – that space is now devoted to heavily used computer workstations. Unless he or she knows enough to ask at the reference desk, or at least reads the fine print in our online catalog or on our signage, a researcher may be completely unaware that not all our catalog records are online. In any case, searching both the online database and the card catalog requires an extra step, one that a busy scholar may not always be inclined to take." CUL also found that in contrast, holdings listed in the online catalog and international bibliographic databases are becoming used more than ever. For further information, contact Karen Calhoun (607-255-9915, *ksc10@cornell.edu*) or project manager Hana Dedina *(hed5@cornell.edu)*.
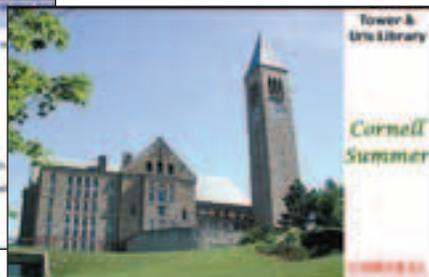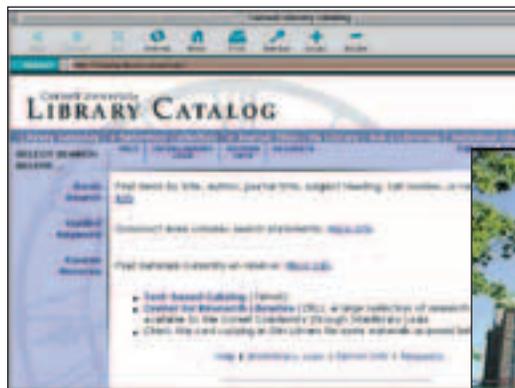
Alan George, Dean, Faculty of Mathematics; Frank Tompa, Director, School of Computer Science; Chris Pal, Graduate Student, School of Computer Science; Ian McPhee, Distinguished Alumni, J.W. Graham Medal holder; David Johnston, President, University of Waterloo (fleft to right)

DEPARTMENT OF COMPUTER SCIENCE BECOMES A SCHOOL

In May, the University of Waterloo's computer science department became a School of Computer Science. While the new school is still under the auspices of the Faculty of Mathematics, the change in status gives the computer science field a higher profile and raises its visibility to industry, government, and academic units within other universities. As a result, a new undergraduate degree program leading to a Bachelor of Computer Science (BCS) will also open at UW. For more information, visit *www.cs.uwaterloo.ca/launch*.

FREE RECRUITING SYSTEM FOR CO-OPS ACROSS CANADA

The University of Victoria has developed an employment recruiting information

system called recruitSource, and plans to make it freely available to any co-op in Canada. recruitSource is a Web-based, platform-independent system that runs on Linux and Unix servers. It contains modules for job postings, online resume and cover letter applications, company and applicant information, interview signup, short-listing and ranking, and advanced reporting. The system also features special tools such as Spectrum Analysis, which allows staff to get an overview of a student's application, a department, a job, or an entire university. recruitSource will be licensed as OpenSource software. UVic hopes

this gesture will open workplace opportunities for students and help broaden co-op access across the country. The university is also developing a province-wide portal where students, employers, and institutions can both post and access information related to co-operative education. Based on the recruitSource system, the portal will be open to all 16 post-secondary institutions in British Columbia that have co-op programs. Users will be able to find out career opportunities, employer profiles, and statistics. The portal is scheduled for beta testing this October, and for full release in January 2003. For further information on recruitSource, visit *www.recruitsource.ca.* The UVic co-op portal will be available at *http://myco-op.ca.*

McGRAW-HILL-MICROSOFT PRESS

McGraw-Hill Education and Microsoft Corp. have entered into an agreement to develop, publish, market, and distribute professional and technical books for the global education market. Under a newly created imprint, McGraw-Hill-Microsoft Press (MHMP) will initially focus on the higher education market, offering a "one-stop" solution for IT texts and materials. MHMP plans to offer Microsoft titles in

McGraw-Hill Higher Education

print, multimedia, and network-ready format, and will also develop new IT titles. In addition, certain IT titles previously published by either party will now be published under the McGraw-Hill-Microsoft Press imprint. MHMP will distribute and sell its books and academic materials through a variety of established McGraw-Hill sales and distribution channels, including its higher education direct sales force representatives. For further information, visit *http://www.mheducation.com/.*

NEW DOCUMENTARY EXPLORES HOW DIGITAL MEDIA AFFECTS LEARNING

Ball State University will release a documentary that explores how digital media affects learning. Directed by telecommunications professor James Shasky, the film focuses on Squeak, an adaptable open source software language created by Alan Kay. "Kay is one of three or four founding geniuses of the information revolution, and [Squeak] is his latest project," says Scott Olson, dean of the College of Communication, Information, and Media. Olson explains what makes Squeak unusual: "It allows learners to create and collaborate on their own learning environments. Unlike any user interface you have ever used, this one is

Professional Camera Operator Kevin Daughtry (left) and Telecommunications Professor Jim Shasky (right)

truly icon drive and object-oriented." The film is important, he adds, because "No one has told this story before – about how teachers around the world can use digital technology and icommunication principles to revolutionize learning. This is not about plopping a computer in a classroom and letting students browse the Web. This is about learning in a completely different way, unprecedented in human history." The documentary is Ball State's first attempt at creating a film using digital equipment. It was shot on Sony Hi-Def and edited in high definition. "These are exactly the same cameras that George Lucas used to shoot Star Wars Episode II: Attack of the Clones," says Olson. "That means it will be better than broadcast quality – this will really have the quality of a theatrical film." Ball State will feature the premier this fall. A release date has not yet been announced. For further information on Squeak, visit *http://squeak.org.*

Kay's nonprofit company, Viewpoints Research Institute, is accessible at *www.viewpointsresearch.org.*

UNIVERSITY OF SAN FRANCISCO LAUNCHES DIGITAL CAMPUS

This fall, the University of San Francisco will launch USFconnect, a central resource for members of the USF community. With a single sign-on, USF users will be able to access their campus email, a personal calendar, online course materials, and administrative services such as online registration and grades. The system will also provide group communication tools, tools for creating campus organization Web sites, and targeted content. USFconnect is built on Campus Pipeline software. For more information, visit *www.usfca.edu/connect.*

USFconnect

MIT'S JAVA REVOLUTION REACHES EIGHT SUB-SAHARAN COUNTRIES

Students in Ethiopia, Ghana, Kenya, Mozambique, Rwanda, Tanzania, Uganda, and Zimbabwe are taking a 6-week online course designed by MIT's Center for Advanced Educational Services (CAES). Titled Java Revolution, the course features live videoconferences, moderated email, videotaped lectures delivered via satellite, and a Web site for course materials. Students are also directed to a Java User Group Web site specific to users of Java in Africa so that live interaction can continue after the course has ended. Java Revolution is based on an on-campus MIT course that teaches students Java programming language. CAES partnered with the African Virtual University (AVU) to make this course

The Java Revolution
Language, Tools, and Environment

available. For more details about CAES, visit *http://www-caes.mit.edu.* For further information on AVU, visit *www.avu.org.*

UBC'S NEW MASTER OF EDUCATIONAL TECHNOLOGY

A new Master of Educational Technology (MET) program opened at the University of British Columbia this fall. MET is a joint, graduate-level program offered by the Faculties of Education at UBC and Tec de Monterrey (ITESM, Mexico). Based on UBC's Post-Graduate Certificate in Technology-Based Distributed Learning (TBDL), MET is a professional development program aimed at education professionals working in technology-supported learning environments and those interested in exploring issues related to education and technology. Course content appeals to university teachers, college instructors, adult educators, primary and secondary school teachers, instructional designers, program administrators, educational decision-makers, and others concerned with managing, designing,

MET Virtual Ribbon-Cutting:
VP of Academic Studies Neil Guppy,
Associate Director of DE&T Mark Bullen,
Dean of the Faculty of Education Rob Tierney,
and Tec de Monterrey Representative
Sylvia Martinez (fleft to right)

or teaching technology-based courses. Students can focus on either the primary/secondary or the adult/post-secondary sector. They also have the option of taking courses in English, Spanish, or both. All courses will be delivered online. Applicants can register for the 10-course Masters degree, one of two 5-course Certificate Programs, or can take individual courses for professional development. For further information, visit the MET Web site at *http://met.ubc.ca,* or send an email to *info@met.ubc.ca.*

UCCB JOINS WITH INTEL CANADA

University College of Cape Breton (UCCB) is the first university in Canada to offer the "Intel Teach to the Future" program as part of its graduate diploma in Educational Technology. Program graduates receive advanced standing in their diplomas, and can progress to the Master of Education (Information Technology) degree that is jointly offered by UCCB and Memorial

Judith Schmidt, Education and Community Programs Manager, Intel of Canada Ltd.; Dr. Jacquelyn Scott, President & Vice-Chancellor, UCCB; Dr. Jane Lewis, Dean, Extension and Community Affairs, UCCB; Dr. Ken MacLeod, President and Managing Director, LCI; Coleen Moore-Hayes, Program Director, UCCB Teacher Education; and Colleen MacLeod, graduate student and Intel Teach to the Future master teacher. (fleft to right)

University of Newfoundland. Developed by Intel with support from Microsoft, The Intel Teach to the Future program aims to help teachers effectively integrate computer technology into classroom curriculum. Intel has also introduced an "Intel Teach to the Future Pre Service Program," which launched at Queens University earlier this year. The Pre Service program trains faculty in the School of Education to deliver the curriculum to pre-service teachers. For further information on these Intel programs, visit *www.intel.com/ca/education/.*

UMASS ANNOUNCES NEW INFORMATION TECHNOLOGY MINOR

The University of Massachusetts just launched a minor program in information technology. The IT minor is the first campus-wide, interdisciplinary undergraduate minor offered by the university, and the first of its kind in the state public higher education system. Drawing on faculty in various
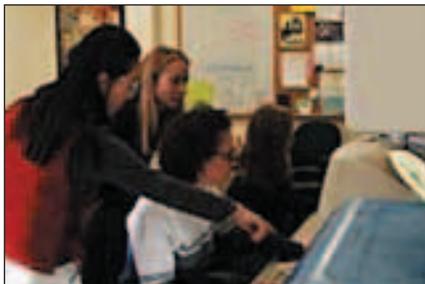
Students in Policy Analysis at the Center for Public Policy & Administration

disciplines across the Amherst campus, it intends to produce information technology generalists from a variety of academic fields. Admission to the program begins this fall. Courses will be formally recognized in the spring. The program will start on a small scale by accepting 50-75 applications. Any undergraduate student in any major may apply. For more information, visit *www.umass.edu/itprogram.*

UMUC DESIGNS COURSES IN NETWORK SECURITY

In February, the National Security Agency designated the University of Maryland University College (UMUC) a Center of Academic Excellence in Information Assurance Education. This distinction, which indicates that UMUC can produce professionals with the skills needed to improve the protection of the National Information Infrastructure, was largely due to the university's decision to offer a new track of courses in information assurance (network security). UMUC had already introduced an energy track of courses to five graduate degree programs, in part, to protect energy facilities from terrorism. This fall, UMUC added four new courses to better prepare students in corporate, government, and non-profit IT arenas for dealing with potential security

threats. The new track of courses, which includes topics such as intrusion detection, computer forensics, and disaster response and continuity of operations, will help students earn a specialization in information assurance for their Master of Science in Computer Systems Management (MSCSM) and Master of Science in Information Technology (MSIT) degrees. Students can also take the courses for elective credit. UMUC offers courses in security and information assurance at the undergraduate level as well. For more information about the new track of courses, visit *www.umuc.edu/grad/news*, or contact Garth MacKenzie, associate chair and program director for the university's MSIT program, *gmackenzie@umuc.edu.*

UNC-CH WILL OFFER NORTH CAROLINA'S FIRST INFORMATION SCIENCE DEGREE

The University of North Carolina at Chapel Hill is about to become the first university in the state to offer a bachelor's degree in information science. Building on UNC's existing undergraduate minor program, the new major will be taught in the School of Information and Library Science. It will integrate the study of the creation and management of information content, the characteristics and needs of the people who create and use information, and the technologies used to support the creation and manipulation of information. To earn the degree, students will complete 10 courses (30 credit hours). Core courses will include those on retrieving and evaluating information, systems analysis and design, database design, and networking. Electives will be in areas such as information technology, management of information resources, and information design. UNC already offers a master's degree in information science, one in library science, a certificate of advanced study, and a doctor of philosophy in information and library science. The new program will begin in the spring of 2003. For further information, visit *www.ils.unc.edu/html/ 2_is_major.shtml.*
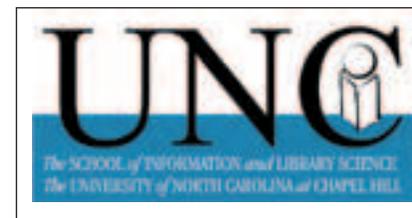
Adobe Looks to the Library

By Jennifer Kavur

Imagine loaning a book to a library patron with the guarantee that it will return in seven days. Or say you'd like a particular book returned on a specific date - what if you could be assured that when the day comes, your book will too? What if you never had to worry about books being lost, damaged, misplaced, or stolen?

> **❝ if eBooks are going to become popular, consumers must be able to try them at no risk first, and libraries provide the ideal avenue for this to occur ❞**

Adobe placed a spin on the eBook market this summer with its release of Adobe Content Server (ACS) 3, a program with specially added library functionality that gives librarians new options for managing their electronic collections. You can now govern how and when patrons check out eBooks by setting your own usage rules. Not only can you set the rules, you can set a different rule for each title, and you can change the rules at any time. Libraries purchase eBook titles just as they would print. Patrons check the eBooks in and out over the Web and read them offline. When an eBook reaches its due date, it automatically "expires" from the patron's computer and becomes immediately available in your library catalogue system once again. (This automatic expiration feature ensures that no rights are violated.) Another feature is concurrent user tracking. ACS provides immediate updates on who checks out what copy, when it is scheduled to be returned, and how many copies are still available. The program also supports industry standard meta-data formats such as ONIX and MARC, so libraries can easily integrate eBook titles into their catalogue systems. And patrons can use ACS 3 to convert eBooks from text to speech.

The package is also appealing. Adobe has eliminated DRM fees, and offers ACS 3 just like any of its other programs - at a one-time purchase price, available anywhere that Adobe products are sold. Two options are available. For a content-based cost of US $5000, libraries receive one Content Server destination site capable of hosting 250 titles (expansion packages are $1000 per additional 500 titles). With ASP-based pricing, libraries pay $10,000 to have the Content Server linked to one destination site that hosts an unlimited number of titles (additional destination sites are $1500 each).

Why the recent interest in libraries? Simply put, Adobe wants the eBook market to grow, and it realizes that people are more willing to try an eBook if it doesn't cost them anything. So if eBooks are going to become popular, consumers must be able to try them at no risk first, and libraries provide the ideal avenue for this to occur. James Alexander, director of eBooks at Adobe, explains that the company wanted to find a way for libraries to give the public this opportunity. He feels that the Internet is not putting libraries at risk, and that ACS 3 provides a nice example of how the two can work together. In the last decade, he points out, library usage increased by 24.3 percent. Two out of three adults currently check books out of a library, and 94.5 percent of public libraries now offer Internet access to the public. Technology is making the library more user-friendly, says Alexander, and the demand for electronic resources is continuing to grow. In the current economy, people seem more interested in borrowing than buying, and Adobe has just found a way to make this work. ■
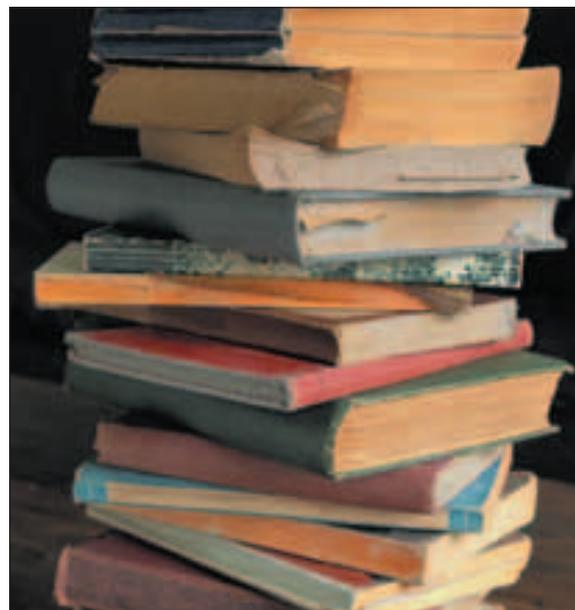
Using *Email* to Conduct a Survey

By Jennifer Kavur

Email is not only a convenient way to communicate with friends and colleagues. It is also a valid means of conducting formal surveys and research. Many universities now use email for this latter purpose, and most have found this method to be more fruitful than past means. Electronic surveys generate greater pools of response than traditional pen and paper, and the larger the response, the more accurate the sample population.

The University of California, Davis uses email and the Web to conduct formal student surveys and informal student opinion polls. UC Davis began using these tools in the fall of 2000, after its now-retired vice chancellor, Carol Wall, expressed her desire to be more in touch with the student body. The university had already begun experimenting with email surveys, so it used this technology to respond to Wall's request. Shortly afterwards, the Electronic Student Advisory Council (e-SAC) was formed, and two additional methods of communicating with students soon followed.

Headed by Steve Chatman, director of Student Affairs Research and Information, e-SAC collects students' opinions and experiences on current campus-related topics, and then sends this information directly to the vice chancellor's office. e-SAC replaces focus groups, he says. In the beginning of the school year, Chatman gathers a random sample of students and sends them an invitation to participate. He then forms

a panel of about 100 students to represent the undergraduate student population of approximately 20,000. Over the course of the school year, students on the panel receive 3-4 surveys via email that take about 15 minutes to complete. The students are given about one week to respond. Responses are kept confidential, and are sent directly to Student Affairs Research and Information staff. A few weeks later, a survey summary and report are posted on the UC Davis Web site.

> **email produces less bias than traditional post**

QuickPoll is the university's second means of gathering electronic information. Via the MyUCDavis Web portal, QuickPoll sends out an average of one mini-survey containing one to two items per week. It collects information from students, faculty, and staff, and can easily target specific groups if necessary. QuickPoll is often used to clarify responses from other surveys. For example, if the university conducted a broad survey that led to too many ambiguous "other" responses, QuickPoll would quickly set out to clarify what those "other" answers specifically meant.

In 2001, UC Davis conducted its first university census. This third variation of the email survey allowed the university to assess its entire undergraduate student body. The response rate was incredibly high - 53 percent of the 19,000 students surveyed replied. While UC Davis was thrilled with the results, the time it took to edit all the responses was overwhelming. The university will continue to conduct the email census, but because the editing obligation is so high, it plans to conduct a maximum of one per year.

Chatman feels that one of the main benefits of using Web-based surveys is that they are nearly cost-free. A decade ago, when the university was still administering paper-based surveys, the cost was quite expensive.

Initially, the university did have its concerns. Most of all, it was worried about student bias - that only a particular type of student would respond to email. However, Chatman says this bias has yet to occur. In fact, the university has found that email produces less bias than traditional post. Because students' addresses are often unreliable, it is more difficult to contact them through the mail and expect them to respond. With the help of the Internet, students can easily send and receive information no matter their location.

A growing concern, however, is that email may be leading students to become "over surveyed." Chatman says the university tries to make students clearly aware of the difference between its "official" surveys and those conducted by undergraduate psychology students, who have the tendency to produce a proliferation of email surveys for their psychology projects and assignments.

UC Davis keeps its surveys confidential, but not anonymous. It feels that confidentiality, at least for now, is sufficient. So far, no students have complained. Since the surveys are conducted more for evaluative than research purposes, confidentiality seems to work best for both sides. When a student logs on to the UC Davis Web portal, the university automatically verifies the student's identity through his/her username and password. This can save the university a lot of time. For example, it doesn't need to bother asking any demographic questions. Moreover, since the system can keep track of who responds and when, once a student does respond, he is not bothered about it again.

University of California, Davis

High response rates are positive, but as mentioned before, they increase the university's editing responsibilities. Data does not need to be re-entered into the computer system, but since UC Davis asks open-ended questions, the answers must be combed through. Chatman has found that students are more verbose electronically than on paper, and tend to provide an abundance of comments when using the Web.

In the future, Chatman hopes to customize the survey collection and develop surveys that are more tailored to the individual. He would also like to experiment with video streams. Video streaming could be very helpful, he explains, for asking subjective questions. For example, if you ask a student how he feels about prejudice, it is difficult to judge his answer unless you first understand his definition of the term. With the aid of video streaming, you could show students a clip displaying a type of prejudice and ask for their response to it.

Simon Fraser University is another institution that finds potential in Web-based research. Professor Neal Roese, programmer/analyst Richard Blackwell, and undergraduate student Diane Lines recently worked together to conduct an email survey for Roese's research on counterfactual thinking patterns in intimate relationships.

> **people are just as conscientious in Web-based surveys as they are in person**

The entire SFU email community received an invitation to participate. An incentive was provided - those who participated would be entered into a drawing for a $100 cash prize. The survey, which looked at how people think of their own histories and the emotional consequences of their decisions, had a great response.

This was Roese's first email survey, and his main reason for supporting it was Lines. He says that Lines really wanted to do an email survey, and SFU's psychology department had the right technical staff to make it happen. Although they had not yet used it, the staff had already created a custom research database.

Initially concerned about the quality of the answers he would receive, Roese soon realized that people are just as conscientious in Web-based surveys as they are in person. He says that if you are just asking questions, there is not much of a difference between Web-based and paper-based surveys, except that communication is easier when face-to-face. Methodologically, however, there is no difference. The main issue, says Roese, is whether people are paying attention.

As for students being "over-surveyed," Roese isn't worried. He replies that no matter how many surveys are out there, students aren't pressured to participate.

Roese also points out that while the Internet brings greater accessibility to a wider sample of people, there is a difference between a big sample and a representative one. Over the phone, a researcher can perform a randomized survey, obtaining results that are more accurate. Roese doesn't believe that one can do this over the Web.

However, he does have several other positive things to say. A Web-based survey allows you to survey people quickly, anonymously, and widely. It is conveniently available 24 hours a day, 7 days a week, from any location in the world. It leads to a broader demographic than conventional research sampling. It also saves time by avoiding the need to transfer information from hard copy to digital form, and immediately stores responses in a computer database. It is less expensive than paper, and people tend to feel more honest, open, and comfortable participating in their own environments than a lab.

Blackwell, who converted the SFU survey from paper to digital form, says that the technical task of converting a survey is relatively easy. All you need is a secure Web server, a database, and the right applications to tie the two together. He suggests you copy the paper version as closely as possible, and make sure you set up the system to look exactly as the researcher would intend. Another critical aspect of the job is ensuring the anonymity of the participants, but this requires a higher level of technical expertise that some universities don't have.

He explains how he managed to verify participants' identities, obtain their informed consent, and

still maintain their anonymity. When a user logged on to the system with his username and password, the survey would verify his identity by querying an authentication server. The computer would confirm whether the identity was valid or not with a simple yes or no. After logging on to the consent form page, the user would enter a separate database that would store his responses. The two databases were stored on a secured server that only database administrators could access. Blackwell did not link the two files, so the names could not be matched to the responses. When Lines collected the data, she received one file containing the survey responses, and another listing the email addresses of the participants.

The difference between a university survey and one conducted by a corporate business is that the former must conform to ethical standards set by a nationwide research council. The two most important parts of this standard is that participants must provide informed consent, and at the conclusion of the study, they must be debriefed. Informed consent was relatively easy to obtain in the SFU survey, Blackwell says, because the participants were limited to the SFU community. Their email addresses were easy to identify. Obtaining informed consent from the public is a completely different story, and even though the possibility of doing so is there, many universities have yet to figure out exactly how.

In the future, Blackwell would like to develop more complex surveys that involve aspects such as reaction time. He would also like this technology to extend to other departments. Other departments, says Blackwell, need to realize the assets that Web-based surveys bring. ■
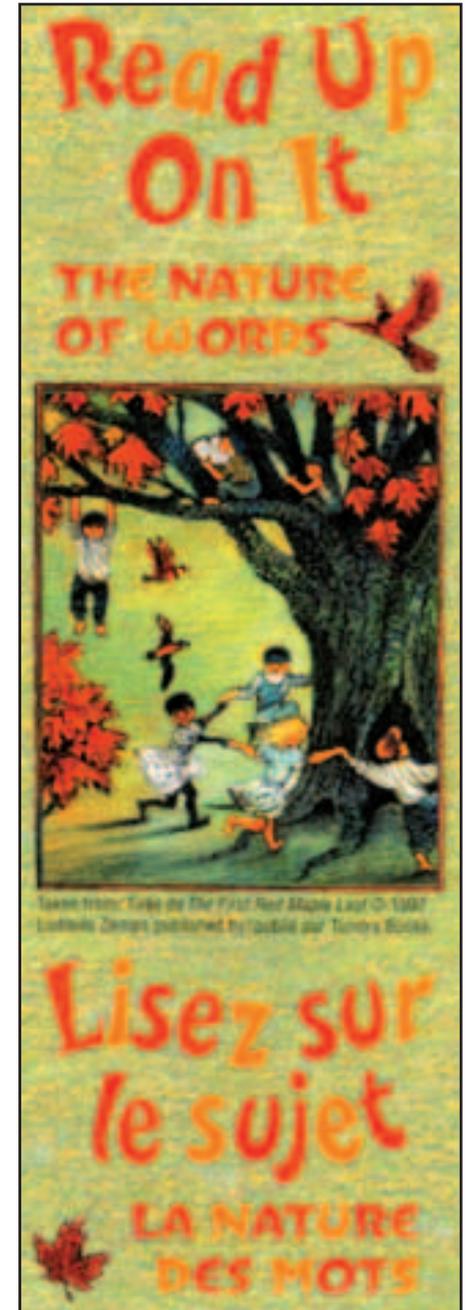
Summer Software Review

By Michel Mersereau

CONTENT CREATION SIMPLIFIED BY EZEDIA MX

Content delivery and content creation - often worlds apart. Macromedia's recent perspective on the growth of the second generation of Web and multimedia delivery emphasizes the transition from provider-centric to user-centric content models, and with scheduled releases of powerful authoring software designed to bridge this often-terminable gap, it is taking steps to accommodate just that.

While this bodes well for professional media developers, amateur users often feel the pinch of the dreaded learning curve accompanying such transitions. eZedia Inc. hopes to capitalize on this by providing both professional and amateur content developers the ability to create, manage, and deliver rich multimedia content in an intuitive, user-friendly authoring environment replete with tools usually reserved for creative professionals alone.

> " While this bodes well for professional media developers, amateur users often feel the pinch of the dreaded learning curve accompanying such transitions. "

More often than not, e-based educators face the twofold dilemma of having to develop and provide suitable material to students. This involves a marked investment in time. In a recent statement by the National Education Technology Standards (NETS) project, a set of standards addressing specific skills required by post-secondary educators in preparation of e-based learning implementations is laid out. It details the need for educators to be familiar with technology operations and concepts, as well as the planning and designing of e-learning environments. Familiarizing oneself with new media content creation is a laborious, time-intensive task, and educators who wish to accommodate these standards face great challenges. eZedia MX promotes itself as not only being able to accommodate these parameters in a user-friendly environment, but also provides educators with a flexible content creation tool that grows with the user as his skills grow.

More than simply a layout and design engine, the program allows educators to create logic-centric learning applications and problems tailored to respond to end user input. Its content creation environment is both object-oriented and visually simplistic in terms of the layout and handling. This premise is what affords eZedia MX the ability to create and manage multimedia content with such ease. Once inside, eZedia content is created through a process of layering, positioning, masking, animating, and linking existing multimedia content.

For example, you may wish to provide students with a brief, animated multimedia presentation in the hopes of exploring motion dynamics. You may wish to construct a template whereby students, provided with animated content, are required to input variables describing various dynamics occurring within the animation. eZedia MX allows you to not only create the content, but also assign logic parameters that respond to the input of the students. Traditionally, this would be accomplished with programs such as Macromedia's Flash or Fireworks

Studio. However, content creators would be limited by the degree of compatibility with foreign file formats (such as QuickTime movies), and would ultimately be forced to rely on scripting in order to provide any degree of interactivity. With eZedia, however, users select from a wide range of source content such as PNG images and QuickTime movie content, which they can then drag onto the content creation window. Once imported, content can be positioned as desired, and then linked or animated (eZedia relies on path-based animation as opposed to Flash's cell-based format).

Linking, and thus allowing objects to interact with each other, is remarkably simple. eZedia provides a unique linking tool by which users simply draw a path between the objects they desire to link (this is similar to "targeting" without the scripting in Flash and Live Motion). Once the objects are linked, users apply desired parameters (such as animation loops) that proceed based on the user's input via a linked button.

eZedia MX has sought to position itself well in the educational market, and has done so by conforming to the pedagogical guidelines put forth by the NETS project. In this regard, eZedia MX is unique among content authoring applications in its ability to provide educators with the necessary tools to create object- or logic-oriented content without resorting to the arduous task of coding and scripting. Content created via eZedia MX is provided by way of the proprietary eZedia player. While eZedia's end user base is limited in this fashion (it simply does not have the installed user base afforded to Macromedia, for example), it is ideal for educators seeking to provide and maintain educational multimedia content within a relatively small, controlled environment.

VIRTUAL PC BRIDGES THE PLATFORM GAP

At last count, the Microsoft Windows installed user base accounted for a staggering 90 percent of the PC market. While such figures may give Mr. Gates reason to smile, they have meant that the 10 percent of alternative platform users have, more often than not, been left in the cold with regard to their ability to interact with their PC counterparts.

The business world may be reluctant to embrace alternative computing platforms despite the significant benefits, but the education and creative markets have historically fallen under the domains of Apple and Linux. With the recent release of Mac OS X, Apple computer has indeed seen the "Linux light," as demonstrated by its incorporation of Linux as the core of its next generation operating system. Inevitably, however, educators and creative professionals are at some point confronted with the need to interact with the Windows Empire.

> 66 **The ability to run multiple operating systems simultaneously offers significant benefits to educators and creative professionals alike.** 99

Any discourse pertaining to cross-platform computing must begin with a brief introduction to the various solutions available to end users and developers alike. Hardware-based solutions, usually involving the installation of a conversion card, have been around for quite some time, but are no longer prevalent or supported due to their low popularity. While hardware-based solutions had their benefits (namely greater speed and stability), their price, installation cost, and non-compatibility with portable computers ultimately contributed to their demise.

Enter the software solution. Initially, software-based solutions primarily involved the development of direct conversion utilities. In other words, rather than creating an environment in which to run the data natively, the utility would simply convert the data into a form recognizable by the host computer. This is acceptable as long as you intend to only convert simple text files. I say simple, because document properties and attributes such as formatting were often lost during the conversion process. PC-centric applications, however, were still beyond the capabilities of such utilities.

We next saw the development of environment emulators. Rather than simply convert PC files, emulators recreated the environment of the source operating system within the host PC. This enabled

the user to not only convert the data, but also run the software that initially created it natively. The undisputed champion in this arena undoubtedly was, and still is, Connectix's Virtual PC.

Within the release of version 5, Virtual PC allows Apple, Linux, and PC users to run a myriad of operating systems from their own PCs with greater stability than ever before. Virtual PC 5 offers Windows, Macintosh, and Linux users the option of running Microsoft's Windows 95 through XP and the core Linux operating system, respectively.
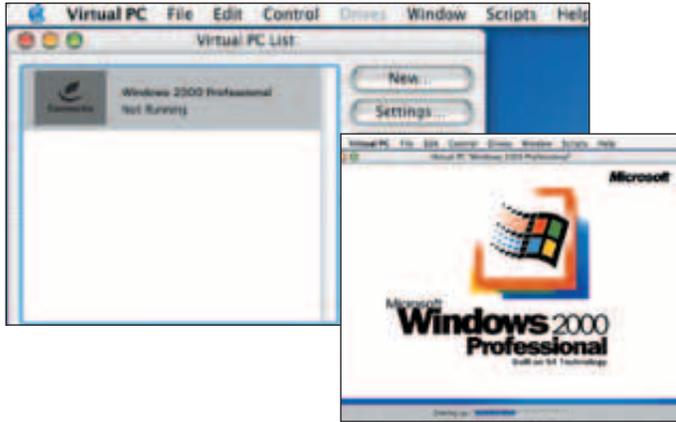
The ability to run multiple operating systems simultaneously offers significant benefits to educators and creative professionals alike. Educators benefit from the ability bridge the gap between students, teachers, and institutions in the current non-homogeneous computing world. Creative professionals and developers are able design and develop platform-independent content for distribution.

While the application gap between platforms may be narrowing, there still exist several PC-centric applications unique to the Windows environment. (For example, a Mac version of CAD, the staple of engineering classrooms around the world.) Virtual PC 5 further narrows the gap for educators wishing to broaden their delivery options for

content and material. Students are able to become accustomed to multiple operating environments, enabling them to market themselves as flexible and proficient to employers.

New features in version 5 include Macintosh OS X compatibility and cross desktop drag-and-drop simplicity. It also enables users to completely discard any changes made to the operating system during sessions by giving them the ability to revert to the previous PC state. Virtual PC 5 automatically shares the host computer's established network, but can be configured to establish its own network connection with either a remote or a local network. Virtual PC 5's cross platform networking ability provides educators with the salvation of being able to network computers with relative ease in a cross platform environment, such as a classroom. In real world tests, Virtual PC running Windows 2000 Professional on a PowerPC-based Macintosh with a clock speed of 667 Mhz performed remarkably well during complex tasks (such as browsing with Internet Explorer while document processing with Microsoft Word).

However, this power comes with a price. The ability to run new generation operating systems, such as Windows XP, is a fairly processor-intensive task. As such, the hardware requirements for running Virtual PC with a relative degree of speed and workability are somewhat steep. (Connectix recommends a processor speed of at least 400 MHz for running the software on a Macintosh using OS X, for example.) With rising hardware costs, evident in the recent rise of PC prices, an investment in the updated hardware required to run the software effectively may be somewhat disconcerting to educators and those on a budget.

Monetary concerns aside, compared with hardware upgrades and replacement, Virtual PC 5 represents a low-cost solution to educators either wishing to incorporate multiple platform educational materials in their programs or to simply be able to share content with students regardless of their operating platform. ■

Michel Mersereau is a freelance writer and Web designer based in Toronto, ON. He can be reached at *michel@bluebeatdesign.com*.

BOOK REVIEW: *Steal These Ideas Please!* By Jennifer Kavur

If you're looking for new techniques to refresh your marketing strategies, *Steal These Ideas Please! Great Marketing Ideas for Continuing Education* is a handy booklet you'll definitely appreciate. Published by the University Continuing Education Association (UCEA), the 84-page guide is filled with ideas for publications, advertising and promotion, public relations, e-marketing, database development, market planning, and internal as well as international marketing. Editor Susan Goewey Carey amassed the collection of pointers and tips from academic seminars, listservs, conferences, newsletters, and marketing professionals across the U.S.

Steal These Ideas is a well-organized, tip-filled, easy-to-read booklet that would easily settle on your desk as a favorite quick-reference tool. The presentation is practical, pleasant, and precise. High quality content takes the shape of 2-5 sentence pointers, check lists, boxes, charts, questionnaires, guidelines, and do's & don'ts. Cartoon illustrations and bold titles in catchy fonts maintain an amusing, casual feel.

Chapter 1, Internal Marketing Ideas, presents suggestions for keeping employees happy and improving customer service. In Chapter 3, Advertising & Promotional Ideas, learn about tasteful tele-marketing, scan the "effective advertising" check list,

"If you cannot have dedicated lines to track advertising, make your own 'faux' dedicated lines. In your ads use phone numbers that the outside public doesn't know about and would have no need to call (e.g., the person who does your word processing). Obviously, you need this person's cooperation. Anyone who calls 'Mary' asking for a bulletin to be sent, had to have gotten her number from the newspaper or radio ad."

- Gloria Fisher, University of Massachusetts-Amherst

preview some promotion do's & don'ts, and gather a few money saving tips. Chapter 4, Public Relations Ideas, provides tips on getting press releases noticed and maintaining relations with the media. A timely chapter on e-marketing tells you how to get the most out of your Web site, how to begin an email campaign, what to look for in an e-learning provider, search engine do's & don'ts, and common Web site mistakes. Chapter 7 provides a marketing plan summary, and Chapter 9 is filled with research and resource lists. The Appendix presents a detailed outline of the marketing process, including a preliminary planning questionnaire and lists of guidelines to keep in mind.

New Media and Arts Education

By Ana Serrano

Reading the New Yorker one evening, I happened to come across a new iMac advertisement, which wryly declared in the headline, "There are 256 bones in the human body. Surely one of them must be creative." And it struck me – here is Apple facilitating people's creative development, AGAIN. With a suite of affordable, easy-to-use "expression" tools (e.g. iMovie, iPhoto, iTunes), Apple seems to be positioning itself as an "arts educator" of sorts. And I guess that is good. Isn't it?

So, this got me thinking. This popular idea is probably what most people, notably those in the arts education field, think – that the only thing new media can offer to the practice of arts education is, in two words, cheap tools. Not to be scoffed at, to be sure. But then again, pen and paper are cheap too.

I would like to suggest an alternative to this notion. Upon further analysis it becomes clear that a different and more profound relationship exists between this new medium and "arts education," stemming from an important question: "What can we learn from this new medium that can help inform how we teach the arts?"

For many of you, this question may seem absurd. You may ask, "How can we align a medium's properties with that of curricula?" But for me, in retrospect, this is exactly the question we were asking ourselves when designing our training programs at h@bitat, the new media division of the Canadian Film Centre. We asked ourselves: Can we create a holistic relationship between our program's form, our approach to education, and our program's content with new media art? And now, after five years of operating the Interactive Art & Entertainment Programme, I realize that emerging from our design process is not curriculum per se, but a special sense of place, which is h@bitat itself.

I was trying to explain this to our ad agency the other day. We are in the midst of revamping our recruitment strategy and the agency wants to find out what h@bitat's story, or "brand narrative" as they call it, is all about. They asked me: "What is the one thing about h@bitat and its training programs that you would like people to know?" I answered: "That we are a community of people who will impact the world in meaningful, beautiful, and good ways." My ad guy asked me what that had to do with education.

I realized that this conception of what we do, and who we are, did not just come out of nowhere, but is very much related to how we perceived new media, and what we, as faculty and staff, feel the spirit of this new medium is all about.

"So what can we learn from this new medium that can inform how we teach the arts?"

A number of theorists, from Janet Murray to Lev Manovich, have tackled, and are in the process of tackling, exactly what the formal properties of new media may be. However, while words that express some of these properties - procedural, modular, transcoded, variable, automated, spatial, encyclopedic

– may academically explain the nature of the medium, they don't necessarily express its spirit. And it is the spirit of new media that is at the heart of its "difference." For this, we need to look at issues of access, control, and diversity and see how these things are expressed in this medium.

ACCESS

The Apple example touches on the notion of access, but only highlights one facet of access that is pertinent to this medium – that is, the nature of the tools – their ubiquity, their affordability, and their ease-of-use. The other facet of access is the more important one. As one of our former faculty members, Darryl Williams, used to expound, "New media is the first medium where the tool for production is the same as the tool for auditing." This means that for the first time, creators have access to affordable, decentralized distribution. These two aspects of access have encouraged self-expression on a mass scale that seems unprecedented. The number of Web logs, personal home pages, and e-zines are now in the tens of millions. It seems clear that having built it – the tools and the distribution system – people did come and express themselves.

We can take this lesson into our communities of learning and, I think, apply it literally. In h@bitat, for example, we provide 24-hour access to the studio for our students. We allow them to use any tools they wish (that is, we don't make exclusive arrangements with hardware and software manufacturers). Through technology like email, and BBS systems like Hotline and listservs, we provide greater access to mentors, faculty, and staff. And

most importantly, we design as many opportunities for self-distribution and self-publishing as possible, not only online but also within the physical environment itself – walls, beams, floors, and ceilings are all places where work can be displayed by anyone, anytime. These things pertaining to access do encourage self-expression. But what else can we learn from new media that will assist us in designing environments where we facilitate the unfolding of talent?

> " New media is the first medium where the tool for production is the same as the tool for auditing. "

CONTROL

Central to the notion of self-distribution is the relocation of control away from the center and to the margins, away from the hands of the few to the hands of the many. Relocation and redistribution of control permeates all relationships in new media:

• The relationship between machines: We've seen shifts from mainframe computing to client-server, to peer-to-peer networks, and now to grid and distributed computing.

• The relationship between artists/authors and machines: When leveraging the computer's capability to calculate algorithms, sometimes it becomes unclear who ends up producing the "work" – the computer or the artist/author? This is especially true in most examples of random-generated or emerging new art.

• The relationship between artist/author and audience: In the interactive medium, the audience has the capacity to exert a lot more control and agency over the experience in which they are participating, potentially undermining the role of the artist/author.

• The relationship between audience members: In multi-player environments, the unfolding of inter-active experiences may not depend on one's choices, but on those of others.

In all these relationships, the locus of control has the potential to shift at anytime and anyplace. And in this idea lives something so intrinsically subversive, so delicious, and so exciting. Leveraging this nature of new media requires an understanding of the procedural property of this medium (that at the heart of new media is the logic of 1's and 0's). But more importantly, leveraging this nature of new media requires generosity on the part of artist/author – a willingness to share power with her audience, with the machine, and with other artist/authors.

In order to convince our students at h@bitat that generosity is a core value of new media, we needed to model it. In modeling this aspect of new media in our program design, we looked at how to share power in three areas: environment, roles and responsibilities, and the conception of what makes good new media.

The h@bitat environment is not about pure play. It is not merely a sandbox with all the bells and whistles of technology accessible to all. Instead, the h@bitat environment is one we co-create with our students each time we run a new session. What we co-create is not so much the physical layout of the space, but the values and norms that define our community, which in turn, form the shape of the environment itself. These values and norms can include facilitation styles we choose collectively: how we define roles, which collaboration models we choose, how the group of students make decisions, how information gets distributed, how we deal with lateness, etc. With each six-month session, the vibe of the place shifts as the shared values of the group of faculty, staff, and students shift. There is, however, one value that almost never shifts with each session – the adherence to the idea of h@bitat as an "open system." Everyone is a contributor always (as in open source development, where code is written collaboratively) and information flows freely (we use many different ways to share knowledge, from sticky notes on walls, to listservs, to chats, to mind maps, to formal conversation breaks).

The same holds true when we talk about roles and responsibilities. From the very beginning, indeed, even at the recruitment stage, we make it clear that the responsibility for learning is shared equally amongst students, staff, and faculty. Staff and faculty, however, do have a distinct and separate role from the students – they become the primary

architects responsible for structuring opportunities for learning. These structures can take the form of exercises, discussions, readings, guest lectures, and field trips, and can be quite formal in approach.

The third area in which we "relocate control" is in our conception of what makes good new media art. One of the basic components of a comprehen-sive arts education is art criticism. Making sound and/or informal judgments about art starts with knowing the criteria for what makes art and differ-ent art forms successful. For some, these criteria can take the form of a prescribed checklist one ticks off when one experiences works of art.

❝...how we create mental models become as important as how we produce new media art.❞

In new art forms, like new media where language, convention, and even aesthetic meaning are still being discovered, defined, and created, the value of such a list becomes questionable. What is valuable for the new media art practitioner and for the new media art critic is the creation of a flexible onto-logical model within which a series of questions are housed. At h@bitat, how we create mental models become as important as how we produce new media art. The actual list of criteria is less important than the model used to determine what those criteria might be. This model, in turn, tends to change over time (as do the criteria) as students build knowledge and meaning from their experience of the medium.

DIVERSITY

Diversity, like control, can be found in all aspects of this medium. Diversity of form is the MULTI-media sense of new media. Expression through the medium may be through a variety of forms, from aural to visual, dynamic (as in moving images) to kinesthetic (as in the use of haptic devices in virtual reality). There's also diversity in the sense of potential for a multiplicity of points of view – the encyclopedic, spatial, and interactive properties of this medium provide opportunities for expression to go "wide" and "deep" (think of the Web).

In terms of the former, h@bitat basically took to heart the idea of "multimedia" or "diversity of forms" literally. We provide opportunities for students to learn about new media through the use of different media. Students can learn by reading, by hearing a person speak, by making things and conducting experiments, by role-playing theories, by watching movies, by watching someone make new media works, and the list goes on.

In terms of the latter, there's really only one way to do it - make sure the faculty and student bodies are as diverse as possible, create an open system where all voices are heard through a plurality of forms, and shake and see what happens.

SO WHAT CAN WE LEARN FROM NEW MEDIA THAT CAN INFORM HOW WE TEACH THE ARTS?

Perhaps by looking at how new media, and by extension new media art, teaches us about notions of access, control, and diversity, we may be looking at a way for us to educate ourselves and each other. How art teaches us to experience the world could be the best pedagogical model.

It's true that some of the ways to facilitate learning that I've mentioned are not new. But I think it may be time for us to take a look at these old models again. The spirit of new media – accessibility, decentralized distribution, open systems, relocation of control, shared sense of agency, diversity of forms and points of views – this spirit of new media is capturing many people's imaginations, despite the dot-com crash and in spite of the increased commercialization of the Internet.

I am hopeful that it is in this spirit that new media experiences are starting to permeate our everyday lives – from how we define community to how we may define learning. And as such, I think these experiences may force us to reconsider that these models, which may seem pedagogically unfashionable – models like group and peer learning, teaching and learning through experimentation – have never been more relevant and important than they are now as we move into the 21st century. ■

LET US KNOW WHAT YOU THINK

Please forward your ideas, suggestions and comments concerning **Higher Learning**

Send information to **Higher learning**

258 Wallace ave., Suite 206
Toronto, Ontario, M6P 3M9
or email us at: *teachmag@istar.ca*

The Challenge of Distance Education

By Cable Starlings

Teaching in distance education over the last 20 years has taught me a number of valuable lessons. The lessons have come in both the preparation and execution of teaching at a distance.

I have used the U.S. mail, correspondence learning methods, relearned how to create module-based learning methods, learned by trial and error how to run audio and video conferences, and used and discarded many online communication tools, including First Class, WebCT, Pollis, and now Blackboard. I have trained myself in many educational products and tools, and have spent much of a fortune on software and hardware technologies. I have learned much regarding technology, and have appreciated the opportunity to continue to grow professionally.

The most valuable lessons over the years have been to place a great deal of attention to answering the following questions: What do I teach? What really is of value to learn? How do I teach it? What resources do I need to enhance the learning experience? How do I help my students master the information? I consider planning as the process of answering these questions. However, the challenges we face today in planning are very different than in the past.

Cable Starlings is an associate professor of Special Education at the University of Alaska Anchorage. He is the recipient of UAA's 2002 President's Outstanding Distance Educator Award.

The Challenge for Me

- Larger amounts of information to include in a single course.
- Same amount of instructional time.
- Greater lifestyle diversity.
- Greater academic diversity among my students.
- Unrealistic planning expectations.

The Challenge for My Students

- Distinguishing important from unimportant information.
- Identifying how to organize information meaningfully.
- Remembering large quantities of information.
- Generating purposes and rationales for learning content.
- Valuing the process of learning how to learn.
- Discovering ways to understand abstract concepts.
- Analyzing information to arrive at conclusions and solve problems.

In light of these challenges, I have found it comforting to follow these possible solutions in planning to teach:

Some Possible Solutions for Us

- Community building (teaming). As a part of your class, teach your students how to work cooperatively and how to learn collectively.
- Teach students how to learn in your class. Plan the course with your students. Model memory enhancing tools and how to create them to retain large chunks of information.
- Use strategic teaching tools (e.g., semantic mapping, concept maps, graphic content organizer).
- In methods courses, model what is to be learned and used in class. Teachers cannot teach what they personally do not consider important.
- Plan routines that work. Include students in decisions regarding content coverage and course design. Do this routinely, not just at the beginning of the course.
- Use both synchronous and asynchronous learning. Use both to meet students' lifestyle needs and keep us connected.

BOOKS

Gaining Independence

A new publication from SPARC gives readers a detailed, step-by-step guide to the creation of a business plan for start-up and early-stage electronic publishing ventures, including digital repositories and journals. *Gaining Independence: A Manual for Planning the Launch of a Nonprofit Electronic Publishing Venture* helps universities, libraries, societies, and others to conceive, plan, and implement alternatives to commercially published scholarly and scientific information. It provides background information on relevant electronic publishing models and focuses especially on areas of business planning that may be unfamiliar to those considering new communications initiatives. A detailed appendix links readers to pertinent resources. The manual complements *Declaring Independence: A Guide to Creating Community-Controlled Science Journals* (*www.arl.org/sparc/DI*) and is a follow-on to *Create Change: New Systems of Scholarly Communication* (*www.createchange.org*). *Gaining Independence* is available on the Web free of charge at *www.arl.org/sparc/GI*. A printed version is also available by emailing *pmds@arl.org.*

Lifelong Learning Trends

The 7th edition of *Lifelong Learning Trends* is now available. Providing detailed statistics, graphics, and analysis, the book contains over 100 pages of data on national trends that are influencing continuing higher education in 2002. Chapters include: U.S. Population Trends, Trends in Education Enrollments, Financing Higher Education, Building a Quality Workforce, Technology in Education, A Global Economy, and Enriching Community Life. The book is available for US $35. To order, contact the University Continuing Education Association, 1 Dupont Circle, Suite 615, Washington, DC 20036, Tel: 202-659-3130, Fax: 202-785-0374, Email: *postmaster@ucea.edu.*
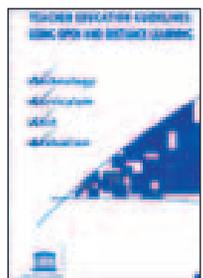
Teacher Education Guidelines: Using Open and Distance Learning

UNESCO has published a handbook that describes how to plan for distance learning, how to choose the appropriate technologies, how to fund them, how to teach classroom skills, and how to assess them. It focuses on new and old technologies, including radio, television, print, and computers.

The guidelines draw on a set of eleven case studies carried out for UNESCO by the UK-based International Research Foundation for Open Learning (IRFOL), an independent non-profit institute affiliated to the Commonwealth of Learning. The studies were originally published in 2001 under the title, *Teacher Education Through Distance Learning: Technology, Curriculum, Evaluation and Cost.* Countries studied include Brazil, Burkina Faso, Chile, China, Egypt, India, Mongolia, Nigeria, South Africa, and the UK. *Teacher Education Guidelines* logically follows the descriptive 2001 publication, but applies the national experiences to a wider audience. Both publications are available free of charge from UNESCO's Documentation and Information Service, Education Sector, *oai@unesco.org*. They are also available in PDF format on the UNESCO Education Web site, *www.unesco.org/education/index.shtml*.

SOFTWARE

IntelliMetric

IntelliMetric is an automated essay scoring engine from Vantage Learning that provides online open-ended assessment. IntelliMetric leverages artificial intelligence technology in four primary areas: Machine Learning, Natural Language Understanding,

Pattern Matching, and Heuristics Integration. It allows for authentic assessment, simulations of real-world problems, presentation of depth of understanding, and demonstration of breadth of knowledge. Vantage Learning also offers three other technology products for post-secondary education: MATH Access, MY Access, and The Vantage Learning Platform. MATH Access is a mathematics diagnostic system. MY Access is an online writing development tool that uses IntelliMetric technology to provide students with holistic, analytical scoring and immediate diagnostic and instructional feedback. The Vantage Learning Platform is a set of online tools for managing the entire assessment process from initial scheduling and examinee registration through score reporting. It also features authoring, item banking, test delivery, and administrative tools. For further information, visit *www.vantagelearning.com*.

Internet2 Detective

The Internet2 Detective is a small, easy to install and use Microsoft Windows application that lets you know if a computer can access an Internet2 backbone network, how much bandwidth is available, and whether you can receive multicast streaming media. A small icon in the lower right corner of the desktop indicates the capabilities of your computer's network connection. Double clicking the icon reveals more detailed information through a menu-driven graphical user interface. Download the Internet2 Detective at *http://detective.internet2.edu/*.

MacDrive 5

If you need to access Mac disks from a Windows computer, Mediafour's newest version of MacDrive will help. MacDrive 5 allows PC users to open, edit,
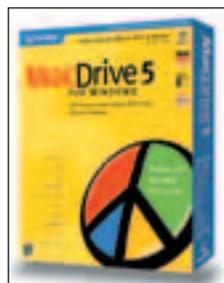
format, and save files on Mac disks (floppies, Zip, Jaz, SyQuest, CD-ROM, CD-R, etc.) from any cross-platform software program (e.g. Microsoft Office, AppleWorks, Adobe programs, QuarkXpress, and FileMaker Pro). Users can also make and decode MacBinary and BinHex files. Mac files are shown with their appropriate icons and file name extensions, and Mac disks are indicated with an apple overlay. The program also includes a full version of Aladdin StuffIt for Windows. MacDrive 5 is designed to work with Windows Me, 98, 95, NT 4.0, 2000, and XP, and can be ordered online at Mediafour's Web site, *www.mediafour.com*. Educators qualify for online academic pricing.

RefWorks

RefWorks is an online bibliographic management tool that allows you to create your own personal database of references. You can automatically import references from a search performed in an online database or enter references manually. You can also format your references for papers and bibliographies in a variety of output styles, including APA, MLA, Turabian, and Chicago. RefWorks is compatible with nearly all major online services, including CAS SciFinder, CDL, Ovid, CSA, EBSCOhost, PubMed, and ProQuest. Additionally, RefWorks users can import and export references from a number of commercial bibliographic software products. Complimentary trial access is available to interested institutions, and individual subscriptions cost US $50. For further information, visit *www.csa.com/ refworks*, or send an email to *sales@csa.com*.

SPLASH

The Portals for Online Objects for Learning (POOL) development team at Technical University of British Columbia (TechBC) is developing a digital learning object repository that allows educators to exchange teaching materials. SPLASH is a freely downloadable application that allows educators to create personalized repositories and link with other educators in a nation-wide learning object community. SPLASH uses peer-to-peer technology so every user can have their own mini-repository on their computer and search all the POOL sites from their own SPLASH application. SPLASH is currently in the pilot phase, and is sponsored by the CANARIE e-Learning Program. For further information, and to download the software, visit *www.edusplash.net*.

Spring Cleaning 5.0

Aladdin Systems' Spring Cleaning 5.0 is a must-have application for Mac users. The program includes 16 tools for leaning up your hard drive, increasing its performance, and regaining disk space. Alias Fixer finds invalid aliases so you can either remove or repair them. Document Finder collects documents that are similar to each other or no longer necessary. Duplicates Finder locates duplicate files and fonts. File Checker gathers corrupted files. Orphan Adopter eliminates "Application can't be found" error messages by attaching new parent applications. MacUninstaller removes applications, including all associated files, fonts, and extensions. Spring Cleaning also includes the popular iClean program, which removes Internet buildup and protects your privacy by erasing Web cache

files, history tracks, and cookies. Spring Cleaning is a user-friendly application that guides you through the steps of each process. If you are unsure about taking an action or take an action and realize you made a mistake, the Restore Function reverses your action and restores the item to its original location. Spring Cleaning requires a Power Macintosh computer, running Mac OS 8.6 or higher, including Mac OS X (version 5.0 includes additional tools specifically built for the OS X system). Priced at US $49.99, Not only does it include iClean, which is sold separately for $29.99, but if you purchase Spring Cleaning before December 31, 2002, Aladdin will also include Tech Tracker Pro and Secure Delete free of charge. Priced individually at $25.00, Secure Delete is a handy data deletion tool that completely and permanently erases files by overwriting them. Treat the Secure Delete icon just as you would the Trash - simply drag an item over the icon on your desktop and a popup box will ask you to confirm whether you wish to permanently delete the item. For laptop owners and those who share a computer, Secure Delete ensures that no one else can retrieve your information. It is also helpful for when you take your computer in for repairs. Spring Cleaning is available at retail computer stores through the US and Canada. To order directly from Aladdin Systems, call 1-888-245-1723 or visit *www.aladdinsys.com/store.*

EducaNext

EducaNext is a multilingual, Web-based brokerage platform for corporations and institutions of higher education that incorporates offers, inquiries, booking, and delivery of learning resources. Content providers can choose to offer their resources for sale or free of charge, and can restrict their offers to individual institutions and users or given alliances. Users may upload resources directly to the platform, or simply provide an URL and store their content locally. Educational materials include sharable chunks of reusable learning content, such as electronic textbooks, recorded lectures and presentations, case studies, quizzes, lecture notes, problem statements, project assignments, etc., usually available in formats such as text documents, spreadsheets, presentations, and audio or video files. Educational activities refer to distributed educational and training activities, such as lectures, tutoring sessions, synchronous group collaboration, and complete online courses. Registration to the EducaNext community is free. Once registered, users pay for each booked resource. Several payment processes will be offered, including classical invoicing and billing, as well as direct online payment with credit card. Funded by the European Commission and run by the UNIVERSAL consortium, EducaNext is currently in its beta-testing phase. The latest version, EducaNext 0.85, was released this summer and features several improvements based on user feedback. Version 1.0 is scheduled to launch in February 2003. For further information, visit *www.educanext.com.*

getCITED.org

getCITED is a free, online academic database and discussion forum that enables scholars and scientists to post, link, and share research from all academic disciplines. In addition to using the database and discussion forum, members can create bibliographies on specific topics collaboratively with other members. The site also functions as an online academic directory - members and visitors may search for contact details for researchers, faculties, universities, and associations from around the world. Other key features include the ability to create customized reports ranking researchers, faculties, and universities by number of publications and citations, and to generate and view detailed statistics about works in the database (e.g. the number of pageviews, comments, and citations in other works). getCITED is member-driven, and intended to be used by content contributors. Students are invited to visit *www.myLITsearch.org*, where getCITED's data is available in an unalterable format. Visit getCITED at *www.getCITED.org.*

ibiblio.org

Based at the University of North Carolina at Chapel Hill, ibiblio.org claims to be the largest collection of freely available and publicly accessible information on the Web. The site, a collaboration between UNC-CH and the Center for Public Domain, maintains a close relation to open source models, and has a strong history of contributor participation and autonomy. It also offers a flexibility of forms and management styles, a diversity of collections, and a large community of contributors sharing their knowledge across disciplines. ibiblio.org is hosting the Linux Documentation Project and has taken the lead in creating an XML metadata template for cataloging, finding, and retrieving Open Source Documentation. A list of ibiblio.org projects can be found at *www.ibiblio.org/metalab/collection/.* For further information, visit *http://ibiblio.org*.

3-D DIGITAL RARE BOOK LIBRARY

Location: School of Information and Library Science, University of North Carolina at Chapel Hill

Web site: *http://ils.unc.edu/3D/*

Launch: December 2002

Summary: The 3D Library intends to "reintroduce" the experience of viewing a book in digital form, giving readers the sense that they are actually handling the book.

Details: The project consists of two components. The first is an interactive system for viewing rare books and historically significant material in 3D form. Readers will able to "handle" the books individually or as a collection. The second component is a set of procedures and software tools for scanning, converting, and distributing this material online.

Participants: SILS, ibiblio.org, Interaction Design Laboratory, Yumetech Inc.

Contact: Gregory B. Newby, Project Manager, School of Information and Library Science, *gbnewby@ils.unc.edu*

BUDAPEST OPEN ACCESS INITIATIVE

Location: Open Society Institute, Budapest, Hungary

Web site: *www.soros.org/openaccess/*

Launch: February 2002

Summary: BOAI advocates open access to peer-reviewed articles, making research and scholarship in all academic fields freely available on the Internet. It supports two main strategies: self-archiving and alternative journals.

Details: BOAI would like the public to be able to read, download, copy, distribute, print, search, or link to full-text articles without any financial, legal, or technical barriers, providing that the articles are preserved, attributed, and cited. Authors would retain control over copyright and the integrity of their work. Articles would be freely reused by any party for any purpose. BOAI does not demand existing journals to change their access policies and focuses on new unpublished articles. It does not intend for authors to relinquish intellectual property rights or put their work in the public domain.

Current status: BOAI's recent projects include: engaging the SPARC Consulting Group to develop business plans for open access journals, supporting the development of a user manual for Eprints2 (a self-archiving software), and supporting the production of the Free Online Scholarship newsletter. BOAI has also launched a program that will support 50 institutional memberships to BioMed Central, and will provide funds to support the publication of articles from authors in the OSI region (67 developing and transition countries).

Contact: Melissa Hagemann, *mhagemann@sorosny.org*

COLLECTION OF POLITICAL AMERICANA

Location: Cornell University Library

Web site:

http://cidc.library.cornell.edu/political

Launch: CUL aims to have the database up and running by September 1, 2002. The project should be completed by late 2003.

Summary: A collection of approximately 7000 items represented by more than 35,000 online images of published materials, ephemera, and artifacts from U.S. national political campaigns between 1800 and 1976.

EEBO Undergraduate Essay Contest

EEBO-TCP is currently accepting undergraduate research papers for its Undergraduate Studies Essay Competition. The papers must rely on research conducted via the EEBO collection of primary texts, and should reflect work done between November 1, 2001 and October 31, 2002. The contest is open to all academic disciplines, as well as interdisciplinary studies. Group papers are also acceptable. All contestants must be enrolled in an institution with approved access to EEBO. Submitted essays must consist of no more than 20 pages of written text. The deadline for receipt is October 31, 2002. Cash prizes will be announced in January 2003. For further information, visit *www.lib.umich.edu/eebo.*

Details: The library will preserve, digitize, and categorize the collection, and make it freely available and searchable on the Web. The majority of the items will come from the Susan H. Douglas Collection of Political Americana in Cornell's Division of Rare and Manuscript Collections, which includes approximately 5500 objects of political memorabilia dating between 1789 and 1960. The library will also conserve and digitize approximately 1500 similar items found among its other manuscript collections covering campaigns from 1960 to 1972, and nearly 400 other works of campaign literature dating between 1800 and 1964 found in its rare books collection. A searchable database with linked images will allow the public to search by year, candidate, or format.

Participants: Division of Rare and Manuscript Collections, Cornell Institute for Digital Collections, Department of Preservation and Conservation

Current status: CUL is currently inputting their data into Luna. Users can access material as it is digitized, rather than wait until the collection is complete.

Finance: A two-year National Leadership Grant from the Institute of Museum and Library Services (IMLS).

Contact: Susan Szasz Palmer, Head of Public Services, Cornell University Library, Division of Rare and Manuscript Collections, Tel: 607-255-3530, *sms5@cornell.edu.* To view the April 2002 project report, visit *http://cidc.library. cornell.edu/political/digital_access.htm.*

DIGITAL OBJECT IDENTIFIER

Location: International DOI Foundation
Web site: *www.doi.org*
Launch: The system was launched in 1998, and the first widespread applications began in late 1999.
Summary: A system that identifies any item of intellectual property in any digital environment (as an aid to digital commerce) and maintains current data about the item (which is automatically obtained from the identifier). Akin to a physical bar code, but for intellectual property (including abstract and digital forms). A DOI identifies an object as a first-class entity, not simply the location of an object.
Details: A DOI consists of two parts: a prefix and a suffix, which together ensure that the identifier is unique to the work. Existing identifiers may be encapsulated (e.g., publishers may choose to use ISBN numbers as suffixes). When a browser hits a DOI, it is directed via the DOI resolution system to current information and services about the publication such as catalog data, excerpts, reviews, and links to places of purchase.

Participants: The first application was for the STM community, via the CrossRef agency. One hundred and forty seven publishers have allocated over five million DOIs to date. Although the majority of these registrants are from traditional print-publishing companies that have established online publishing programs, the fundamental design of the system is applicable to any media or content.
Current status: DOIs are currently in use in online academic and professional journals. Over 200 different registrant organizations have so far allocated over 5 million DOIs.
Cost: DOIs are obtained via Registration Agencies, each of which is free to determine its own pricing model.
Contact: *info@doi.org*

EARLY ENGLISH BOOKS ONLINE– TEXT CREATION PARTNERSHIP

Location: University of Michigan Library and the University of Oxford
Web site: *www.lib.umich.edu/eebo*
Launch: In production since July 2001
Summary: A new database that will hold fully searchable digital editions of 125,000 early English titles produced between 1474 and 1700. About 25,000 searchable texts will be available, with 125,000 page images. In most cases, only first editions will be encoded, allowing for greater coverage.

EEBO in Practice

Hillary Nunn has used the database's primary texts in an upper level Shakespeare course at Michigan State University. In her experience, the main challenge of introducing students to EEBO is teaching them how to use it (e.g., how to cope with the intricacies of early English, how such words are used and spelled, and how the texts are structured). The language was completely alien to them, but the students ended up coping "surprisingly well." According to Nunn, it didn't take long before EEBO became second nature to the class. She taught her students to use the database just as she had taught herself. "The best learning occurs through practice," she says. For example, Nunn had her students gather background information on Shakespearean plays by searching the database for key words. Students looked up "exploration" in the context of *The Tempest,* and "shrews" for *The Taming of the Shrew.* The database is a "boom to scholars in all fields," says Nunn. Professors can also use the encoded texts in linguistics courses and for teaching the evolution of concepts. Literature professors can access documents that are otherwise difficult to locate. One professor in particular used EEBO to study early English pronunciation by locating rhymed words at the end lines of poetry.

Details: The EEBO-TCP database will contain the total surviving record of the English-speaking world, most of which was previously available only in microfilm form. The database will include novels, scientific texts, prayer books, pamphlets, proclamations, almanacs, calendars, and musical exercises. It will cover a wide range of subject areas, from history, English literature, religion, women's studies, music, and the arts to physical science, the history of medicine, botany, astronomy, witchcraft, and travel and exploration. Users will be able to search and access the database by author, title, keyword, publication date, subject, and type of work.

Participants: ProQuest Information and Learning owns and sells microfilmed copies of the works, and will co-own the new searchable edition with library partners. It will sell access to the database during the period of limited distribution, paying royalties to library partners. Five academic reviewers, three at the University of Michigan at Ann Arbor and two at the University of Oxford, proofread the texts to ensure the quality and integrity of the editions.

Current status: Over 1300 works are currently available on a prototype database to partner libraries. Approximately 200 texts are added each month. The project now has the support of over 60 libraries, all of whom are helping to fund its production flow.

Contact: Hillary Nunn, Harlen Hatcher Graduate Library, Tel: 734-615-5248, *hnunn@umich.edu*.

Summary: SPO explores new models for electronic publishing of new scholarly content. SPO also creates new electronic publications, helps convert back files of journals to digital format, and develops ways to publish and distribute scholarly digital projects in the forms of databases and Web sites.

Participants: American Council of Learned Societies, Michigan Ethnic Heritage Studies Center, Western Michigan University (Medieval Review), University of Detroit-Mercy (Post Identity), a number of publications edited by staff and faculty in many disciplines across the University of Michigan campus, and various scholarly societies.

Current status: Twenty-five electronic publications are either completed or under development. SPO is currently converting backfiles of journals to digital format, creating multimedia exhibits featuring rare materials, and developing new online scholarly resources.

Contact: Maria Bonn, *bonn@umich.edu*.