



The Fourth Annual Look at Leading Edge E-Learning Technologies

"The more I look at last year's stories, the more I see the same stories...we'll be reading in 2004."

Terry Calhoun, ["Looking Backward Looks Like Looking Forward – to 2004."](#)

Syllabus Magazine, (Annual technology review) 1/8/04

As this issue's opening quote suggests, there may appear to have been fewer new ideas in e-learning technologies, but, instead, more refining and problem-solving of those already in existence. Nevertheless, there have been more than enough recent innovations to warrant our annual look. As far as hardware goes, 2003 was definitely the year for advances in handheld and portable devices. In terms of software and applications, the only limit was the human imagination.

What follows is a sampling of the latest, as well as BEEP's yearly list of upcoming educational technology conferences and, of course, the most recent of BEEP's Best Bets in a number of areas.

Hardware

- ["Block Your Ears to Hear Better on Japan's New Bone Phone."](#) Article in *Yahoo! News*, 1/21/04, about the TS41 handset. This new Sanyo product is the first mobile phone that enables users to listen to calls inside their heads, by conducting sound through bone.
- [Canesta Projection Keyboard.](#) This device works by beaming an image of a standard keyboard onto any flat surface, allowing a cell phone, PDA or other mobile device to be used for email.
- [Electronic Paper Technology.](#) An in-depth look at a technology, mentioned briefly in an earlier BEEP, that can bring moving images to a foldable screen. Developed at the University of Rochester, it could replace a computer screen and fit in a pocket or even be sewn into clothing.
- [ImagiProbe Systems for Palm Handhelds.](#) A combination of both hardware and software, these systems provide sensor interfaces that can be attached to Palm devices, plus software that allows users to manually collect various weather, health and environmental data.
- [Kensington Wi-Fi Finder.](#) The only such device of its kind presently on the market, this pocket-sized item identifies, without software or a computer, hot-spots for Wi-Fi at the touch of a button.
- [Top Ten Handhelds of 2003.](#) As handheld technology becomes more and more sophisticated, the features and innovations available (e.g., GPS, cameras, built-in Bluetooth technology) are many and varied. As part of its annual 100 best list, [CNET.com](#) has chosen ten handhelds that provide an impressive array of things that can be accomplished in the palm of your hand.

Applications

- ["Fifty Million Internet Users Connect Via Broadband..."](#) January 8, 2004 release by Nielsen/Netratings that indicates 38% of all home Internet users now connect via broadband, a 27% increase in six months. Numbers of narrowband users were unchanged in the same period.
- [Hologprojection.](#) A process patented by the 3DH Corporation for producing ultra-realistic, 3D holographic images. The company is currently working on a walkthrough of a soon-to-be built museum and an immersive chamber capable of providing images to 30-45 people at a time.
- [Internet2 \(I2\) Year End Update.](#) A report by I2 president and CEO Douglas Van Houweling on developments in 2003 that include multipoint videoconferencing services, an upgrade of the Abilene network that will allow I2 data to move at 10 gigabits per second, and increased security.
- ["Learning to Control a Brain-Machine Interface for Reaching and Grasping by Primates."](#) Article by Jose M. Carmena and others at Duke University (NC) in *Public Library of Science Biology* (1:2), November 2003. It reports on the remarkable work of Duke scientists who have trained monkeys to control the movements of a robotic arm entirely with their brains.

- [Telling Humans and Computers Apart: The CAPTCHA Project.](#) Website maintained by Carnegie Mellon University (PA) that explains programs called CAPTCHAs, which can generate and grade tests that computer programs cannot pass. Designed to screen out “spambots,” software that gathers email addresses without permission for mass spam mailings, the tests are already in use by companies like Yahoo, eBay and Ticketmaster. (A [prototype](#) of a somewhat related concept, which allows automatic phone systems to distinguish irritated from normal human speech, is being developed by the University of Southern California.)
- [“The Underground Internet.”](#) Article in *Business Week Online*, 9/15/03, about file-sharing services known as darknets, software that lets individuals set up a password-protected, members only, network for exchanging anything from sensitive organizational data to downloaded music.
- [Universal Translation.](#) Embryonic technology discussed in *MIT Technology Review*, February 2004, that uses mathematical models and natural-language-processing techniques to make multi-language computerized translation accurate and efficient. (Requires free registration to read.)

2004 National Educational Technology Conferences

- [International Technology Education Association Conference](#) - March - Albuquerque, NM
- [Distance Learning Administration Conference](#) - May - Jekyll Island, GA
- [National Educational Computing Conference](#) - June - New Orleans, LA
- [LERN Teaching on the Net](#) - June - Online
- [InfoComm 2004](#) - June - Atlanta, GA
- [Syllabus 2004](#) - July - San Francisco, CA
- [California Virtual Campus and Merlot Joint Annual Conference](#) - August - Costa Mesa, CA
- [Society for Applied Learning \(Interactive\) Technologies Conference](#) - August - Washington, DC
- [Emerging Technologies Conference at MIT](#) - September - Cambridge, MA
- [Technology and Learning Conference](#) - October - Denver, CO
- [Educause 2004](#) - October - Denver, CO
- [E-Learn 2004](#) - November - Washington, DC
- [League for Innovation Conference on Information Technology](#) - November - Tampa, FL
- [The Power of Online Learning](#) - November - Orlando, FL

BEEP’s Best Bets

E-Learning Administration

- [Adaptive Technology Resource Centre.](#) Website maintained at the University of Toronto that advances information technology accessible to all. Includes many links to outside sources.
- [“Library Periodical Expenses.”](#) Article by Roger C. Schonfeld et al in *D-Lib Magazine* (10:1), 1/04, that reports on a study of the implications of transitioning journals in academic libraries from print to electronic formats – and on the consequent favorable cost differentials of doing so.
- [“MIT Helps Break Ground in Educational Software Collaboration.”](#) Article in *MIT News*, 1/23/04, on the Sakai Project, a collaboration of MIT (MA), University of Michigan, Indiana University and Stanford (CA), to produce open source code for course management systems and make it available for all users to study and modify freely, with no restrictions whatsoever.

Free Information Sources

- [Educator’s Reference Desk.](#) With the termination of its question/answer AskERIC service in December 2003, the DOE has set up a Website that continues to offer an interface to the ERIC database, plus access to links to online education information previously assembled by AskERIC.
- [Project Eagle Research Capsules.](#) Summaries of recent e-learning research reports and statistics done by [Project Eagle](#), a \$470,750 grant, 8/1/03-7/31/07, [St. Petersburg College](#) (FL).

Instructional Resources

- [“PowerPoint Is Evil.”](#) Article by Edward Tufte in *Wired Magazine* (11:9), 9/03, that summarizes his controversial monograph on the damaging cognitive style of slideware computer programs like PowerPoint software, which he claims “elevates format over content, betraying an attitude of commercialism that turns everything into a sales pitch.”
- [Strategies to Succeed in Distance Learning.](#) Article by Farhad Saba, Distance-Educator.com CEO, 1/19/04, with some new approaches to help e-students learn and their instructors teach.

www.spcollege.edu/eagle/research/BEEP/BEEP37.htm

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