

# Virtual Personalities

## Breathe New Life Into Libraries

*Professional Perspectives — Tools and Techniques of the Trade. The Professional Development Committee encourages members to continue to explore topics after presentations at the local, regional and national levels. We welcome your comments and article suggestions. Please contact Lori Hedstrom at 651/687-5891 or lori.hedstrom@westgroup.com.*

What used to be science fiction increasingly becomes science fact. In the classic movie "2001: A Space Odyssey," a sophisticated computer named HAL accompanies astronauts on their deep-space journey to Jupiter. HAL is a "living-intelligent" artificial being that interacts with the crew members like a person. Today the imaginary HAL's real descendants — **virtual personalities** — populate countless video games and Web sites. Now virtual personality technology is ready to make its debut in the educational arena.

Not just voices coming out of boxes, these cyberpeople are interactive digital characters with life-like facial movements and expressions. They are created using artificial intelligence, a natural-language-processing engine, and real-time animation, along with speech recognition and synthesis technology that enables them to "converse."

### Interactive Talk

Virtual personality software can provide a human touch to cold and impersonal Web sites and e-mails, while reducing administrative overhead costs. Imagine a user going to a law library Web site and being greeted by a 3-D personal guide, who looks a lot like the actual law librarian. The virtual librarian is ready to

answer questions and take the user to the information he or she needs. The librarian describes the available resources and helps the user navigate through them. After the information is retrieved, the virtual librarian will even help the library patron understand and use the resources. For example, instead of the user reading the pathfinder, what if it could talk to the user? The virtual librarian would provide guidance as the reader examines the entire document, giving verbal explanations on how to use this library resource.

Most users probably find their e-mails inadequate or aloof at times. Rendering a particular emotion might require much text. Alternatively, the writer may rely on such tactics as icons or symbols to demonstrate a traditional "happy face." With virtual personality e-mail, a virtual person delivers the message with a smile. It can speak, display emotion and deliver more complex messages than text can convey.

How does it work? Two pieces of software are required. The person using the site or receiving the e-mail needs a virtual personality player. All vendors of virtual personality software provide their own players. The second main software program allows the user to set up the artificial intelligence to carry out his or her directions.

### Personality Invades the Impersonal Web

This type of technology is already widely used by many businesses and institutions.

Although the technology is in its infancy, virtual customer-service agents or representatives are popping up on some e-tailer Web sites, such as Dove soap ([www.dove.com](http://www.dove.com)) and DirecTV (<http://www.directvds.com>), a digital satellite entertainment service. This new breed of "agent" addresses customer-service matters and encourages potential customers to become regular customers, while also cutting costs associated with serving online customers. The virtual

representative can assist and reassure customers by emoting. If the representative can't find the customer's particular product, it can express disappointment or direct the customer to an alternate product or service. The representative can suggest related items that might interest the customer. After the transaction is completed, the representative can thank the customer and urge him or her to return.

Even the media are getting in on the act. The first real-time virtual newscaster, Ananova, became available in 2000 on PA New Media's Web site at [www.ananova.com](http://www.ananova.com). Created by the new media arm of the UK's Press Association — Britain's counterpart to The Associated Press — Ananova reads news, sports, weather and more. She can be personalized with details, such as the user's preferred news and favorite sports team.

Children are already interacting with virtual personalities, which are common in the newest video games.

### Learning the Virtual Way

Virtual personality technology now appears poised to enter a new arena. Three main companies are taking virtual personalities into the educational field: LifeFX Networks, Inc.; Virtual Personalities, Inc.; and Pulse.

**LifeFX, Inc.** (<http://www.facemail.com/index2.html>), a developer of photo-realistic, 3-D digital humans for the Internet, markets a software called Facemail™ that allows consumers to add expression to e-mail communication. Facemail™ features the LifeFX Stand-In™ virtual people, 3-D digital characters that convey e-mail messages. With speech driven by a text-to-speech engine, Facemail™ users can send and receive e-mails via talking, life-like virtual human faces to and from friends and colleagues who have downloaded the LifeFX™ player. Users of Facemail™ can make Stand-Ins™ speak and use various facial expressions by typing in text and familiar emoticons.

#### AALL Professional Development Program Competencies of Law Librarianship

1. Core Competencies
- Specialized Competencies
2. Library Management
  3. Reference, Research and Client Services
  4. Information Technology
  5. Collection Care and Management
  6. Teaching

This article addresses AALL Specialized Competency 4 on Information Technology. The complete AALL statement of Competencies of Law Librarianship is online at <http://www.aallnet.org/prodev/competencies.asp>.

# A Desktop Learning Opportunity

LifeFX now records pictures and voices of real people to create virtual characters from them. With this software, a library will be able to supply a picture and voice recording of a librarian to LifeFX to set up a 24/7 reference assistant that can respond to reference questions in real-time.

Motorola's Web site uses virtual hosts, created by LifeFX. The host guides visitors through the Web site's various cell phone products and accessories, demonstrating the products' capabilities and features. To see a demonstration, go to <http://www.mymotorolai85s.com>. Remember, it will be necessary to first download the player.

**Virtual Personalities, Inc.** ([http://www.verbot.com/ve3/index\\_enhanced\\_high.php](http://www.verbot.com/ve3/index_enhanced_high.php)) offers a proprietary, interactive technology known as Verbot<sup>®</sup>, or "verbally enhanced software robots," which was showcased at the 2002 Computers in Libraries Conference in Washington, D.C. Verbot<sup>®</sup> technology can make a library's Web site easier to navigate and increase user interactivity, according to David Bennett, associate professor and automation librarian at Robert Morris University in Pittsburgh, Pa. At the conference, Bennett demonstrated how Verbot<sup>®</sup> Web@ssistants answered simple directional and reference questions and forwarded queries to a library database or search engine. Specific features include hosting Web site tours for visitors, remembering visitors by name and recalling their histories, and the ability to give general advice and make recommendations. They can also open Web pages, send e-mail, perform searches, gather information, launch multimedia presentations and speak any natural language using a real human voice.

Virtual Personalities and Robert Morris University have partnered to develop the Verbot<sup>®</sup> Librarian for public, academic and law libraries. This virtual assistant guides patrons in what might be called an enhanced online public access catalog. It performs tasks such as locating books and information in large knowledge databases. It also adeptly answers questions about library directions.

"Our proprietary interface, which includes an animated character that uses a text-to-speech voice, not only allows individual libraries to customize information for their users at their own library, but provides an interface to all major reference and search engines, allowing research to be done in the library on an Internet kiosk or at home on any Internet connection," said Rob Rappaport, president and C.E.O. of Virtual Personalities.

"In an era of continued budget pressure on library institutions both public and private," Rappaport said, "our solution provides relief for the library budget, as well as very effective automated research and customer service and support functionality."

For more information and a demonstration of the Verbot<sup>®</sup> Librarian, visit <http://lib.verbots.com/demo>.

**Pulse<sup>™</sup>** (<http://www.pulse3d.com>), a provider of emotive interface technologies for the Web, takes distance learning to the next level. Its technology can create 3-D, interactive characters with speech, emotions and behaviors, and can respond to users' actions in real-time.

The characters, known as Pulse Veepers<sup>™</sup>, enhance e-learning by going beyond the linear limitations of text, images and streaming video synonymous with current distance-education programs. The Veepers<sup>™</sup> provide information in a video-like setting in which virtual instructors respond instantly and appropriately to each student via gestures, expressions and speech. Because the technology engages users in realistic conversations, environments and situations, users are more likely to retain the information and complete the education program, according to the company.

"In speaking with e-learning decision-makers among our enterprise clients, we discovered there was a fundamental gap between real-world learning and online learning that could be bridged only by applying the human factor in an interactive, engaging, always-accessible format," said Fred Angelopolous, C.E.O.

of Pulse<sup>™</sup>, in a company press release in May. "Now fully interactive virtual instructors of all types can be made available 24/7 via even a modest Internet connection, and provide a much more rewarding experience for teachers and students, regardless of the subject matter."

Pulse Veepers<sup>™</sup> allow users involved with e-learning and corporate training environments to build, deploy and update complete interactive characters without needing to know programming animation or 3-D modeling. The Veepers<sup>™</sup> technology makes use of a click-and-drag interface, where users can create fully functional digital characters in about two minutes from a single photograph or image. Using a photograph, the user is guided through a process of setting different data points on key areas of a subject's face. The software takes these points and maps that data to a 3-D model. The resulting character can deliver audio via the text-to-speech engine in a variety of natural human voices or in the person's own voice by way of spoken audio captured by recording programs.

Veepers<sup>™</sup>-based content uses only one-fiftieth of the bandwidth required for video and can be delivered in 2 percent of the time required for video-based content of similar length. Thus Veepers<sup>™</sup> content is readily accessible by standard dial-up connections.

## Keep Up

All this software as well as other virtual personality technologies are already in use. If librarians are to keep up with changing times, they must be prepared to embrace new technologies. Libraries should consider using virtual personality software as a supplemental library resource. It is just a matter of time before patrons encounter virtual personalities elsewhere. As with chat-reference, virtual personality technology is here to stay.

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