

ONLINE REFERENCE TECHNOLOGIES AND PRODUCTS

E-mail

Using e-mail for online reference is either the up-and-coming method of communication, or an obsolete, outdated technology, depending on who you ask. Writing in 1999, author and associate director of programs at New York Public Library Kay Ann Cassell reported that “e-mail has become an important means of communication, and librarians must learn to deal with the many requests for information that they will receive” through this medium of communication. (Cassell, p. 57) Barely two years later, Susan McGlamery wrote that e-mail-based service such as Ask@Librarian is out. As she sees it, “the future is live and interactive, and that future is here now.” (McGlamery, Nov. 13, 2001)

The state of e-mail reference is uncertain but many libraries begin providing online reference service via e-mail.

E-mail advantages

E-mail reference has several advantages over other technologies. Of all the existing electronic communication methods e-mail is easiest to use and most widely available. E-mail more than chat is still the preferred communication method of middle-aged computer users. Though rushing to catch up and learn how to chat (all too often taking lessons from their offspring), many middle-aged patrons still prefer e-mail.

In conjunction with their live online reference service, Sam Richter, president of the James J. Hill Business Library (St. Paul, Minn.) conducted extensive research on his patrons’ communication technology preferences. He found the preferred communication methods were e-mail first, telephone second, and chat third. Interestingly, from focus groups, he also learned patrons were glad chat reference was available in case they needed it.

E-mail is quick, informal, and lends itself to transferring facts and bits of information. Since e-mail addresses can be anonymous, e-mail provides a good way for patrons to avoid embarrassment over sensitive questions. Racial, religious, and ethnic discrimination can be limited through e-mail since neither party has information about the other’s characteristics. E-mail reference is inexpensive since it does not require any additional software or real-time staff when offered asynchronously.

Limitations of e-mail

E-mail reference is not without its limitations. Most libraries offering e-mail reference are aware that the short, cryptic messages sent through e-mail “do not necessarily jibe well with reference service, which is based on good communication and complete discussion of the information needed.” (Cassell, p. 57) To ensure good communication, many

libraries begin e-mail reference service with a statement about the types of questions that will NOT be answered via e-mail.

For example, the San Francisco Public Library states that appropriate questions for e-mail are “those that can be answered with short, factual responses. We cannot answer questions that require extensive time or research. For this type of question, please call or come in person to use the library’s resources...” (as quoted in Cassell, p. 60)

Unfortunately, many libraries have found that despite patrons’ comfort level with e-mail, the response to e-mail reference is rarely overwhelming.

Web forms

One of the methods some libraries use to circumvent the limitations of e-mail is to provide a Web form that prompts users to supply additional information about their requests to help the library address questions precisely. A Web form is an online form created by a library to standardize various elements of patron inquiries. As described in the online resource *The Teaching Librarian*, “[w]hile e-mail reference allows the user to write down the query in his or her own words, a Web form structures the user’s request....” (*The Teaching Librarian*, pages.prodigy.net/tab01/digref.htm, Feb. 22, 2002) Some Web forms begin with a statement about the service, including the hours and expected turnaround times, and others explain the types of questions that should and should not be posted via this service. Examples of Web forms are available on pages 70 and 72 in Kay Ann Cassell’s book, *Developing Reference Collections and Services in an Electronic Age*. (New York: Neal-Schuman, 138 pp.)

Chat and instant messaging

“The computer bonged at us whenever someone hit the chat Web page. I had a tendency to jump immediately to the screen...Then I’d just sit there, staring in anticipation at the screen, hoping he had a real reference question, yet fearing how to deal with it...” (Broughton, p. 27)

Welcome to the world of real-time, online reference service—bonging computers, jumping librarians, followed by terror-filled moments of waiting. As succinctly described by the newly initiated virtual librarian Kelly Broughton, “it was weird—really weird.”

Broughton was describing the most popular methods used to provide real-time online reference and instant messaging (IM). Chat software permits back and forth immediate conversing with a patron using typed messages. IM goes a step beyond chat in its immediacy by alerting the person involved in a chat session that they have an incoming message. Through instant messaging senders and receivers can communicate as a side-conversation while still in the chat mode. Instant messaging could be likened to talking on the phone while typing on the computer, though the second conversation also is conducted through the keyboard rather than verbally. While you are conducting a chat session a separate message flashes (or bongs) to alert you that someone is sending an instant message. The person chatting can briefly leave their chat session to respond to the instant message, then return to the chat. This side conversation frequently fills the time while waiting for a chat response.

For many libraries, adding these features to their electronic reference service is the next logical step in the online information world. Though moving from e-mail to chat and IM does not require a major technological undertaking (IM and chat software are standard on many systems), significant human costs exist. Chatting requires different rhythms than are used in oral or e-mail communication. These differing methods, however, can be easily learned. As Kelly Broughton found, "despite the strangeness of communicating via chat, it didn't take long to get accustomed to it." (p. 30)

Librarians who have used chat and instant messaging software acknowledge that communicating through this medium requires training. Just about anyone can answer an e-mail reference question, but because chatting occurs in real time with a live person awaiting a response at the other end, training and practice are needed to master this form of communication.

Because chat is instantaneous, it conveys a sense of urgency and immediacy that takes getting used to. This type of communication is more demanding than e-mail. (Brandt, D. Scott "Nov./Dec. 2000, *Computers in Libraries*, p. 66 as quoted in Broughton, p. 27) For Broughton, chat translated into anxiety-filled expectations because the answer should be "not only completely correct, it should be there *right now!*"

Many librarians believe this urgent need to respond is the greatest drawback to chat-based reference because of the pressure to both communicate continuously and look up the information, which is one task too many, even for librarians used to multitasking.

Another difference between traditional reference and chat and instant messaging is that the librarian must send short, frequent responses so the other party knows communication is being maintained. And these short bursts of words are needed at regular intervals.

Broughton says, "unlike the telephone, you can't say, 'I'm doing this and looking there' while you are actually doing it. Also, unlike when the person is standing there in front of you, they can't observe you diligently trying various keywords in the catalog. Maybe more importantly, you can't see them. You can't tell if they're angry and impatient...or...desperate." (Broughton, p. 27)

To help fill the time gaps while a librarian is looking up information, reference software packages enable pre-scripted messages to be used so the patron will know the librarian is still there. In some chat software these scripts can be of limited number, and in others they can be more extensive. At the Jerome Library at Bowling Green State University in Ohio the staff found that even a dozen present messages helped ease the time lag. You can use a script message such as "please visit your local librarian" when the question can more effectively and appropriately be handled in person.

As with e-mail, conducting a reference interview through this medium is difficult. Library science professor Marilyn Domas White has observed that information channels such as chat "do not provide the rich visual and aural clues that abound in face-to-face encounters and do not easily accommodate conversations that clarify the information need." (White, p. 1)

Though chat offers the advantage of taking place in real time, it does not allow the librarian to hear, see, or *smell* the person. Eye contact, smiles, nods, leaning of the body, and tone of voice are all missing from this communication. Knowing the person's mood is difficult. Are they kidding, angry, or disappointed? In some cases you cannot even tell if the person is

there. One of the most common responses used during a chat session is "Are you still there?" (McGlamery, Nov. 14, 2001)

The patron's presence, or lack thereof, is another potential benefit of chat over in-person reference: virtual reference enables the librarian to more easily avoid nuisance patrons. 24/7 Reference Project director Susan McGlamery estimates that 2% to 3% of the inquirers using that service are crank calls. With the click of a finger, these nuisance patrons can be dismissed, which is not so easy when the person is standing at the reference desk.

To compensate for the limitations of chat, some libraries have a policy to follow-up chat sessions with other forms of communication. McGlamery credits one of the secrets of the 24/7 program's success to its policy of sending e-mails, faxing, or making phone calls as a follow-up to chat sessions.

Though chat is the emerging technology for real-time virtual reference right now, even its chief proponent says the days of chat are numbered. "Chat will disappear in the next few years" Steve Coffman says (Feb. 8, 2002). As advances are made with video and voice transmission, many experts believe several text-based communications will be replaced with these other technologies. Details about the specific technology that will replace it are not yet known, though.

Web-based courseware, Web meeting, and videoconferencing

Web-based courseware, Web meeting, and videoconferencing software were designed to serve people working together over the Web in real-time. Since this direct interaction is exactly what live online reference entails, some libraries naturally turn to this type of software to offer online reference service. But this type of technology is costly and technologically taxing, and is not in libraries. After researching this state-of-the-art technology, many library leaders agree that the software is not ready for wide application.

Originally designed to meet the growing demand for online distance classes, these products facilitate synchronous and asynchronous connections to course materials. With Web-based courseware, a faculty member can share the course syllabus and calendar to make announcements, post assignments and lecture notes, give tests, post grades, and share links to other course materials. At the University of Tennessee students use the Centra Symposium software to meet in virtual classrooms from anywhere. "As a class, they can share computer screens, listen to live audio, ask questions, share whiteboard space, view synchronized Web browsers, and share applications and files." (Casado, p. 36)

Though essential for classroom faculty, many of the features are not essential for librarians. Most of these applications are not required for virtual reference. What makes courseware attractive for library purposes is the ability for the librarian to "control the session...so that everyone can observe a search by seeing what is on the leader's screen; or students can conduct searches while the librarian observes and helps." Also useful for library reference is courseware's simultaneous communicating features such as chat, online discussion boards, e-mail, and digital drop boxes for students to use to submit assignments electronically. (Casado, pp. 36-37)

Web meeting and videoconferencing software allow real-time communication among many people in different locations. Librarians should try to employ these functions for live online reference service. Though these programs are missing the ability to automatically route incoming questions, these technologies all offer chat at a minimum. Some of the more sophisticated programs offer both audio and video support.

The two major disadvantages to the use of this type of software in libraries are bandwidth and plug-ins. As anyone who has experienced the halting reception of a video feed knows, without adequate bandwidth a video transmission is almost useless. When conducting an interactive reference session using videoconferencing, librarians have found the technology distracts from the task at hand, so the software becomes more important than the content. Librarian Margaret Casado, for example, ended up forgoing the video transmission—eliminating the massive bandwidth requirement—and simply using NetMeeting, a conference software, without this feature. (Casado, p. 38)

Likewise, many Web conference applications usually have lots of software or plug-ins that must be downloaded and installed on patron computers before patrons can meet with virtual reference staff. This drawback is nearly insurmountable for public libraries that must serve the general public, but these applications could be employed in libraries with closed populations, such as an academic institution or special library.

Because of the limitations of Web-based courseware, most libraries implementing live online reference service opt for other technologies, most often a homegrown chat system or more sophisticated customer call center application, both of which are discussed in the product section of this report.

Contact center software

What do L.L. Bean, Kinko's, John Hancock Insurance, and the Cleveland Public Library have in common?

They all use Web-based contact center software to communicate with their customer/users in real time.

Most major vendors of live reference base their software on some form of customer call center application/contact center software. These products, originally designed to handle customer service calls to mailing houses and help desks, lend themselves to library applications because of the similarities of their functions. Catalog shoppers, help desk visitors, and library reference seekers need information from a central knowledge source. The shopper may need to know if the blue oxford shirt is available in extra large, while the library user may be seeking the origin of the shirt known as Oxford blue, but both populations need to be routed to and communicate with a knowledgeable employee in real time.

Customer call center software queues and routes patrons to the next available librarian. With this type of software, the staff member can communicate interactively with the person, share information from a remote site, bounce questions and answers back and forth, and archive the transaction when it is completed.

Seats are what individual stations are called in most customer call center software products.

Call center advantages

Customer contact software offers many functions to serve users and maximize staff efficiency. In the more sophisticated systems, just about anything a library can think of doing technologically, such as communicating through video, conducting group instructions, or sending questions back and forth within the library and beyond, are all available through the software.

The most attractive feature of this type of product is its wide variety of interactive tools. Most call center service software packages enable the librarians to push work with the user and escort them through the many steps involved in locating and using databases. Web page pushing, which automatically sends a page a patron's home computer, saves time for both librarian and user. Some products allow the librarian and user to collaboratively fill out forms, search screens, and share slide shows and online content. These systems also are equipped to capture information into a reusable knowledge base, profile the patrons, and track and analyze users of the system and the librarian responses. Many systems can handle voice and video technology, as discussed in the audio and video reference service section.

Call center limitations

Customer call center software is not without limitations. Cost and training time needed are two significant drawbacks of the more sophisticated systems. Prices of systems vary, according to the software and whether the system is run on the vendor's servers or licensed directly and installed on the library's hardware. Hosted applications can cost as little as \$200 and as much as \$1,000 per seat per month. Installation and training fees may be priced from a few hundred dollars to \$10,000 and \$15,000, providing no custom work is required.

Larger library systems and collaboratives may want to consider licensing the software directly. Licensed versions of call center software generally cost \$50,000 and up, plus an annual maintenance fee that often averages 18% to 20% of the base fee. Once hardware and maintenance costs are added, a direct license is usually beyond an individual library's budget.

Customer Call Center software includes other drawbacks for library users. As librarian Steve Coffman describes it, "the best of the programs will allow you to push individual Web pages, guide a patron through sites on the Internet, and share the content of search boxes and Web forms. But this software still has problems with many of our proprietary databases, and there are some sites on the Web that can disrupt co-browsing for both the patron and the librarian. Because many of these issues are particular to libraries, they are problems that we will have to resolve on our own." (Coffman, April 2001, p. 24)

Despite these disadvantages, customer call center software systems are being installed in libraries at an astounding rate. As recently as summer 2000, Susan McGlamery and Steve Coffman stated that "no library has actually used Web contact center software in a real reference applications." (McGlamery and Coffman, p. 5) Barely two years later, 47 libraries are listed on the client list for LSSI, producers of one of the major Web contact center systems. Improvements to existing products and the creation of new systems specifically for library applications are occurring almost daily.

Audio and video online reference service

Since the 1930s, libraries have been offering audio reference assistance via telephone. In recent years, interest in telephone reference has waned as librarians rushed to embrace the advantages of text-based computer systems. But some experts say voice communication, coupled with video transmission, will make a comeback as soon as technology improves.

Exactly when this comeback will happen is open to debate. Duke University's Phil Blank predicts as many as five years may pass "before audio technology, in the form of voice communication through the computer, becomes a reality." (Blank, Phil, Dec. 14, 2000, www.lib.duke.edu/reference/liveonlineref.htm)

Steve Coffman forecasts that chat-based reference, which now dominates the online reference scene, will disappear in the next few years, when the state of audio and video technologies improve. Though these two experts do not agree on exactly when this comeback will occur, most experts do agree that the comeback is more a matter of *when* than *if* audio and video transmission replace text-based systems.

Some libraries have made attempts to harness video and audio technologies for online reference using existing systems. The University of California at Irvine and the University of Iowa both experimented with video transmission for reference inquiries. In these experiments, a remote site, such as a laboratory or dormitory, was equipped with a video camera and personal computer that enabled users to communicate directly to the reference librarian who had similar hardware at his or her workstation. In 1996 the science librarians at the University of California-Irvine tried using real-time videoconferencing to provide online reference support to student users at various locations across campus. By 1997, they had installed a live video connection between the science reference desk and the College of Medicine lab ½ mile away. They were encouraged by the initial results and planned to extend the service to the computing lab at the medical center library 15 miles away. (Lessick, p. 2)

Other libraries have tried using CU-SeeMe/Netscape Conferencing software to interact with remote users and conduct reference interviews. The University of Michigan Shapiro Undergraduate Library tried using desktop videoconference technologies and CU-SeeMe software. But most of these experiments found the software and equipment were not at a high-quality developmental state. (Sloan, Bernie. 1997. *Service Perspectives for the Digital Library: Remote Reference Services*, www.lis.uiuc.edu/~b-sloan/e-ref.html, as quoted in Lankes, 2001, p. 41)

R. David Lankes writes that the premature use of these technologies "illustrate that technology, always costly, may not deliver on its promises or may condition for unforeseen user expectations that create additional service challenges for librarians." (Lankes, 2001 p. 41) Librarians should not abandon new technologies but should be aware the technologies may present problems and disappointments.

Undaunted by stories of unsuccessful attempts, other libraries, such as the Tulsa Public Library, have tried incorporating live video and audio transmissions into remote kiosk stations. By and large, however, audio and video transmissions remain the exception, rather than the rule, for virtual library reference. As expected improvements in these methods are made, audio and

video communications will dominate online help, especially when combined with text-based assistance. Nancy O'Neill says improved VoIP systems (voice over IP) will be the answer to the difficulties now experienced in conducting an online reference interview. (O'Neill, Nov. 13, 2001)

Software products

Those shopping for an online reference software package will quickly realize that a small number of software products seem to dominate the market. Though many of the products are basically the same in capabilities, the prices can vary widely. The software is usually available through different options: it can be developed locally, purchased outright, licensed from a vendor or accessed through an application service provider. The number of products and combinations is almost limitless, so the following basic information about the most commonly used products for virtual reference are provided as a starting point.

Generally, a software product or application is included if a significant number of libraries are known to be using the product to provide live online reference.

Much of the information about who is using what product was derived from two online inventories of real time reference services LiveRef. One is the list maintained by Gerry McKiernan (www.public.iastate.edu/~CYBERSTACKS/LiveRef.htm), and the other is the Index of Chat Reference Services (pages.prodigy.net/tabo1/chatsoftware.htm) produced by Stephen Francoeur and included at the Web site of "The Teaching Librarian." <http://pages.prodigy.net/tabo1/index.htm>

A helpful product comparison chart created by Phil Blank is available at www.lib.duke.edu/reference/liveonlineref.htm.

Libraries looking for a comprehensive list of all product choices are encouraged to consult these sources, along with those mentioned in the Overview section of this report. Other valuable information sources about products may be found in the articles by Kimmel and Heise and Fagan and Calloway listed in this publication's bibliography.

Before selecting a product, experiment through a real-time demonstration. You can conduct a test in various ways. For systems already in place, pose as a user and post questions to the system. For systems requiring user authentication, the operating library or software vendor will sometimes provide passwords for demonstrations.

Software vendors are eager to provide online demonstrations or free trials. For Web-based services that do not require additional equipment, a short-term trial can be arranged.

As with other types of software products, none is perfect. Waiting for the ideal system means waiting indefinitely. Since all systems are flawed, after investigating all the possibilities, libraries may want to choose the one with the least objectionable features.

In the future, if vendors hear enough complaints, they may amend software problems. In the meantime, the library must adapt and offer the service to patrons willing and eager to take advantage of an online real-time reference service.

When considering the purchase or lease of an online reference software product, first delineate a library's needs from its wants. The article by Kimmel and Heise listed in the bibliography provides an excellent summary of features to look for in a software package.

Many products arrive loaded with bells and whistles that may seem impressive but are unnecessary—and at times distracting. At the minimum, the product should provide the ability to push Web pages and escort the patron through a search. There must be an easy way to communicate with the patron's computer (called a patron interface), and it should not require the user to obtain or do much to his or her computer to communicate with the system (frequently referred to as plug-ins). The system should allow for sending pre-scripted messages. It should notify the librarian of incoming messages, produce and archive transcripts of the session, easily transfer questions among librarians, and allow for easy statistics gathering. To make future growth easy, ensure the system is easily upgradable as new technologies develop.

24/7 Reference

24/7 Reference

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Susan McGlamery, Susan@247ref.org

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Description

24/7 Reference is a set of software tools that enable librarians to provide real-time reference assistance through the Web. With 24/7, librarians can communicate using real time chat, co-browse the Internet, and share files, images and PowerPoint presentations. The product allows the library to use and organize customized, pre-scripted chat messages and Web pages. The software can be customized to integrate it into the library's Web site, transfer requests to local or remote experts, and access reports and statistics on demand.

The software is available in two versions: one version allows for the ability to push Web pages, conduct chats and product reports. Another version of the product is available if placed on the library's own server. A test site and manual are available online at www.247ref.org.

Prices

24/7 Reference prices includes a one-time set-up fee, a training fee, and an annual license fee per seat. The one-time charge for setting up the software is \$4,000 per seat. The annual fee is \$3,600 per seat. The training fee is \$1,000, plus traveling expenses for the company's training staff, usually a round-trip ticket from Los Angeles and one night hotel. (Prices quoted June 6, 2002.)

Libraries using product

24/7 Reference is used by the Metropolitan Cooperative Library System (MCLS), a consortium of multitype libraries in Los Angeles and Orange Counties, Calif. Other libraries using this software are the University of Utah, University of Alberta, Memorial Hall Library in Massachusetts, and ERIC.

Convey's OnDemand

Convey Systems

5605 Carnegie Blvd., Suite 200

Charlotte, NC 28209

877-623-5087

sales@conveysystems.com

www.conveysystems.com

John Ingraham, virtual reference desk project director,
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Description

Convey's OnDemand system provides for video, voice, application and database sharing. Co-browsing of databases and chat are available with this product. With OnDemand a library can place help buttons anywhere, including within a subscription database, use a browser share feature's "pointer" to take control of a patron's keyboard, and secure all data exchanged with a patron. According to Stacey Kimmel the Convey product they evaluated, Convey Pro, "requires the installation of a plug-in the first time the user connect to the system." However, it does "offer some unique and progressive capabilities. It provides many ways to communicate with users: text chat, voice over IP, and one-way digital video." (Kimmel, p. 5)

Prices

OnDemand is available as a subscription or license. Subscriptions are available in two levels: basic and enhanced.

Basic, includes co-browsing, and text chat, and is priced at \$50 a month per seat. Enhanced subscriptions offer digital video, application sharing, voice capability plus everything included in the Basic package and is priced at \$200 per seat monthly, not including additional set-up and training costs.

Licensing of the software is available for the Enhanced level. Prices range from \$1,600-\$2,500, depending on the number of seats. An annual maintenance charge is 15% (price quotes as of Nov. 2001)

Libraries using product

A relative newcomer to the library market, Convey Systems (formerly Videogate) is a five-year-old Internet software company that shifted its product focus from video technology to real-time, Web-enabled customer service. Its OnDemand product has been used by Pace University, the University of Central Florida, and the University of Wisconsin—Madison.

Docutek's Virtual Reference Librarian

Docutek Information Systems, Inc.

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Burlingame, CA 94010

650-286-7300

info@docutek.com

www.docutek.com

Description

Docutek's VRL (Virtual Reference Librarian) allows librarians to chat with patrons online, escort patrons with co-browsing and push Web pages to patrons. Collaboration among library consortia is available as well as queuing features. Using Expert Builder, transcripts can be captured, edited, and entered into an online reference system by category or keywords.

Prices

As of February 2002, annual license fee of \$1,795 allows for unlimited seats at one location. The product has a one-time installation fee of \$1,995. Prices for libraries with multiple locations or having multiple internal systems (such as a medical or law library) are negotiable on an individual basis. Current clients using Docutek's E-Reserve system do not pay the annual installation cost. Consortia discounts are available.

Libraries using product

Long known within the library world for its electronic reserves and document management systems, Docutek's Virtual Reference Librarian is used by more than 30 library systems. Among the libraries on the VRL client list are the University of Missouri-Columbia, Eastern Michigan University, Southwest Tennessee Community College, Swarthmore College, and the University of Toronto.

HumanClick

HumanClick USA Office

3718 Grand Ave., Suite 10

Oakland, CA 94610

510-839-1088

<http://humanclick.com/index.asp>

Description

HumanClick was acquired by LivePerson, Inc., and is no longer available free of charge. For more information on this product, see the LivePerson, Inc., listing in this section. HumanClick was by far the most popular chat software for libraries because it worked well and was free.

Incubator

Virtual Reference Desk Project
Information Institute of Syracuse
621 Skytop Road
Syracuse, NY 13244
800-464-9107

Blythe Bennett, VRD Q and A Coordinator, Blytheb@vrd.org
Customization of Incubator done by ICS (Internet Consulting Services, Inc.)
315-443-1872
info@internetconsult.com

Description

Incubator software is designed for start-up AskA Services that needs a basic software package to begin answering, routing, and answering questions via the Web. A demonstration of the software is available online for academic libraries at askvrd.org/porter, and an Incubator "K-12 Service Demo" can be accessed at askvrd.org/askateacher.

Version 1 of Incubator is currently in use, with Version 2.0 to be released in late spring 2002.

Prices

Version 1 of Incubator is available free of charge to nonprofit service; however, some minimal customization may be necessary in some situations, in which case costs must be borne by the individual services. Training with the software and server space is provided free of charge by the Virtual Reference Desk. Customization costs can be obtained through Internet Consulting Services, Inc. (ICS).

Libraries using product

Incubator software is in use at the Virtual Reference Desk Learning Center, the Ask an East Asian Studies Library (AskEASL), and AskABLE, a disabilities organization in Wisconsin. The National Science Foundation is planning to use the software for two projects in April 2002.

LSSI's Virtual Reference Software

LSSI (Library Systems & Services, LLC)
20250 Century Blvd.
Germantown, MD 20874
800-638-8725
www.lssi.com

Description

LSSI's Virtual Reference Software (VRS) does not require patrons to install any special software to use the service. The product supports multiple browsers, creates transcripts, and allows for patron escorting and scripted responses. The software allows for co-browsing and patron authentication. VRS offers each library full administrative control of its

own separate installation. Training and support are available.

Prices

The price for one full seat per year is \$6,000. For six through 10 seats, the unit price drops to \$5,400, and for 11 or more seats, the price is \$4,800 each. The price for installation and training is a one-time charge of \$9,000. This cost includes customization, two days of onsite staff training, and training manuals, but it does not include travel-related training expenses. (Prices quoted as of Feb. 12, 2002.)

Libraries using product

LSSI claims its software is used by more libraries and more librarians around the world than any other system available. With more than 43 libraries listed as users of this system on the Index of Chat Reference Services Registry system at this time, the claim is arguably correct. Among some of the libraries using this product are CLEVNET Library Consortium, with 56 public libraries in Ohio, the Alliance Library System in Illinois, the Baltimore County Public Library, Massachusetts Institute of Technology, and the University of Guelph (Ontario, Canada).

LiveAssistance

LiveAssistance

www.liveassistance.com

International Business Systems, Inc. (IBSI)

14102 Sullyfield Circle, Suite 150

Chantilly, VA 20151

703-488-3600

J. D. Kathuria, director of operations, 703-488-3981

Description

LiveAssistance provides for chat-based communication and requires no hardware or software installation by the library or downloads or plug-ins by the user. Icons can be easily used with this service. LiveAssistance can be used as a "Web Call Center" through outsourcing or as a software solution within the library. Among product features are: chat history, customizable backgrounds, exit surveys, post chat wrap-up, reports, automatic call distribution, push technology, and chat transferring. The system allows for pre-scripted responses and the retrieval of frequently used URL addresses. According to Stacey Kimmel, the product includes "excellent transcript tracking and searching features, along with "a useful knowledge base that provides a searchable database of answers" that would help librarians respond to common questions. (Kimmel, p. 9)

Pricing

As of February 2002, the educational pricing for LiveAssistance Center includes a one-time setup fee starting at \$500 and \$150 per month per operator seat.

Libraries using product

Since its launch in November 1998, libraries choosing LiveAssistance include the Winter Park Public Library (Fla.), the University of Chicago, Illinois

Institute of Technology, the University of Rochester, and the University of Pennsylvania's Biomedical and Van Pelt Libraries.

LiveHelper

Livehelper.com LLC

1 W. Superior, Suite 2015

Chicago, IL 60610

312-751-3481

www.livehelper.com

Description

LiveHelper offers text chat, with a customizable chat button and call routing on its basic package. More advanced packages offer the ability to push pages and voice chat, among other features. In the evaluation of six online reference products, Stacey Kimmel found that of the products included in the test, LiveHelper was "the only product that clearly informs a user when he or she is in a queue for service. When the service is unavailable, LiveHelper provides the user with the date and time that service resumes." (Kimmel, p.6)

Prices

LiveHelper is available in three package levels: Basic, Pro, and Corporate.

Lehigh University's Stacey Kimmel found that when conducting product evaluations (published in Nov. 2001) Basic LiveHelper software was free. Likewise, as of Dec. 12, 2001, Phil Blank's online reference systems page showed the service as free. But, according to the company's online product information viewed June 2, 2002, the Basic package price per simultaneous operator login per month was \$25. The Pro package price per simultaneous user login per month was \$50. The Corporate package price per simultaneous operator login per month was \$250.

Libraries using product

Libraries known to have used LiveHelper are the Hartford Public Library (Ct.), Gulf Coast Community College (Fla.), Dakota State University (S.D.), and New Westminster Public Library (British Columbia, Canada).

LivePerson, Inc.

LivePerson (previously known as HumanClick)

462 7th Ave., 21st Floor

New York, NY 10018

212-609-4200

www.liveperson.com

Description

LivePerson Pro was the least expensive product and offered the basic services we wanted..." said Jody Condit Fagan and Michele Calloway in their comparison of virtual reference products. (Fagan, p. 5) The product

supports multiple browsers, includes the ability to push Web pages, and does not require any software installation by the user.

LivePerson Pro uses the IP address as the main identifier, enabling anonymous use of the service for those libraries choosing this option. Stacey Kimmel found the attention-grabbing "invite to chat" to be a unique feature of LivePerson Pro that can be used to entice users to try the service. Through this feature a link to the reference service can be sent to anyone who is logged in and monitoring visitors, providing an effective publicity tool for the service.

LivePerson also includes the ability to automatically send scripted messages and create searchable transcripts.

Prices

As of February 2002, LivePerson Pro is \$89.50 per month per concurrent operator. A Corporate Edition, which allows user surveys and more reporting features, is available for \$350 per month. LivePerson Pro has no contracts or set-up fees.

Libraries using product

Because of this company's purchase of HumanClick, a widely used free library software system, LivePerson Pro has a strong presence in libraries that offer live reference services. Among the larger libraries using LivePerson, Inc., are Cornell University (N.Y.), the University of Pennsylvania, King County Library System (Wash.), New York Public Library, University of Massachusetts, Georgetown University (Md.), and the University of Virginia.

NetAgent

Divine

5051 Peachtree Corners Circle

Norcross, GA 30092

866-999-3846

www.divine.com

Daina Gibson, executive administrator, daina.gibson@divine.com, 770-239-4290

Description

NetAgent was a product of eshare communications but has recently been purchased by Divine. NetAgent is a contact center service offering VoIP (voice over IP), chat, and e-mail communication. Co-browsing and the ability to jointly fill out forms are available, along with call routing and transferring. Messages can be pre-scripted and slide show presentations can be sent to users. NetAgent supports multilingual chat in many languages. The system will support six sessions to be handled at once.

Price

As of February 2002, NetAgent is \$3,695 per seat, but more specific pricing information should be obtained directly from the company.

Libraries using product

The two library systems that could be located that are using NetAgent are the University of Florida and NOLA Regional Library System (a consortium of 18 public libraries in Ohio).

NetMeeting

Microsoft Corp.

Microsoft has offices in all major metropolitan areas and the country (and worldwide). To find your local office, go to www.microsoft.com/usa/offices.

www.microsoft.com/windows/netmeeting/home

Description

NetMeeting gives librarians the ability to use the Internet to hold face-to-face conversations with patrons anywhere as long as they also use the same product. According to a posting on Dig_Ref, with Netmeeting you can "get video and audio conference between librarian and patron (one-way or both ways), simple file transfer, chats and desktop sharing (co-browsing). (Feb. 15, 2002) Best of all, for users of Microsoft windows, the product is free. If this offer sounds too good to be true, it may be. Due to firewall problems with this option, users often encounter difficulties when trying to connect from outside a library.

Price

For users of the Microsoft Windows software, the software is free.

Libraries using product

Two libraries known to have tried NetMeeting are Macquarie University and Monash University, both in Australia. Cathy Grant, director of service planning and development at the Pickering Public Library (Ontario, Canada) reports that when she tried the product it worked beautifully in the library; however, firewalls prevented external use with remote patrons.