ADMINISTRATION AND MANAGEMENT

Just below the surface of the buzz about real-time reference software and services lies a quietly nagging question: where are the users? The number of libraries offering these services is growing, yet libraries are reporting lackluster activity levels. Many libraries find that initially their services receive a modest amount of questions, but usage shortly dies down to a trickle. Though initial low statistics need not automatically doom an online project, administrators should be prepared to defend their nascent service in light of these initial statistics.

On the Dig_Ref listserv, one library reported it had been operational for about two months and had answered 400 questions, with 150 of them received in the past two weeks. (Dig_Ref, Dec. 10, 2001) "Staggering" is how another listserv subscriber characterized these statistics. A closer examination of these numbers, however, reveals that, in reality, the library is handling an average of less than seven questions per day, which would be less than one per hour even if not operating a 24-hour service.

Another library reported the following usage statistics for a six-month period (Dig_Ref, Jan. 16, 2002):

Month	# questions
May	214
June	130
July	123
August	99
September	275
October	613
November	437
December	270

Using these statistics, even the highest usage month, October, averages less than 20 inquiries per day, with a six-month average of just 11 per day, again less than one per hour for even a 12-hour day.

The numbers are higher than those of another virtual reference provider, who reported on the same listserv that its library received less than one request a day. But the library still considers the service a success because it is able to reach new patrons and improve its image by showing the library as techno-savvy.

The May/June 2002 Library Technology Reports, *"Strategies for Measuring and Implementing E-Use" by librarian Marshall Breeding offers strategies and how-to information for assessing how many patrons are using electronic services.*

Reference librarian Saundra Lipton reports on a popular, but little-used trial reference service at the University of Calgary (Canada) Library.

"While users of the service and staff participating in the trial agreed that this is a valuable service, the level of demand was far too low to justify the continuation of real-time electronic reference as a separate service." (Lipton, p. 213) In discussing the award-winning Morris County (N.J.) Library's electronic reference service, academic and public reference librarian Sara K. Weissman reports what many other libraries have reported—that "the response to e-mail reference is not overwhelming and libraries simply have to adjust as they go." (as quoted in Cassell, p. 64)

The previous examples can be juxtaposed against the activity of the national AskERIC service, which began in 1997. This question-answer service, which provides education information to teachers, librarians, counselors, administrators, parents, and others, has seen an increase from 151 questions per week to 868 questions per week. Much of this growth was due to finding the right publicity mix, as discussed in the marketing section at the end of this chapter. In response to this overwhelming growth, AskERIC has increased staff and improved processes. (Lankes and Kasowitz, p. 175)

All these statistics lead to another question about live online reference—how do librarians measure its success? Does all the excitement generated about the service translate into a viable, sustainable service?

24-hour live online reference service

One library dubbed its around-the-clock 7-day-a-week library online service, "Anywhere, Anytime Reference"—a library that never closes, that is always ready for the knowledge-seekers whenever they feel like seeking. What could be a better definition for library service? For many librarians, anywhere, anytime service is the Holy Grail of virtual reference, a service they hope to implement just as soon as they can figure out how.

But for some librarians, 24/7 library service is an unwelcome fad, one they hope withers and fades fast. These detractors cite low usage statistics to support their lack of enthusiasm for this service option. Pointing to the underwhelming public response to library service in the wee hours of the morning, many feel 24-hour reference service simply drains the already limited library resources from the peak usage times.

Usage statistics

How much is 24/7 reference service used beyond traditional library hours?

University of Illinois' senior library information systems coordinator Bernie Sloan reports that during October 2001, 12.5% of the questions of the Alliance (Ill.) Library System's Ready for Reference Service were received between 10 p.m. and 8 a.m. Of that number 10.8% were sent between the hours of 10 p.m. and 2 a.m. Libraries considering this service may be interested in the following hourly breakdown:

Hour	# questions
10 p.m. – 11 p.m.	12
11 p.m. – 12 a.m.	7
12 a.m. – 1 a.m.	9
1 a.m. – 2 a.m.	5

2 a.m. – 3 a.m.	3
3 a.m. – 4 a.m.	0
4 a.m. – 5 a.m.	0
5 a.m. – 6 a.m.	1
6 a.m. – 7 a.m.	1
7 a.m. – 8 a.m.	0

(Bernie Sloan posting on Dig_Ref listerv (Dig_Ref@LISTSERV.Syr.Edu, Dec. 6, 2001)

Another virtual library reference service found that its hourly breakdown was as follows:

Hour	**# questions**
4 p.m. –5 p.m.	1
5 p.m. – 6 p.m.	5
6 p.m. – 7 p.m.	22
7 p.m. – 8 p.m.	16
8 p.m. – 9 p.m.	44
9 p.m. – 10 p.m.	61
10 p.m. – 11 p.m.	50
11 p.m. – 12 a.m.	37
12 a.m. – 1 a.m.	6

Author and consultant Anne Lipow says if a live online service is not available 24 hours, it will not be used. Predictability is essential for the public to use the service. Echoing that sentiment, Patricia Hoskins, the business information specialist at James J. Hill Library, says offering live online reference service will not meet with success if the service is offered only during selected hours. Her library launched live online reference service as a fully operational service available during the library's open hours.

Staffing 24/7

Libraries that offer real-time reference service around-the-clock can experiment with various staffing strategies. Among the most popular methods are:

- Contracting with a vendor to provide off-peak reference service
- Hiring librarians to work from home
- Partnering with another library or libraries in different time zones to share the load.

Contracting with a vendor for off-peak hours

Several libraries are choosing to outsource off-peak-hour reference service to private vendors. This option is especially attractive for libraries using the LSSI software because they can have the company's live librarians take over the reference desk when the library closes.

Libraries wishing to outsource the entire management of the library also may do so using LSSI (www.lssi.com). For instance, the Lancaster, Texas, library is operated and managed by Library Systems & Service, LLC.

This type of vendor-provided virtual reference is available through the LSSI Web Reference Center, which is staffed by librarians who hold an MLS or MLIS degree and paraprofessionals with a bachelor's degree and often a master's degree.

LSSI describes its reference service as follows:

"LSSI Web Reference Center operates around the clock. We respond to reference questions posed by the patrons of our client libraries. We do this when the client library is closed or otherwise unable to respond to questions from its patrons. Our goal is to provide the same level of service the patron would receive if she or he were in the library working with on-site staff." (LSSI Web Reference Center, e-mail communication, Jan. 24, 2002.)

Pricing for the Web Reference Center service is based on the numbers of questions provided within a 12-month period.

Prices for reference services are:

600-reference-question bundle	$9,000
1,200-reference-question bundle	$14,400
3,600-reference-question bundle	$38,700

LSSI's Web Reference Service, www.lssi.com

The service is available only to clients who have licensed a minimum of one full seat. Many of the software products base their fees on seats, which are the numbers of people actually providing the service at one time. Though sometimes referred to as agents in the literature, libraries can calculate these fees by counting the number of librarians that will simultaneously provide online service. (See software products listed in Chapter 3 for details.)

Hiring librarians to work from home

When patrons contact the online reference service of the Keystone Library Network (based at Mansfield University, Mansfield, Pa.), they may be communicating with a librarian wearing pajamas because some of the librarians answering online reference service questions are at home. Working in four-hour shifts, these home-based librarians respond to incoming questions via phone and computer. Providing library reference without the physical resources of a library has not posed a problem for home-based reference, says Larry Schankman, coordinator of the Keystone Library Network project's virtual information desk. He estimates only 3% of the system's reference queries require the use of print resources. (Schankman, personal communication, Feb. 22, 2002)

In the Keystone arrangement, the library provides each home-based librarian with a DSL or cable connection. The librarians must provide their own computer, but the library provides technical support if needed. The remote librarians receive calls electronically and through remote call forwarding from the library's toll-free number.

For a short time the library experimented with audio and video online service, but Schankman says, "the librarians did not really like the video part." As Schankman gingerly put it, "Perhaps because they are dressed rather casually." For now service is limited to phone and chat. (Schankman, personal communication, Feb. 22, 2002)

Some librarians work from home in addition to their in-library hours, and others are employed part-time specifically to provide this service.

"When we began offering live reference several years ago, the service was based in the library," Schankman says. "We were doing it until 1 in the morning. Some of the roads can get pretty treacherous around here in the winter. The librarians asked if they could do this from home. Originally we said 'no way.' But after thinking about it I decided we needed to be flexible…. Flexibility in this—and all aspects of live online reference—seems to be key to making this work."

Many librarians, like those at the Keystone Library Network working from home, report great advantages to this work alternative. Susanne Bjorner, who describes herself as a self-employed information professional, finds the work provides rewards that are "more important, at least for now, than money: flexibility in hours or location, professional ideals, the challenge of something new." (Bjorner, p.145) Freelance library work provides her with the knowledge and competence that enables her to define her skills, analyze a market, and sell her value to an organization. You can always find or create a job for yourself after undertaking this type of work, she says. (Bjorner, p. 145)

As Bjorner notes, money is probably not the biggest attraction to providing home-based reference service. No known figures are available on such salaries. The American Library Association (ALA) does not include part-time or freelance employment in their annual salary survey, says ALA's director of research and statistics Mary Jo Lynch; however, anecdotal evidence suggests librarians providing home-based service earn significantly less than full-time, library-based librarians. The average salary for librarians who do not supervise (which could conceivably include most reference librarians) was $42,704 in 2001 (Lynch, Mary Jo, p. 64), which translates into an hourly rate of $23.46 based on a 35-hour work week. A random sampling of libraries conducted in January 2002 revealed hourly part-time librarian salaries of $11.38, $13.20, and $15.06. Schankman reports the home-based Keystone Network librarians are paid the same as the on-site part-time librarians. (Schankman, personal communication, Feb. 22, 2002.)

Library partnering for off-peak hours

One of the best ways for libraries to both partner with another institution and gain reference coverage during off-peak hours is to team up with a library in a different time zone. The Los Angeles and Orange Counties Multitype 24/7 Reference Project partnered with a library in Massachusetts to take advantage of their differing time zones. The 5 a.m. time slot in California is handled by the public library in Andover, Mass., where the time is 8 a.m. (Hyman, Nov. 12, 2001)

The Library of Congress's Collaborative Digital Reference Service (CDRS) networked reference desks all over the world to provide after-hours service. With CDRS "a patron in New York at 2 a.m. could talk to a reference specialist in Australia." (Lankes, 2000, p 7.) As of June 2002, CDRS has been replaced by QuestionPoint, a collaborative service between LOC and OCLC.

At the Keystone Library Network the same partnering idea is used to provide virtual reference service during slow periods. One library partner uses the virtual reference service on Saturdays between 1 to 4 p.m. (typically a slow period for the library). During this time the reference desk at the participating library is staffed by a student assistant with a live audio and video hookup to the librarian working from home. When the student assistant is asked a sophisticated question, the student contacts the librarian at home who answers the reference question virtually.

Libraries interested in pursuing the option of partnering across time zones should consult the registries of virtual reference services provided in Chapter 1. For international libraries, they can consult the American Library Association (ALA) and International Federation of Library Associations and Institutions (IFLA). Dr. Gulten S. Wagner at the School of Computer and Information Science, Edith Cowan University, Perth, Western Australia 6050 Australia, g.wagner@cowan.edu.au, has conducted extensive research on the status of digital reference service in Australia and New Zealand.

Human resource issues

"Does it take a village to start a live reference service?" Susan McGlamery and Nancy O'Neill rhetorically asked in a presentation on virtual reference. (McGlamery and O'Neill, Nov. 13, 2001) For many libraries, the answer is a resounding *yes*.

In some ways beginning online reference requires *all* members of the library village. As librarian Eugene L. Wiemers notes, "an institution-wide view of the…human resources is required to make a digital environment real." As he sees it, "Without the content, without the network, without the smart people to make it work, without the people in the library and information services organizations to teach people how to use it—without all of this, digitized library service will be a failure." (Wiemers, p. 30)

For other libraries, the crux is not the members of the village, but the village elders, a.k.a. the administrators, who must support the project to make live online reference a success. The commitment from administrators is crucial, says Nancy O'Neill, who listed administrative support as one of her most important secrets of success. (O'Neill, Nov. 13, 2001) Larry Nesbit echoes this sentiment, "You must get administrators on board if this is going to work." (Nesbit, Nov. 12, 2001)

Human aspects of online reference

One of the greatest challenges to library administrators planning virtual reference—and reference librarians providing the service—is to maintain the human side of reference within an online environment. As library science professor Karl Bridges says, "Whether libraries have actual reference desks or some other derivative form of service point, we still need to serve people on a face-to-face basis….That interaction between librarian and student is still an important part of our identity. That's why some of the emerging trends in librarianship—such as virtual libraries modeled on Google or Yahoo—are so frightening. There's no doubt that, as a business model, these kinds of services are more efficient in terms of time and money: as a model for human interactions, however, they are horrible." (Bridges, p. 53).

Few people would choose to interact with HAL from the movie *2001* at the reference desk, especially if they could be talking with Katharine Hepburn from *Desk Set* instead. No matter how sophisticated the technology, the person—at least for now—is still preferable. Just think of automated switchboards that tell you to dial 1 for a directory of staff, dial 2 for hours, and 3 for directions. As research has shown, "customer satisfaction with automated telephone systems remains low." (Peterson, p. 40)

The same is true for live online reference. The system must be constructed to facilitate, and not replace, the human connection of librarian to patron.

Designers of real-time online reference services are advised to remember that, according to ALA-approved guidelines for reference service, successful reference transactions are assisted by the following observable behaviors: "approachability, interest, listening/inquiring, searching, and follow-up activities." (ALA, 1996, as quoted in Peterson, p. 39) Librarians are still being taught "attributes of warmth, sensitivity, and friendliness through encouragement of behaviors including smiling, eye contact, nodding, and other interpersonal relationship skills." (Jennerich and Jennerich, 1997 as quoted in Peterson, p. 38) The challenge for real-time reference services is to maintain human qualities within a virtual environment.

Lack of staff

"We don't have the staff to do this," is an oft-repeated refrain. (O'Neill, Nov. 13, 2001) "[T]he original goal of technology to reduce staff size has not been realized. Instead, technology has brought about a redeployment of staff…" (Cassell, p. 7), but not a reduction in the need for the staff currently available to provide service.

Lack of staff is one of the most crucial problems for online reference to address. "While technical infrastructure and administrative details will be difficult to work out, the real question is: is there unused staff time in the current library-based reference service, and if so, will organizations be willing to share it?" (Lankes, 2000, p. 7)

Many librarians say they can barely provide adequate service to in-library patrons, let alone add to their burden with another service point. Especially because librarians are now attempting to provide "both quality reference service and technical assistance" to computer users in the library, they "have found themselves overwhelmed." (Cassell, p. 7) Asking librarians to increase their service population to include remote users and add the service at a place other than the reference desk seems an unrealistic demand on resources.

Additional staff will, indeed, be necessary for a fully functioning virtual reference service if Steve Coffman's calculations of predicted staffing requirements are to be believed. Using an algorithm known as Erlang C, Coffman estimates that for a virtual reference service averaging 10 calls per hour "it will take 5 full-time librarians to handle the traffic…" (Coffman, February 2002 and Dig_Ref listserv, Feb. 16, 2002)

LSSI provides a free online "Workforce Calculator" produced by Preferred Solutions for libraries to calculate their staffing needs. Based on numbers used by professional call centers, the calculator guides the user through the information needed to predict the numbers of librarians needed to provide a real-time library service.

Even without anywhere near the number of librarians needed, libraries are proceeding with the service. As was cited earlier, fear of the consequences of *not* offering online reference drives some. Given the trend of decreasing reference usage, many libraries worry that if they do not offer online reference now, they will pay a bigger price later as library users vote with their feet and seek assistance elsewhere.

A free online workforce calculator, www.lssi.com/virtual/research.

To keep library users within the service area of the library, many libraries are diving in, carefully using their limited staff. Some libraries are using only professional librarians to staff this new service; others augment the staff with paraprofessionals and subject specialists. Tiered reference, beginning with questions first being received by paraprofessionals and then elevated to librarians or subject specialists, also is being used to staff online reference.

Online reference at the reference desk?

Once you decide to offer live online reference service, one of the most fundamental questions to address is where the librarian is *physically* located. Since the service is virtual, the service could be provided from anywhere. Should the librarian be at the reference desk, an office, or in the library at all?

Because only limited research on operational aspects of live online reference service exists, knowing how many of these services are situated outside libraries is difficult. (Several studies are underway, though.) From a random sampling of existing services, the preferred central locus of the service is still within the library, especially during regular library hours. Often a library-based service is augmented with after-hours service provided outside the library, but the services are mainly based in and provided from the library. The placement of these sources on the library premises matters.

Reference service is traditionally offered from a reference desk. When libraries added e-mail access to reference services, the e-mailed questions were often received and responded to from the reference desk. Many administrators assume the most logical place to offer online reference also is from the desk, but librarians who have attempted this combination of services caution against this location.

"Providing virtual reference at a reference desk is impossible," says Susan McGlamery. (Nov. 14, 2001) "You cannot answer a reference question with someone standing in front of you while the phone is ringing and the computer bonging."

Most libraries give priority to walk-in patrons, rather than remote users. This practice is laudable from a customer service perspective—as anyone who has ever stood before a store clerk chatting on the phone can attest. Real-time reference, though, comes with a sense of urgency. Expecting a librarian to simultaneously serve in-library and remote populations is unrealistic. (The standard benchmark used by retail call centers requires incoming calls to be answered in 20 seconds or less, which is difficult at a busy reference desk.)

Incoming e-mail requests that are not conducted in real-time usually do not pose the same problem as live online services (e-mail requests, too, can be difficult during peak times). But real-time questions are fundamentally different and should be handled differently.

Most successful services provide real-time online reference away from the public service area. Some libraries with a separate telephone reference service locate the online reference desk with that service, which seems to work better than on the floor of the library.

In other libraries, the service is parceled out to individual participating librarians, who monitor and respond to questions during their off-desk hours. This alternative, however, requires each librarian to have a high-

speed connection to the Internet. In some libraries the high-level access required by the software is available only at in-house access stations. For libraries offering fax service in conjunction with online assistance, the lack of fax equipment at each librarian's office also can be problematic. Along with these equipment requirements, other staff issues arise when placing online reference at a nonpublic-service location.

Waiting for the user

Libraries that add online reference service to their off-duty librarians' hours must ask: what does the librarian do while waiting for a question? As was mentioned earlier, especially in the beginning of an online reference service, usage traffic is not overwhelming. One library found that, after several months of service, they were still receiving roughly one question a day. Taking an overworked librarian's hours to sit before a blank computer all day seems folly—and will lead to staff resentment.

Some libraries allow the off-desk, virtual librarian to leave the computer during their online shift but still tether them to the machine via an electronic device that alerts them to incoming messages.

Susan McGlamery from the 24/7 Reference Project reports experimenting with pagers in the library that automatically notified a librarian's beeper when messages were received. But the lag time between message and page was too long to be effective. Instead, the library stumbled on an ideal solution: baby monitors. With one monitor stationed near the bonging computer and the librarian on duty roaming with the receiving monitor, they were able to respond to incoming questions immediately without waiting around in front of the receiving computer. Advances in paging and wireless communications should offer additional solutions to this problem. For now, baby monitors seem to provide a workable, cost-effective solution.

The frantic librarian

Another live online reference service human resources issue that administrators must face is how much activity the service can support. One software package boasts it is equipped to handle as many as eight active chat windows. This feat may be technologically impressive, but from a human standpoint, it seems a less-than-effective selling point. Who wants to do eight things at once? One library reported that, though the software supported multiple questions being answered at once, "trying to deal with two clients at once was the maximum service capacity for each staff member." (Lipton, p. 211)

Anecdotal evidence suggests that an ability to handle many users at once may be easier for younger librarians who are accustomed to interacting quickly in an electronic mode. Watching her teenager chat online, Kelly Broughton noticed her daughter was multitasking. Her daughter was listening to music, chatting in two or three different conversations, and surfing the Web. "She was doing other things in between thoughts in one particular conversation, and if she had another thought before she received her friend's reply, she just went ahead and sent it…It certainly is not natural to us…." (Broughton, p. 28) Learning to communicate in a multitasking environment is key training that library administrators need to provide to staff not accustomed to this form of communication.

Along with the quickened pace, online reference also is encumbered with a sense of dire consequences if not performed immediately. One online reference software package routes questions to the next librarian if the first

does not respond within 20 seconds, putting pressure on the receiving librarian to respond immediately. A few libraries have adopted actual time limits for the live reference interactions. One library's draft policy states "Our objective is an average transaction length of 7-15 minutes, while another online service stipulates that 'ready reference questions' are expected to be answered in less than 10 minutes." (Dig_Ref, Dec. 18, 2001)

Some libraries have even adopted military language to describe various aspects of online reference. *Triage* is what one library calls its deluge of requests, which they handle through a policy of answering the easy ones first through a quick, scripted response. At another library, staff announces, "Incoming!" when messages are received, bringing to mind images of MASH units scurrying to their stations to tend the wounded.

Special staff skills

Most librarians who have done real-time online reference say certain qualities and traits make a person suited for this type of reference. As Susan McGlamery stated, those pursing online reference should be able to type and type quickly. An ability to "copy, page, close/open/reduce windows" quickly and an ability to work in multiple windows are essential skills. McGlamery's opinions also are reinforced by respondents on the Dig-Ref listerv. Time and again people repeat that real-time reference librarians must be able to *work quickly*. In addition to speed, strong traditional reference skills are still valued in an online environment. (McGlamery, Nov. 14, 2001, and Dig_Ref, Dec. 15, 2001)

Staff enthusiasm

Although many administrators are excited about the possibilities of online reference, some librarians lack enthusiasm. Some libraries that have experimented with the service found that, though many staff members are eager for what they see as the future of librarianship, others approach online reference with hesitation, and some with outright hostility.

For instance, one library was forced to offer real-time reference using part-time librarians from home because the full-time library staff was reluctant to become involved. Another university offering online reference service found that of the 30 librarians involved in the new service, two angry staff opposed the service. The reaction of these two made the service so difficult to manage, it almost fell apart. For a short time the service was discontinued, then reconstituted with a smaller number of committed staff. The program administrator reports the seven librarians on the team are happy about it now.

The experience of these two library systems (both chose to remain anonymous) is not unusual. System designers should anticipate some negative staff reactions. Staff buy-in is imperative, so remember to address the reactions of all staff members—including the naysayers—for the service to succeed.

One library that experimented with an electronic reference service found that "the success of this trial was directly attributable to the dedication and support of reference staff participating…as well as to the expertise and support provided by staff" from the supporting technology unit. (Lipton, p. 209)

One program administrator at an academic library consortium found that some librarians did not see a need for virtual reference. These librarians asked: Who really needs this? Who is our target market? Why are we doing this? These questions must be clearly addressed before staff members will be motivated to embrace this new technology.

Library administrators who ignore these attitudes do so at their own peril. Though some library professionals claim *administrative* commitment is needed to make virtual reference a success, others believe *staff* buy-in and motivation makes or breaks the new service.

Procedures manual

Even though online reference service is electronically based, a great need for printed material concerning the service still exists. Libraries must have a printed policy manual with guidelines and expected levels of service. When service is offered collaboratively, policy manuals are crucial to outline minimum standards, procedures for accepting and rejecting questions, and how to handle local questions. This information can be available online but also provide a printed copy to all library staff involved.

Handling change stress

"Because of today's accelerating pace of change and the uncertainty that accompanies it, many people feel stressed," writes University of Minnesota interim director Peggy Johnson in an aptly titled article "Learning to Cha-Cha with Change." (Johnson, p. 138). For both libraries and the people who work in them, finding a way to address the unprecedented rate of change is necessary for the well-being of personnel and the institution. To help library administrators and librarians address unprecedented, unrelenting change, the following survival tips are provided. These suggestions are taken from Stanford University Library's Karen N. Nagy's chapter "Managing New Initiatives" published in the book *Virtually Yours* and adapted for application for online reference service.

"1. Work from principles or values.

2. Feeling as if we are 'making it up as we go along' is OK.

3. Reallocation of resources is and will continue to be a way of life.

4. Think through the kinds of expertise you need to get a certain task or initiative accomplished.

5. Allow no sacred cows.

6. Stopping doing things is harder than you think.

7. Educate staff on the broader pictures in your organization.

8. Understand that people are worried about their jobs and their livelihood.

9. Be tolerant of different levels of readiness among staff members.

10. Don't use euphemisms such as downsizing or reallocation for staff cuts.

11. Remember: *training, training, training.*

12. Trust librarians to behave like librarians.

13. Help the user understand that trade-offs are inherent in difficult decisions.
14. Unrealistic and overly optimistic proposals are dangerous.
15. You can trust the administration to behave like the administration.
16. Leverage resources…with vendors, donors, other service providers or other libraries.
17. Avoid foolish consistency.
18. Use technology to get things done in different ways.
19. Consider using consultants.
20. Allow the process of change to be flexible."

(Nagy, Karen N., "Managing New Initiatives," in *Virtually Yours,* pp. 133-135.)

Training for live online reference service

Training librarians is key to planning and operating a live online reference service. But this training is one of the most neglected aspects of the inauguration of this new service. As Nancy O'Neill pointed out in a presentation at the Annual Digital Reference Conference, "a good reference librarian does not always equal a good digital librarian." (O'Neill, Nov. 13, 2001)

"The Shazam Effect" has created an overwhelming need for training, says Charles R. McClure. (McClure, Nov. 11, 2001) By way of explanation, he dramatically circles his hands in front of himself, thrusts them at the listener and shouts, "Shazam, you are a digital reference librarian!" He means that librarians are instantly expected to become effective providers of online assistance without ever being provided adequate training for the task.

"There is a lot of angst out there," says McClure about the training deficit. Librarians know they are insufficiently prepared to provide good online service but forced to deliver it anyway. Many librarians are sent to do online reference with little more than a password and a prayer, which partly explains why many are reluctant to embrace this new delivery method.

Even when training is available, too often it emphasizes the technical aspects of the software, neglecting the more nuanced problems of how to be an effective digital reference librarian. "The digital reference field involves innovative uses of technology, new aspects of reference and educational service (i.e., virtual vs. face-to-face), and other situations that demand a special set of skills." (Lankes and Kasowitz, 1998, p. 76) For many librarians, however, these new skills are not part of their current reference repertoire, nor part of any organized training program.

Online interviewing and chat skills especially require special training. A librarian should not be plunked down in front of a computer screen teeming with messages and expected to be able to efficiently chat with the patrons waiting on the other end of the line. A unique vocabulary, etiquette, and set of behaviors must be mastered before a person can comfortably chat online. Unfortunately, too often the librarian is thrown into a chat session without being provided any guidance or chances to experiment.

Another crucial need, often repeated as a plea from those providing real-time reference, is for instruction in conducting the reference interview

online. "The Reference interview remains the biggest challenge that is still on the plate," says professor R. David Lankes, who is also the founder of Virtual Reference Desk (Lankes, Nov. 12, 2001)

The online reference interview can be like a bad case of telephone tag, with one party typing something, waiting for an explanation, typing in a follow-up question, waiting, and so forth. The special skills needed to exchange information through this instantaneous medium must be acquired through an extensive training program. Too often this training is either not available or provided too late to be effective.

Who should be trained?

Most online reference services concentrate on training the front-line question-receivers since they are the ones who directly work with the users. But others involved in the day-to-day operations of online service also require training in policies and procedures, such as question routing, monitoring information specialists' responses, and Web site development and maintenance. These support personnel may include technical support staff, clerical personnel, administrators, public relations staff, and so on. Because of these different types and levels of employees, many types of training programs may be needed. (Lankes and Kasowitz, 1998, p. 78-81)

What to train for

Once training recipients have been identified, the library must determine what each person needs to learn to carry out his or her responsibilities. The answer should form the basis of the content of the training.

To learn what each person needs to know, begin with asking the person to be trained. (Often this source of information is ignored.) Probably better than anyone else, people know what skills, knowledge, and information they need to acquire to do their job. If librarians know their responses will not reflect negatively on them (admitting a lack of skills may be difficult for some), these responses can guide the training content.

Some libraries use a formal survey to elicit specific training needs. The *AskA Starter Kit* provides a sample pre-training questionnaire for new experts that libraries could tailor.

Especially pertinent are two questions from this survey:

- "What skills would you like to acquire (or sharpen) in preparing to carry out your responsibilities…"?
- "What information would be helpful to you to know in preparing to carry out your responsibilities"? (Lankes and Kasowitz, 1998, p. 86)

Another way to obtain information about specific training needs is to carefully observe the staff performing (or *not* performing) the tasks required. This method is especially good for novice online reference providers. Supervisors unobtrusively watching the service in action will be able to identify behaviors and knowledge needed to more effectively provide real-time reference service. Careful observation also should reveal the level of comfort staff exhibit about this technology, which could establish direction for the training curriculum.

Some libraries fold the tasks and skills needed by staff into a skill-based checklist that forms the basis and subsequent evaluation of the training program. An example of such a checklist is available in the *AskA Starter Kit.*

Other libraries may prefer to translate the skill set needed into stated goals. For instance, a goal could be "Support staff member will review and organize incoming questions," or "Librarians will respond to incoming questions within five minutes." These goals can be used to evaluate the performance of the trainee before and after the training session.

The *AskA Starter Kit* by R. David Lankes and Abby S. Kasowitz (Syracuse, N.Y.: ERIC Clearninghouse on Information & Technology, 1998, pp. 189-197) provides detailed information on many of these methods.

Who will do the training?

After you identify the staff to be trained and the content to be covered, locate the source of training. Thanks to the outpouring of interest in online reference, several sources for training in live online reference skills are cropping up. Most of the major virtual reference software products include training with the service (often at an additional charge). Vendor-provided training usually focuses on the technical aspects of the products such as how to send a scripted message or push a Web site. Others sometimes cover online reference skill training within their sessions. The vendor trainers are often librarians who have used their products in library settings, so they are familiar with the on-the-job needs of librarians.

In response to librarian interest, training opportunities, workshops, and library conferences on effective online reference are proliferating. One of the best conferences on this subject is the annual Virtual Reference Desk Digital Reference Conference, which features both technical demonstrations of software and information on all aspects of online reference. Now in its third year, the event has moved from investigating how to establish online reference to an emphasis on effectively providing the service. At the November 2001 conference one of the programming tracks, "Training and Education for Digital Reference" included topics such as interviewing virtual users, integrating virtual reference into library workflow, and teaching virtual reference skills.

Virtual Reference Desk Digital Reference Conference, www.vrd.org

The emphasis on training for online reference also is reflected within several ALA divisions. Reference and User Services Association (RUSA) and Association of College and Research Libraries (ACRL) have sponsored virtual reference training sessions. At the 2002 ALA Midwinter Conference, several Machine-Assisted Reference Section (MARS) committees sponsored a forum entitled "Care and Feeding of the Virtual Librarian," a discussion on training and support for chat reference staff. One of the key concerns of this discussion was how to help librarians make the transition from regular to virtual reference and ensure quality service.

The Virtual Reference Desk Project also offers custom training solutions and materials on providing human-mediated Web-based information services.

For more information on courses, workshops, and individualized training sessions, e-mail Virtual Reference Desk at vrd@vrd.org. Local library schools also provide training in online reference skills. Many library science schools provide—and in some cases require—instruction in providing reference service in the online environment. Customized training by library science faculty also may be available through your local school of library and information science.

Evaluating training

No matter where the training is obtained, include an evaluation for your staff. A checklist or list of formally stated educational goals lets the administrator know if the training has been successful. Exercises incorporating the skills included in the training also can provide feedback about a program's effectiveness. For instance, a trial online reference session can be provided before and after a training session. The transcript of both sessions can be analyzed to demonstrate the skills gained through the session.

Training follow up

The training has been held, the evaluation was laudatory, and the handout material was plentiful. Is that the end of the subject? Hardly.

Even the most astute student learning from the best teacher still needs follow-up instruction after training. Especially with hands-on computer training, going back to the office and performing the tasks learned are the best methods to reinforce the training. Assigning exercises shortly after the formal session or practice questions are recommended follow-up. Also provide support staff with an opportunity to manipulate the questions and answers before the service goes live.

Because the service is electronic, printed materials are rarely available. Having printed handouts of instructions, policies, procedures, and key points is invaluable after a training session. Provide these handouts whenever possible following the formal training.

Trainees also need administrative support. "No matter how well the trainee…is performing," let the person know someone is "available for help on an ongoing basis. This [ongoing help availability] communicates to staff that the service is always looking to improve and that individual attention and support are available when needed." (Lankes and Kasowitz, 1998, p. 119)

Along with providing this support, the training designer should begin planning for the next session. Training program development is an evolving process.

The only statement that can be said about live online reference of the future is that it will be different from live online reference of today. Change is guaranteed and training is needed to communicate these changes to staff. Rather than looking at training as an event, view it as a process. Training must constantly respond to needs as they are identified, in the present and the future.

Evaluation and standards

What one word should serve as the foundation for any online reference evaluation?

Surveys? Focus groups? Feedback forms?

The correct answer is *goals*.

Unfortunately, goals are seldom used with, let alone as a foundation for, an evaluation program. But they should be. According to virtual reference experts, goals should be the beginning, middle, and ending of an effective assessment program. "The primary reason for conducting a formal evaluation of AskA services [and online digital reference] is to ensure that goals of the service and organization are being met most efficiently and effectively." (Lankes and Kasowitz, 1998, p. 180) As that old adage goes, "if you don't know where you are going, any road will get you there."

That proverb holds true for virtual online reference. If you don't know what you are trying to accomplish through the service, you won't know when you have done it and when you have not. An effective evaluation program should measure quality and answer questions such as, "To what extent is the service achieving its goals?" (Lankes and Kasowitz, 1998, p. 181)

Before establishing any evaluation program, carefully articulate an online reference service's goals and objectives. If the goals and objectives are clear, the assessment needs become transparent.

Well-stated goals reveal "what you really want to need to learn as a result of the evaluation project.… [Y]ou must have firm goals in mind for the project, know what audience or audiences it is intended for, and then determine what data are needed for the purpose/goals you have stated." (Gregory, p. 62)

All too often libraries craft, publicize, and launch new services such as real-time reference without any preplanning about their evaluation. In some instances the evaluation component is forgotten entirely. "It is very easy to get caught up in the daily operations of question answering, resource building, expert recruiting, etc. and to take for granted that the service is adequately meeting user needs and is being conducted in the most cost- and resource-efficient manner." (Lankes and Kasowitz, 1998, p. 180)

In other instances evaluation is not forgotten by the library but is addressed after the service is in place. A survey or two then is distributed, almost as an afterthought, with the hope the surveys will reveal how the service is performing. But such a device reveals little about the effectiveness or efficiency of the service. "Simply collecting data for the purpose of collecting data will not result in useful information.… You may collect so many data that it is impossible to see the forest for the individual trees. Before you engage in data collection, carefully determine what data are really required." (Gregory, p. 62)

To help libraries think about goals and evaluation before a service is inaugurated, library science professor Vicki L. Gregory provides a useful three-page form to use to determine exactly what an online library project is intended to accomplish, and how to best determine the attainment of that goal in her book, *Selecting and Managing Electronic Resources* (pp.64-66).

Why evaluate?

Along with knowing when goals are met, other reasons to evaluate an online real-time reference project exist. Three basic motives for evaluating reference services are to:

1. Improve services to users.
2. Improve processes (efficiency).
3. Justify benefits of service to decision makers (such as funders).

(Allen, B. (1995) as quoted in Lankes and Kasowitz, p. 181)

For many libraries, the low rate of incoming questions is the primary motivator to begin a formal evaluation of the service. "We built it—why didn't they come?" is the all-too-often-heard refrain about a new online reference service.

Libraries often fall into what library science professor Darlene E. Weingand calls the "build a better mousetrap" school of promotion. They may dream up a new service and launch it amid much noise and fanfare but never bother to find out from the users if the users want it. Only after the public responds—or does not respond—do they turn to an assessment tool to find out why the service is not being used. Had they consulted the public before, instead of after designing the service,

they could have saved themselves significant time and expense. (Weingand, p. 132)

Some libraries turn to assessment when a new online service is used, but glitches are reported with the initial venture. For instance, users logging into library systems from America Online (AOL) sometimes encounter difficulty due to AOL's internal firewalls. Formal evaluation of users of the new service should help reveal such problems.

On the other hand, evaluation also is an excellent tool for demonstrating the success of this service to authorities. In some cases documentation that a service is working and is well-received by users is required for the continuation of the service. A well-constructed evaluation should tell library management and funding authorities crucial information about the positive aspects of a new service.

A close observation of reference staff also may motivate administrators to conduct a formal evaluation program. As with traditional reference, the quality of reference responses is important to evaluate—especially in an online reference environment, since the frantic pace of real-time reference staff burnout can be a problem. An evaluation of individual librarians can reveal the quality and quantity of their responses, as well as the prevailing service orientation of each staff member. Whether a librarian is beginning to exhibit symptoms of burnout should be obvious through these responses.

Evaluation also obtains specific information about the service. Effectively done, evaluation sheds light on the key demographics of digital reference users, the frequency and type of digital use, the cost of digital reference, and the effect of digital reference on the library organization and other staff. (McClure, Nov. 11, 2001)

One happy by-product of an effective reference service evaluation is the recognition of ancillary improvements needed. For instance, at one Ivy League college library, the evaluation revealed that many of the queries concerned how to access conference proceedings online. As a result the library redesigned access to this resource so users could locate it easily. Other libraries began offering additional information on how to cite references after their formal service evaluation uncovered many questions concerning this topic.

Online versus traditional reference evaluation

Those people with experience evaluating traditional reference service may notice similarities between online and in-person reference service. In fact, the reasons for evaluating online reference are similar to reasons for evaluating traditional reference services. (Lankes and Kasowitz, 1998, p. 181) In some ways, though, the assessment data needed for real-time reference is different from traditional reference statistics and measures.

In both traditional and online reference, "easily accessible service, knowledgeable staff, and interactivity to confirm the user's need" should be available. (Lankes, 2000, p. 70) But determining the effectiveness of each of these items for a virtual service is different from an in-person exchange.

Begin evaluating a reference service by looking at the number of questions asked and answered. Quantitative factors, such as how many questions were answered, lend themselves to assessment because they are easy to

obtain within an automated environment. With online reference, librarians no longer must perform the time-consuming tallying of tick marks that form the basis of manual reference statistics. But use the raw numbers of users for evaluation cautiously. As Lankes and Kasowitz point out, "quality should not be assumed based on any such measurement of quantity." (p. 184) Just because a service receives and answers lots of questions should not be the basis of a declaration of success. Instead, assessment should concentrate on how the question was received, answered, and processed.

In addition to the rate of questions, with online reference, additional data about the user population is useful, such as who they are demographically, the time of their inquiry, the content of their question, and the sources needed to assist them. Ensure that all data are aggregate and do not reveal individual information. Information about login procedures, technical difficulties encountered, and ease of user authentication, also is useful. In addition, the effectiveness of online instructions and page layout are potentially valuable areas for feedback.

What to evaluate

Librarians often don't know where to begin evaluating their live online reference service. Because digital reference service has such a limited history not much information is available in terms of best practice for evaluation. Historically, reference services were tested on the accuracy of responses, along with such issues as user satisfaction, quality of the reference interview, and librarian performance. Some of these categories are still applicable, but some may not easily transfer into the virtual environment.

The most obvious place that libraries start their service evaluation is with the reference question and answer. Especially with the written transcript generated by the service, this point seems a logical place to begin, but the interaction between librarian and user is not the only area program coordinators should investigate.

As mentioned earlier, the ease of access to the service can first be explored to make sure *all* potential patrons can make use of the service. Supporting materials, such as policy statements, documentation, and publicity fliers, also can be evaluated to make sure the materials explain the service adequately. Related resources, such as FAQs and archived questions, are often overlooked but can be included in a formal evaluation to determine their usefulness.

As you compile evaluation components, remember that a combination of factors should encompass the program assessment. For instance, when assessing the question-answer exchange, record how many questions were received, who answered how many, and how long a response took. Although more difficult to determine, assess if the answers were correct, easy to understand, and appropriate for patron's level of interest and expertise, and based on authoritative sources. In addition, was the patron provided an avenue for follow-up and further information?

For libraries with a teaching mission, the evaluation should investigate if the service instructed the users, along with giving them the answer to their questions. Assessment also should ensure the site states and adheres to a strict confidentiality policy concerning patron privacy. Other components to evaluate include the ease with which patrons can

locate and use the online service, both within the library and remotely. Equally important to assess, but difficult to obtain, is information about nonusers. This information is especially useful for those services experiencing low usage statistics.

How to evaluate

There seem to be as many ways to evaluate online reference services as there are sites offering such services. (A major problem with the current online reference scene is the lack of agreement about evaluation measures. The "Facets of Quality" discussed below attempted to bring some standardization to this process.)

According to Carnegie Mellon University's Gloriana St. Clair (p. 65), the three best methods available to assess the quality of online reference are: qualitative studies (which count numbers of things) quantitative studies (measuring the effectiveness), and benchmarking (comparing a service with similar services). As mentioned above, relying on strictly qualitative analyses and giving short shrift to the other two methods may be short-sighted.

Creativity abounds in the ways libraries design and implement qualitative studies of their online service. Some institutions use a formal assessment instrument and others use a less-structured investigation and observation. Whichever method you chose, remember that the results of the examination should reveal something about the goals of the service.

Among the most popular methods of evaluating online reference services are:

- User surveys
- Nonuser surveys
- Feedback forms
- Online pop-up surveys
- Focus groups
- Benchmarking
- Observation, including anonymous shoppers
- Peer assessment
- Self-assessment
- Performance review
- Grading or tracking

The *AskA Starter Kit* by R. David Lankes and Abby S. Kasowitz (Syracuse, N.Y.: ERIC Clearninghouse on Information & Technology, 1998, pp. 189-197) provides detailed information on many of these methods.

Facets of Quality for Digital Reference Services

One of the best sources for a library beginning—or thinking about beginning—an online reference service is to consult the Virtual Reference Desk document "Facets of Quality for Digital Reference Services." This publication helps libraries develop standards for building digital reference service for all audiences, including the K-12 educational community. "Facets of Quality for Digital Reference Services" includes all the major online reference assessment areas, with three levels of attainment in each: base, current practice, and goal level.

Virtual Reference Desk document, "Facets of Quality for Digital Reference Services," vrd.org/training/facets10-00.pdf

The list, based on panel members' experiences in managing and coordinating exemplary digital reference services, was originally identified by the 1997 Virtual Reference Desk Expert Panel. The document was subsequently revised based on discussions of the 1999 Expert Panel and the Oct. 13, 1999, AskA consortium meeting.

For libraries to participate in the collaborative reference project called the Virtual Reference Desk, they must fulfill the minimum requirements of each facet of quality as detailed in the document. Libraries can strive to fulfill higher levels of service, which also are listed in the complete document.

The following are the "Facets of Quality for Digital Reference Services," (Version 4, October 2000) and their definitions. "Facets" is divided into two categories: user transaction and service development and management.

Facets for user transaction:

1. **Accessible:** Digital reference services should be easily reachable and navigable by an Internet user regardless of equipment sophistication, physical disability, or language barrier.
2. **Prompt turnaround:** Questions should be addressed as quickly as possible. Actual turnaround time depends on a service's question-answer policy and available resources (such as staffing and funds).
3. **Clear response policy:** Clear communication should occur either before or at the start of every digital reference transaction to reduce opportunities for user confusion and inappropriate inquiries.
4. **Interactive:** Digital reference services should provide opportunities for an effective reference interview, so users can communicate necessary information to experts and the experts can clarify vague user questions.
5. **Instructive:** Digital reference services provide access to current information and expertise. Quality digital reference services offer more to users than straight, factual answers; the services guide users in subject knowledge as well as information literacy.

Facets for service development and management:

6. **Authoritative:** Experts of a digital reference service should have the necessary knowledge and educational background in the service's given subject area or skill to qualify as an expert. Specific levels of knowledge, skill, and experience are determined by each service and its related discipline or field.
7. **Trained experts:** Services should offer effective orientation or training processes to prepare experts to respond to inquiries using clear and effective language and following service response policies and procedures. Training of information specialists is one of the most important aspects of planning and operating a digital reference service.
8. **Private:** Hold all communications among users and experts in complete privacy.
9. **Reviewed:** Regularly evaluate digital reference services and processes. Ongoing review and assessment help ensure quality, efficiency, and reliability of transactions as well as overall user satisfaction.
10. **Provide access to related information:** Besides offering direct response to user questions, digital reference services should offer access to supporting resources and information. Services can reuse results from

question-answer exchanges in resources such as archives and frequently asked questions (FAQs).

11. **Publicize:** Services should inform potential users of the value that can be gained from use of the service. A well-defined public relations plan ensures services are well-publicized and regularly promoted. Publicity should not create more demand than the service has capacity to handle.

Source: Virtual Reference Desk Project. "Facets of Quality for Digital Reference Services," Version 4, (Online). October 2000. Revised Oct. 27, 2000. Nov. 6, 2001. http://vrd.org/training/facets10-00.pdf

Additional resources

In the near future, additional evaluative tools will be available through a nationwide survey of best practices in digital reference. The Information Institutes at Florida State University and Syracuse University are developing methods for assessing the quality of digital reference services and for testing and refining measures and quality standards to describe digital reference.

For more information on this research project, contact Dr. Melissa Gross at the School of Information Studies at Florida State University at mgross@lis.edu or Dr. R. David Lankes at rdlankes@ericir.syr.edu.

Another valuable source for libraries planning an evaluation of their online reference service is *Statistics and Performance Measures for Public Library Networked Services* by John Carlo Bertot and others. (See references at the end of this report.) This useful manual provides a guide "through the process of measuring and assessing the quality of service you are providing to a new breed of technology-savvy library users." Though written with public libraries in mind, all types of libraries will find this information valuable.

The May/June 2001 issue of *Library Technology Reports,* "Strategies for Measuring and Implementing E-Use," offers sample surveys, scripts and techniques for assessing in-house and use of electronic services. For more information, go to www.techsource.ala.org and click Library Technology Reports.

The delivery of quality reference service, as revealed through an effective evaluation program, is key to the success of an online reference service. "Don't overlook quality in the rush of time," said virtual reference veterans Nancy O'Neill and Susan McGlamery, at the Annual Digital Reference Conference in November 2000. Both speakers emphasized that the quality of this new service will seal the fate of online reference. Designing and implementing an effective assessment program for online reference will ensure that quality is front and center in this new service.

Standards

"Ugly, really quite ugly," is how Nancy O'Neill describes standards for live online reference. (Nov. 13, 2001) Florida State University library science professor Charles R. McClure prefers to call the standards "a bit of a mess." (Nov. 13, 2001) The current state of virtual reference software is chaotic at best. The crux of the problem is that virtual reference systems cannot easily communicate with one another—or as is described in technical standards language the systems cannot interoperate.

To remedy the situation and bring needed uniformity to the digital reference technology, the National Information Standards Organization (NISO) is creating reference-specific standards. NISO began exploring the need for such standards at a workshop on Networked Digital Reference Services held in April 2001. Finding sufficient need for standardization at that gathering, NISO announced the formation of a Networked Reference Services Standards Committee in January 2002. Under the leadership of committee chair Sally H. McCallum of the Library of Congress, the newly formed committee is charged with proposing standards for submission through the NISO standards-development process.

The NISO Standards Committee has been asked to address two major areas for digital reference standards: question transferring between systems and metadata about the people, institutions, and questions being transmitted. The first would address the *process* of sending question and answers between systems and the latter would attempt to standardize the *content* of the exchange.

The first area for standards-promulgation is the designation of a protocol for sending questions from system to system. The Virtual Reference Desk project has proposed a standard called QuIP (Question Interchange Profile), which is a "metadata scheme to allow AskA services and other digital reference type services [to] interoperate and exchange questions and answers in a threaded manner." (Lankes, May 1999, p. 2) Syracuse University library science professor R. David Lankes calls QuIP "the glue that holds virtual reference systems together." (Lankes, Nov. 12, 2001) He writes, "QuIP is designed to get data from one service to another." (Lankes, May 1999, p. 6)

In NISO's view, the development of a standard protocol for the "interchange of messages between digital reference domains…will support processing and routing of questions and responses and packaging of other information to be exchanged." (NISO Committee Charge, Jan. 12, 2002, www.niso.org/committee_az.html)

The second area of standards would bring uniformity to the metadata applied to the content of the question-answer exchange. Brett Butler, founder of AnswerBase Corp., a Web-based publisher, describes the problem this way: "One of the shortcoming[s] of traditional card or even local computer files of reference knowledge has been the lack of metadata—information about the knowledge that can be used to retrieve data. In the absence of well-defined, rich metadata, such collections cannot scale to large size. Without a large scale of content, the value of any such individual collection is limited." (Butler, p. 2) Butler's AnswerBase Corp. has submitted its "Knowledge Bit format" for review as a standard for the capture of reference content. (Butler, p. 10)

Butler uses the metaphor of a box to describe what the Knowledge Bit format is trying to accomplish. "[W]e must create an exceptionally wide, high, and deep box of rich content if we are to capture any information that may flow across a (virtual or physical) library reference desk, and are to add our knowledge and organize it for future use."(Butler, p. 2) Those librarians who have worked in libraries with an index card file filled with reference questions and answers will understand the task involved in trying to transfer each card to a standardized and machine-readable format. The NISO committee will address exactly what data is included in the profile about the libraries (such as subject specialties, hours of operation, and so on), as well as what information is to be included about the questioner and question.

Once these standards are proposed and adopted, digital reference likely will take the next major step in its development. Software developers would jump on the opportunity to create and market new products and researchers would benefit from new ways to organize and transfer knowledge.

To return to the *Desk Set* and *2001* movie scenarios, the adoption of these standards should help bring together people and computers in a way that optimizes the capabilities of both. Lankes sees that "by turning questions and answers into digital objects with strong computation aspects, primary

knowledge (that is, what's in people's heads rather than in some static representations such a book, video, or Web page) becomes accessible on a large scale. "At the heart of … [these standards] development is the belief that reference interchanges can be both computational (that is able to be processed by software without human intervention) and extendable …while retaining the value of human to human communication." (Lankes, May 1999, p. 4)

With these standards, librarians should move one step closer to marrying the wisdom of librarian Katharine Hepburn with the information stored in computer HAL.

Privacy, user authentication, and copyright

"Transcript terror" is how Nancy O'Neill characterizes the troubles wrought by the written records generated in the brave new world of online reference. (O'Neill, Nov. 13, 2001) Before digitized reference, the conversation between librarian and patron was a verbal exchange. The only record of the exchange was lodged in the memory of the librarian and patron, and the paper trail, if any, was an anonymous tick mark recorded on the librarian's statistics sheet.

That anonymity has changed with the advent of online reference. In the online reference environment every word of the transaction, every keystroke is recorded in a transcript. What to do—or not do—with this paper trail has been one of the thorniest questions to address in live online reference service.

Consider the following contradictory approaches to transcript terror found in existing online reference services. Some libraries launch their online reference services with an honor code: all the librarians doing online reference promise not to look at one another's transcripts.

Other services make systematic evaluation of the transcript a central component of their peer review process, sometimes with as many as three people reviewing the logs. Some services allow only administrators to view the record, although other libraries bar administrators from peeking. Given these contradictory practices, no wonder such confusion—and even terror—is generated over this issue.

The crux of the transcript problem can be broken down into two overlapping areas: librarian privacy and patron privacy. Whatever action a library takes on these issues, the staff and management should address both areas before inaugurating an online reference service.

Librarian privacy issues

For many experienced reference librarians accustomed to the confidentiality of the reference interview, review of the record of patron interactions is problematic. Education critics have noted that when a teacher closes a classroom door, no one really knows what happens among students and teacher. The same has been true for librarians. Except for an occasional eavesdropping librarian, no one else could hear the in-person reference interview. Though user surveys and satisfaction questionnaires assess a patron's reaction to the interchange, usually little recording or evaluation is made of the reference transaction.

Digital reference service changes all that lack of detail. As a by-product of every online reference system, a transcript is generated for each reference interchange down to a second-by-second account of what the librarian did, and did not do, in response to the query. Some administrators say this transcript can be analyzed, which can lead to service improvement. (Such records are the library equivalent of what is often heard on the telephone: "This call may be monitored for quality assurance purposes.")

To some librarians, however, a transcript review constitutes a violation of privacy and an unfair performance review. For instance, one virtual reference chat software product gives the system administrator the ability to monitor the chat and take it over seamlessly in real time in either the name of the librarian, or as a supervisor.

In one newly launched digital reference service, a librarian (preferring to remain anonymous) said she was so leery of a possible surreptitious review of her interchange that she suspected she was monitored from the first online reference question onward. As she said, "The first question I got was so unintelligible, I thought an administrator had must have sent it as a test."

To date no known grievances have been lodged against administrative review. The policy could be questioned by labor unions or library associations in the future, however, if it appears to violate ethical or legal standards of employee-employer relations.

Other librarians are concerned about patron privacy. For security reasons, some librarians prefer to communicate with patrons anonymously. For instance, librarians within the online reference service called Q&ACafe have the option to use their own names or a handle. One librarian posting on the Dig_Ref listserv chooses to use a unisex name to reduce interactions based on gender. (Dec. 7, 2001.)

Patron privacy

A log of reference sessions also creates a host of problems for user privacy, as well as librarian privacy. Some online reference services attempt to avoid this issue by allowing users to access the service anonymously. According to University of Illinois' Bernie Sloan, 16.2% of the users of the Ready for Reference Service, which allows anonymous login, chose that option during their fall semester. (Dig_Ref@listerv.syr.edu, Jan. 17, 2002) Another librarian posting on the Dig_Ref listserv found that about 80% of the people using its library's online service enter just their first name. (Jan. 17, 2002)

Though anonymity is a popular method of access among users, anonymous use of online reference can be problematic both because of software design and institutional policy—especially in libraries that create live online service exclusively for closed populations (for instance, for students and faculty of an educational institution or residents within a political boundary). Some user authentication systems do allow for verification with numbers only, without revealing the user's name. In other systems the name shows up when authentication is made, so anonymous use of the system is not possible.

Even in services that can verify anonymously, usage can still be problematic because some software systems require a username and e-mail address to send follow-up information or a copy of the session transcript. People who want to query the system anonymously but still want follow-up information must sacrifice one option or the other.

Many libraries have instituted a policy of stripping all identifying information about patrons from queries immediately following the librarian's initial response. This method effectively ensures patron privacy, but it prohibits follow-up at a later date.

Identity stripping also prohibits the transfer of the question to another online service. Since many online services are cooperative ventures, with tiered levels of service built into the structure, the anonymous forwarding of queries can be difficult.

Even systems that automatically strip personal information from the questions usually do so only at the inquirer level, but patrons often include personal information in the text of their question. Automated systems that remove identifying information from the questioner information would miss question-level revelations about the person. Some reference services have added this removal as a manual step to be completed before the question is archived. This editing requires reviewing each question, which slows the entire archiving process.

Posting of privacy statement

To adequately address privacy concerns for both librarians and patrons—and to assure they are operating within ethical and legal bounds—digital reference services are encouraged to adopt and post a privacy statement on their Web site before beginning service. The policy statement should be visible at or before the point where inquiries are submitted. Examples of policy statements are available through the ALA and OCLC, among others.

ALA, www.ala.org

OCLC, www.oclc.com

Examining the Web sites of currently operational online reference services such as the 24/7 Reference Project also yields examples of privacy statements. Most often these statements spell out personal information being gathered, how it is used, with whom it is shared, and whether the user has the option to control its dissemination.

An excellent nonlibrary source of information on privacy statements is the nonprofit privacy initiative TRUSTe, which awards a branded online seal or trustmark to Web sites that adhere to established privacy principles and agree to comply with their oversight and complaint resolution process.

TRUSTe, www.truste.org

For more information about TRUSTe, see www.truste.org/about/truste/about_faqs.html.

TRUSTe has found that the display of privacy statements is not only ethically justified but also enhances the use of the service. According to its research, the volume of online transactions over the Internet increases as consumer confidence about the use of patron information grows.

Copyright

With all the excitement and buzz surrounding live online reference service, overlooking the potential for infringing federal copyright law is easy. The possibility of wandering into trouble in this area is real. "Danger, danger, danger," is how one speaker at a digital online reference conference characterized this prickly legal area.

The existence of copyrighted textual works on the Web presents one such danger spot for libraries. (Ensign, p. 1) Take care not to inadvertently copy, reproduce, and distribute one of these works illegally.

Another potential area of great concern is the now commonplace practice of cutting and pasting information from a library's electronic resource to send it via live online chat. The problems associated with this practice are so grave that an article entitled "Guidelines for Distance Education and

Interlibrary Loan" carried the ominous subtitle, "Doomed and More Doomed." (Gasaway, Laura N.*, Journal of the American Society for Information Science,* 50 (1999): 1337-1341) The danger posed by cutting and pasting is twofold: it could violate licensing agreements *and* copyright law.

Most librarians are aware of the constraints placed on their use of electronic resources through licensing. Rather than purchasing the information outright, as libraries used to do with books, electronic resources such as proprietary databases are usually licensed for a limited time and population. The use of that information beyond the confines of the license, for instance beyond the population group intended for use, violates the licensing agreement. To avoid illegal use, most libraries have implemented restrictions such as user authentication systems to ensure that only the patrons authorized for use by the library's license can access the data.

One of the dangers for online reference systems is the illegal use of a restricted database by nonauthorized users, such as patrons of another library system. Even the limited cutting and pasting of information from a licensed product (such as finding a relevant paragraph) and sending the information to a nonauthorized user may violate the license.

For this reason, some collaborative reference services have implemented a policy of banning the use of licensed databases in answering questions. Other systems allow librarians to use and assist patrons with the use of databases through escorting and co-browsing, but these systems do not allow the cutting, pasting, or downloading of information by the librarian for use by the patron.

Still other collaborative systems have tried to circumvent some of these problems by providing core databases to all members of the collaborative. This solution brings the cooperative down to the lowest common denominator and prevents shared assistance on some of the libraries' internal resources.

According to author and consultant Anne Grodzins Lipow (Feb. 8, 2002), initial discussions have been held with vendors to create a new type of licensing agreement that would enable all patrons within a consortium limited rights to the databases of the member libraries. In spring 2002, such an arrangement was still in the discussion stage.

Another danger posed by copyright restrictions for online reference is the possibility of violating copyright law through the distribution of copyrighted works. Section 106 of the Copyright Act reserves the acts of reproduction and distribution to the copyright owner. Cutting and pasting from a database, then sending the information electronically may constitute such a violation.

Legal library expert Gretchen McCord Hoffmann, the author of *Copyright in Cyberspace,* explains the problem: "Downloading a file from the Web undoubtedly creates a copy of that file, as does printing. If this is done without permission of the copyright owner, and barring fair use and other exemptions, it infringes the copyright." (Hoffmann, p. 75)

According to Hoffmann, the reason for the prohibition against downloading is to keep control of the work in the hands of the author. Prohibiting downloading "is equivalent to allowing the author to prevent one person from buying a copy of a book and then passing it around to all of her friends to make their own photocopies so they do not have to buy it." (Hoffmann, p. 77)

As University of Louisville Law Library's David Ensign writes, "The logical question would be, if patrons can come into the library and consult the work that is to be uploaded, and perhaps make copies for themselves, then why can't the library make the same work available electronically?" (Ensign, p. 1) As he explains, the answer can be found in Section 108 of the Act. Section 108(d) permits a library to make one copy of a work, which must be made at a patron's request. "The library cannot anticipate that patrons will want copies of a work, and make the copies in advance of patron requests. Section 108(d) also requires that the reproduction become the property of the patron. A reproduction made for the purpose of uploading to a Web site would remain the property of the library maintaining the Web site, rather than being given to a patron." (Ensign, p.1)

The January/February 2002 issue of Library Technology Reports, *"A Librarian's Guide to Shared and Networked Resources" (Vol. 38, No. 1) by Tomas A. Lipinski discusses essential online copyright issues in the library and offers strategies and recommendations for managing electronic resources and copyright regulations. Visit www.technsource.ala.org and click Library Technology Reports for more information.*

According to the Copyright Act, making a photocopy of a printed resource is different from converting printed information to an electronic format. As Ensign further explains, "Because of the First Sale Doctrine found in section 109 of the Copyright Act, the library is able to lend legal copies of works from its collection to patrons. An electronic copy of a work that is made without permission is arguably an illegal copy, and therefore section 109 does not apply." (Ensign, p. 2)

For online reference service, no similar restrictions on copying and sending URLs (Web addresses) exists. Reference librarians can copy and send URLs to their heart's content, but they may not open or download them.

The area of library copyright is complicated and uncertain. "As your head spins," Hoffmann suggests keeping in mind that "fair use is decided on a case-by-case basis. There are no hard and fast rules. This means that one can never be 100 percent certain, no matter what the circumstances, that any given situation will be excused as fair use." (Hoffmann, p. 30) Most likely the entire area of copying and distributing electronic resources will be addressed in the future. For now, however, libraries should "be mindful of the increased danger of infringing copyright laws." (Ensign, p. 2)

Go it alone or join in?

"Directory assistance. What listing?" asks the carefully modulated female voice.

"I'm looking for the number of that big new hotel they are building near the mall. I can't remember the name. It's on the corner of Sunrise and Flamingo, do you know the one I'm talking about?"

"Whadya'll say that listing was?" she repeats, this time letting her Southern drawl escape.

"I'm not sure of the name of the hotel," I repeat. "It's the one that is causing all that construction mess near the mall."

"Honey, how would I know what hotel you'all's building in Florida?" she asks. "I'm in Kentucky."

For many librarians, this interchange epitomizes the dangers posed by joining a collaborative venture to provide online reference service. Callers in Florida being forwarded to a person in Kentucky. How could they possibly answer your questions? No one knows your patrons' needs like you.

For other librarians, joining a collaborative venture is the only way to go. Through a cooperative reference service a library can invest as little as one hour of reference coverage and gain 23 hours in exchange. Joining a collaborative reference service lets the libraries that participate provide richer resources and services than they could ever dream of offering by themselves. (Coffman, Sept./Oct. 2001, p.18)

Should you control your online reference service locally and launch it independently, or should you join a collaborative service?

Restricted clienteles

Every library is a members-only institution. For academic institutions, the membership population is obvious. Academic libraries shouldn't have to answer the questions of students from other academic institutions. Even public libraries have restricted clienteles—though their mission is to serve everyone—because they receive their funding from a limited population of taxpayers.

When libraries were bound by place—that is, when people came to the library to receive the service—limiting service to restricted clientele was easy. Only those within walking distance or within local phone call range are offered the service because only they could reach the service.

Now that libraries have been unleashed, service is not longer restricted by time and place, but it is still restricted by means of support.

For a library thinking about joining a collaborative reference program, this new reality creates a problem. Either the library must find a way to limit the new service to the restricted clientele within the collaboration group, thereby replicating the former restrictions of place through technology, or it must justify participating in a service that reaches beyond the library's source of support. In most cases, the former is easier than the latter.

Limiting service to entitled users is technologically possible through user authentication. Though initially difficult when restricted databases were first introduced into libraries, most library information systems now allow for easy verification of a library's users through IP addresses and passwords.

Customized levels of access, only a dream a few years ago, have become commonplace. Access to certain databases can be easily provided or denied based on a user's status. Today libraries can routinely select which resources are made available members of their service area. With user authentication, libraries can restrict service to their populations, no matter where patrons are located physically.

Some collaborative reference services have been able to maintain the service-area restrictions of participating libraries by incorporating the library's authentication procedures into the new service. In these systems, anyone wanting to post a question must enter the system through their library gateway and are verified against the local patron files.

Some cooperative systems have found remote authentication of users is not possible due to the variety of systems employed by member libraries. For some libraries this impediment to cooperative service has inspired them to independently launch service, while others have taken the opposite route and eliminated patron authentication. This open-access decision flies in the face of the members-only philosophy and may replace technological difficulties with political ones.

Politics, competition, and fairness

"The status of live online reference can be likened to the third act of a five-act Molière play," Susan McGlamery says. (Nov. 13, 2001) "This means we have come to the crisis. When we were talking about hardware and software problems, we were in the first acts. But now we have come to point where we must confront the more difficult political questions about serving library users beyond the library's population."

For some library administrators, the benefits of collaborative service outweigh the burden of serving those outside the library's traditional boundaries, but convincing funding authorities of these benefits can be difficult. Local library boards, library committees, and college officials may be reluctant to commit resources to a collaborative service reaching beyond the service population of the library.

Another problem libraries may encounter when contemplating joining a cooperative reference arrangement has been dubbed "the greedy librarian syndrome" by R. David Lankes. (Nov. 12, 2001) Librarians may feel proprietary about the questions they receive. They don't want to give any of them away either to other librarians at their own institution or, more importantly, to other libraries in the cooperative.

Lankes conjectures that guilt may fuel this reluctance. Librarians may believe they should be able to answer the questions themselves and are reluctant to publicly admit they need help with a question. In other instances, mistrust of the referring library may generate hesitation about elevating questions to the extra-library level.

Technical and administrative issues also must be worked out before establishing digital reference service. Issues to be addressed include what happens when a library does not fulfill its promised coverage, how quality will be maintained, and how the transferring of questions among libraries will be handled. Minimum standards of performance, with strict time restrictions, could help alleviate this reluctance. If librarians know their questions will be answered by the collaborative quickly and accurately, they may be more willing to forward the questions.

Fairness is another issue that surfaces in conjunction with cooperative reference. When a strong library with extensive human and collection resources joins a collaborative effort with small, understaffed libraries bringing few specialized resources to the arrangement, the question of fairness and equity of burden becomes central. Especially critical is the issue of how and why the well-endowed library is taxed by the poorer participating institutions.

Local questions

Some libraries may be reluctant to have local questions answered remotely. Libraries that participate in cooperative reference ventures find the num-

bers of location-specific questions (such as library hours, circulation policies, and so on) can vary widely.

One library estimated that about 10% of its online reference questions are local questions about services or programs specific to that library. Another cooperative venture found about 33% of its inquiries required information about a specific library. In anticipation of receiving locally specific questions (such as checkout loan periods and library hours), many collaborative systems provide this information about all the participating libraries. For success with these local types of questions, every librarian providing online reference must have ready access to this information. Online or paper notebooks with information such as staff names, addresses and phone numbers, library hours, and circulation rules must be at the fingertips of everyone handling reference questions.

Collaborative Digital Reference Service of the Library of Congress

For many libraries joining the national collaborative reference project, the Library of Congress/OCLC Collaborative Digital Reference Service (CDRS) was the best way to test the virtual reference service. This network of libraries, originally offered free of charge to any interested organization, provided authoritative reference service to users worldwide 24 hours a day, 7 days a week. (See "Future of Live Online Reference" for more information on CDRS.) Though still an attractive beginning point for libraries, the service is no longer free. In June 2002 the Collaborative Digital Reference Service was replaced with the fee-based QuestionPoint service.

QuestionPoint service, www.questionpoint.org

According to its sponsors, the Library of Congress and OCLC, QuestionPoint provides a low-cost, easy-to-use resource to provide and manage Web-based reference services. One of the key features of this service is the seamless interface between the local, regional, or global reference services. QuestionPoint 1.0 provides librarians and library users with a fully searchable global knowledge base of previously asked questions and answers. QuestionPoint is available as either a Global Network, which allows libraries to submit and receive questions collaboratively or as a local/group network, which allows for participation in a local virtual reference service, as well as the submission of questions to the global collaborative.

Pricing information is based on individual library reference needs, www.questionpoint.org.

The idea for an international network of libraries such as the former Collaborative Digital Reference Service was discussed in a brainstorming session at the ALA Midwinter Conference in January 1998. By 1999 the service was conceived as a joint reference service that "would start small and grow into a vast international service that would allow libraries to help each other serve all their users, no matter where the users are. From the beginning, interest was expressed by all types of libraries around the world." (Kresh, p. 63)

The Library of Congress launched the Collaborative Digital Reference Service with 16 libraries initially participating. The first live CDRS question was sent June 29, 2000, by a library in London to the Santa Monica Public Library. Since that first question, about 4,000 question records have been processed. As of March 2002, the number of participating libraries has grown to about 230 members comprising one of the largest international Web-based cooperative network of librarians in the world. (Grotke, Abbie, e-mail communication, March 21, 2002) The impact of the new fee structure for QuestionPoint is not predictable.

Virtual Reference Desk Project

Another way libraries can collaborate on a virtual reference project is by joining the Virtual Reference Desk Project, which lists 18 libraries, organizations, and services among its current participants. Sponsored by the U.S. Department of Education and operated by the Information Institute of Syracuse, Syracuse University's School of Information Studies, the Virtual Reference Desk operates this network for sharing questions and expertise among digital reference services. (VRD also maintains an AskA locator service that catalogs information about existing digital services.) Because the VRD network includes specialized information resources such as AskA MAD Scientist, AskERIC, and national museums among its members, libraries participating in the network gain access to reliable subject experts in a variety of fields.

Institutions that participate in VRD are allowed to "decide how many questions your service will accept from other services…" and are entitled to "forward twice that number to the network" for answering. For example, a library that agrees to take five questions from the VRD network may post 10 questions from that source. ("Invitation to AskA Services To Participate in the VRD Network!" www.vrd.org/invitation.shtml, March 20, 2002)

For more information on VRD or to participate in the network, e-mail Blythe Bennett at the VRD Network at blytheb@vrd.org.

Internet Public Library

Individual librarians interested in trying virtual reference may want to consider volunteering to answer questions for the Internet Public Library (IPL). In operation since 1995, this free service is open to patrons all over the world. To provide online reference to this almost limitless population, the service uses a large, diverse, and geographically widespread group of students and volunteers.

Based at the University of Michigan School of Information, the IPL's mission is "to educate library school students about the practice of librarianship in the digital age. An integral part of that education has been providing students …with the opportunity to receive hands-on experience in being a 'virtual librarian' by answering questions for the IPL's Ask A Question service." (www.ipl.org, Nov. 19, 2001, March 20, 2002) Volunteer librarians, who must have e-mail and Internet access, may choose from a list of questions. Questions must be answered within a week of posting or by a given deadline.

Internet Public Library, www.ipl.org

The IPL staff provides training, feedback, and guidance to students and volunteers as they begin answering online reference questions. Because participating in IPL is an effective learning tool for library science students, the IPL is especially interested in working with library science faculty to incorporate student participation within traditional library science classes.

To participate in the IPL, e-mail Patricia Memmott, IPL reference coordinator at ipl@ipl.org.

Marketing your service

Publicity is a complicated endeavor when you are trying to sell virtual reference service. "You are never quite sure what is going to work and what will not. To complicate things even more, it is hard to predict how well it will work and for how long," says AskERIC coordinator Pauline Lynch. (as quoted in Lankes, 2000, p. 90)

Consider the marketing of the new AskERIC service. When the service began several years ago it was advertised through exhibits and presentions at national and local education-related conferences. Despite these efforts, the number of questions did not change from the previous year. The library held a brainstorming session to generate ways to better advertise the system. Following this session the staff decided that announcements should go out on appropriate listservs. The result? Nothing.

The next idea was to try advertising on the library Web site. Banner ads asking "Got an Education Question? AskERIC" were created and deployed on selected sites. The question load nearly tripled. The staff was unable to keep up with this level of demand, and the banners were taken down after a few days.

Like Goldilocks, first the library had too little, then it had too much, and finally—after experimentation and trial and error—it got the marketing just right. For the online AskERIC service just right meant placing announcements about the service in brochures and other promotional materials. With this promotional technique, the library maintained a manageable level of growth—20% more questions a week.

The experience encountered by AskERIC is not unusual. "The effects of publicity are very difficult to control and may cause sudden increases in questions," says Mary Jo Lynch, director of ALA's office for research and statistics. (Lynch, Mary Jo, p. 177) She recommends libraries to "be sure to have a solid organizational structure before …[looking] for ways to increase the question load."

Despite this advice, many librarians feel pressured to market their services aggressively and immediately after launching the service to guarantee success. One virtual reference administrator reports the three words he hears more than any other in conjunction with online reference service are marketing, marketing, marketing—especially since initial usage figures for real-time, online reference service are often underwhelming.

Some libraries are reluctant to market their service because they fear the quality of their responses, and not the quantity of questions. "Fear of future inability to sustain quality…leads to fear of promoting the service," say Massachusetts Institute of Technology librarians Sarah G. Wenzel and Lisa R. Holowitz. (Nov. 12, 2001)

Because virtual reference is automated, users approach the service with a high level of service expectation. Virtual reference seekers expect immediate, correct responses to their questions. Because virtual reference appears to promise a new, better way of doing things, it can generate unforeseen user expectations that create additional service challenges for librarians. If users do not receive high quality, they will go away disappointed and frustrated that their expectations were not met, and they will not come back.

Growth management

The challenge for online reference service is to refrain from overselling the service at the beginning. By growing slowly and not overstating expected service delivery times and methods, libraries can avoid disappointing virtual reference users.

One way a library can avoid runaway growth of virtual reference is to build an expansion plan. While its online service still in the design stage, the

library can outline incremental service levels based on use. When a predetermined threshold level of demand is met, the next level of service could be implemented. The AskERIC experience taught Pauline Lynch that starting out small and gradually increasing staff and question load over a period of time seems to work best. (Lynch, Pauline, p. 177) As she sees it, slow steady increase is the best way to launch a service.

Reflecting this advice, the standards-setting document "Facets of Quality for Digital Reference Services" recommends that "[p]ublicity should not create more demand than the service has capacity to handle." The document's publicity goals state that "publicity should not create an inundation of questions to the point of overwhelming the service."

Effective promotion

Along with managing growth, another problem for marketing reference service is the bewildering array of choices for notifying library users and nonusers. Among the most frequently used methods are bookmarks, fliers, radio ads, student newspaper articles, press releases, posters, and key rings.

Weingand suggests that libraries use all five facets of promotion for a new live online reference service: public relations, publicity, advertising, incentives and "atmospherics." (Weingand, pp. 134-135) "'Atmospherics' include such elements as the ambience and environment of the distribution channels," including both physical sites and electronic connections. (Weingand, p. 135)

To devise an effective promotional campaign, librarians should harness the power of new technology. "If the library's customers are exploring new means of communication, then the library must move boldly forward and use the same technologies." But promotion should not be done by computer alone. Traditional means of promotion and channels of communication should not be totally abandoned as a variety of strategies have a place in the total promotion effort. (Weingand, pp. 136-137)

Promotional efforts for live online reference service must keep the potential user in mind. As with any other marketing mix, the message must be directed at and be effective with the target audience. (Weingand, p. 134) Market segmentation presents an effective method for libraries to zero in on their population of users. Long a standard practice within business, dividing potential users, or segmenting customers, reveals the appropriate content, style, and media for each. For instance, a library could list the most likely users of its online reference service. The most effective promotional avenues for each segment can be derived once the groups are identified. For an example of such a breakdown, see Weingand's *Future-Driven Library Marketing*, p. 131. Identifying target markets also is important when considering where to place notices for the online reference service outside the library.

Some librarians happily report that many effective marketing techniques also are the least expensive to implement. Strategically placing an icon on the library Web site works best for most real-time reference services and does not cost the library anything.

Recognizing the attractiveness of this feature, many virtual reference software products come equipped to place icons on the library Web site and tout this function prominently in their promotional literature. For instance, the first feature listed on Convey's OnDemand promotion

letter extols its ability to "Put a Librarian on Every Page," allowing the library to place an advertisement for live help on any library Web page.

Placing the icon in nontraditional places, such as government agencies and nonprofit agencies in public libraries and academic departments in colleges and universities, is especially effective in gathering users who would not usually consider the library as a question-and-answer source.

One of the greatest benefits of promotion outside the library also is the informal networking formed through cooperation. The new partnerships that emerge through icon-placement can lead to other joint programs with these organizations in areas beyond online reference.

Going one step beyond icon placement, some libraries have considered the use of library kiosks in public areas such as shopping malls and grocery stores. For example, the online reference service vendor LSSI recently joined with Public Information Kiosk (PIK) to deliver library services via an ATM-type machine placed in strategic locations. The Tulsa County Library has experimented with voice- and video-equipped kiosks as a way to expand its service.

Another effective marketing technique is to include a demonstration of the virtual library service in library instructional sessions**.** Mansfield University's director of information resources Larry Nesbit says that other marketing techniques, such as using mass media, did nothing. Only bibliographic instruction worked for promoting his library's service. (Nesbit, Nov. 12, 2001)

Demonstrating the effectiveness of this avenue, Nesbit cites the fact that in the first two years of service, two-thirds of the questions were received from one school—the school that had incorporated virtual reference into class curriculum. When usage suddenly dropped, the library discovered that one of the instructors who had promoted the service in his class had stopped teaching.

No matter how you promote the new online service, evaluating the marketing program is crucial. Build components for promotional evaluation into the initial plan; don't tack them on after the service is in place. A helpful guide to the formal evaluation process is library science professor Douglas Zweizig's "Tell It!" acronym below. If a library has covered all the components of "Tell It!" the staff can be reasonably sure it has covered all the bases of evaluation.

Talk about the vision.

Explore alternatives and design your approach.

Learn from what's happening.

Let people know what happened.

Integrate results with ongoing services.

Think about how it all worked.

Source: Zweizig, Douglas, and others. *The Tell It! Manual: The Complete Program for Evaluating Library Performance* (1996). Chicago: American Library Association, p. 106 as quoted in Weingand, p. 141.