

	<p style="text-align: right;">Date : 12/06/2007</p> <p>Serving Patrons in Their Language, Not Just Ours</p> <p>Susan McGlamery (OCLC),</p> <p>Paul S. Ulrich (Berlin Central and Regional Library)</p>
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Communities around the world are becoming more diverse in the services they offer, especially as the world economy globalizes. One aspect of library services which only recently has been addressed is the problem of language as a barrier between the library and potential users. By taking advantage of new Internet-based technologies and the possibilities which international networking offers, libraries now have the opportunity to create services more attuned to the increased needs of users and thereby better serve a multicultural, multilingual community – even if the local library itself is unable to have a staff with fluency for all the languages that are represented in their local – and virtual – community. By utilizing appropriate virtual reference software and partnering with other libraries around the world, a local library can better meet the needs – both content and language – of all its potential library users, regardless of the languages they feel comfortable using.

Two models of providing reference assistance to a linguistically diverse community are used as an illustration of what such services can entail. In both models, libraries offer multilingual reference services without hiring additional staff.

Model 1: Global Reference Network (GRN)

The first model is the Global Reference Network (GRN), a multilingual, multinational community of libraries around the world that agree to answer reference questions referred through the network. The service is a key component of OCLC's QuestionPoint service (<http://www.oclc.org/questionpoint>), in partnership with the U.S. Library of Congress. The service was formally launched by the Library of Congress in June 2000 under the name Collaborative Digital Reference Service (CDRS).¹

¹ For a more complete history of the CDRS and GRN, see <http://www.loc.gov/rr/digiref/history.html>

Currently there are over 1800 libraries in 23 countries that belong to the QuestionPoint community. Although not all QuestionPoint libraries elect to participate in the GRN, those that do participate agree (as a group) to answer over 3,500 questions per week, in any one of 26 languages.²

The GRN is based on a foundation of cooperation and participation. As the number of libraries in the network grows, so does the utility of the service and the depth of subject and language expertise available through the network. Any library that subscribes to QuestionPoint may participate in the GRN; participation is entirely voluntary.

To participate in the GRN, the library must first fill out a profile for their institution. The profile contains information about the library (location, collection strength, language expertise, education levels served, hours of availability), as well as parameters for GRN participation, e.g., the number of questions the library is willing to receive (and answer) from the network per week.

Any QP library that agrees to answer at least one question via the GRN per week is entitled to refer questions to the GRN. The referral process is one of several referral options presented to the library inside the QuestionPoint interface. Thus a library may answer a question within the library, refer it to a partner library, or refer it to the GRN. If a library elects to refer a question to the GRN, only a few steps are necessary:

1. The librarian selects “refer to Global Network” from a menu
2. The librarian then fills out a profile for the question. The question profile consists of a menu-driven template with fields for subject area, geographic subject area (if relevant), language, education level, and deadline. The referring librarian can also add comments, reason for research, keywords, or other ancillary information. This profile is attached to the original user request (which also contains any communications between the user and any librarians relating to that specific question).
3. Based on the subject chosen, the referring librarian may select from a list of libraries to send the question to. Or, the librarian may simply choose automatic routing, in which case the algorithm will select a library based on matching the question profile with the institution profile. The referring librarian can also select whether the answer should go back to the referring librarian (for eventual transmission to the requesting user) or directly to the user. Even if the answer goes directly to the user, the referring librarian will see the answer given (it will appear in the question history of the original question).
4. Once the question is submitted to the GRN, the software will select a library to answer the question based on matching the institution profiles with the question profile. Libraries that profile themselves broadly will receive more questions, and those that profile narrowly will receive fewer questions.
5. Librarians receive questions that match their profile inside their existing QuestionPoint accounts. The questions appear in the same inbox that other questions from users would appear (but with an indication that they are from the global network). This allows librarians to use the same workflow that they ordinarily use. No additional password or separate list is employed. Questions answered via the global network are

² GRN libraries can answer questions in: Arabic, Catalan, Chinese, Dutch, English, French, German, Greek, Hebrew, Hindi, Hungarian, Italian, Japanese, Korean, Polish, Portuguese, Russian, Sanskrit, Slovenian, Spanish, Swedish, Thai, Turkish, Ukrainian, and Xhosa.

counted in the same statistics and reports as the usual questions from the users, thus providing a complete picture of reference activity at the library.

6. A library that receives a question through the network may elect to answer it or reject it. Questions may be rejected if the receiving library does not have the time or resources to answer the question. When questions are rejected, they are sent back through the network and matched with another participating library.

7. Questions that are not answered by the deadline specified are flagged and the GRN administrator (the Library of Congress) is alerted. The librarians at the Library of Congress may then elect to answer the question or re-code the question for routing through the network.

8. All questions routed via the GRN are eligible for inclusion in QuestionPoint's Global Knowledge Base. This knowledge base is searchable and available to any QuestionPoint library. Any library may also elect to make this knowledge base available directly to their users. Individual user information is not available in the knowledge base: just the question, answer, and any relevant bibliographic information.

Using the GRN, member libraries are able to access language expertise throughout the global network. By filling out the question profile, librarians can refer questions to the network without personal knowledge of which librarians have the requisite language and subject expertise. Thus, a librarian does not need to know what librarians are available to answer an art question in Dutch. Instead, they just fill out the profile. This allows a potentially broader array of librarians to ask and answer questions, such that the most appropriate librarian ends up with questions within their expertise.

In order to submit a question to the network, a library must agree to answer questions sent through the network. Only those institutions that have filled out profiles and have agreed to answer at least one question per week will have the option of referring a question through the GRN. Thus in order to access this valuable resource for their own users, a library must agree to provide answers as well, even if it is only one question per week.

Once a library decides to participate, the benefits are great. Not only does the library now have an additional referral resource for their local users, but the GRN also provides an avenue for libraries to share resources, experiences and pathways to previously inaccessible expertise.

The information space has changed a great deal since the founding of the GRN. Now, people with a question have many options in finding answers. In a study of the information environment and how it relates to libraries, researchers found that there is a dissonance between what libraries provide (not just books, but also reference expertise and rich online resources) and what information consumers are seeking. The report found that self-service, satisfaction, and seamlessness (in other words, ease of use, convenience, and availability) are more important to information consumers than information quality and trustworthiness, the hallmarks of library reference services.³

³ See 2003 OCLC Environmental Scan: Pattern Recognition, available at: <http://www.oclc.org/reports/escan/default.htm>

Information seekers not only have anytime, anywhere access to increasingly sophisticated search engines, there is also a rise in community-driven social networking sites that provide a space in which users can ask questions and get answers on any number of topics. The most notable example is Yahoo! Answers⁴, although there are others.

Although users may prefer self-service (ie, using a search engine), this requires the user to come up with a good query and then sort through undifferentiated results – sometimes hundreds of results. This can be both daunting and cumbersome. While Yahoo Answers does provide an opportunity for anyone to simply ask a question, one still must sort through a variety of answers, all provided by an undifferentiated community. Several librarians have seen an opportunity in this space for libraries.⁵ If libraries want to band together to collectively enter spaces like Yahoo! Answers or other spaces on the web that are not connected with a specific library, why not look at the GRN, a reference librarian network that is committed to collaborative reference and to sharing their expert resources to answer questions for library users worldwide? The GRN today is a closed network: only librarians who participate in the network can refer questions to it. By opening the network, librarians can potentially act as one, under the banner of the powerful librarian brand, to make a real difference in the information space.

Before the GRN can fully take advantage of the opportunities presented in the information space, at least two issues must be addressed:

- Profiling should be done at the librarian level, in addition to the institution level. This will allow staff with multiple language capabilities (and subject strength) to surface that expertise at the network level.
- Subject classification should be broader than the current Library of Congress classification system, and allow for alternative subject categorizations to be mapped to the existing network. This will allow for a more international aspect to the network.

Opening the network will allow participating libraries to better leverage their local resources and provide better service to their increasingly diverse community of users. Service will no longer depend on the language of the staff at the local library, but rather on the strength and diversity of the network that the library can access. This will provide true equality of service, regardless of local resources.

Model 2: Multilingual Collaborative Reference Services (Berlin Central and Regional Library)

In the second model, the Berlin Central and Regional Library (Zentral- und Landesbibliothek Berlin, ZLB) extends the possibilities QuestionPoint provides and

⁴ Yahoo! Answers is available at <http://answers.yahoo.com/>. According to a December 2006 press release, Yahoo announced that as of November 2006, Yahoo! Answers had surpassed 60 million users and 160 million answers worldwide. See

<http://yhoo.client.shareholder.com/press/releasedetail.cfm?releaseid=222275>

⁵ See, for example, Burger, Leslie, "Transforming Reference", *American Libraries*, p. 5 (March 2007) http://lb.princetonlibrary.org/documents/March_2007.pdf Leslie Burger is the current president of the American Library Association.

offers reference services in 18 languages on its web site.⁶ For each language there is a separate form in each of these languages.

Several interesting situations lead the Berlin Central and Regional Library to begin offering multilingual reference services.

1. The Berlin library has partnerships with libraries in other countries. As a general rule such partnerships only extend to contacts and exchanges among staff members of the various institutions; there is little or no visible activity which carries over to the patrons of the respective libraries.

During a conference with the partner library Bibliothèque publique d'information Paris (Bpi) in the Fall of 2004 the idea emerged to collaborate and provide reference services reciprocally in the language of the partner library on each library's web site using QuestionPoint. Rather than having staff members in each library handle questions in both languages, it was decided that each library would only answer the questions in the local language and the partner library would handle the questions in its own language. This rather simple beginning was implemented in the Summer of 2005 and rapidly lead the Berlin library to expand the number of languages offered to include English and Turkish (the library has a native Turk on its staff).⁷

2. Reference librarians traditionally make use of any contacts they have in order to answer questions asked of them. However, when it comes to the language in which questions can be asked by patrons, most web sites provide the impression that questions can only be asked in the language the library is capable of handling. In effect the libraries are projecting the attitude: "Either talk/write to us in a language we understand, or we won't be able to answer your question." Taking this idea one step further, the Berlin library tries to create an environment which conveys the impression: "Ask your question in a language you are familiar with and we will find someone who can answer it."
3. Academic libraries can perhaps afford to limit the number of languages in which they will answer questions to the local language and English, public libraries can not afford to do this, since it can not be assumed that everyone using a public library will be comfortable enough in the two languages to ask questions in these languages: if they are serious about serving everyone in their "community", then they need to pay attention to the language needs of everyone in this community and to find a way to open themselves up to this extended constituency. With limited resources, public libraries can only meet this need by being creative and forming partnerships with other institutions who can assist in answering this need.

⁶ Chinese, Czech, English, Estnian, Finnish, French, German, Greek, Hungarian, Italian, Korean, Latvian, Polish, Romanian, Russian, Swedish and Turkish. http://www.zlb.de/fragen_sie_uns/ask_a_librarian

⁷ Reports of the services of the two libraries can be found on the OCLC server:

Success story: Berlin Central and Regional Library (ZLB). A German library opens language doors with multilingual collaborative virtual reference services

<http://www.oclc.org/services/brochures/questionpointcasestudyberlin.pdf>

Success story: Bibliothèque nationale de Paris (BnF) and Bibliothèque Publique d'Information (BPI). Paris's Bibliothèque Publique d'Information (BPI) helps Nationalize Multilingual Virtual Reference. How Paris's most prestigious library grows a national multilingual virtual reference service

<http://www.oclc.org/services/brochures/questionpointcasestudyparis.pdf>

4. Members of the European Union have basically stated that all citizens of all member countries will be treated equal. This equal treatment dissolves rapidly when it comes to conversing in languages other than those of the local institutions, however. The realization that the Berlin library was effectively excluding citizens in other EU countries from asking questions in their own language gave a further impetus to extending reference services to include all the official languages.

QuestionPoint provides a powerful environment in order to offer multilingual reference services, since it is possible for both patron and librarian to choose the language in which he/she wishes to work. When someone logs on to QuestionPoint he/she can select from currently 19 different languages⁸ in which the interface is presented.

Development of the services of the Berlin Central and Regional Library

Once the Berlin library had begun offering multilingual reference services, it began actively seeking additional partner libraries who were interested in participating in this endeavor. The next language which was implemented was Polish – a logical choice since Berlin is close to the Polish border and hence has users from Poland – and a partnership was formed with the German-Polish Documentation and Media Center in Slubice. The next surprising addition was Chinese, when following a webinar where the multilingual collaborative reference service project was presented, the Sun-Yatsen University Library in China expressed its interest in participating and shortly thereafter Chinese was added to the offerings of the Berlin library. Thereafter contacts with additional libraries (primarily members of Intamel) expressed their interest in participating and over the next year the number of languages which could be offered increased rapidly. The initial hesitation which many libraries had about participating in the project decreased with the increasing participation of new libraries. The comment “Why should we participate” which was heard when the project first began gradually was replaced by “Why aren’t you offering ... language? Can we join you?”

At the last meeting of QuestionPoint libraries which was held last year at the IFLA conference in Seoul, the librarian from the Institute of Science and Technology in Seoul, immediately expressed interest during the meeting in becoming a partner library, since the Berlin library had already answered several questions (in English) which had been forwarded to it previously within QuestionPoint. Shortly thereafter Korean was also added to the languages offered.

Currently the Berlin library has partnerships with the following libraries: **China:** Sun Yat-Sen University Library, Guangzhou; **Czech Republic:** Prag Municipal Library; **Estonia:** Tallinn Municipal Library; **Finland:** Helsinki Public Library; **France:** Bibliothèque publique d'information, Paris; **Greece:** Aristotle University of Thessaloniki; **Hungary:** Central Library for Foreign Literature, Budapest; **Korea:** Korea Institute of Science and Technology Information, Seoul; **Latvia:** Ogre Public Library and Riga Municipal Library; **Poland:** German-Polish Document and Media Centre, Slubice and

⁸ The complete interfaces (i.e. for both patron and librarian) are available in the following languages: Catalan, Chinese, Dutch, English, French, German, Korean, Portuguese, Russian, Slovenian and Spanish. Only the patron interfaces are currently available for the following languages: Czech, Estonian, Finnish, Hungarian, Latvian, Polish, Romanian, Swedish, and Turkish.

the Pommeranian Library, Szczecin; **Romania:** Bukarest Metropolitan Library; **Russia:** Forgein Language Library, Moscow; **Sweden:** Skåne Regional Library, Malmö. In the coming months it is hoped that the number of libraries will be further increased in order to provide an even greater language diversity for its services.

How do the services work?

The Berlin Central and Regional Library creates a form in each of the languages and places it on its web site. When a question is asked in a language handled by a partner library, the question is sent directly via QuestionPoint to the partner library; the Berlin library never sees the question. The partner library answers the question as if it were on its own web site. Conversely, the partner libraries have forms in German on their web sites and the questions are sent directly to the Berlin library. For each of the partner libraries it is as if they had a virtual branch reference desk on the web site of the partner library. In practical terms this means that the library has increased the points of access to its services and thereby increased the possibility of questions being asked.

A frequent rebuttal for multilingual reference services is that the library is not getting questions in languages other than those presented on their web site – with the exception of English. Here it is necessary to put oneself in the position of someone who is not comfortable in these languages: the presence of a language on a form reinforces the impression that one can only ask a question in that language. Having a form in a language in which the patron feels comfortable reinforces the impression that the library is really interested in communicating with the patron. The library has taken a first step in creating an environment which encourages multilingual communication and signals its willingness to help.

An interesting example of how users react to the possibility of asking questions in a language they familiar with was a question posted by a Russian living in Munich. She began her question in broken German and then said that since she did not feel capable of formulating the question in German, she would ask her question in Russian. The colleagues in Russia were able to answer her question in Russian. The result: the librarian knew more precisely what the user wanted and the user was better able to understand the answer.

Offering multilingual services can also have an additional positive effect: it not only provides a signal that the library can answer questions in a specific language, it also provides a signal that questions related to that language may also be asked. A Swiss archive asked a question (in German) about a Chinese book mentioned in the diary of a Swiss missionary in China. Without a doubt the Berlin library would never have been asked this question if it did not have a form in Chinese for asking questions. In this case the question was translated into English and sent to the Chinese partner library, which in turn provided the answer.

Without a doubt libraries want to know how many questions will be asked in the different languages. The number is not very large – users need to learn that there is the possibility of asking questions in different languages. Since initiating the possibility of asking questions in the various languages, the number of questions asked has gradually

increased. It takes time for such services to be used. More important than how many questions are being asked is that questions are being asked. The library opens its virtual doors to more potential users and over a longer period of time it becomes more and more obvious to people unfamiliar with the library that here is a valuable service which they can use.

It would be wrong to assume that the Berlin library is the first library to offer multilingual reference services. Bi- or tri-lingual services are offered by numerous libraries – primarily there where multiple official or semiofficial languages are found. There are additional examples of libraries offering the services in more languages, for example the Suffolk Collaborative Library System in New York with Suffolkweb (<http://www.suffolk.lib.ny.us/>) offers email reference in 4 languages: Chinese, English, Portuguese and Spanish and the Swedish Fråga biblioteket (http://www.eref.se/se-admin/vrl_entry.asp?virtual_desk_id=43) offers its services in Arabic, Bosnian, German, English, Finnish, French, Croatian, Persianh, Polish, Russish, Schwedish, Serbian und Spanish.⁹ In contrast to the Berlin library, however, these systems are self-contained and rely on language-fluent librarians within the system to answer the questions.

As the two models illustrate, by using the collaborative capabilities of virtual reference, libraries are able to better serve their users without being limited to their own staff. With so many demands on library budgets and staff, international partnerships help us better serve all of our users and not just the ones who speak our language. Both models are examples of the many new possibilities available to libraries today to extend their services to a large, previously untapped group of users and thereby making them active members of a growing multilingual international community of library users. At the same time it opens new doors to libraries and permits them to work together with new partners and expand their services much beyond what they are capable of doing alone. In the process one of the greatest barriers in the world – the language barrier – is partially overcome. It is an exciting possibility and offers creative librarians a chance work together to contribute to a truly open society.

⁹ The forms for asking questions in most of the languages are, however, in English and not in the language in which the questions may be asked.

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Paul S. Ulrich is a reference librarian at the Berlin Central and Regional Library and is responsible for developing new methods of doing reference work in an electronic environment. In addition to supervising the translation of the QuestionPoint and OpenWorldCat interfaces into German, he developed the idea of partnering with libraries in other countries to offer multilingual references services.

Imagine a reference service where a patron in a public library in the United Kingdom can query an online system and get reference help from a librarian at a public library in southern California...all within a matter of hours...sound hard to believe? It is exactly what is possible with the Collaborative Digital Reference Service (CDRS).

What is CDRS?

CDRS provides professional reference service to researchers anytime, anywhere, through an international, online network of libraries and related institutions. Launched by the Library of Congress in June 2000, CDRS now includes more than 200 member libraries—academic, public, special, and national—worldwide and that number is growing weekly. The collaboration has been very beneficial in that each library brings its professional experience, knowledge of user behavior and needs, and subject expertise to bear on the project.

CDRS uses technology to provide the best answers in the best context, by taking advantage not only of the millions of Internet resources but also of the many more millions of resources that are not online and that are held by libraries around the world. CDRS supports libraries by providing them additional choices for the services they offer their patrons. Libraries can more ably assist their patrons by sending questions that are best answered by the expert staff and collections of CDRS member institutions from around the world.

An advisory board, comprised of representatives from CDRS member institutions, meets to discuss policy and future directions of the program. Business meetings with member representatives are also regularly held to get feedback, report on and solve workflow problems, discuss training and performance measures, and build esprit de corps. The CDRS homepage posts general information and news links, information for members, and project milestones. An electronic mailing list allows members to communicate frequently with one another, get technical questions addressed, and comment on the efficacy of the network.

The World at Your Fingertips

At no other time in history has the emergence of technology affected so significantly the core mission of a library. These technological advances have created new service opportunities for libraries and library patrons. For information to have relevance, it must be up-to-date and receive the hands-on touch of the skilled reference librarian to provide context and added value. Through the CDRS network, LC and its partner libraries can serve researchers everywhere and, in so doing, bring control, context, greater choice, and timeliness to the world of information.

CDRS includes two component parts: submission of a question and answer, and archiving the answer for future use. The workflow looks like this: An end user requests information through a CDRS member institution. The member institution sends the query to the online Request Manager (RM) software for processing and assigning. The RM searches a database of CDRS member institution profiles looking for the institution best suited to answer the question. Once a match on an institution has been made, the query is sent to that institution for answering. After the query has been answered, it is routed back to the original CDRS requesting library via the RM to allow for closing out the case and completing other administrative tasks.

Click image for larger version. The library profile is the core of the routing and assignment activity, and each institution can "code" itself as broadly or as narrowly as it chooses. Library profiles contain basic information about the library, including hours of service (and time zones), collection strengths, staff strengths, education levels served, languages covered, geographic location of users served, whether there are special services provided and what they are—as many as 28 data fields. This information is captured in a table, where it is used by the online RM to sort, assign, and track incoming questions and to deliver answers to the end user. Further, the profile tool is flexible enough to allow for regular updating to reflect staffing changes or special circumstances that would affect the automatic routing by the RM. For example, if the astronomy specialist is on sabbatical for several months and no back-up is available, the library might choose to remove that subject strength from its profile until the staff member returns.

Answers are edited and stored in a separately searchable knowledge base of information. The knowledge base, to be populated with the diverse and authentic information provided by CDRS librarians, will ultimately serve as a front end to CDRS, designed to "catch" and answer incoming questions if there is a ready match. If there is no match on the knowledge base, the question will be routed through the RM and assigned to a library.

CDRS Implementation

The implementation process began by defining a concept of operations by which CDRS would work on behalf of its members. For example, the advisory board agreed that CDRS is a membership model; CDRS builds its infrastructure once and shares that cost among its members so all can afford to use the service; CDRS is open and members need only Internet access, a browser, and e-mail to use it; quality is considered number one and

policies, certification, and Service Level Agreements (SLAs) are enforced to ensure that the brand lives up to the market's expectations; the technology platform is built to serve the membership as a whole; and, finally, CDRS is an international service that does not give preferences to certain jurisdictions or members.

We also initiated a series of pilots to test the technical solutions. Pilot 1 had two principal goals: to test the effectiveness of the library profiles and to test a web form for submitting questions. Results indicated that more standardization of the data elements was needed, for example, agreement on use of a standardized tool—such as a truncated version of the Library of Congress Classification schedule—to describe a library's subject strengths. All of the libraries contributed edited sample questions and answers that were sent through the system according to a scripted schedule.

In Pilot 2, we added more institutions worldwide, increased the number of questions asked of the system, revised the profile database, and began to experiment with software packages to serve as the Request Manager.

CDRS Accepts All Comers

There are no restrictions on the types of libraries that can participate. Size of a library or collection is not a factor in determining whether a library can become a member. The aforementioned Service Level Agreement defines the nature of the member library's relationship to the CDRS and that agreement is codified in the library profiles. Many types of agreements are possible and are limited or expanded depending upon the strengths (e.g., subject) or limitations (e.g., staffing or hours of service) of the individual library. For example, a library may agree to ask and answer questions; only ask questions; ask or answer questions only during specified periods; serve as an editor for the knowledge base; or serve as the on-call library if the automatic Request Manager function is inoperable. In addition, many libraries have local collections that are unique to them. These local, specialized collections make a potent contribution to CDRS overall, filling special niches that larger research institutions may not be able to fill.

In addition to defining roles and responsibilities among the partner libraries, the SLAs will ultimately be used to determine what it will cost a library to be a member of CDRS. While the pilot is underway, CDRS is free. However, we have been examining a variety of funding options with the goal of being as flexible as possible, both to allow for the broadest participation among types of libraries and to ensure that no one library or group of libraries has to bear all of the costs of establishing and sustaining CDRS. To that end, we conducted a series of marketing surveys, both in person through interactive sessions and online, to develop potential cost models. These sessions provided valuable information to the planners, affirming support for a service through which credentialed experts provide high-quality information and affirming a willingness to pay for such a service.

The Value Proposition

We have encouraged maximum flexibility in developing the many component parts of CDRS. For a library to want to participate, CDRS has to be perceived to have value. Just

as there are no "one size fits all" libraries, so too are there no "one size fits all" arrangements with CDRS. Libraries are structured and organized differently, they have different local audiences, and they have different policies and procedures for ensuring quality control. To be useful to a library, CDRS must fill an unmet need and offer something that the library does not already have, e.g., adequate staff, a subject strength, or a special collection unique to a participating library that the whole collaboration then has access to. When the participating library defines the terms of that value, that library will have greater incentive to make the arrangement work, for itself and for CDRS. Our job is to create the tools; the library then decides for itself how to make the relationship work.

Where to Next?

Currently, libraries participating in CDRS connect with other libraries on behalf of patrons so that the libraries can conduct the reference interview before sending the question, define the parameters of the service, determine what works and what does not work, and create a service that is scalable and maximally responsive to user needs. From the beginning, however, we have envisioned that CDRS will become a service that is available directly to patrons, recognizing that many individuals never go to their local library but still need information. Over the next several months, we will work with our members as we begin to define the direct-to-patron interface. Eventually, we hope to build a service that provides one-stop shopping for reference and information.

In January 2001, the Online Computer Library Center (OCLC) and the Library of Congress, on behalf of CDRS member libraries, signed a cooperative agreement to guide CDRS through its next phase of development. OCLC will provide technical and development support to CDRS by building and maintaining a database of participating institution profiles that will route questions and answers through CDRS; building and maintaining a question-and-answer database system that will enable CDRS participants to catalog answers and store them in a searchable and browsable database; and providing administrative support for CDRS, including marketing the service, registering new members, and providing training and user support. Together, the Library of Congress and OCLC will develop a viable model for a self-sustaining digital reference service and promote CDRS in the library community.

We continually examine our technical solutions to ensure that we have the right ones to meet our mission, and that the tools we have created are easy for librarians to use. As we look to expand globally and become a true 24/7 service, there are many issues we must examine: language and literacy, service to local populations in their own language, acceptable Internet access and technical infrastructure support mechanisms for a worldwide constituency, cultural and political sensitivities, and e-commerce and trade agreements that may affect pricing models. The solutions to these issues will determine the long-term success of CDRS.