A Consortial Approach to Interlibrary Loan

Ontario universities rebuilt their interlibrary loan framework and service

By **Carol Stephenson** and **Anne Fullerton**

Interlibrary loan (ILL) services have traditionally borrowed materials or obtained photocopies from libraries or commercial document suppliers on behalf of their communities. Despite the growing number of full-text e-journal packages, increasing full-text content on the Web, and the ongoing expansion of print collections, many students and faculty in a university environment still need materials not available from their local university library. Unfortunately, the ILL service in place at many universities, including those in Ontario, Canada, have not kept up with the increased demand for materials and the expectations of rapid delivery. Many have not taken advantage of systems with digital capabilities.

Examining the ILL Process

The Ontario Council of University Libraries (OCUL) is a library consortium of 20 universities (see Table 1) that rely heavily on each other's collections to meet the demand for materials not held locally. Member libraries exchange more than half a million books and copies of articles annually. In addition, OCUL libraries borrow from other libraries and document suppliers worldwide to obtain materials not held at OCUL libraries.

Figure 1 outlines the basic flow of an ILL request submitted by a student or faculty member at an OCUL institution. At each stage of the process to meet the request (shown on the left), potential problems can arise (shown on the right), taking additional time and staff resources. For example, staff must verify that the end user checked the local library catalogue before submitting the ILL request, that the user's request is complete, and that the user has requesting privileges. Staff must then search the appropriate catalogues effectively, which requires both knowledge and searching skills. After identifying multiple potential suppliers of the requested material, staff send the request, using paper copies as a backup against loss of data from the aging system. Staff at different libraries use multiple requesting systems to contact suppliers and track each request. More staff time is required to contact the end user by phone or e-mail to pick up the items when delivered. At any stage, staff can get caught in multiple rounds of communication with either the end user or the supplier. The entire process is very labor- and time-intensive.

A New ILL System for OCUL

OCUL has a long history of cooperative resource sharing and collective purchasing projects in support of diverse research needs. Consortia purchases have focused on electronic resources, including participation in the Canadian National Site Licensing Project,

Table 1

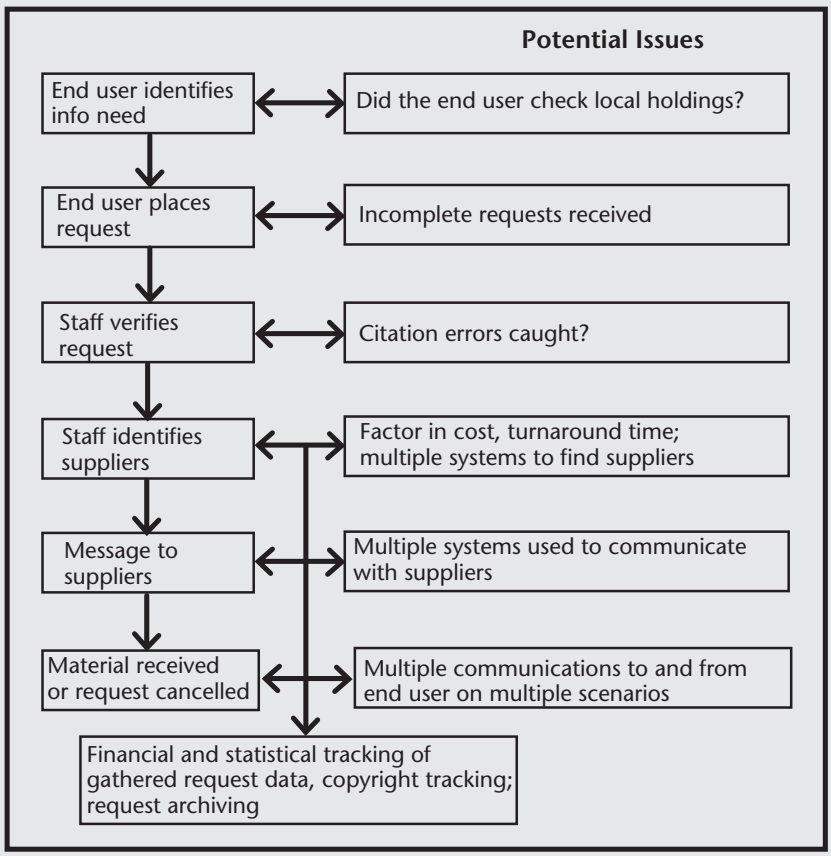
OCUL Member Universities

Small Institutions (<10,000 full-time students)	Medium Institutions (10–20,000 full-time students)	Large Institutions (>20,000 full-time students)
Lakehead University	Brock University	University of Ottawa
Nipissing University	Carleton University	University of Toronto
Ontario College of Art and Design	University of Guelph	University of Waterloo
University of Ontario Institute of Technology	McMaster University	University of Western Ontario
Royal Military College of Canada	Queens University	York University
Trent University	Ryerson University	
	Wilfrid Laurier University	
	University of Windsor	

Source: OCUL Facts: Population Statistics, July 2004; <http://www.ocul.on.ca/ConCan/stats2004.html>.

Figure 1

Basic ILL Borrowing Process



a massive electronic journal-licensing initiative involving 64 institutions across Canada.

In January 2000, OCUL received a five-year government grant from the Ontario Innovation Trust to develop an infrastructure that would enable researchers to access and use information resources. The purchase and implementation of a new ILL system for all OCUL institutions was one of the programs under this project.

OCUL ILL managers evaluated their existing systems and came up with a wish list of functionality for a new system, to include a Web-accessible interface for end users to search catalogues, submit ILL requests, and track the status of their requests. For staff, the key components of a new ILL system were simplified verification and management of requests, integrated communication with other resource-sharing partners, and system reliability. The specific functionality desired matches the steps of the ILL process, as follows:

- Only authorized end users can submit requests.
- End users are automatically blocked from submitting incomplete requests and notified which fields to complete for a valid request.
- Requests are automatically checked against the local library catalogue.
- End users are notified automatically if the material is available locally.
- Requests are automatically searched against catalogues to produce a list of potential suppliers.
- Messages between requesting libraries and potential suppliers are sent and received through one system.
- If the first supplier cannot fill the request, it is automatically routed to subsequent suppliers.
- An online, reliable system manages the ILL process with minimal staff effort.
- Basic forms and reports are generated electronically.
- End users receive automatic notification when the requested materials are ready to be picked up and can check on the status of their requests themselves.

In 2000, after evaluating the desired functionality against existing products, OCUL purchased the Fretwell-Downing ZPortal software for end-user ILL requests and VDX software for staff management of the ILL process. The Fretwell-Downing software most closely met the wish list of system functionality. Seamless integration of ILL and circulation systems to provide patron authentication and materials check-in and check-out were also on the wish list. This functionality was not available from any vendor because the ANSI/NISO Z39.83 Circulation Interchange Protocol supporting this interoperability was still in development.

The implementation of ZPortal and VDX within OCUL is named RACER for "Rapid Access to Collections by Electronic Requesting." From the RACER Web site (http://racer.scholarsportal.info/), end users search library catalogues through a common search interface to create ILL requests or fill in a blank ILL request form. Staff log in to RACER via the Web to process their library's borrowing and lending requests. Although the system consists of a centrally configured and maintained Oracle database, each library's implementation can be set up uniquely to meet the local workflow.

What We Have Learned

The first eight institutions went live with RACER in June 2003. Before the end of 2004, all 20 OCUL institutions will be using RACER. The lessons learned during the implementation are applicable to other consortia system implementations, not just ILL.

Plan to Revise Timelines Often

Initial implementation timelines were far too optimistic, it turned out. The project team determined that one year would be sufficient to configure the Oracle database and Web interfaces, cre-

ate forms and reports, train staff and end users, test the system, and eventually roll out the implementation to OCUL institutions.

In reality, it took one year just to set up and test the system before the first libraries went live. Project staff then needed to phase in implementations every four months because of the difficulty of switching systems in the middle of an academic term. In addition, the project team is still struggling to complete reports development and implementation for the universities that need a combined French and English end-user Web interface.

Standards Don't Guarantee Interoperability

Adherence to current standards does not mean stress-free interoperability between systems. The standards that drive the ZPortal and VDX system are the ANSI/NISO Z39.50 protocol for integrated catalogue searching and information retrieval and ISO 10160/10161 and the Canadian generic script messaging format for exchange of request information. Through testing, the project team learned that each library system vendor interpreted the standards differently in its particular system. Time-consuming testing and additional programming were needed to ensure successful searching of the different catalogues and efficient messaging with the vendors and libraries involved in the ILL process.

Be Ready to Add Staff

Project staffing requirements were also too optimistic. The initial project implementation team consisted of a project manager, a user support/training librarian, and a systems administrator. After the first year, we added another user support/training librarian to assist with the heavy workload of providing day-to-day support for implemented sites while continuing to train staff at new sites. An additional systems librarian was brought on to work on reports and interface customizations.

In addition, several working groups made up of staff from OCUL libraries were established to focus on specific database configuration issues: reports, staff training, the French language end-user interface, and end-user interface customization. The membership of the configuration issues and reports groups varied depending on the specific issue under discussion, but representation always included a mix of systems librarians and ILL managers. Decisions on server purchases, end-user authentication, database record and reports structure, and default settings were made by members of these key groups.

The training group consisted of three ILL managers and the two user support/training librarians. Development of the staff training syllabus and training documentation was included in their mandate.

The French language group had representation from each institution with a bilingual campus. This group provided Fretwell-Downing with translation recommendations.

The end-user interface customization group consisted of seven public librarians who reviewed the layout of the public Web pages and recommended changes before each system upgrade as well as developing end-user instructional materials. In total, more than 30 library staff, with representation from every OCUL institution, participated in the working groups.

Communication Is More than E-Mail Updates

Frontline staff up to library directors agree that the frequent and varied forums for communication have been one of the project's successes. The project team set up many methods of communication to gather direct, frequent input from frontline staff during configuration and to provide them with assistance in using RACER on a daily basis. Project listservs were set up for managers and system contacts at each library, for staff training, and for subgroup work. A detailed support Web site was established to manage and provide ready access to all the surveys, reports, and training materials (http://www.library.utoronto.ca/scholarsportal/vdx/support/index.html).

Within the first year of production, we held two all-day staff workshops, inviting frontline staff from OCUL libraries to meet and share experiences. As a result of extensive communication and staff participation, staff feel a strong commitment to and ownership of RACER.

One Staff Training Package Won't Fit Everyone

Taking into account different learning styles, the two OCUL user support/training librarians gave a two-day workshop that combined PowerPoint overviews with hands-on exercises. Each library sent up to four staff to these "train the trainer" sessions, many of which were held at the University of Toronto, a central, easy-to-reach location for most libraries and also the site of an OCUL office. The training working group helped participants during the hands-on exercises on the RACER test system. Participants were expected to practice receiving and processing ILL orders on the test system at their own libraries and to train their colleagues to use RACER.

For about half of the libraries, this training was not sufficient. By monitoring the test system, the project team identified which libraries were not experimenting with the system. These same libraries shared a common characteristic: many long-term ILL staff who were both entrenched in their local manual procedures and unfamiliar with Web interfaces. They needed on-site training at their own workstations to go over specific workflow tasks in their actual setting. The goal was to have all staff comfortable using the test system before the library promoted the new system to end users. As a result, OCUL staff trained many more of the member universities' ILL staff than originally planned.

New Partnerships Emerge

An indirect benefit of implementing the RACER system has been the development of new partnerships. As the project team informed other consortia of OCUL's system changes or tested system-to-system interoperability, other discussions took place. For example, ILL agreements were made between OCUL and other Canadian and Australian

consortia for preferential access to each others' collections for speedy and discounted ILL service.

RACER project staff are also sharing ideas and best practices about ZPortal and VDX implementation with the Ontario Public Libraries consortia and the Quebec university consortia. Both are implementing their own VDX and ZPortal systems.

Usability Testing Is Important

Library staff work daily with confused and frustrated users tripped up by poor search interfaces. Usability testing ensures that users will have a positive experience with the interface.

The End User Instruction Working Group (EUIWG), for example, based their customization of out-of-the-box RACER on their knowledge of user behavior with online databases and problems encountered with any Web interface. Usability testing helped clarify the differences between the staff's assumptions of how end users would use the system and how end users actually used it.

As it turned out, our users' mental models for ordering an item through ILL did not match the RACER approach. They thought their job was to search the right catalogue and identify which library could supply their item. The reason for searching catalogues using RACER is to identify any (one) correct record so that the correct information is automatically transferred to the ILL form. Some users have always thought identifying the supplier was necessary regardless of the ILL system, and the first version of RACER reinforced this perception because the user had to choose the libraries to search to begin a request. In the most recent upgrade, all the OCUL libraries are preselected for searching. Usability testing will reveal whether this resolves the misperception.

In response to the language and terminology questions, EUIWG reduced on-screen help to a minimum because users did not read or even scan it. They also recommended that Fretwell-Downing change the hard-coded buttons and labels.

Was RACER Worth It?

The following quote comes from the Trent University student newspaper, *The Arthur*: "I am still in awe of this program… One might say that with the new influx of high-speed Internet and programs like RACER that the world is at our fingertips." An interlibrary loan/document delivery/collections librarian at Lakehead University said, "One of the aspects of RACER that has exceeded my expectations is the speed with which our materials are getting to us. I have overheard patrons coming into the ILL office marveling at the 'lightning' speed of the service."

These comments underline two of the most obvious expectations for RACER: the sharing of library resources among Ontario's universities and fast, efficient ILL service whether the end user is at a small or large university. Local systems departments are delighted with the centralized server, which they do not need to support and maintain locally. Smaller universities benefit from features they could not have developed and supported themselves. Larger universities have automated many labor-intensive ILL processes that were unsustainable in a large-volume operation.

We will begin a formal assessment of RACER in February 2005 in part to comply with the terms of our funding. Components we intend to measure include turnaround time from request to receipt of material, system stability, and success/failure of the automated processes compared to previous manual processing. Analysis of the results will tell us how successful the implementation has been. Through usability testing and focus groups we will identify gaps in the interface design and measure end-user satisfaction with RACER. We also want to learn what difference RACER and OCUL collection sharing have made to research and learning at Ontario universities. Informally, we know RACER has been worth the time and effort. We'll publicize the formal results next year, but we don't expect any surprises. *e*

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