

Digital Delivery to the Desktop: Documents Anytime, Anywhere

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The Health Sciences Libraries, University of Wisconsin-Madison, are offering faculty, staff and graduate students an attractive alternative to traditional forms of document delivery. Based on high-speed transfer, Web-based interface and order tracking, Library Express combines recent technologies with a strong customer service orientation to provide easy and convenient access to local and worldwide collections

On a Big Ten campus spread out over 933 square acres, distance can pose a significant barrier to retrieving print resources from over 40 libraries. For those working off campus in the many research stations and clinics, students completing rotations and clerkships in other parts of the state or the nation, the challenges of access to health sciences materials become even more daunting. At the University of Wisconsin–Madison, a new document delivery service, Library Express, is bridging the distances and providing easy and affordable access to articles, book chapters and tables of contents from local library collections and beyond.

Library Express users can initiate their requests through a Web-based interface, track the status of their requests online and retrieve digital documents in PDF format from their networked computer of choice anytime, anywhere in the world. Four campus libraries currently provide this service to a potential combined user population of approximately 24,000 faculty, staff and graduate students. While the service is currently not open to undergraduates, exceptions are generally made for distance learners of any status. Libraries and their Library Express users are matched by subject area affiliation, major and, when necessary, by manual entry into the system. Authentication and access are determined by an active 11-digit campus ID. Within the Health Sciences Libraries (HSL) Library Express development occurred in three basic phases – an extensive planning phase, a carefully staged implementation phase and the final, fully operational phase with second generation software. The last phase opened the service to all faculty, staff and graduate students at the University of Wisconsin–Madison.

The HSL consist of three separate library facilities (main health sciences, pharmacy and hospital collections) which serve a diverse campus population including the Medical School, School of Pharmacy, School of Nursing, basic sciences, History of Medicine and other health sciences and related fields. User groups are very mobile, crisscrossing not only a large campus but also traveling the state, the nation and the world.

The HSL have a long tradition of making library materials readily accessible to primary user groups. For many years library users have had access to a shuttle van that stops twice a day at each of the three libraries to pick up and delivery library materials. Requested items are shuttled for convenient pick up at the site chosen by the user. This service provides one-day turnaround and is, for some, still the document delivery method of choice. While very efficient in getting the materials to the users in a timely fashion, the service has one major disadvantage. Physical items being transported are out of circulation for days and not available to others at the home library. With an increasing number of electronic journals available

and readily accessible from our Web pages, HSL users are quickly adopting the idea of digital retrieval as a viable option. To broaden the scope of easy access to print-only titles/volumes, digital delivery to the desktop seemed the next logical step and a welcome replacement for other more manual and cumbersome methods of the past. Library Express also offers the opportunity to provide one point of access for multiple types of delivery services running in the background. When fully implemented, users will no longer have to ponder where to go and which forms to fill out for intra-campus or inter-campus services.

With the advent of appropriate and easy to use technologies, more comfort with computers and an articulated commitment to serving the information needs of our library users in a timely and convenient manner, the implementation of digital delivery to the desktop was given top priority. After 2 ½ years of operation, the service has not yet reached its capacity and continues to grow. The copyright notice for this document is in the public domain and is not subject to the electronic library of the future, as a road to the next generation of technology-enabled library services.

Planning for Success

Heeding lessons learned earlier in 1999 from a premature start and a quick retraction of the service in the spring of that year, the HSL put the smooth implementation of Library Express high on the list of the HSL priorities. The newly hired Head of Access Services was given the mandate to bring up a new digital delivery program in a timely and organized manner. The general components of the service would be based on an existing document delivery pilot already in place at another campus library. Early in the first planning process, Ophthalmology, a department of approximately 60- plus members, had expressed a desire and need for electronic desktop delivery to both on and off campus locations. Members of this department are widely dispersed and have a broad range of information needs, including clinical, instructional and research support. They had also agreed to work with HSL to get the bugs out of the program during the beta phase. The challenges posed by this department made it an ideal test group for distance delivery services.

At this point, the project management team consisted of a newly hired .5 FTE dedicated to the Library Express planning process, the Head of Access Services and coordinator of the hospital library who had experience with the first roll-out.

Clearly defining service parameters and setting service standards early in the planning phase, kept us on track, outlined basic expectations, reduced misunderstandings and streamlined staff training. HSL Library Express staff agreed to do everything humanly possible to make access to the service easy and effortless for our user groups who repeatedly listed a lack of time as one of their most pressing dilemmas to information retrieval. Our goal was to deliver articles from all three health sciences collections within 1-2 working days, 24/7. Articles would be ordered through a uncluttered Web-based interface, received by processing staff in email format, materials retrieved from the library shelves, scanned and delivered to the user with a link pointing to the PDF document sitting on the server. Adobe Acrobat would be used for scanning materials. Data storage and report generation would be MS Access-based. The main health sciences library, which has the largest collection of the three, would serve as the recipient and screener of all incoming requests. Requests for materials located at either of the other health sciences facilities would be electronically forwarded for processing and delivered directly to desktops. Requests for items from non-HSL libraries would be retrieved manually from other campus libraries whenever possible, returned and scanned for delivery to the user. Requests not found on campus would be sent to our HSL interlibrary loan staff for processing and then returned to Library Express staff for scanning and digital delivery. All requests would be delivered electronically. No paper delivery options would be available through Library Express. Links to scanned materials would be available on our server three weeks, then automatically deleted from the server. Color images would be delivered whenever requested and available. Status of requests throughout the processing queue would be posted to the users email box using canned messages manually generated by staff. No fees were charged during the beta phase in exchange for input from and the patience of our users. In summary, it was a very labor-intensive process for library staff.

Setting a realistic implementation timeline was of paramount importance to the project management team. Keeping a vigilant eye on the details helped us stay grounded and focused on the ultimate goal to provide a smooth and speedy document delivery experience for the user. A loose timeline was set at "as soon as possible, but not before we are truly ready." After one false start and a project cessation lasting 6 months, we needed a successful outcome to restore confidence and sustain momentum. A successful jumpstart was perceived as imperative to the extended well-being of the program.

During the fall and winter of 1999/2000 staffing and equipment demands were closely reevaluated. The library director made it clear that staffing as well as other forms of program support such as space requirements and equipment would be promptly provided. The .5 FTE hired in the fall to assist with initial project planning was no longer sufficient to handle projected development activities, staff training, setup, promotional and processing duties. The .5 was converted to a full-time position with a robust position description. Identical scanners (Fujitsu ScanPartner 600C) and software (Adobe Acrobat 3.0) were purchased and set up at each of the three health sciences libraries to assure uniform processing and training at each site when demand picked up.

Since one Library Express shop (Wendt Engineering Library) was already functional on the campus, the first few months of planning were devoted to familiarizing ourselves with the successful processes already in place and how we could adapt these to our HSL environment. We were able to emulate much of the workflow and "borrow" the home-grown software that allowed us to scan, mount, duplicate, and distribute files with little effort. Librarians (and the staff) was trained to verify citations

in a number of databases and to work with email clients, MS Access and Adobe Acrobat. Student assistants were hired to retrieve, scan and post articles to the server. Trouble-shooting and communication with users was limited to Library Express staff, closely monitored and carefully documented.

During this time a detailed procedures manual was designed to support training and to communicate best practices. A Web page was developed to provide a point of access and source of service information for our users. Promotional materials and other aids, such as a letters of introduction and a service brochure were also developed. Other functions and practices of the first generation system were worked out piece by piece in countless meetings and discussions throughout the 16-month beta phase.

Implementation

Starting out small afforded the project management team time to assess, tweak and fine-tune the service before moving on to serve a larger and more complex user group. We introduced the initial version of Library Express to members of the Ophthalmology Department (clinicians, faculty, residents, fellows and support staff) during February 2000 and opened the service to them March 1. Library Express staff conducted on-site demos, circulated letters of introduction, trained Ophthalmology staff in the efficient use of the service and closely monitored their progress. A Web-based tutorial was designed to provide an introduction to new users and refresh the memories of the occasional visitor. Technical issues were addressed immediately, often with an on-site visit to see first-hand what obstacles the users were encountering. Starting with a small group (approximately 60) with varying needs and varying degrees of computer comfort levels, allowed for more control, better communication and more immediate resolution of problems as they surfaced.

After working with Ophthalmology for two months, we added the School of Pharmacy to the Library Express test pool. The pharmacy graduate students doing clerkships throughout the state posed challenges – how to deliver large PDF files to users with minimal hardware configurations, through firewalls and over slow modem connections. Additional user groups were added incrementally throughout the year by invitation only. Promotion was very focused and controlled to keep activity levels in line with our ability to provide a high level of service. Staggered additions to the Library Express service roster included the Department of Surgery, Student Health Services, Psychiatry and the School of Nursing each bringing with them unique demands and service challenges. Contacts were identified for each new group and asked to contribute to the on-site promotion and local trouble-shooting.

Although Library Express staff had been meeting often, we now felt a need to formalize the meeting calendar in order to include staff from all three libraries who were processing more requests. Staff hours during this time tripled as requests increased ten-fold. The first month of the beta period with only Ophthalmology on board, we received 129 requests. Sixteen months later during the last month of the free beta phase, we received 1881 requests. Business was booming.

The Library Express working group had now grown to include the Head of Access Services, the coordinator of the hospital library and front-line Library Express staff (1.5 FTE). Regular weekly meetings were helpful in keeping us on track, addressing problems quickly, making corrections immediately and communicating any changes in policies and procedures to all Library Express staff at all three processing locations. Regular meetings continue to this day, but less frequently.

Throughout the beta phase the Library Express team remained flexible yet focused, smoothing out the bumps in the road as they came up, willing to make changes, if needed, to improve the quality of service. Nothing was set in stone. Everything was up for evaluation. Attention to detail became our mantra. Staff scrutinized, assessed and evaluated each step of the process. We conducted a time study which tied staffing needs to volume processed. Daily, weekly and monthly statistical reports generated from MS Access were helpful in identifying trends (or the lack of them) and aided with scheduling, estimating equipment and space needs as well as planning for future service enhancements.

During the beta phase we also listened carefully to our users. Two questionnaires were sent out, one in May 2000 to approximately 100 users and the second in February 2001 to 350 users of Library Express. Beyond a high degree of satisfaction with the service, responses to the early survey also revealed a desire for color images, that faculty were doing their own requesting and that we needed to do a better job promoting the service. Responses to the February 2001 survey indicated that the suggested fee of \$1 per delivered article would substantially reduce the number of requests. A majority of respondents clearly stated that duplication or redistribution is prohibited without the permission of the author (the \$1 fee). This was very

useful in planning for short-term staffing needs. Other information uncovered from this survey included a need for 24-hour service, a desire to have tables of contents delivered and a confirmation that most Library Express users loved the service and found it extremely helpful in conducting both research and their daily business.

One of the most rewarding experiences during the beta phase was working with colleagues across campus to design generation two software and to open Library Express to all faculty, staff and graduate students served by four different libraries each with its own specific user group. During this time of collaborative development, the group made a wish list of Library Express features that each site wanted in place in the new version, both on the public/user side and on the processing/staff side. Out of these meetings came an end product that had a common look and feel, yet one that was able to retain some of the site-specific features and functions. For example, HSL had for most of the beta offered the option of color images. This was an important feature for our Ophthalmology group and others who needed the color variations of photos. Blacks, whites and grays were not always as useful. This feature choice was incorporated into the design for the HSL Web-pages, but not for other shops. The new software would be totally Web-based, eliminating the awkward interactions between email clients, home-grown programming, MS Access and other bits and pieces that had been cobbled together.

Working together with campus-wide Library Express staff also allowed us to share general document delivery experiences and philosophies. It strengthened our understanding of current practices in other document delivery areas on campus and created opportunities for further collaboration and partnerships beyond Library Express.

Library Express: The Next Generation

After testing the new software with a small sampling of current users, the second generation of Library Express software was activated July 2001. Bugs and potential enhancements were identified and scheduled for resolution. None prevented requesting or delivery, but did add to confusion on the staff side. We all experienced some growing pains. Reports were not in place when the new system was activated, resulting in continued data entry with MS Access. User and transaction data, now collected by a Web-based system, could not be harvested without considerable programming, which at this writing, is still in progress.

In anticipation of the \$1 per article fee, users swamped us in the free periods of May and June resulting in our highest productivity to date—1513 and 1881 respectively. During the month of July, our activity level fell to less than half confirming what we had learned from our survey earlier in the year. Since July the number of monthly requests has continued to climb, albeit slowly, to leveling out at approximately 1000.

The new Library Express software provides a total Web-based environment for both users and processing staff. The only remnants of the previous system are the manual scanning process which we have found no way to streamline and the initial citation verification and location procedures. Users now have the ability to track the progress of their requests online limiting the amount of email generated in communicating request status with users. A built-in request forwarding feature allows requests to be moved to other Library Express shops for retrieval and processing. We no longer send students to other campus libraries to copy articles found there. This significantly reduces the turnaround time for those deliveries.

As the news of this new service spreads across campus, Library Express is rapidly replacing older, less automated levels of document retrieval and delivery. This successful program is a direct result of strong administrative support, careful planning, a staged implementation, continued attention to quality control, an emphasis on customer satisfaction and, above all, a well-trained and dedicated staff.

In April 2002, HSL Library Express staff celebrated a milestone. Within two years, we had processed more than 25,000 requests. As we gathered staff members from all three HSL libraries over pizza, homemade desserts and lots of stories from the “trenches,” we congratulated ourselves on a job well done and looked toward the continued growth of a service that emphasizes convenience and eliminates the barriers of distance through digital delivery to the desktop anytime, anywhere.

Biographical Sketch

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