**IM'ing overload: Libraryh3lp to the rescue**

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**Abstract:**

**Purpose:** The purpose of this paper is to describe the new virtual reference system Libraryh3lp, developed to assist librarians with managing multiple instant messaging (IM) patrons at one time. **Design/methodology/approach:** A summary of the main features of the Libraryh3lp system, including setup and reports; and a discussion of how to provide staff training. **Findings:** This paper provides an overview of the Libraryh3lp virtual reference platform including what it does, how it works, and its benefits for reference managers. **Originality/value:** This paper is useful for information management professionals who are looking for a low-cost, reliable alternative to current IM software systems.

**Keywords:** reference services | libraries

**Article:**

1. **Introduction**

In a 2004, Pew Internet & American Life Project survey (Lenhart *et al.*, 2005), 65 percent of the 12-17 year old respondents reported that they use instant messaging (IM), with nearly half of those respondents reporting that they do so daily (Lenhart *et al.*, 2005). In a recent survey of more than 27,000 undergraduates, 57.5 percent of the 18-19 year old respondents and 47.1 percent of the 20-24 year old respondents reported they use IM at least several times per week (Salaway *et al.*, 2008). Because of the prevalence of IM in these user groups, any library serving teens and young adults and valuing user-centered service should consider providing patrons with a means to interact with library staff through IM.

Several libraries providing patrons with a means of interacting through IM report high levels of patron satisfaction with the service (Naylor *et al.*, 2008). For example, 82 percent of those responding to an exit survey for IM reference service provided by Southern Illinois University Carbondale's Morris Library stated that IM is a very good method for getting help (Ruppel and Fagan, 2002).
This article provides an overview of Libraryh3lp, an integrated IM/webchat platform designed for libraries by Pam Sessoms, Electronic Reference Services Librarian at the University of North Carolina at Chapel Hill Libraries, and Eric Sessoms, President of Nub Games, Inc. and Executive Consultant for End-to-End Data Operations for the National Radio Astronomy Observatory. Libraryh3lp is a robust, reliable and customizable platform that enables multiple operators to field incoming chats simultaneously.

1.1 Our story: challenges and requirements of an IM system

Before implementing IM at your library, it is important to assess the needs of your users and staff. K-State Libraries used several different systems before selecting Libraryh3lp. Each of the other systems proved inadequate for our needs for a number of reasons.

Before K-State Libraries decided to implement our own IM service, we were part of a consortium with several other state universities using the QuestionPoint system. QuestionPoint became frustrating to us for several reasons, including a few key operational disadvantages to the system. First, users had to enter too much information before interacting with the librarian. Second, the system was very slow at times and often resulted in lost calls due to patron frustration. Third, unlike IM services that many patrons use daily, the proprietary QuestionPoint interface was unfamiliar. Finally, there was a steep learning curve for the operators, and quite a bit of training was necessary before a librarian could use the system.

In October 2006, we launched our IM reference service using Meebo. Meebo is a free IM service that enables users to monitor many different IM accounts (Yahoo messenger, AIM, ICQ etc.) from one interface. Patrons could contact us from their own established IM account using any of those services, or could contact the service directly via “widgets” embedded into K-State Libraries' webpages.

After several months, we discovered that Meebo was not adequate for our needs. The largest challenge for us was that Meebo does not allow multiple operators on the same account. Because only one person is responsible for responding to all of the reference requests coming in, the librarian on duty was often fielding two, three or even four reference questions simultaneously (see Figure 1). In addition, when we chose to staff the service from one of our reference desks, we often missed questions when we were called away from the desk.

Because of Meebo's drawbacks, we transitioned to Libraryh3lp in the fall of 2008. Libraryh3lp has solved several problems. We can have an unlimited number of operators signed in to our account, and any one of the operators can take an incoming question. We also created multiple queues to easily see what access point a user is coming from. Libraryh3lp also allows us to transfer questions between operators, so reference staff can transfer a question to a subject specialist or circulation staff member, and vice versa. Libraryh3lp also offers several features related to capturing session transcripts and removing patron identification information. As was the case with Meebo, co-browsing, where a librarian takes over the user's computer screen, is still not an option.
Like Meebo, Libraryh3lp makes it easy to create widgets that can be embedded in web pages. These widgets provide a simple way for patrons to chat with a library staff person without providing any personal information or being required to download software. The interface for the library operators is easy to use as well, and requires minimal training. Libraryh3lp has also recently added a web interface for operators, which means that, as with Meebo, it is not necessary to download anything to the operator's computer. While not free, the system is very reasonably priced. For university libraries, the price per year is solely based on student full-time equivalents. We have found that Libraryh3lp is an excellent system, both for our patrons and for our staff.

2. Libraryh3lp: the technical side

While the decision to make the transition from Meebo to Libraryh3lp was an easy one, the transition itself proved more challenging. To give our staff the opportunity to become more familiar with the software, we kept the transition soft, asking for volunteers from our established IM reference staff who were interested in using Libraryh3lp for their regular shifts at the start of the Fall 2008 semester. The need to switch became more pressing when, for several weeks in the beginning of that semester, we experienced frequent Meebo outages that made it impossible for us to staff our IM service. This compelled us to transition more quickly, and provide technical support and training for all of our IM reference staff.
Before we transitioned, we had to set up the system so that it worked with our Library's Staffing model. Using the Libraryh3lp administrative interface, we:

- Created individual operator accounts for each of our IM reference staff.
- Created separate queues for each of our entry points (11 to date, including the Ask a Librarian page, the catalog, our page in our course management system, in Facebook and several more).
- Created gateways for each of our IM accounts.
- Added operators to the appropriate queues as necessary.

We were then able to style the widgets for each queue. Libraryh3lp, like Meebo, allows users to customize widgets and provides a code snippet to cut and paste. A significant difference between the two services, however, is that Libraryh3lp allows for much more customization, even leaving space for more tech-savvy users to develop cascading style sheets hacks to style the widgets. For those who prefer to keep it simple, the administrative interface also allows you to select styles or “themes” that have already been created.

While this setup was taking place, each staff member providing IM reference service met individually with the General Reference Coordinator, who provided an introduction to Libraryh3lp and also installed the Pidgin client on the staff member's machine. We initially operated Libraryh3lp through Pidgin (or Adium for our Mac users), but now also offer staff the option of logging in to the webchat version. Each user connected to his or her unique operator account in Pidgin via Extensible Messaging and Presence Protocol (XMPP) technology.

According to Pam Sessoms, Electronic Reference Services Librarian at the University of North Carolina, Chapel Hill and co-creator of Libraryh3lp,

Libraryh3lp is an integrated IM/webchat platform designed for libraries, which combines the convenience and speed of an IM service with the administrative backend of more traditional library chat systems. It allows for multiple simultaneous librarian operators, creation of specialized queues with flexible operator assignment, chat/IM transfer, and transcript storage and deletion. It also has its own fast and responsive webchat widget written in JavaScript; the widget can be integrated into web pages in a number of different ways.

The core of Libraryh3lp is a flexible and intelligent routing engine written as an extension module to Ejabberd, an XMPP server. XMPP is an open IM protocol. To interface with non-XMPP IM systems such as AIM and Yahoo!, Libraryh3lp includes IM gateways that translate such traffic into XMPP packets and forward them on to the routing system.

To staff the system and receive chats, librarians log into the Ejabberd server using their XMPP client. Locally-installed clients such as Pidgin and Adium can be used, or librarians can use the custom Libraryh3lp webchat client to staff the service from their web browser. (Sessoms and Sessoms, 2008)
This description highlights the technical sophistication of Libraryh3lp. However, your average librarian operator needs to know very little about the technical specs to provide reference service with the software. The operator simply logs in and begins to take questions (even if other operators are already logged in – an impossibility in Meebo). A future improvement to Libraryh3lp includes a short message service gateway using a Google Android phone platform for text messaging of reference questions.

After staff was trained, the final step of the transition was to embed our widgets. We did so early on a Monday morning and moved the new widgets into production in a matter of minutes – service was never interrupted for our patrons.

3. Libraryh3lp community

Libraryh3lp creators created an online community where a reference manager can find help about how to set up services and also learn about new and upcoming features. Libraryh3lp's Google Code (n.d.) site at http://code.google.com/p/Libraryh3lp/ has additional information about the technical components of the system. A blog is also available at http://Libraryh3lp.blogspot.com/ where the creators post relevant information about upcoming changes or new features of the system (Libraryh3lp Blog, n.d.). Current and/or future users of Libraryh3lp often comment to the blog posts. A Twitter feed is also available to inform current operators about upcoming service outages or changes. If setting up Libraryh3lp sounds too complicated and your library has funding for an IM service, you may want to consider Altarama's RefChatter (n.d.), which is a fee-based product built on Libraryh3lp's virtual reference platform. Please see www.altarama.com/ for more information.

4. Libraryh3lp's webchat interfaces

An operator can monitor Libraryh3lp through a locally installed client (Pidgin or Adium) or through a webpage. The latter option is especially attractive because it is easy to access, requires no special setup, downloading or updating, and because it simplifies the process of transferring a patron to another queue or operator. To access the interface and begin receiving incoming messages, an operator need only navigate to http://Libraryh3lp.com/webchat, and login with a username and password. The interface works well with Firefox 2 or 3 (Macs or PCs), Internet Explorer 6 or 7, Opera 9, Safari 3 and many other browsers.

Figure 2 shows the operator's webchat interface when the operator has an active session with a patron. The operator's status is indicated in the upper-left corner of the window. The operator's buddy list appears in a resizable and moveable box on the right side of the screen. The buddy list has two sub-lists: buddies, which shows online buddies, and offline. An operator can initiate a chat session with an online buddy by clicking the buddy's name.

The chat window in the left portion of the screen is moveable and resizable. It appears and a tone sounds when a patron sends an instant message to any of the queues the operator's account is set to monitor, when another operator transfers a chat to the operator, or when another operator contacts the operator through the buddy list. If other individuals initiate a conversation when a
previous chat window is open, the new conversation will appear in a moveable and resizable chat window that overlays the previous one.

Figure 2. Libraryh3lp’s webchat operator interface

In the chat window itself, the window's title bar shows the patron's screen name and the name of the queue they contacted. The row below the title bar has three buttons: one for transferring the chat to another queue or another operator, one for sending a file to the patron and one for e-mailing a transcript of the chat. The center portion of the chat window displays the history of the chat, with the first message at the top, and the newest message at the bottom. The chat history shows the time each message was sent and who sent it. This information is shown in red for messages sent by the operator, and blue for messages sent by the patron. The operator can transfer the chat at any time by clicking the transfer button. If the operator would like to transfer a file to the patron, he or she can click the send file button. If the operator would like to e-mail the transcript, he or she can click the e-mail transcript button.

The chat window a patron sees upon clicking the image on K-State Libraries' Ask-A-Librarian page is very similar to the chat window an operator sees. The main difference is that in lieu of the transfer, send file and e-mail transcript text of the operator's chat window, the patron's chat window has three icons in the bottom-right corner. The first icon mutes or unmutes the sound signaling new messages, the second opens the send file dialog and the third opens the e-mail transcript dialog. Libraryh3p makes it possible to control what operator name appears to the patron. With most of our queues, the operator's name appears as K-State Libraries.

5. Libraryh3lp, assessment and staff training
5.1 Libraryh3lp assessment

With Libraryh3lp implemented in September 2008, we saw an immediate increase in our IM patron traffic (see Figure 3). We can account for this by acknowledging that when we used Meebo we were unable to answer many of the IM transactions because only one library staff operator could monitor the account at the same time. Our highest IM traffic occurred in October of 2008 when we had one day with over 70 IM transactions. By then we had the library staffing to handle that number of IM transactions. Often we find that as many as five or six library staff members will sign on to Libraryh3lp at one time even though we only have one operator and a backup scheduled. These additional operators sign on just to help out in case there is too much traffic for two operators.

![Figure 3](image)

**Figure 3.** 2007 and 2008 IM transactions by month

5.2 Libraryh3lp reports

Libraryh3lp has a built in reports section found under the administrative account login (see Figure 4). This is where reference managers can monitor specific queue traffic, daily IM traffic and even library staff operator IM transactions. Using the administrative side, a reference manager can determine which queue is being used the most (for us, it is the Ask a Librarian queue) and whether or not patrons are IMing us via their own personal IM services (AIM, Yahoo, GTalk etc.). When you run a report you can export this information into Microsoft Excel and then perform further analysis using pivot tables.

Figure 5 shows which days we have the most IM traffic. Clearly, Tuesdays are the busiest days of the week for our Libraryh3lp service.
Figure 4. Libraryh3lp reports options
5.3 Staff assessment

After the initial phase of switching to Libraryh3lp, the staff operators were asked to complete a survey about their use of Libraryh3lp and how effective they felt the program was for the IM service. Overwhelmingly, the staff agreed that Libraryh3lp worked well and was a major improvement over the Meebo service. The following staff comments from the survey describe several benefits of the new service:

I love the fact that you can have more than one operator. It comes in so handy and sometimes I log in when I am in [my] office – even when I'm not scheduled. I can pick up any chats that come in when the other two operators are working with patrons.
Simplicity and being able to see when the other person is typing. I do like that we no longer have to run two accounts and can just have the next person say, hey, I'm ready and sign out. I like the fact that more than one staff member can provide virtual reference help at the same time under the same “alias”.

5.4 Current virtual reference and Libraryh3lp training

After a short training session on how to use the basics of the program and how to access the Libraryh3lp help pages listed on our wiki page, staff members were asked to complete an initial virtual reference training session, and to continue to attend yearly sessions as refreshers and as a way to discuss any new developments.

Virtual reference training sessions are provided yearly to all staff members who work the IM service. Besides covering items such as our virtual reference privacy policy, the sessions also explain to staff how to address different situations that may arise such as handling harassment by a patron. In this situation, “canned responses” are given that the staff member can use to politely, but yet firmly, end an IM interaction. One important aspect discussed in virtual reference training sessions is how to conduct reference interviews over IM – a way to use the Reference and User Services Association's (RUSA, 2009) Guidelines for behavioral performance of reference and information service providers in a virtual world. During each training session, time is also given for open discussion of specific situations or questions the staff may have at that time. All material covered in the training sessions is kept on our wiki so it can be easily accessed or updated at any time. The sessions have proven helpful for all staff members, IM pros and novices alike.

6. Conclusion

Libraryh3lp has been an integral part of the success of K-State Libraries' IM reference services. We believe the choice to use Libraryh3lp has not only benefited our departments, but has also been a wise economical decision for our organization. Throughout our time using Libraryh3lp, we have been able to receive quick responses to our questions from the creators, continuous support from the online Libraryh3lp community, and most exciting of all – the chance to see our own requests and ideas come to fruition in the program itself. As Eric and Pam Sessoms continually welcome feedback from their users, they update and improve the program in ways that fit their users' needs, whether a small or large library.

REFERENCES


FURTHER READING

Libraryh3lp Twitter Feed (n.d.), available at: http://twitter.com/Libraryh3lp