Libraries without Borders:
Content Delivery, Singapore Style

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Abstract

For 2 years now, the National Library of Singapore (NLS) has been prototyping new ways of delivering content to its users. This is to make it easier for users to get their hands on the content once they identify the ones that they need.

The process of helping the users find what they want begins with knowing how the user searches for the information that he needs. If the user is able to identify and search for the materials himself, then the library will provide the delivery options at the very place where the user does his search. If the content that the user has found is a digital copy, then the user is welcome to download the article where rights have been obtained. If the user comes to the librarian for assistance, the librarian will compile a list of resources and send it to the user, with options for delivery.

This paper describes the three approaches used by the NLS to prototype ways to bring content out to the internet spaces as we realize that many users are using search engines such as Google and Yahoo to do their initial searches.

Introduction

When we started thinking about this paper, we asked ourselves this question :
what exactly is the outcome that we are looking for when we think of interlibrary lending and document delivery services (ILDS)?

We looked at the traditional way we deliver ILDS and this is usually the scenario that we expect: when library users go to the library to look for the information that they

need and they cannot find it, they can get into the digital library to make a request, or approach the librarian to request for delivery of the item that they need.

In reality, when users cannot find what they need from the library catalogue or library shelves, they could just give up and leave the library, they could look for alternative sources of information or they could approach the library or the librarian for help.

Given these possible scenarios, coupled with recent surveys that tell us that more and more of our users are turning to internet search engines to look for information, the question we asked ourselves is: can we serve more users more effectively? OCLC's 2005 user search habits survey tells us that 84% of information seekers go to internet search engines first, and only 1% use library online catalogues. What does this mean for us librarians?

To us in NLB, this means that if we do not relook at the way we serve our users, we will likely lose a large number of our users over time, especially those who grow up in this new internet age. Our existing users will likely continue to use us in the way we serve them, however, the new ones will not. This change in usage pattern has also been confirmed by BL's 2007 survey of researchers where younger researchers are demanding instant gratification when they search for information, and they use internet search engines as well for their research, in addition to their research on database content.

We also considered the many new opportunities offered by the internet and all the social networking tools, plus the mobility of our users who usually carry more than one mobile device. In fact, most of us carry two, one for work and one for office use. These platforms and devices made many new ways of access and delivery possible.

We decided that in re-designing the access-delivery service, we will not look at access separately from the delivery side. This is because if we do not look at the whole process as one value-chain for the user, we will not be able to reach as many users as we would like to reach. If we only look at the delivery side without looking at the way users search for information, we would only be able to serve those who use our digital library or the online catalogue to look for items that they need. This is only a small portion of the users that we want to serve.

We set out to understand the search habits of our users more and we set out to understand how to get into the spaces that our users frequent when they do their searches.

Understanding the users and the spaces that they use

We started looking at the survey results of many other libraries, and also looked at the way our users were looking for information. We quickly learnt that many of them do not rely on the library's online catalogue or the digital library to get their information.

Though many users browse for information in the good old fashioned way, many others use the internet to search for information that they need. At the beginning, it was hard for us librarians to accept that users do not want to use our collections, even though we make it clear to them that our collections are carefully selected and organised for their use.

When I realized that we had built up a wonderful collection of digital resources, including databases of all kinds, our own digitized rare collections, articles and pathfinders about Singapore, I (Ngian) told my 18 year-old daughter about it one day, thinking that perhaps she had not used it because she did not know how rich the collection was. I asked her if she could bring 200 copies of our digital library booklet to give away to her friends at the junior college that she is studying in and she agreed. Months after she did that, and months after the collaterals had all been taken, I asked her if she or any of her friends had used our digital library, and she said. "Not that I know of".

I asked her why, as any librarian mother would, and she said, "We can get all our information from the internet and we know how to "authenticate" the content by comparing the information with more than one source"! I stared at her, and she stared back, and asked me, "Why?"   I asked her, "Why don't you use our digital library?" She said, "It is not convenient for me". She said that when she is on the internet, she does a variety of other things, in addition to doing her search, and getting out of her space into the NLB digital library's space is quite troublesome for her!

Although this is only one teen's story, I have heard similar stories elsewhere. Very recently, when a few of us visited a big university library in Berlin, the librarian told us that their students use internet mainly to search for information, even though the library has a very good collection of digital resources. In a survey done by the university also recently, undergraduate and post-graduate students told the library that internet search is the most convenient and most used by them. We do not know if this is the same story elsewhere. We suspect it may be so.

Another anecdotal evidence came from our attempt to put our Singapore content in the Google space, in order to reach more users.   For many years, we have been compiling pathfinders on topics about Singapore called Singapore Infopedia. Each entry in Infopedia comprises a short story about the topic, and a list of resources at the end of the story. The intent is to encourage users to read more about the topic, after reading the short story.

By Nov 2005, we had collected over 1,000 pathfinders and they were all metatagged and neatly mounted in our website. The website's address is www.nlb.gov.sg. When the content was parked there, we used to get between 200-400 accesses a month.   After we put the entries into a microsite with no frills and exposed the content to Google to crawl and index them, from Nov 2005 to Mar 2008, we found that the usage increased from 400 a month to 30,000 to 150,000 in Mar 2008.   This experiment told us something, that if we provide users an easy and convenient way to use

our content, they will. The usage of this content is still growing. By now, we have also increased the number of pathfinders to over 2,000.

Moving from here, we are packaging more of our own created content into microsites and exposing them to Google and other internet sites for users to use the internet search engines to find us.   When they find us, we bring them gently back to our digital library in the hope that they will also explore and discover the other NLB e-resources.   We made a deliberate decision that we will work towards finding more channels to reach our users, and exploit search engines and internet spaces to allow users to find us there.

With this in mind, we re-strategise our approaches to serve our users. The sections below describe the approaches we have taken to reach the user where he is, and to provide the content at the point when he is doing his search, as far as possible.

Traditionally in the area of document delivery, libraries:

1. Prepare content ready for delivery via acquire, publish, digitize and subscribe.
2. Build a platform for access or for users to request, both physically and virtually
3. Market the service as widely as possible

Then we just wait … - a typical cycle of we get it ready, you demand, and we deliver.

The Three New Approaches

We now would like to propose three approaches to content delivery (not just document delivery) that we think are relevant to today's world.

I   Content Delivery – The Restaurant Model (User walks into a restaurant, there is a menu, user selects and orders, chef makes dish and delivers.)

In this approach, libraries acquire and organize content; build delivery platforms and market the service. This is really content delivery within a library space. Traditionally, this is what has been done over the years. The assumption is that customers making the demand are those who are existing library users or at least are aware that the library is a content delivery provider. They have chosen to use the library to get needed information.

It is a "Patrons demand, libraries deliver" model.

In this model, apart from making the catalogues to the content readily available, and to retrieve and package the content for delivery upon request, the other issue to deal with is the rights management. This involves negotiating with the content owner the rights that libraries have to deliver the content.

For such a service, the libraries will usually build a platform to respond to content requests. This will include the requestor's authentication and entitlement, delivery process and mechanism, and payment. This is often the most expensive part of the made-in-library content delivery approach. To design a good service, usually libraries build an elaborate environment to offer the service. The cost of building such an infrastructure can be quite prohibitive. We think that this model will work if there is either a very high demand for the service, or if the value of the content delivered is high enough to justify the investment for the systems and service.

II   Content Delivery – The Fishing Model (User goes to the open seas, knowing the kinds of fish in the sea. User drops the line with bait. He lets go what he does not need, and keeps those which he wants.)

In this proposed approach, libraries do not only prepare the catalogues for the content. They also deliver the actual content at the point when the user needs it. However this time, libraries need not build a platform for delivery, or at least not entirely their own infrastructures anyway. We recommend that libraries make use of popular platforms such as search space (Google, Yahoo and MSN) and social network spaces (You-Tube, Flickr, Wikipedia, My-Space, Face-Book, etc.) to deliver their content. These are user e-spaces created by other service providers, as distinguished from the library's e-space.

While the library space is still a popular place with strong followings all over the world, it is clear that the popularity of the internet user spaces is rising rapidly. Libraries cannot afford to under-estimate the power of such spaces. Surveys show that libraries have to make deliberate plans to leverage on them or face the risk of losing our users. Survey after survey shows that the search engine is becoming the default platform where customers search and get information. Users, especially in the social networks, want peer-to-peer sharing of almost everything, including information. Users today are so attached to the social networks that they would accept "good enough" content in order to stay within their preferred network rather than to leave the network for another space with more authenticated content, such as a library.

We have trialed successfully and would like to suggest that libraries can prepare content with some simple additional structure and "sprinkle" these information packages (content) into those user spaces. Netizens inhabiting those spaces will stumble upon such information packages prepared by libraries by chance when they are in the spaces looking for information. They do not need to leave their space. In other words, content of libraries and librarians become a part of the social space. Social netizens willingly share and exchange content with us, as well as engage with us to enrich each other's contents. This is peer-to-peer demand for information or content delivery. This to us is library 2.0.

Not all content packages are for free. Instead of "sprinkling" full-text content in these social spaces, libraries can also produce abstracts, summaries or simply the metadata for users to access. Such information will allow netizens to review them and make an informed decision to demand for delivery. In such a service, the delivery process must be kept as simple and convenient as possible, if possible, with minimal requestor

authentication and an easy payment method (such as credit card, prepaid card or stored value account). If libraries have high-value content, they can combine this approach with the first approach, with a more sophisticated delivery platform. However, we suspect that the second approach will be sufficient for most of our libraries today.

There are other advantages of leveraging on the e-spaces provided by other service providers. One of these is that there is no need for libraries that do this to market their content.   The owners of the social spaces have a vested interest to keep their spaces vibrant and attractive. Their interest is to keep the membership and traffic high. They will build the appropriate capacity to handle user management, user interactions, and traffic management. This saves libraries a lot of un-necessary headaches. Secondly, each social network will target its own audiences. If it costs libraries almost nothing to "sprinkle" their contents into such spaces, then this approach is an effective means to cast the library's net as widely as possible to reach as many customer segments as possible, without the usual accompanying financial burden. Traditionally, libraries advocate targeting customer segments because it takes considerable cost (within the often limiting library budget) to build service and service delivery platforms to a targeted segment. The more they build, the higher the cost burden.

This is a "Libraries deliver, netizens demand" model, where the user drives content access. Libraries place their chosen content in the most frequented e-spaces where their users spend a lot of their time in. When their users need the content, they do a search for it, and the content is already there. There is no need for ILDS most of the time.

The service is an almost perfect eco-system of delivering information to users where they are, with minimal overheads. Libraries can then focus on creating useful information packages for different target groups and place them in the spaces where these groups frequent.

NLB adopted this approach quite extensively these past 2 years, primarily in the dissemination of e-content.   As mentioned above, we have made the Singapore Infopedia available to Google users for over a year now. It is now achieving an article viewership of nearly 1.6 million per year. We also allow customers to comment on the articles as well as lead them to discover other articles or related content within NLB.   We have also adopted the same approach to expose our database of images.   Apart from making the images available to Google, they are also exposed to Flickr to engage our users. Another interesting project that we have recently embarked on is the digitization of our old newspapers. The intent is to make them available to internet users, this time with a charging mechanism built-in.

III   Content Delivery – The Franchised Model

One of the key customer segments of libraries is the research community. The content that researchers need is usually more specialized. We know that researchers would usually work within the portal belonging to their institution or community. They would usually not use the platform built by libraries, even if there is one, to request for content.

They would expect to find what they want from the internet or from their institution library.

To make our resources available to them, a better way would be to enable our services to be easily incorporated into their own portal, via some sort of API services (e.g. Web Services). With this, researchers at their respective institution will not need to navigate between different portals to request or access content. Instead, within their own portal, they will be able to search and access an external library, for example, the national library's content.

This form of collaboration enables individual libraries and institutions to be relatively autonomous in presenting their content, in service offerings and even in the delivery process, yet work together to meet the content needs of the researchers. One of the challenges for a national library to offer content delivery service to the research community is the way researchers look for information and the kind of information they want. It is almost impossible to build a search engine to cater for both general users as well as researchers. We figured it is more practical to leave the respective research institutes to acquire their own specialized content, searched by their own specialized search engines, yet supplemented by content from the national library.

This model allows the originating library, for eg. the national library, to focus on content development and the delivery process. Using API or Web Services, the national library needs only to develop the API once and it can be reused by as many research institutes and communities as we wish. Also, using API, to the user, the combined content delivery service is presented as one integrated service, rather than content coming from two different websites.

Since this collaboration happens "behind the scenes", the marketing of the service and content is fronted by the research institutes to their customers. Similar to the second model, the research institutes have their own vested interest to make the portal attractive to their own customers. The originating library only needs to market their delivery service (via API) to these research institutes or communities.

In NLB, we have not used this model to deliver content yet. However, we have used this idea for another service. We have made our online catalogue service available to the developer of one book club portal, called Bookjetty. On average, there are about 1,000 accesses to our online catalogue from this portal per week. By offering the online catalogue to Bookjetty users via an API service, we were able to reach Bookjetty's clientele at almost no extra cost to NLB, and increased our reach.

Conclusion

To provide the service described in the three approaches above, a library needs only to develop one content repository and one delivery process. These can be used by all three approaches. This is the beauty of the digital world, where libraries need not duplicate the collections in order to expose the content in different spaces, over time and space.

The NLB of Singapore will continue to prototype these approaches to see how we can reach more of our users in the internet spaces that they frequent. Who knows, one day I (Ngian) will find my daughter using the content that we have selected and packaged for her and her friends, while she is navigating her preferred internet or social e-space?

Thank you.

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