

The case for home-grown, sustainable next generation library services

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Introduction

In the words of Eli Neiburger, "Libraries are so screwed" (Eli Neiburger at the LJ/SJ eBook Summit: Libraries Are Screwed, Part 1). While we offer next generation public services like mobile access and e-books, these services are often neither home-grown nor sustainable. Libraries have a history of lending and services built on a simple model: we purchase an item, and then provide it to the community. Unfortunately the latest generation of services that libraries offer have a much more complicated path. The buy/lend model is relatively simple when applied to traditional print media, and essentially only requires three things: a process to purchase the item, shelf space, and a person to manage that item, once acquired, for as long that item physically lasts. If libraries try to apply that model to electronic media things suddenly get more complicated. A purchasing process and manager are still required, but shelf space isn't. Server space becomes necessary instead. In addition to these changes, the electronic media also gains new requirements. It needs a delivery platform, a computer or other device to view the item on, and a technical support staff. All this is required for as long as the license to that item persists.

The process of providing access to items is suddenly complicated due to the overhead requirements of electronic content and libraries have responded by outsourcing many of the new

demands. In addition to circulation procedures becoming more complex, the increased complexity affects other services related to electronic content. Developing electronic equivalents of our book displays and promoting services online is no longer as simple as hand-coding basic HTML. Users expect highly interactive online experiences, and that's before we even get to mobile websites and apps.

As complexity in providing electronic services develops more and more outside our historical experience, libraries have turned to outsiders to fill gaps in operating knowledge. This made perfect sense at the time because in the short term it was the easiest and most cost-effective way to provide the next generation services our users now expect. Outsourcing electronic or digital expertise was far cheaper in both time and money than retraining library staff in a time of staff and funding shortages, but it is not a long term solution. We have positioned ourselves as middlemen, and the web is not kind to middlemen. This column will explore why third-party solutions are not the best way for libraries to provide next-gen services in the long run, and will provide some suggestions and examples of what libraries should be doing in-house instead.

Mobile Services

In the last few years there has been a surge of interest among libraries in providing services tailored to mobile interfaces. By June 2011, "more than 100 libraries and universities"(Hane, 2011, p. 8) had chosen to provide their mobile presence via Boopsie, a third-party vendor. The major benefit of contracting with a vendor like Boopsie is that their product includes a mobile catalog, which can be difficult for libraries with limited expertise to develop on their own. Major ILS systems sometimes don't provide standards-based access to catalog data via XML or Z39.50 that would make it easy to craft a custom mobile interface in-house. While this can be accomplished by libraries directly, the amount of work involved can be prohibitive for some organizations. Providing our users with a high quality mobile interface to access our resources is a positive outcome, but libraries that outsource this type of

functionality to Boopsie are committing to an ongoing cost. Ongoing costs aren't a new issue as libraries have been at the mercy of unpredictable electronic journal price increases for many years now.

Libraries need to learn from those past agreements and use available tools and avoid ceding control of new services like mobile development to third-parties.

Libraries now have an alternative to vendor contracts by building a competing system ourselves. If ILS vendors won't provide standards-based access to our catalog and user account data, we need to demand in strong terms that they fix this gap. With standards-based access to catalog information, libraries could band together to develop frameworks which are easy to deploy with a minimum of programming knowledge required. A collective effort put forth by libraries with the necessary means to build and provide tools related to next generation services would allow less-funded libraries to benefit from those libraries fortunate enough to have more funding and staff time available for the task. Existing library consortia tend to operate in this manner already and related agreements could expand to specify which members will work on developing tools. Many tools already exist which could be adapted to the task of developing these new frameworks for consortia web development.

Simple frameworks already exist for basic mobile website development. Many, like iUI (<http://code.google.com/p/iui/>) and jQuery Mobile (<http://jquerymobile.com/>), offer mobile site templates based on nothing more complicated than HTML, CSS and JavaScript. These are the basic tools of any web development, a task many libraries are already familiar with. It would only take basic scripting in php or another common programming language to integrate dynamic catalogs into these frameworks, if only ILS vendors would let us.

At the very least, libraries should try those frameworks before committing to a contract with Boopsie or a similar vendor. Apart from dealing with a catalog or other dynamic source of information, the process of developing a Boopsie site and a basic mobile website in-house is likely very similar. Either

way a web designer would have to do a content audit, identifying the important pieces of information worth formatting for mobile use. After the initial content audit, plugging the results into a jQuery or iUI site is only marginally more complicated than asking Boopsie to integrate the info into theirs. Some frameworks even have automatic site generators available, including one this author built for iUI called the Mobile Site Generator. The Mobile Site Generator (<http://www.hiddenpeanuts.com/msg>) builds a basic mobile site based on how a user fills in a form. The result is an HTML file requiring very few alterations prior to deployment. Users can modify the HTML directly to create features or content beyond the scope of the generator.

Lending E-books

Another emerging next generation service is lending e-books. Unlike traditional print books, libraries cannot just buy an e-title and copy it onto users' devices. DRM (Digital Rights Management) is part of the process, which means servers and other overhead technology are involved. Few libraries have the resources to run this kind of system themselves so outside vendors are able to fill that void. Overdrive is among the largest of these service providers.

Overdrive provides a silo of content. Users can search for an e-book after being authenticated into an Overdrive site via their affiliated library. A limited number of users can check out and download each title simultaneously, so when this number is exceeded, patrons must wait in line. Overdrive handles the servers, DRM, and other related considerations. This model imposes artificial scarcity on the digital world, a world with the inherent advantage of a lack of scarcity. Owners of e-book reader devices are accustomed to instant purchases from online stores. Time will tell if they're willing to wait in lengthy virtual queues to get access to a title for free instead. Patron acceptance of this model is perhaps an issue for another column entirely, but for now Overdrive's business model of positioning subscribing libraries as middlemen deserves an examination.

Allowing libraries to be positioned as middlemen in e-book access is a dangerous precedent. While libraries have long been middlemen in the world of print books (we purchase and then loan the books to end users), the internet and sale of electronic content has historically not been kind to middlemen. In the pre-web world an artist often needed a publisher or other entity to act as a middleman. That middleman could provide the artist with access to markets that an individual would be unlikely to match on their own. But the internet is accessible to almost anybody as a centralized market. For example, Amazon was able to become both a publisher and a storefront. Musicians, authors and other artists can similarly bypass publishers entirely and sell directly to readers via individual websites. J.K Rowling went as far as cutting out both publishers and booksellers when she decided to sell e-books of the Harry Potter series online herself (Trachtenberg & Sonne, 2011).

Overdrive offers books to its end users in a model similar to the way Netflix approaches DVDs. For a recurring fee Overdrive provides all the books you care to read, but only a few of those books at any given time. The primary difference between Netflix and Overdrive is that Netflix sells their service directly to individual end users. Overdrive has so far chosen to sell to libraries instead, and lets us pass the service on to end users. If Overdrive someday decides to eliminate libraries from that equation and sell subscriptions directly to end users, nobody should be surprised. For now it may be more profitable for Overdrive or 3M, which provides a similar service, to sell to large organizations such as libraries. Not everyone owns an e-book reader yet to take advantage of Overdrive's services, but that will change. With e-book reader ownership doubling to 12% over the first half of 2011 (Purcell, 2011), someday that balance will tip.

Librarians know that libraries aren't just about books, but not everyone agrees with us. The public perception of libraries is largely that "The library brand is books" (DeRosa et al., 2010, p. 38) and only books. Communities have been willing to support non-book library services almost as an aside to

the books. What will happen when users can get e-books for a monthly fee that's potentially equal to or lower than their library tax burden or share of campus libraries' budget? As Stephen Abram noted on his blog, books are a brand that's "...easy to disrupt" (Abram, 2011). If libraries' primary brand is disrupted, can libraries replace it with something else? Libraries need to be promoting our non-book services now, while our books still have widespread public support.

There are arguments both for and against the idea that the era of print books is coming to a close. If true, libraries need to build new services and models to incorporate e-books or replace books entirely and serve the community in new ways. If the arguments for the death of print books are false, there is still no harm in developing the new next generation collections and services that will move our brand beyond books and secure future generations of libraries. No matter which of those motivations takes hold, those models and services still need to be built both by and for libraries. Libraries can't afford to outsource this and risk disruption or disintermediation for much longer.

Violating Terms of Use

Much fuss was made last year when it became apparent that some libraries used a Netflix subscription as a just-in-time supplement to their DVD collection. An article on the Chronicle of Higher Education's website concluded that while using Netflix in this way was not illegal, the libraries may still be violating Netflix's terms of use contract (Kaya, 2010). Netflix's disc rental offering is stretching the definition of a next generation service, but the issues raised dealing with the terms of use contracts extend beyond just one vendor or service. The terms of use surrounding many new consumer devices are not friendly to libraries. Amazon's Kindle license agreement makes it clear that "you may not sell, rent, lease, distribute, broadcast, sublicense, or otherwise assign any rights to the Digital Content or any portion of it to any third party" (Amazon.com Help: Kindle License Agreement and Terms of Use, n.d.). While Amazon has occasionally given verbal permission to libraries to lend out Kindles in the past, they

are very hesitant to put anything in writing (Haddock, 2009). Libraries have historically been legally able to loan purchased items, but Amazon's Kindle terms also state that "Digital Content is licensed, not sold, to you..."(Amazon.com Help: Kindle License Agreement and Terms of Use, n.d.). It is difficult to determine how the doctrine of first sale may apply if the item is licensed and no sale took place

Licensing instead of purchasing is an issue with broad applications related to more than just Kindles. Across libraries it affects journal articles, e-books, online video, and most other types of digital content. Libraries that do not explore this issue risk losing the ability to function as libraries. It threatens their core ability to both archive the present and provide access to users in the future.

Beyond issues surrounding licenses at purchase time, libraries then remain at the whim of content providers in the future. Buffy Hamilton, school librarian at Creekview High School in Canton, GA, was recently surprised to discover that Amazon altered their stance on Kindle user in libraries. The new rules, which among other restrictions require individual Amazon accounts for each device, make it nearly impossible for a school or small library with limited resources to manage the devices. Hamilton expressed her frustrations in a blog post:

I immediately thought of colleagues who have much larger collections of Kindle devices and Kindle books and felt astonished that Amazon could be so ignorant (or indifferent?) of how ridiculously impractical this mandate will make it for librarians to manage the those [*sic*] devices and content. (Hamilton, 2011)

Hamilton concludes that Amazon "...is not being terribly responsive to our needs as institutional consumers" (Hamilton, 2011), and based on their unwillingness to compromise and sudden enforcement of restrictions without warning, Hamilton's opinion seems justified.

It is possible that Amazon has let libraries using Kindles slide by unnoticed until now because the relatively small scale use of their product by libraries was not enough to impact their business. Now that Overdrive's Kindle support is on the horizon (Amazon to Launch Library Lending for Kindle Books, 2011), Amazon suddenly wants to enforce the restrictions more strictly. Libraries which bought into the Kindle ecosystem are now faced with a difficult choice - expend even more staff time and funds managing the devices, or abandon what may have been a promising new delivery method for materials. We need to get out from under these restrictive use limitations and find new options and models.

New Models

How can libraries find or develop new models of service around electronic content? What can libraries do instead to move primary services from a middleman approach to a direct provider approach? Eli Neiburger, Associate Director for IT and Production at Ann Arbor District Library, has offered a compelling vision of a path forward. His talk at Library Journal & School Library Journal's 'E-book: Libraries at the Tipping Point' online summit (available on YouTube at <http://www.youtube.com/watch?v=KqAwj5ssU2c>) was intriguingly titled "Libraries are Screwed". In the second half of that presentation, Neiburger covered solutions to the problems outlined. Neiburger predicts a possible future where the material demanded by our users is not available in formats which libraries can purchase or lend. Instead, Neiburger essentially advocates that libraries become a community "...platform for unique experiences" (Eli Neiburger at the LJ/SLJ eBook Summit: Libraries are Screwed, Unless... Part 2). Libraries would get back to their ancient roots of ..."storing and organizing the content of the community"(Eli Neiburger at the LJ/SLJ eBook Summit: Libraries are Screwed, Unless... Part 2). Libraries would provide facilities and training on producing media, and then also provide a "permanent, non-commercial online home" (Eli Neiburger at the LJ/SLJ eBook Summit: Libraries are Screwed, Unless... Part 2) for that media or content going forward.

While Neiburger's warnings and ideas are largely focused on public libraries, these sentiments have implications for academic libraries as well. The future scenario he presents may be delayed for academic libraries, but could still eventually arrive. The academic model of libraries may be temporarily insulated from the decline of physical item circulation simply because many of the titles purchased are extremely expensive. If a user is faced with the choice of waiting for a no-cost library copy of a new novel or instantly buying an e-copy at \$5 or \$10, that decision could conceivably go either way. But when the choice is between waiting for a library copy and spending hundreds or even thousands of dollars on personal e-access, the decision becomes simpler for a user to make. High title price in the Academic publishing model is insulation for libraries, maintaining our resources as a viable user option longer than they would remain otherwise. The high price of many materials buys a little time for libraries, but the grace period won't last forever. Publishers might decide to drastically lower scholarly title e-pricing, or offer affordable e-book library subscriptions to users in the same way that Overdrive can. Academic libraries must use this insulated transition period to delve deeper into what we own outright without absurd licensing or use restrictions. To many libraries the collections that we truly own and have control over are the special collections.

Enhancing Special Collections

Libraries ultimately need some source of content as a base for next generation services. That content might come from outside organizations like publishers. It might come from outside individuals in our communities, or it might come from what libraries already have in-house. Special collections represent the last option in that list, and provide a ripe source of material ready for distribution and access via new technologies. The content of special collections often belongs more clearly to libraries, and depending on the agreements made about the acceptance of a particular collection, these collections may be free from restrictive licenses of the type put in place by vendors. Libraries can

present it in whichever form they see fit. At the simplest end of the spectrum, libraries are able to digitize papers or records and put them online. At the more complicated end libraries can experiment with digital media and help users make connections among these materials that the user never would have otherwise found.

Items can be placed on a map, as with the 'geobrowse' feature developed as part of the Driving Through Time digital collection at UNC (<http://docsouth.unc.edu/blueridgeparkway/geobrowse/>). Users are presented with an interactive map built in the familiar style of Google Maps. By placing the images on a map, their connection to physical locations on the Blue Ridge Parkway becomes much more apparent. Each image becomes less an isolated capture and more of one element in a stream of information. As visitors to the Parkway, users could look up historic photos at a given location they've visited or plan on visiting. This provides a completely new way to access the collection.

Maps in general have become a popular way to display and visualize content from special collections. The University of California, Santa Barbara's libraries have also implemented a map browse feature for their photo collections (<http://digital.library.ucsb.edu/geolocation/map/browse>), and the University of Louisville's Kentucky Maps Collection uses a map overlay (<http://digital.library.louisville.edu/collections/maps/index.php>) to display and visualize the regions their historic maps cover.

Duke University Libraries' Digital Collections department also realized the incredible opportunities for next gen services related to increased access on the web. Their online 'AdViews' collection (<http://library.duke.edu/digitalcollections/adviews/>) contains "...thousands of historic commercials created for clients or acquired by the D'Arcy Masius Benton & Bowles (DMB&B) advertising agency or its predecessor during the 1950s - 1980s" (About - AdViews: A Digital Archive of Vintage Television Commercials - Duke Libraries, n.d.). Duke did not stop at simply putting the commercials

online in a repository. The ads are also pushed out via iTunes, an interactive quiz, and even as part of the Internet Archive's broader collections (<http://www.archive.org/details/adviews>). By putting their special collections materials where users already are, and not just in front of Duke researchers in a traditional special collection, Duke has vastly increased their potential audience.

A next generation service can also mean simply highlighting elements of a special collection in ways that are unexpectedly relevant or entertaining to users. The University of Texas at Austin's Perry-Castañeda Library Map Collection's website (<http://www.lib.utexas.edu/maps/>) includes links to "Online Maps of Current Interest", such as Libya or South Sudan. While there doesn't appear to be any official link between the University of Kentucky Archives and the "Mustaches of the Nineteenth Century" blog (<http://mustachesofthenineteenthcentury.blogspot.com/>), the Archives' images certainly make up the highly entertaining content of the blog. Outreach done in manners newly relevant or novel to users is in a way still a next generation service. In this context it introduces users to library-owned content.

One example of distributing special collections via next generation services which stands out is 'Going to the Show' (<http://docsouth.unc.edu/gtts/>), produced by UNC's Documenting the American South publishing initiative. Sanborn Fire Insurance Maps were produced for more than 10,000 American towns and cities from 1867-1970 (About Digital Sanborn Maps, n.d.), and show remarkable detail in building locations from the years covered in the project. They make for a fascinating way to view a town's development over time. But flipping through giant cumbersome paper maps is difficult at best. It's hard to see a town's development over time at a simple glance without serious work. As part of the Going to the Show project, Documenting the American South took the original Sanborn maps from UNC's special collections and digitized them. The scanned maps were then laid over a current Google Map layer with a transparency slider. By simply moving that slider back and forth, it becomes incredibly easy to grasp the changes over time that the Sanborn Maps' data represents. Without this project, the

Sanborn Maps in the special collection might never have reached as many users. The addition of a new interface using tools only recently available to libraries made all the difference. And with the exception of the underlying Google Maps layer it was done entirely internally by libraries, without relying on third-party vendors for either source material or technology.

These are all impressive efforts by individual libraries, but efforts internal to libraries don't have to be made in a vacuum. Through local consortia and larger nonprofits with loose ties to libraries we can accomplish even more via collaborative models.

The Triangle Research Libraries Network is currently investigating the feasibility of new purchasing and lending models for e-books, with a particular eye to allowing some form of interlibrary loan between institutions(TRLN: Beyond Print, n.d.). On an even larger scale, the Internet Archive's Open Library project aims to scan books and provide digital access to participating libraries (Internet Archive E-Lending, 2011). Member libraries currently have access to over 100,000 titles, largely from the 20th century. The project may be similar in scope to other efforts like Google Books, but Open Library comes from a non-profit organization embedded firmly in the world of librarianship with a proven track record on projects like the Wayback Machine and the Open Content Alliance. The Internet Archive will even go so far as to preserve print volumes alongside the digital copies (Kahle, 2011).

Conclusion

Old models of library operation may disappear, but that does not mean they can't be replaced. Academic libraries' central book model is temporarily insulated by high prices, but change will come just the same. The time provided by this insulation should be used to explore sources of content like local special collections with clear ownership and distribution rights. Without restrictions like those imposed by many third party vendors, special collections can provide a proving ground for next generation

interfaces and services. This home-grown expertise within libraries can then be applied on a wider basis in the future.

The examples and efforts discussed in this column share one thing at their core, and that is that they are services made by libraries, for libraries. As a collective institution, libraries have great expertise in building sustainable preservation systems capable of lasting many years. Third party vendors do not have a proven track record on building long term preservation systems for electronic resources at this point in time. By placing our trust, funds, and collections in the hands of those third parties we turn libraries into middlemen. For the short term gain of providing easy access to next generation library services, we risk disintermediation by those vendors and removal from the service equation entirely. Libraries of all types and sizes can look inward and grow from our strengths. Major publishers and content providers aren't likely to allow new services with the same scope libraries enjoyed in the past. Fortunately, special collections and collaborative efforts are accessible to even the smallest library as perfect opportunities for gaining relevant experience and expertise. By basing that experience and expertise on homegrown services built by and for libraries, they can ensure a sustainable future of next generation services.

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