Tame The Web

Libraries, Technology and People

« Ten Trends & Technologies Tomorrow

Ten Trends & Technologies for 2009

Ten Trends & Technologies for 2009

by Michael Stephens

Welcome to the 2009 version of TTW's annual look at the trends and technologies that I believe will impact what we do in libraries and information centers. This post ties in with several presentations I will be giving this spring. I was remiss last year - prepping to take "The Hyperlinked Library" to Australia, I just couldn't get the 2008 post going. Another reason was many of the same discussions and trends from 2007 had carried over into 2008.
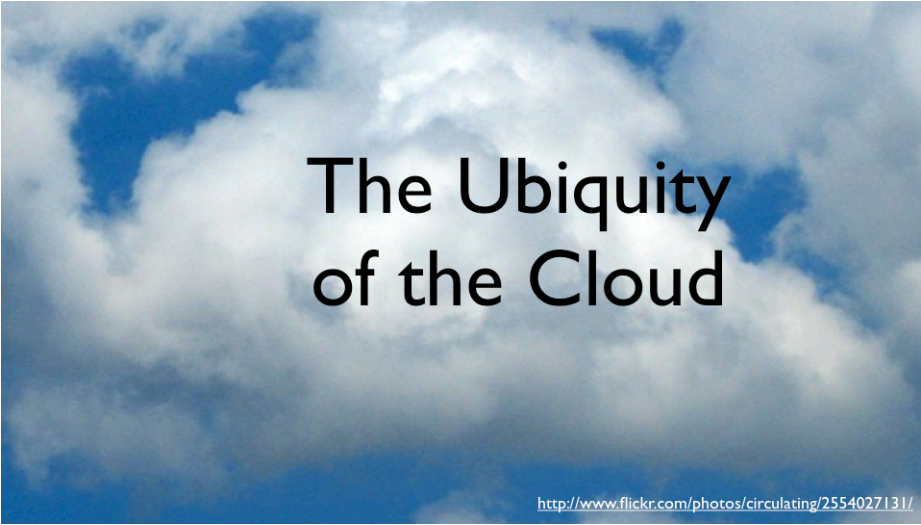
If you're curious, here are the previous posts:

2007: http://tametheweb.com/2007/03/09/ten-tech-trends-for-librarians-2007/

2006: http://tametheweb.com/2006/02/ten_techie_things_for_libraria_1.html

2005: http://tametheweb.com/2005/01/twelve_techie_things_for_libra.html

This year, I'm focusing on some ideas and technologies that I believe will impact everyone. These things will surely influence library users and nonusers alike. My biggest concern is how can libraries respond in turbulent economic times. So, here goes. In 2009, librarians, information professionals and libraries will be touched by:

The Ubiquity of the Cloud

The Ubiquity
of the Cloud

http://www.flickr.com/photos/circulating/2554027131/

The cloud, very much a tech buzzword of the day, describes the servers that user data resides on accessible via the Internet or any number of devices. I might say that my photo collection resides in Flickr's cloud of data. In this summer's "How Can Libraries Use the Cloud," I wrote:

"I'm fascinated by this - could all of my data someday be stored in the cloud, be it at Apple's, Amazon's or some new service? Could I easily access my data from any PC, Mac, phone, tablet, etc at my disposal? And the number one thing on this music lover's mind" could my entire 5,264 item, 34GB iTunes library live in the cloud and be accessible from anywhere I have a wifi or cellular connection to my phone, home stereo, car stereo, etc?? That's what Kusek and Leonard were forecasting in The Future of Music."

The App store for iPhone, the new services offered by cellular providers for "backups" of your data and my total love affair with the Dropbox system are all examples of the cloud of data changing how we do business, access information and store data.

What does this mean for libraries?

As regular folks store more data and rely more and more on the cloud, librarians would be well-served to spend some time pondering what this means for services and access. As movies and music become downloads from the great jukebox in the sky, what happens to the AV department? As documents and data find their way to the ether, how can we provide a means to use them? Some implications from the "Cloud" post:

- **Understand converged devices are everywhere.**
- **Allow unfettered access to the cloud.**
- **Understand that the cloud may also be a valuable information resource.**
- **Utilize the cloud to save time and money.**

That last one is important to me. Why can't we use Google Docs with our users for productivity instead of paying for bloated software suites? Why can't we show our users how to save to the cloud so they can access their stuff from anywhere?

Jason Griffey summed it up well in LJ's "Stranger Than We Know:"

"This new world will be a radical shift for libraries. Library buildings won't go away; we will still have a lot of materials that are worth caring for. Buildings will move more fully into their current dual nature, that

of warehouse and gathering place, while our services and our content will live in the cloud, away from any physical place. The idea that one must go to a physical place in order to get services will slowly erode. The information that we seek to share and the services that we seek to provide will have to be fluid enough to be available in many forms."

I can't agree more about our buildings being a meeting space while our data — and our users' data - resides in the cloud. It may seem scary: what if the servers all blow up? What if Google docs fails? But I believe the positive possibilities outweigh the negatives.

I just downloaded the [Soonr app](), which connects my phone to my iMac at home. I can browse files stored there (actually in the cloud) and do things with them. My Dropbox account syncs up to 50GB of stuff across all of my Macs and in the cloud for access via the Web. I share folders with colleagues and friends for easy transfer and editing. This trend is not going to stop, only improve as connectivity, storage and devices adapt and grow. So, even though it's rather buzzwordy to talk about the "Cloud" - it's a very real thing.

What does this mean for library education?

Educators should incorporate information and use of the cloud into coursework. Exercises in mining cloud data for answers might find their way into reference courses. Imperative: coursework on navigating and managing leased or purchased content stored in other places as well as a focus on reaching users where ever they happen to be.

Useful Links:

The Future of the Desktop http://www.readwriteweb.com/archives/future_of_the_desktop.php

Desktop Vs. Cloud Computing http://stainedglasswaterfall.blogspot.com/2008/08/desktop-vs-cloud-computing-and.html

Is my Head (and my Life) in the Clouds? http://weblogg-ed.com/2008/is-my-head-and-my-life-in-the-clouds/

For more, don't miss Robin Hastings' presentation "Collaborating in the Cloud" at Slideshare http://www.slideshare.net/webgoddess/collaborating-in-the-cloud

The Changing role of IT

This was a year of more reinventions for my colleagues out in the world. It was especially remarkable to me to see folks like Karen Schneider and Nicole Engard go to work for open source solution companies. I also noted that Kathryn Greenhill, esteemed colleague from Western Australia, started a job bridging the library and IT departments at Murdoch.

Stephen Abram pointed to a Gartner report highlighting this trend in the IT area as IT jobs morph into four varied domains. The areas are fascinating:

1. **Technology Infrastructure and Services**. Now composing 65 percent of IT staff, this segment will dwindle to 40 percent. This group should emphasize technical knowledge, such as: "How does this technology work?"
2. **Information Design and Management**–will rise from 20 percent to 30 percent. This group will need to focus more on business-specific knowledge, such as: "What makes this institution tick?"
3. **Process Design and Management**–will rise from 10 percent to 20 percent. This group will need to balance business knowledge with core process knowledge, such as: "What processes make this area

unique," and with industry knowledge, such as: "What characterizes this sector?"
4. **Relationship and Sourcing Management**–will rise from 5 percent to 10 percent. This group will need to balance business knowledge with core process knowledge."

What does this mean for libraries?

Librarians will play active roles in IT governance in their institutions. the says of a locked door that no one but IT personnel is allowed to enter will be gone. And - LIS education must address the changing needs of the IT/Library hybrid and enhance the skill sets of emerging grads. People skills, negotiation skills and enabling effective communication across all levels of an institution will be very important for these new IT/Librarian professionals. The days of hunching over code in a basement office may be fading.

What does this mean for library education?

We are no longer preparing people to be reference librarians or children's librarians. The jobs and duties require a more IT-focused skill set and an emphasis on communication, people skills and humanism. If you're co,ming to library school to get a degree so you can sit in a dark, dusty room of books you're barking up the wrong tree.

Useful Links:

IT Professionals say No to Facebook - Phil Bradley Responds http://tametheweb.com/2008/11/01/phil-bradleys-thoughts/

 The Value of the Commons

In "How WE Learn," Prof. Michael Wesch discusses tapping into the collective mind of his classes. He says something to the effect of "we need a community center where we can all come together.." That center could..should… be the LIBRARY. The Commons.

I spent some time in 2008 visiting various libraries, including many that had implemented a learning or information commons space. This is an idea we'll see more off as libraries plan for renovations, new buildings or simply a refresh of service spaces. Collaborative spaces offering access to technology - such as circulating hard drives, digital video cameras, and laptops - may soon be the norm on many college campuses, especially those with forward-thinking librarians.

The Commons posts were published at ALA TechSource Blog, where I also summarized the visits and what I learned at each of the libraries, also noting that Dr. Carol M. Rose describes the commons as a place where each person adds more value: "The more who join and use the commons, the greater the enjoyment of each participant."

- **The Commons puts students at the center.**
- **The Commons is built with student involvement.**
- **The Commons is a welcoming, useful gathering place.**
- **The Commons makes connections.**

- **The Commons is a relevant, required space on campus.**

The Commons to me is much more than a physical space. It's a community - a gathering place - a place to share. It even has a virtual component. Liz Wilkinson's "Seven Ways to Think About Information Literacy" provided much clarity for this thinking:

1. Literacy beyond text
2. Student centered, not library centered
3. Outside experts
4. Involve students
5. Use students' environments
6. Learning by doing
7. Make students feel at home

What does this mean for libraries?

The above is a recipe for success. Use it for planning. Investigate what it means to offer a space that feels like "home" where access and information is unimpeded. And this recipe is not just for academic institutions but all libraries that might want to create a welcoming useful space for users. Change the word student to "patron," "customer," or "client" (or whatever word you use) and see how such ideas as involving outside experts and making users feel at home influence your thinking. How can you create inviting spaces for all in your library and online?

What does this mean for library education?

I see a course or series of courses on creating common spaces in libraries, steeped in theory *and* practice. Explorations of digital literacies, promoting the use of collaborative devices, and advanced space-planning are here as well. In my perfect world, I'd like to take students on fully-funded field trips to the libraries that have built some of these user-centered spaces as well as working with a library on planning new spaces - "learning by doing."

Useful Links:

The Visits:

- University of Kentucky
- Georgia Tech
- Indiana University South Bend
- Loyola University

Tell Me About Your Laptop http://theubiquitouslibrarian.typepad.com/the_ubiquitous_librarian/2008/12/tell-me-about-your-laptop-what-libraries-can-do-to-provide-support.html

Chelmsford High Library Commons
http://www.boston.com/news/local/massachusetts/articles/2008/12/08/new_learning_commons_defies_commonplace/

The Promise of Micro-Interaction

I had a great time at IDEA 2008, the conference put on in Chicago by the Information Architecture Institute. One of the highlights was seeing Social Media guru David Armano present "Micro-Interaction in a 2.0 World." He defines micro-interactions this way:

"Micro-interactions are the everyday exchanges that we have with a product, brand and service. Each one, in and of itself, seems insignificant. But combined they define how we feel about a product, brand or service at a gut emotional level. In the case of Google, each time it helps us find what we are looking for, view a map, send an e-mail or connect with a friend, it deposits a positive impression in our memory banks."

I experimented with Twitter for conference notes this fall. The IDEA tweets are here and a post about Twitter and Internet Librarian International really brought these ideas home. David Kemper was follwing the conference tweets from ILI and asked a question via Twitter. He summed up the micro-interaction across the ocean well:

"The point was not necessarily to receive a response or to even debate the statement (I mean, these are pro-bloggers, after all, they are busy people in the middle of a conference, so I wasn't expecting a response). To my surprise, however, Stephens and Casey both replied to my tweet and panel members started to discuss the question I had asked, revealing once again the power of Web 2.0 in general and Twitter in particular."

I see Kenley Neufeld at Luria Library opening up video comments on the library blog. This so ties into my takeaways from spending a day at IDEA2008. So much of what we do in the library world and design world comes down to interaction, the extension of human feeling, offering something useful and, very simply, ease of use. This is a perfect example of those things coming together.

What does this mean for libraries?

Library staff could use micro-interaction tools to get things done as well. Easy communication, projects updates and, of course, the excellent examples of libraries using Twitter in time and money saving ways.

Consider the "workstream" as well: "A workstream is a live updated record of work you've completed. When doing group work with remote colleagues, it allows you to keep track of what everyone else is doing. When working solo, it helps you keep track of your own productivity." How could a workgroup benefit from such technologies at your library?
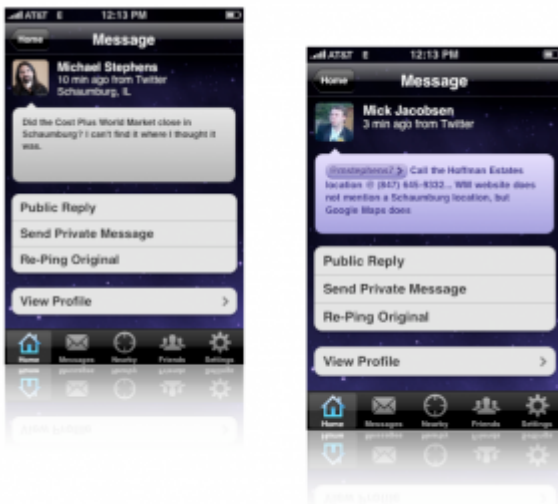
Interaction and engagement at the micro-level can also influence your library users.   It might also be where they are looking for answers. Case in point: I recently did a talk in Schaumburg, IL. Afterward, I wanted to stop by the World Market to see if they had any bottles of Bogle Phantom. Heading to the store, I got confused because it wasn't where I though it was. I pulled into a parking lot, grabbed my phone and asked the Twitterverse: "Did the Cost Plus World Market close in Schaumburg?" Within minutes I had an answer. I am sure I'm not the only one seeking

information via Twitter, or Facebook, or any number of the Q&A sites. My first thought was not to find a library but to ask the question within my personal network.

What does this mean for library education?

LIS educators should explore the social networks, experiment with the various tools and incorporate them into coursework. The reference interview has become much broader than someone walking up to a desk or dialing the library's phone number. We should teach those skills via Twitter, Facebook and whatever comes next.

Useful Links:

Sate of the Twittersphere http://blog.hubspot.com/blog/tabid/6307/bid/4439/State-of-the-Twittersphere-Q4-2008-Report.aspx

Twitter for Internal Communication http://tametheweb.com/2008/12/10/twitter-for-internal-communication-a-ttw-guest-post-by-mick-jacobsen/

Why is Twitter Exploding? http://darmano.typepad.com/logic_emotion/2007/12/why-is-twitter.html

The Care & Nurturing of the Tribe

Seth Godin's *Tribes* was a touchstone for me in 2008. He took discussions of social tools to a much higher level and expertly pulled out the humanity behind the tech. It really plays into my long time interest in virtual communities. Humans, Godin writes, "need to belong." We want to contribute, collaborate and feel a part odf something. "Give us the tools and make it easy," Godin writes and folks will continue to join the tribe.

In "What's Your Tribe," Jonathan Ford brings together the concept of the tribe with micro-interaction.

"Brands need to think small and act small; maybe by scaling down to look at the individual towns and cities —even the streets—where the tribes are living and working to provide brands that are very local and specialized to that market. Alternatively, brand owners could look at brand and product options that allow the consumer to collaborate in the creation process of the brand, like providing them with the means to customize the packaging to create something as unique and individual as they are. Essentially, the packaging needs to embody honest and single-minded expression that relates to the needs of today's consumer who is looking for brands to "be good" and "do good" on an individual level, for their tribe and for the wider world. To be successful and to survive in today's moral climate, brands need to become both more civic and more civil with the biggest brand challenge being to look at the individual first and the product second."

[In the Transparent Library, Michael Casey and I echoed Godin's thinking:](#) "Nurture interested parties in your user community: whomever you serve, whether they be teens, seniors, faculty, staff, or students. Remember that, as with schools, even those who use the facility little or never still benefit from a community with a thriving library. However, you can and should draw in those nonusers, turning them into critical participants whose voices will be heard in difficult times."

This word was carefully chosen: nurture.

More gold from David Armano: [Coming Full Circle: Humanity is the new Technology:](#) "What I think is happening on the Web is very human. While we look toward trends like "cloud computing" it's essential to understand what's happening here. Sometimes, as human beings we don't want human assistance, like for example if we're checking out savings account or just need some cash from an ATM. In other instances, we

are looking for a genuine human connection, and the Web spurred on by the advent of social networks is beginning to show signs of how this could possible be delivered. So in addition to human to computer interaction, we have human to human interaction enabled through technology." We have come a million miles from the "using shiny technology of the day" type posts of a while ago to thinking about what it actually means to interact with another human being. These interactions just happen to be electronic.
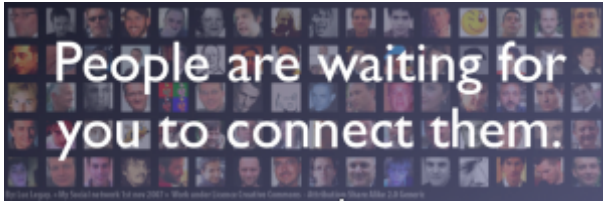
Human interaction is just that: human. It's something business is dealing with right now - how to engage on a human level and not seem fake. That's been one of the common themes of my work with Michael Casey on the Transparent Library. One of the signposts we recently wrote about comes to mind: "Lies don't work. Your staff and users will remember deception for a long time. Honesty creates buy-in for initiatives and plans, and that buy-in creates success. During difficult times, pull constituents in so they understand reasons for changes to services. Don't hide behind "happy talk" PR when an honest voice is much stronger and more memorable."

There's a lot of advice for business folk out there. Take a look at "Can Social Networks Boost Business?" Three lessons that businesses can learn from these consumer sites are:

1. There is a power in numbers – the more people or customers participating in your network, the better the conversations
2. Continuous innovation is necessary, i.e. regular rollout of new feature functionality
3. Strong permissioning capabilities – allow your users determine who gets to see what and when

That's good advice for libraries as well.

What does this mean for libraries?

It's not the library blog or wiki, or Bookspace, or GoodReads, or Meebo embedded librarian on the results not found page, it's people..and connections. I think that's what "The Hyperlinked Library" has always been about. It's about meeting people where they live and providing them with services they need or want. It's about encouraging them.

It's about encouraging the heart, which was one of my hopes for 2009 at TechSource:

I hope that we encourage the heart.

"How can we inspire curiosity in our users? How can we be the community center of town, of campus, of the school? In my mind, this is very important - everything we do should encourage our users to think of us when they need help, an escape or a roadmap in a an ever-changing world. Sure, snazzy technology in a beautiful space is sexy and alluring but the purpose behind it should be deeply grounded in a highly refined service ethic and the mission to put information into the hands of those who need it. Art. Music. Space. Technology. Gadgets. Shiny new toys. Rather important as well. Collaboration. Service. Connection. These are the foundations that make everything work so well. Caring and empathy? That's a given if we want to encourage the heart."

Tell me how your library's humanity will shine through today? Will it be a connection made in person or

virtually? Will it be there while inspiring someone's curiosity? Will it be leading a tribe of passionate users who care about the institution? I keep coming back to the newsletter full of rules and I feel sad for those users. Where's the humanity in that equation? Tapping into the power and insight of the tribe is important. It's outreach in a way, but more than that. It's also "marketing" in the new world - and it doesn't take big money for billboards and ads and without the phony PR talk. Godin notes: The tribe is listening. The tribe wants to follow.

So ponder how you will encourage your library's tribe, continually wow and engage them with innovation and let them share as much or as little as they'd like while participating.

What does this mean for library education?

How do we create leaders? How do we give future librarians tools to build a community of users? How do we continuously foster an attitude of innovation in new graduates? First step: an emphasis on caring and empathy with an eye toward librarianship's foundations. "Books are for use" and the tribe wants to use our stuff - I'm hoping the next wave of librarians in the 21st Century find a million more ways to make collections accessible and friendly.

Useful Links:

Ten Ways to Boost Your Social news Profile: http://www.readwriteweb.com/archives/10_ways_twitter_can_boost_your_social_news_profile.php

The triumph of the Portable Device

Keyword: Mobile.

I asked the Twitterverse to weigh in on this post - and I was pleased to see some useful responses including this from mridley: "For me, the triumph of personal IT: the consumer device as the centre of the IT ecology; Device Police beware." If you've followed TTW for awhile you know I've spent some time writing and speaking about cell phones, library signage and librarians' attitudes toward both. I've been called out a few times but I still believe we've moved way beyond taping up a "No Cell Phone" sign on our front doors.

The iPhone and smart phones in general helped move this along and every innovation, every new feature that extends the capability of our devices impacts libraries. I wrote about this recently when I used a 2D code to ask a question that required some decoding with a scanner enabled cell phone:

Banning cell phones (and the converged devices they've become) is no longer an option for libraries. That sign on your door with a cell phone and a red circle/line through it simply has got to go. Go take it down. I'll wait.

I think both Michael Casey and I feel very strongly about this particular signpost toward transparency: "Focus on user-driven policy, not driving users away. Usage patterns, user needs, and the grim reality of tough economic times mean we must steadily reevaluate our mission, our services, and our policies." This means trying to control your users and their technology might not be a good idea as we go forward with libraries in an uncertain and fluid age.

I can't stress this enough: We should be guiding user behavior in our spaces with simply stated codes of conduct instead of focusing on banning technology to control behavior. Teens out of control? Block Facebook! Person talking too loud on phone? Ban the cellphone! Where does this thinking come from?

The customer..user…client..patron..user should not be the enemy.

People are already using these devices to find all sorts of things on their own, even while standing in your big beautiful library with lovely reference desk. The device connects me - us - them to the world. So that's a big reason to go to the table, re-do your "No Cell Phone" policy to something more friendly, and think about ways to incorporate these technologies into your own services.

Remember Abilene Christian University's take on encouraging student use of mobile technology? "Mobile technology is shaping the way we live, work and learn. Since education can now take place in the classroom or virtually anywhere, ACU is committed to exploring mobile learning technology that makes sense for our students and their future. ACU leaders have given top priority to researching and developing a "connected" 21st century campus, integrating technology into course curriculum and campus life. Several pilot applications have already been developed for Fall 2008."

There's a video as well: "A fictional day-in-the-life account highlights some of the potential benefits in a higher education setting when every student, faculty, and staff member is "connected." The applications portrayed in the film are purely speculative; however they're based on needs and ideas uncovered by our research - and we've already been making strides to transform this vision of mobile learning (mLearning) into reality."

What does this mean for libraries?

By giving each student an iPhone or iPod Touch, the university is creating connections via a converged device. I applaud the forward thinking and sense of innovation that went into the charge of "researching and developing a "connected" 21st century campus." The focus on students — they use technology in every aspect of their lives — does my heart good. Can you see your campus connected - students, staff, faculty — and using technology like this to learn and engage? What role might the library play? This is a model to watch and ponder not only for universities but for university libraries. Again, take a look at the video before you decide to keep the ban on cell phone use at your library.

What does this mean for library education?

LIS classes should be steeped in emerging tech, hands on play and loads of thinking out loud. LIS professors should have working knowledge of many of the emerging technologies and how it relates to his or her areas of expertise.

The importance of Personalization

As we move forward, don't miss the importance of personalization. Kevin Kelly addresses this toward the end of his talk at Ted. People are personalizing their information experiences and spaces. How many years has Amazon welcomed me back with open arms, and a few suggestions for purchase? Libraries should allow them to do the same with our systems and services. Look at some of the recent innovations with OPACs to see where this is headed. Affording personalized connections into the cloud might make the library a gateway to user's data and put library resources in their view. Blocking access — Facebook? MySpace? — negates this benefit and dampens this possibility.

I was very happy to see BiblioCommons in use at the Oakville, Ontario, library in Canada and have used it in classes. Library Journal covered it and Jenny Levine summed up the ease of use and personalization aspects well:

"As I noted in my CiL talk, it's refreshing just to see a catalog I could log in to with a username instead of a barcode - what a novel idea! Don't even get me started on the fact that the interface includes terms like "connect," "network," and "trusted sources." So much good stuff here, though - ratings, tags, lists, users,

comments, recommendations, faceted browsing, contextual help, natural language (not jargon), user-based age ratings, "share with a friend" links, similar titles, a shelf browser with cover images, and the ability to get rewards for adding content to the catalog. I love that I didn't have to dig deeply into the catalog to start finding user-generated content, as I often have to do in other OPACs when I need an example."

This also goes for physical spaces. Just this week as I was working on this post, I caught a review of the new Darien Library by a blogger and Mom who saw the new building on press day:

" ….. beyond all of this, and it's a LOT, what impressed me most about the new Darien Library is the fact that **the books, everywhere, but especially in the children's room, have been shelved, labelled and organized in a way that makes me feel less like a moron and more empowered to find what I'm looking for on my own.**

Now don't get over excited: our old friend Dewey Decimal is still used to guide the Librarians, but above the code that so many of us suffered to learn in grade school are easy-to-understand labels. Like "KIDS." or "TRAVEL." The reason this speaks to me, in addition to the fact that it's relieving me of the need to curse myself for not paying closer attention to card-cataloging techniques in middle school, is because I feel like the Library, which in my mind used to be a little intimidating and kind of like a disapproving Mother, is reaching out to ME. "Library" is saying to ME that she wants to be like ME and doesn't expect me to be like her anymore."

That's personalization too. We should all strive for users and staff to take that ownership of the library and its services. If there's a disconnect, there's a problem.

What does this mean for libraries?

People want to feel connected and welcome. They want to feel that a space - physical or virtual - that they spend time in - belongs to them. If I have helped craft the space or the place, I'll care and be involved. John Bylberg just commented on my "Darien is for Me" post, where I ended with "And teens too?" by saying:

"Yes, of course teens too! In fact, the teen population is a segment of our community that has been under served by us in the past. We now have a dedicated teen room and our coordinator of teen services, Sarah Ludwig, has put together and worked with a teen advisory committee to craft an experience for them that will exceed their expectations. The other change we have made is that we have completely split teen services away from children's services and placed it, organizationally, under technology because we felt that they would be better served if they were considered wholly digital natives, which they are."

How will you help your users personalize their information spaces and their libraries?

What does this mean for library education?

Classes focusing on usability and design will help students understand the purpose of creating products, spaces and services with the user in mind. What can we learn from Amazon and Facebook and how do we apply it to library settings? How do we help new graduates instill the idea that the "library is for ME" in their users?

The impact of Localization

Don't miss the most important aspect of the cloud and converged devices: localization. Many of the new social networking apps on the iPhone tap into using my location in various ways:

- I can find nearby dining places with UrbanSpoon.

- I can share my current location with trusted friends on Loopt.
- I can search for nearby shops and services with the Google Maps app.
- I can find nearby Twitter users with Twinkle - always a hoot in airports.

It's messy, weird, kind of silly, but speaks to the promise of what could come. I might easily find three vegetarian restaurants within a mile of a conference hotel via localized search on my device. I might tap into the wisdom of three other hikers while exploring a national park via services like "Find Twitter users near me." This is where the privacy discussion becomes so important. We need to understand how much is too much and how much is too little ("No photos in the library! It's a privacy thing!").

We discussed this in a back and forth at the Transparent Library, where Michael and I found ourselves on either side of the spectrum of social tools and privacy: Our location-aware iPhones and applications like Loopt make it very easy to follow someone's movements. I am both excited about broadcasting my whereabouts to trusted friends/colleagues and a little rattled when I see how easily the "nearby" functions in iPhone apps reveal one's location—if people choose to be public with their data.

What does this mean for libraries?

What happens when people are asking questions and finding their information via a location aware device? I'm reminded of what Stephen Abram wrote in a recent column about reference:

This is the disaster scenario — at least for our profession. Suppose we don't evolve fast enough. Most of us know the story of the frog in the boiling water. Will we be blind to the overall changes and allow ad-driven search results to dominate the important question space? Worse still, will we fall into the trap of demanding a Google-like experience? Will there be no event, no transformational experience that shocks us out of complacency? Will we ignore the Web 2.0 opportunity to revitalize distance user relationships? Isn't every user not in a face-to-face moment with us a distance user?

When question space is localized to cities or city blocks, how will the librarian be present? This will be one of the most interesting things to watch in the next few years and I'll applaud the library that innovates into this realm.

What does this mean for library education?

We cannot spend semesters doing reference "scavenger hunts" with our students. I want to explore these new realms with them to see how people get their answers and to ponder just how effective it is to embed a librarian in a localized setting - be it via electronic means or by positioning a librarian in the cafe, train station, academic department or town hall.

Useful Links:

GSM Localization at Wikipedia: http://en.wikipedia.org/wiki/GSM_localization

The evolution of the Digital lifestyle

I'll admit I've been a big iTunes fan since the beginning, and when I drove all the way to Chicago to buy the first iPod in 2001, I was hooked. But Apple fanboy-dom aside, the change since then toward more and more digital stuff has to be one of the most important shifts in a long time. Music, movies, books, articles, podcasts, TV shows, etc are all available via various mechanisms online. Have you watched a dhow on Hulu? Have you streamed a Netflix movie to your laptop while waiting for the mail to bring a Netflix DVD? Have you purchased a digital download of a hot new album or song? have you shared a video with your friends and family? Have you recorded your own song or story and shared it with the world? Maybe you have. I know for sure your library users (or non-users) have certainly done these things.

Seth Godin writes that digital downloads of movies and other content offer great promise if the content providers can get the pricing structure to work: "In the case of online rentals, all of these intermediate costs immediately disappear. Gone. So, why try to mimic the current model when it comes to pricing if the costs are mostly gone? The same thing goes for online music and for PDF versions of books….. The current phone novel craze in Japan is even more evidence for why this makes sense. 2,000,000 people download the phone novel you wrote (it costs you nothing) and then, when it becomes a hit, you make millions on the sales of the paper book and the movie…"

Stephen Abram continues to tell us that the media we've circulated for years will soon be gone while industry analysts note a very similar future:

"The industry's comfort with past marketing and promotional practices centered on CD launches is ingrained and difficult to give up. But the reality is that digital natives and immigrants are more interested in convenience and choice," said Mr. McGuire. "This is not to say that the physical CD would disappear altogether. Rather, it could shift to being a promotional tool to be sold or given away at concerts for example."

As I'm writing this post, Apple has announced the end of DRM for iTunes content. Wired noted this may increase choice and competition:"The end of DRM might embolden a host of new, online download venues and other ventures as traditional album sales slump. Album sales fell 9.5 percent in 2007 while the sale of digital tracks rose 45 percent."

And how many times this past year have we heard about the death of the newspaper? I've contributed a bit to that discussion myself - I dropped my local paper a year ago and haven't missed it very much at all. I bought a couple of issues before the holidays for the sale ads but the local and national news that streams into my life comes electronically. This really points to a change in distribution - checkout this post at Demonbaby:

"Newspapers are a good example: It used to be that people read newspapers to get the news. That was the distribution method, and newspaper companies controlled it. You paid for a newspaper, and you got your news, that's how it worked. Until the internet came along, and a new generation of innovative people created websites, and suddenly anyone could distribute information, and they could distribute it faster, better, more efficiently, and for free. Obviously this hurt the newspaper industry, but there was nothing they

could do about it, because they didn't own the information itself - only the distribution method."

What does this mean for libraries?

There are a few themes running through these trends and technologies - one of them is the idea that our collections and services may change — moving to the cloud, moving online — but the core responsibilities behind them will stay the same: putting information and content into the hands of the folks who want and need it.

It's not out of the question for libraries to find a way to circulate digital content. We've seen iPod circulation and other innovative practices, such as iTunes stations, but the leap to libraries hosting servers filled with content is still coming for us in the states. Checkout Aaron Schmidt's "Quick Tour of Muziekweb.nl" for more.

It's not out of the question that as the local newspapers revenues drop and strategies change for that entity to align with the library to create a community information/news hub. Here reporters might work with citizen journalists to create forums or boards of up to the minute news and the information behind the news.

And it's certainly not out of the question that the AV department currently in your public library will look very different in just a few years.

What does this mean for library education?

Managing digital collections, licensing content, and examinations of innovative service like Muziekweb should be incorporated into coursework. A focus on community informatics and community design is important as well.

Useful links:

Music Industry's last stand: http://www.techcrunch.com/2008/01/10/the-music-industrys-last-stand-will-be-a-music-tax/

Roku Netflix Player goes HD: http://www.hackingnetflix.com/2009/01/roku-goes-hd-an.html

The shift toward Open Thinking

We should be open to innovation. We should be open to creativity. We should be open to new ways to make what we do easier.

The idea of open thinking is looking past the ways we've always done things - the ways we've always spent our money - for emerging, lower-cost, sometimes free and very sustainable mechanisms. Open Source Software is a huge part of this but so is the simple idea of open governance and participation. Michael Casey and I write about this at The Transparent Library, and many of us have been speaking about low cost tech and using low cost solutions to solve our problems. In tough economic times this can make all the difference. It pains me to hear from librarians that "when there's no money" things like programming, outreach and moving forward have to stop. Take a look at an example Helene Blowers just posted at her blog:

"Every once in awhile, I run across a truly amazing project that totally makes my heart smile. This one tonight really caught me off guard … for it's so beautifully simple (both application and approach) in capturing the core essence of whatlibraries are really all about… community & sharing stories. Remember When - A collaborative, web based story writing project by Ipswich seniors in partnership with the Ipswich

Library.

Through the use of the PBwiki (a free wiki hosting site) they've created a wonderful model for libraries of any size to duplicate with or without funding."

Funding is tight these days and thinking about open source software may be a very wise move. In "Open Minds, Open Books, Open Source," Andy Guess writes:

"There's a 'growing disconnect in what we're being provided from commercial companies … and what libraries are starting to realize they need,' he said, but libraries aren't blameless either: He believes they need to communicate more effectively the features and functionality they require. And just because it's open source doesn't mean it's better. Soon enough, Gibbons suggested, open source innovations might spur competition and eventually result in more and better choices in the consumer market."

Karen Schneider offered this at SLJ: "Evergreen began in a similar way. In 2004, when it was obvious their legacy ILS could no longer support the needs of their 270-plus library consortium, Georgia PINES, the resource-sharing network of Georgia Public Library Service, held focus groups in which librarians were told, "Pretend it's magic, and describe what you'd like library software to do." (Disclosure: I work for Equinox, the support and development company for Evergreen.) Librarians then helped custom design the product to do the things existing software had not done well, whether it was reindexing large amounts of data, presenting book jackets in search results, or simply making it easy to enter a cataloging record."

This brings home many of the points above: transparency, openness, user-centered focus. Karen writes: "It's a theme common to OSS development: the product stays close to the user. Most of us who deal with proprietary software are very far from the people who actually write those programs. But in the OSS model, the development community works in the open, on discussion and chat lists. Not only good for us, this helps developers, too, acting as a continuous reality check on user needs."

Helene's example of sharing community stories and Karen's examination of open, community-focused support are golden to me. That's the kind of innovation and forward-thinking that makes me happy. Sometimes, it seems to me, we are very quick to run to vendors and spend money on solutions that might be available for the cost of participating in an OSS project. It's not free, I readily admit that, but a very different way of managing resources and the future.

What does this mean for libraries?

Dale Askey noted a list of "driving forces that undermine the sharing of open source software" in libraries:

- *perfectionism – unless the code is perfect, we don't want anyone to see it*
- *dependency – if we share this with you, you will never leave us alone*
- *quirkiness – we'd gladly share, but we can't since we're so weird*
- *redundancy – we think your project is neat, but we can do better*
- *competitiveness – we want to be the acknowledged leader*
- *misunderstanding – a fundamental inability to understand how an open source community works*

I hope we can move beyond those forces. In fact, I made it one of my hopes for 2009 at TechSource:

"*I hope that we make good decisions.*"

"In tough economic times, every penny and every staff hour a library has should be used optimally. What are we doing that could be streamlined, dropped or changed? How can we economize resources to sustain services? We should investigate open source opportunities, carefully, weighing the balance between vendor

solutions and community-based innovation. It's a big shift for many to change the way we do business, but the benefits may just outweigh the drawbacks in the next 5 to 10 years. A dream I have for 2009 is that we'll see more large systems experimenting and adopting products like Koha and Evergreen, as well as applications such as [Drupal](), [Wordpress]() and [OpenJMS]()."

How do we do this in large systems that have done things the "library way" for so long? What are some ways to spur open thinking? Here are a few off the cuff thoughts:

- **Make things easy and useful. That's what the tribe wants!**
- **Nurture your users, your staff, yourself. The results create a community that shares and cares.**
- **Use failures as learning moments to influence the next plan or service. Failure is cool if it doesn't prevent you from moving forward.**
- **Be a champion for open thinking - especially if you are in an admin position.**
- **Review and evaluate everything you do - even the new stuff because it doesn't stay new for long.**
- **Find your voice - a human, truthful one - and share. And share some more. And thank people, openly and honestly.**

What does this mean for library education?

LIS schools should rally behind the open source movement and use the applications in courses. Project-based assignments that not only utilize an OSS app but offers the chance for practical planning and implementation strategies with a healthy dose of open thinking should be the order of the day.

Conclusion, or "What you shouldn't ignore about these points:"

Finally - the common themes present through all of these trends and technologies? I've been keeping a list and it looks something like this:

Five Related Things We Just Can't Ignore in Libraries:

- **Privacy**: We need to rethink our privacy concerns, offer varying levels of opt-in and educate all of our users about what it means to participate in the networked world where our lifestreams are saved throughout the cloud.
- **The Environment**: Saving money is important but also saving resources. As you plan your new buildings and new services, how can we lessen the impact on the world?
- **The Nature of Information**: It's very different than it was 10 years ago. People are finding stuff "on the fly" and "just in time." How can we still play a role?
- **Generation C**: Young people are growing up to be creators. Our spaces and policies as well as offerings should appeal to that mindset. Let them create along with you.
- **Telling Our Story Well to Funding Bodies**: Tough economic times spell disaster for library funding. Make sure you are telling your story well in various marketing and communication channels. It's no excuse to say "we don't have any money to do that" when examples above highlight ways to reach out and engage your users and funders with simple, open tools.

To sum up, these are the things I think we'll be talking about in 2009. They will impact our lives, our jobs and our future. How did I do? What did I miss? What would you add?

This post was a long time coming and sections we reworked and edited from [previous TTW posts in 2008](). Thanks to everyone who weighed in on these trends and tech.

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