NeXT SPACE

From community to technology… and back again

Part 1 of 2: The rise of personal networks

We're living in a networked world

158

Number of items ordered per second on Amazon.com on its peak day

techcrunch.com/2010/12/27/on-november-29-amazon-sold-158-items-per-second-13-7-million-in-total/

6,945

Average number of tracks downloaded per minute from iTunes

www.fluther.com/68098/how-many-tracks-are-downloaded-on-the-itunes-store-every-second

3,344

Average number of Web transactions per user per day

research.zscaler.com/2011/01/web-transactions-per-user-per-day.html
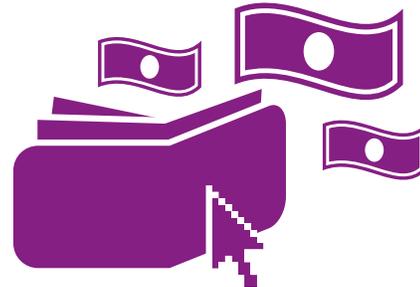
46%

Percentage of Internet users who post to a social network original photos and videos they have created themselves

www.pewinternet.org/Reports/2012/Online-Pictures.aspx

64%

Percentage of smartphones powered by Android, the world's most popular mobile operating system

www.bloomberg.com/news/2012-10-01/google-passes-microsoft-s-market-value-as-pc-loses-to-web.html

$249,900,000,000

Market value of Google (network strategy) when it displaced Microsoft (desktop strategy) as the second largest technology company in the world (Apple being the first)

www.bloomberg.com/news/2012-10-01/google-passes-microsoft-s-market-value-as-pc-loses-to-web.html

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Features

WorldCat® STATISTICS

58,014,157

Clicks to local library services from WorldCat.org since 2005
www.oclc.org/news/publications/annualreports/2012/2012.pdf

1,082,238,903

Referrals to WorldCat.org from search engines, online bookstores
and social networking sites since 2005
www.oclc.org/news/publications/annualreports/2012/2012.pdf

6,864,940

Mobile views of WorldCat.org since July 2008
www.oclc.org/news/publications/annualreports/2012/2012.pdf

2,499

Number of different device types used to access WorldCat.org
since July 2008
www.oclc.org/news/publications/annualreports/2012/2012.pdf

423,939,600

The number of items cataloged in WorldCat in fiscal 2012
(July 1, 2011–June 30, 2012)
www.oclc.org/news/publications/annualreports/2012/2012.pdf

11,676,515

Records in the WorldCat knowledge base
www.oclc.org/news/publications/annualreports/2012/2012.pdf

196,055,800

Library holdings in the WorldCat knowledge base
www.oclc.org/news/publications/annualreports/2012/2012.pdf

Generating new connections for libraries and their users
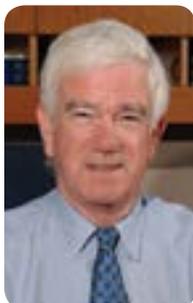
OCLC recently took some important steps toward increasing the availability of the cooperative's data for libraries and people around the world through linked data and data licensing recommendations.

Linked data

Libraries are increasingly exploring linked data as a way to make their bibliographic records available, for free, on the Internet, so that they can be reused and more fully integrated into the broader Web environment. Linked data is meant for machine-to-machine consumption. In the past year, OCLC has been making the following available as linked data:

- Dewey Decimal Classification (DDC)—a full set of more than 38,000 assignable numbers and captions in English, available at the Dewey.info prototype for linked DDC data on the Web, which will assist developers working on apps as well as people who want to look up Dewey numbers

- Faceted Application of Subject Terminology (FAST)—a subject heading schema, created through a multi-year collaboration of OCLC Research and the Library of Congress to make the rich Library of Congress Subject Headings vocabulary available in a Web environment

- Virtual International Authority File (VIAF)—a combination of multiple name authority files from 22 national libraries and agencies from 19 countries into a single name authority service.

On June 20, 2012, OCLC began to add Schema.org descriptive mark up to WorldCat.org pages. Schema.org is a collaboration among Bing, Google, Yahoo! and Yandex (a Russian search engine) that has created a system model for efficient harvesting of structured data from the Web.

Making the entire publicly available version of WorldCat available for use by intelligent Web crawlers such as Google and Bing will raise the visibility of library resources and ultimately increase their availability. This is indeed an important advance for OCLC members, made possible by experience from previous linked data projects such as VIAF, Dewey Linked Data and FAST.

These linked data initiatives also build on alliances that OCLC began fostering as early as 2005 through WorldCat.org with Google, Microsoft, Yahoo! and others, such as HathiTrust.

In June 2012, we welcomed Max Klein to OCLC as "Wikipedian in Residence." He is a Wikipedia editor and is working with OCLC researchers to explore ways that authoritative library data from WorldCat and VIAF can be integrated into entries in Wikipedia.

Most recently, OCLC released a downloadable linked data set for the 1.2 million most widely held works in WorldCat (those with at least 250 holdings). This file is now available to the wider linked data community of commercial providers, retail organizations, researchers and scholars to include in their workflows.

A recommended license for sharing catalog data

During the process of researching the above linked data initiatives, OCLC management has looked into different data licenses on OCLC and WorldCat data projects and consulted with the library and developer communities. At the April 2012 OCLC Global Council meeting, OCLC management had extensive discussions with delegates on an approach involving the Open Data Commons Attribution License (ODC-BY). The Council passed a resolution that endorsed that approach and forwarded it to the OCLC Board of Trustees for further study.

In August, the Board announced that it recommends the ODC-BY for member institutions that would like to release their library catalog data on the Web. ODC-BY is a database-specific license requiring attribution for databases, similar to the Creative Commons Attribution license, but built specifically for sharing data.

This approach lets libraries use WorldCat-derived data in a way that is consistent with the record use policy, "WorldCat Rights and Responsibilities for the OCLC Cooperative." Data can be freely shared subject only to attribution and OCLC's request that those making use of WorldCat-derived data conform to the community norms.

Moreover, in September, Europeana (Europe's digital library, archive and museum) and OCLC announced an agreement whereby OCLC member libraries can contribute WorldCat-derived metadata to the Europeana.eu portal in a manner consistent with "WorldCat Rights and Responsibilities for the OCLC Cooperative."

Going forward, we will continue to look for ways to both encourage contribution to the WorldCat database and increase the availability of these valuable records for libraries and their users. ■

Jay Jordan
OCLC President and CEO

From community to technology… and back again

Part 1 of 2: The rise of personal networks

BY ANDY HAVENS

"[People] are connecting, forming networked communities that allow them to rapidly share information and self-organize into powerful interest groups. Companies will have to be more responsive to customer needs and demands if they want to survive."

— From The Connected Company, *by Dave Gray.*

Communities exist to further the common objectives of their members. And many of the most transformative innovations in history have focused on network technologies that connect communities in new and constructive ways. Highways, railroads, planes, telegraph and telephone service, radio, television and the Internet: all examples of networks enabled by new technology. All of which expand or improve the ability of communities to communicate more easily and achieve shared goals.

What is explicit in any idea of a network is its connections. And in every case, the more connections there are, the more useful a network becomes. This is commonly known as "the network effect." A social network's value, for example, scales exponentially, because you can have groups of many different sizes as well as more individual participants.

While many networks give us the means to connect more effectively, none has changed how we live, learn, work and play more quickly—and some say, more profoundly—than the Web. This is partly because it has collapsed so many different media into one source, letting us read, listen, watch, play, talk, sell, buy, work, publish and broadcast all in the same space. But, even more importantly, it is because the Web lets us create and nurture our **own** networked communities, rather than simply relying on the ones provided by governments, utilities and corporations.

The tools now widely available on the Internet allow us to create and maintain connections that can be both personal and global, and touch on every level in between. This allows groups to define the ways in which they can interact—and succeed—more than ever before. On the Internet, data about a group's resources, combined with information about the interactions between members, can drive technological change. Networks have grown from technologies that enable stronger communities to technologies that are **strengthened by community**. This creates a virtuous cycle, amplifying both the usefulness of shared network services and the role that community can play in their development.

Networked communities: moving from push to pull

In the book, *The Power of Pull: How Small Moves, Smartly Made, Can Set Big Things in Motion*, authors John Hagel III, John Seely Brown and Lang Davison point out that turning passion into success requires what they call **pull**. They define this as "the ability to draw out people and resources as needed to address opportunities and challenges…to harness the forces of attraction, influence and serendipity."

In a *Harvard Business Review* blog post about the release of the book, the authors summed up this point nicely, saying simply, "Companies need to refocus technology innovation on providing tools to amplify the efforts of communities of practice to drive performance improvement."

"Pull" is excellent shorthand for the ability of communities to create networks around the ideas and objectives they share. Rather than waiting for a centralized technology to come along—think of railroads, highways, radio, and TV—groups can reach out and take advantage of services and resources that allow them more freedom, more flexibility, more connections, more ways to configure their networks.

This makes sense, given that in order to "pull" together resources, a group will always prefer more flexible resources that fit within its needs and means. Building a successful community is hard enough work without having to engage in work-arounds and someone else's rigid requirements. There hasn't been much of a choice, though, until the last decade or so, because technology itself defined what a community could accomplish with it.

A good (and fairly stark) example is the difference between how video was shared prior to the Web and the "pull" resources available now. Go back before the early '90s, and you had one option if you wanted to share a piece of video footage with a large community: television. You either had to own a TV station or convince one to air your piece—both very tricky and resource-intensive options. In the absence of those choices, you could possibly mail videos to your members. Either way, unless you could get your whole group together in one room to watch something, sharing video required complex, expensive and top-down network technologies.

Now, though, sharing video can be essentially free, painless and instantaneous. And the resources can be pulled together in a variety of ways: on a YouTube channel, via e-mail, on a file-sharing service such as Dropbox, on Facebook, directly from phone to phone. From a community-building standpoint, this means that "video" has gone from a network technology outside the reach of most groups to a tool that can be easily worked into a variety of applications, environments, events and resources.

That philosophy, though, is something that requires more than just a set of easily configurable hardware and software tools. The authors go on to say:

"…equating [pull] with technology misses some significant elements. … Scalable pull platforms depend on the definition and adoption of standards and protocols for interaction, [some of which] simply focus on helping people and companies connect more flexibly when the need arises. … At the center of pull, remember, are people."

This means we need to think differently not just about how networks can impact our communities, but how our community efforts may change the technology we're using. A look at the growth of the most successful companies on the Web today provides some insight into the platforms on which this new environment is being built.
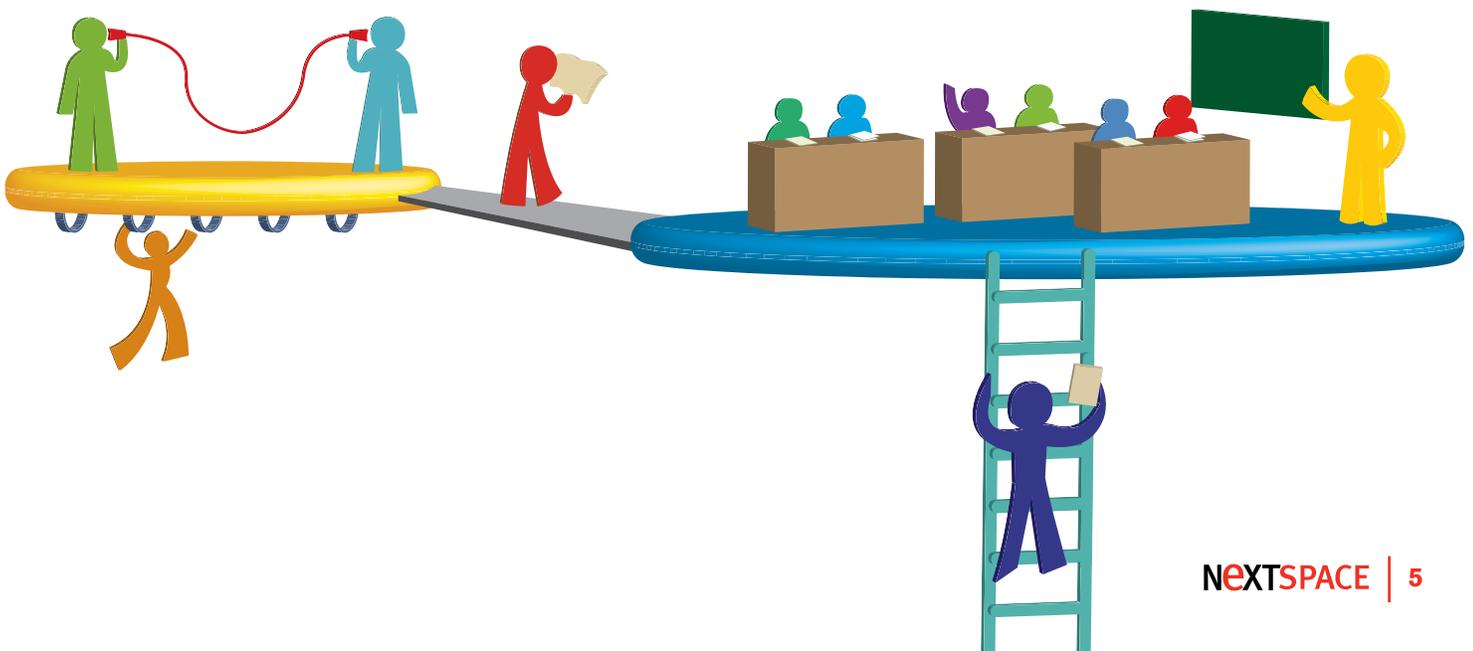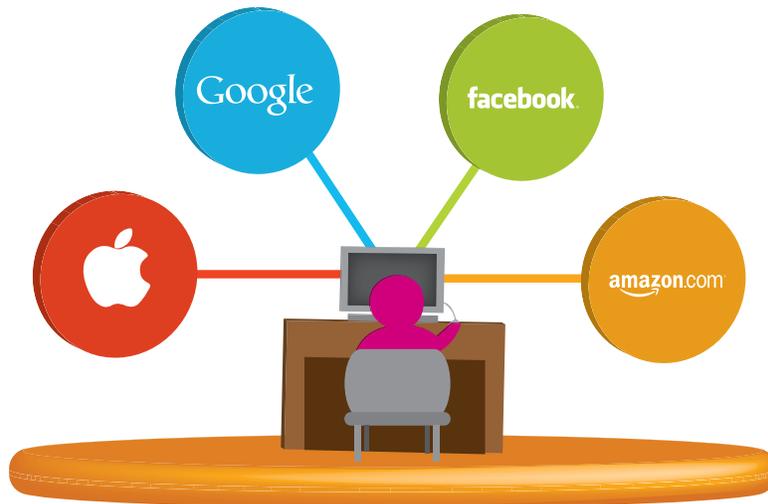
Moving beyond services

In May 2011 at the D9 Conference in Rancho Palos Verdes, California, USA, Google Executive Chairman Eric Schmidt commented that a "Gang of Four" is ruling technology today: Google itself, Apple, Facebook and Amazon. He said that these four companies are "exploiting platform strategies" to create enormous value for both shareholders and consumers.

In his book, *The Age of the Platform*, Phil Simon describes the value of modern platform as follows:

"*[Platforms] bring together like-minded individuals who often share surprisingly similar goals. Together these individuals make up the most powerful component of any open project: the community.*"

The focus for these companies is no longer on creating services and features based on specific tasks. Instead, people are given tools, opportunities and incentives to connect around shared goals and create networks that make sense for them. This allows any company, government organization, academic disciplines—any group, really—to achieve new and surprising results.

A key differentiator of platforms, continues Simon, is that they allow organizations to connect to other networks. "Platform thinking," he explained in an interview with *NextSpace*, "is different because *other* platforms evolve in unexpected directions. It's less about having an intractable five-year plan and more about seeing what happens."

Looking at how the "Gang of Four" developed their strategies provides a good start in understanding how today's technology can promote networking and creative community. In each case, what started as a centralized "push" service evolved into a set of modular tools and resources that any community can use to "pull together" a network of their own:
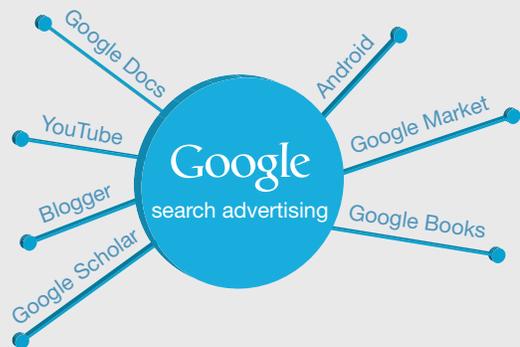
Google began life as a search engine. One of many, it's worth noting. For its first few years, Google was entirely unprofitable and many wondered how it would find the revenue to succeed…or even survive. When it began offering paid search advertising, Google took the first step toward allowing users to create their own networks. Instead of offering case-by-case banner advertising (the norm for the Web up until then), Google allowed its users to assume almost all roles of the advertising workflow. Based on usage accumulated over billions of searches, advertisers could set their own budgets and prices, choose the search terms that most interested them, and even put Google ads on other websites—a strategy almost unheard of until then. At the same time, Google began offering other end-user services such as Gmail and Google Docs in order to help end users succeed in a Web-based environment (and stay in range of Google ads). From there, Google moved into becoming a publishing partner for blogs (Blogger), videos (YouTube), maps and eventually apps (the Android Market). In the academic sphere, the Google Books and Google Scholar services provided more refined tools for researchers and students. All of these services allowed end users to connect to buyers, partners, co-workers and audiences in ways defined by their goals.
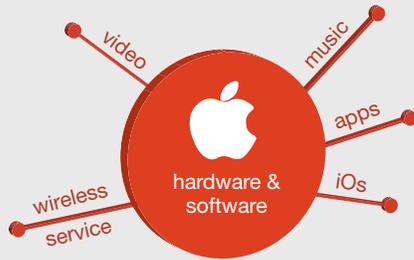
Apple began its recent renaissance with something most brands only dream of: an absolutely fervent and dedicated community of users. But for many years, its products and services were the antithesis of platform thinking, as Apple steadfastly refused to work with outside partners. Though its fans loved Apple products for their design, there were many fewer ways for others to "pull" Apple into their lives and workflows. This kept Apple's market share relatively low when compared with the widely distributed networks of Microsoft-compatible systems. With the birth of the iPod and iTunes, Apple began to reach out to new partners, specifically music producers. The trend continued as the iPod Touch and iPhone brought app developers and wireless carriers into the fold, leading Apple to quick dominance in the smartphone market. By treating the iPod and iPhone as platforms for development and content delivery, Apple leveraged the goodwill and zeal of its community into a global technology powerhouse.

Amazon may exemplify the transformative aspects of this new strategy more than any other company. At each step of its growth, Amazon took its existing services and externalized them in ways that allowed its customers and partners to build their own networks. In order to be a great online bookseller—its original service—Amazon needed great, online retail resources. Once it had built those for its own use, it turned around and sold them to anyone who wanted to build a Web store. It then did the same for its affiliate, publishing and enterprise computing (cloud) programs. Amazon also exemplifies the power of specific data to provide positive network effects to the community when looped back into services. Every search and purchase doesn't just improve Amazon's process for the individual buyer—it fuels the analytics behind "Customers Who Bought This Item Also Bought" and "Frequently Bought Together" links. Participation on the network ends up improving the technology itself.

Facebook began as a network for connecting students at specific universities. Over time, it not only became "the social network" for anyone, regardless of educational affiliation or age, but a place to create, monitor and promote community activities. Fan, interest group, company and cause pages all grew up as Facebook's features expanded to include scheduling, file sharing, photo and video updates and ubiquitous sign-in for other services. In addition, Facebook opened itself to be a development platform for apps and games, and also provided its own apps for other sites and networks to use. The most important of these may be the Facebook sign-on service, which allows people to authenticate themselves on any other site, blog or service using their Facebook identity.

By making resources and tools widely available, these companies encourage users to create their own networks, connecting communities around the processes, data and people that make the most sense for them. The genius of this strategy is that it recognizes and leverages the chief difference of the Internet when compared to earlier technological innovations—that there is no center of the network. Or, rather, there are as many centers as there are users willing to define new hubs around which to aggregate the resources and relationships most important to them.

These giants of the Web succeeded by balancing the centralization of resources and data with flexible tools that allowed their users to "pull" features and benefits into their own networks. While acting as nodes on the networks of these technology giants, communities function as the hubs for their own members. This allows the driving forces of any group or community to provide network effects on several levels. When any local member has the tools it needs to succeed, that reinforces the value of the community for all participants, driving additional usage. And when the network itself is used more, it delivers value up to the larger hubs, making them more useful for the members of many communities.

Networks no longer have to be centralized around technology, but can aggregate based on community. And, as networks expand, they can connect many communities and multiple networks as well. While connecting the work and resources of one community, a network can also become a node from which other networks can draw value.

Your Personal Networks

presentation using iPads

local apps

social advertising

collaboration, scheduling

photo sharing

small business

study group

community garden

Google Docs

Google Scholar

shared calendar

reviews

retail services

affiliate sales

Google

facebook

amazon.com
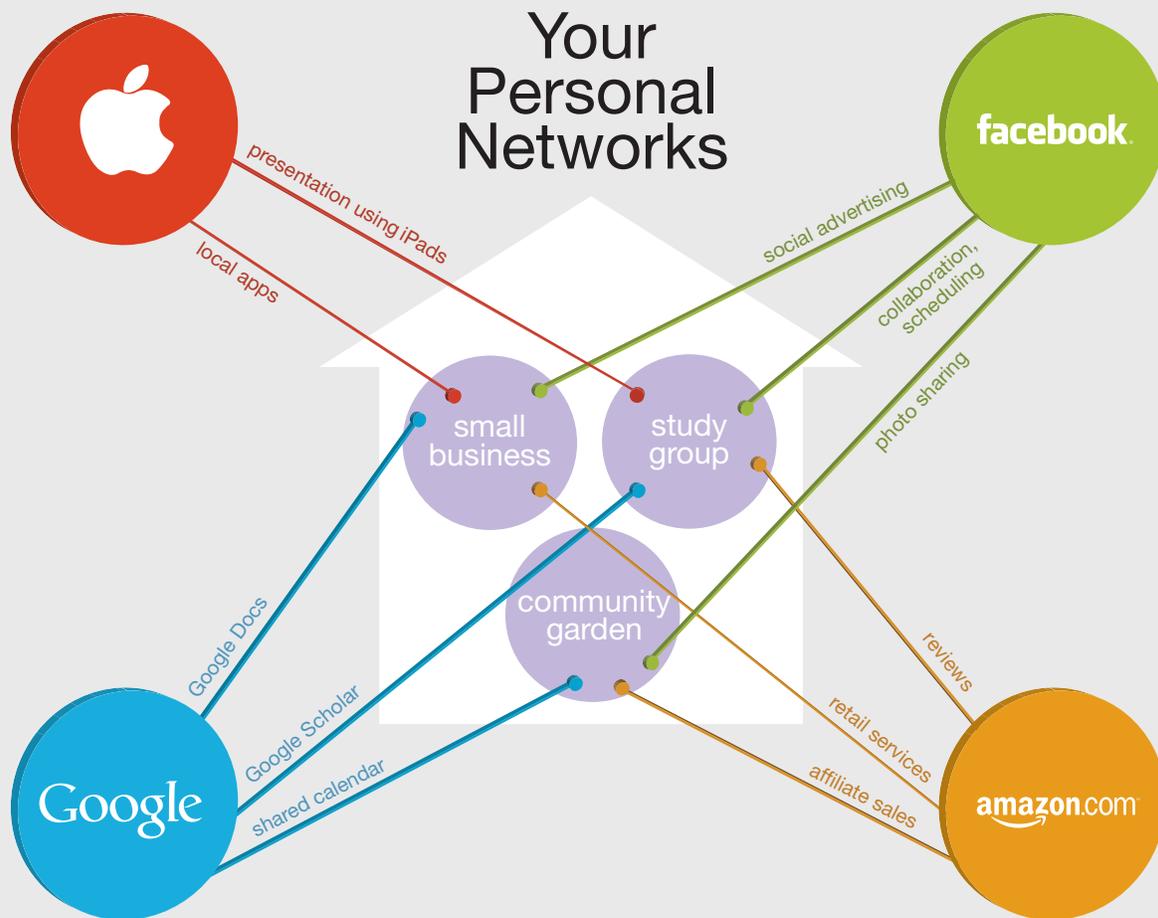
Unlike earlier communications and transportation technologies, there is no need for users to work within the constraints of a top-down system of distribution, publishing or broadcasting. In fact, the large "gravitational hubs," as Lorcan Dempsey, OCLC Vice President & Chief Strategist, calls them, succeed precisely by externalizing many aspects of their features, data and communities. This allows other communities, groups and individuals to achieve network effects without having to build or maintain the infrastructure itself.

Any person or community can now go from simply using service-based network technology to establishing their own networks of interest, with their goals and values at the center. And as certain network tools, features and tactics prove more (or less) successful, those data provide a strategic asset for the community itself: actionable knowledge.

Any person or community can now go from simply using service-based network technology to establishing their own networks of interest, with their goals and values at the center.

We have met the networks, and they are us

What we're beginning to see on the Internet now is the facilitation of new, community-specific networks that support unique goals. They are accomplishing this through "pull" resources, using services provided both by major Internet hubs and other partners. Unlike the "Gang of Four," these new networks aren't companies selling or leveraging their own technology, but communities that concentrate use and data around interests, goals and values.

How do you create a network that maintains a balance between the specific goals and values of your community while embracing as many open, connected platforms as possible? Looking at the most successful network hubs provides some suggestions:

- **Be intuitive.** Describing "The Gang of Four," Phil Simon says that "…their products and services are extremely intuitive…Simplicity, elegance, and ease of use spur the adoption of products at the individual level. This, in turn, drives network effects." The ability of any member of a community to feel as if he or she is contributing to its overall success is extremely important. Being intuitive also means being able to connect to the networks your users are already employing on behalf of their communities. If a group is already using a platform service that you can connect to your network, it makes it much easier for them to engage with you, too.

- **Be data-driven.** Lorcan Dempsey says that, "A major attribute of both Google and Amazon is how they squeeze as much value as they can from the data they have, and the value of that activity increases with the volume of data." His shorthand for this attribute is simply, "make the data work harder." This means championing standards, helping to provide ways to translate between data formats and connecting appropriate sources of authority back to the network. Dempsey goes on to say that data must also be used to "configure the network," influencing services and analytics, such as those we saw in the example of Amazon's "More like this" features.

- **Be human.** In many cases, as the authors of *The Power of Pull* pointed out, strategy isn't just about technology. Opportunities to expand a community's network often rely on personal relationships and real-world partnerships. The technology and data may carry the burden of the actual work—but a handshake may pave the way more effectively than hundreds of hours of programming and development.

These qualities aren't meant to be exhaustive or proscriptive, but directional. In each case, though, they point out that a successful network needs to provide ways to multiply the activities and assets of individual contributors at every stage. It can't just be an amalgamation of resources. The "net work" done by the community must be greater than the sum of its parts. And, as much as possible, work done on the network should be reused to improve the data, results and analysis of future iterations.

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Libraries at the center of knowledge networks

So says David Weinberger, author of *Too Big to Know* and *Everything is Miscellaneous*, and co-author of *The Cluetrain Manifesto*. "A platform view for libraries," he continues, "provides a better starting point for rethinking the role of libraries in a connected age."

In a September 2012 article for *Library Journal*, Weinberger spelled out some of the ways in which a platform strategy makes sense for a library seeking to form networks around useful goals. In a follow-up conversation with *NextSpace*, Weinberger added, "Traditionally, libraries have been seen as portals for access to materials and services. Which is crucial, of course. Where platforms differ from portals, though, is in the opportunity for emergence.

"By opening up as many connections as possible," he continues, "platforms encourage the creation of unpredictable yet important results. New art, ideas, inventions, realizations… all kinds of things…are both created on the platform, and then fed back into it for others to use."

Phil Simon points out that libraries are already creating networks in ways that are extremely valuable outside the traditional realm of library service. "A library's physical presence alone–having places for study and meetings and lectures–gives it access to an asset that 99 percent of online companies don't. Connecting in some way with those who share similar goals provides a wealth of opportunities to develop a strong library platform."

Libraries have been–and still are–centers of knowledge and resources for tens of thousands of communities. They are the hubs across which networks of learning connect millions of users and all kinds of scholarly activities. But on the Web, more groups than ever before share this trait: the ability to concentrate resources around specific goals. While still excellent examples of self-reinforcing, virtuous networks, libraries now co-exist with many other networks–ones that are providing ever more "pullable" services in ways that provide flexible benefits to various communities of learning.

In the second part of our story, "Libraries at the center," we'll explore the ways in which libraries are concentrating data from many sources and providing the foundation for Web services and networks. And we'll examine the next step in this evolution: how libraries, by working together, can create more opportunities for "pull." ■

Moving to meta-services

BY NICOLETTE WARISSE SOSULSKI

As a business librarian at a public library, I get the full range of questions from a huge variety of people. Some are interesting and challenging. Some are mundane and repetitive. Some are just…really, really odd. But if you asked me what my job at the library is, I wouldn't leave it at "answering questions," even though that's what takes up a lot of my time.

My job is also to help you get your next job, maybe to help you create your next job. It's to help you promote and enrich your start-up or growth-stage business. And networks and platforms are probably where some of that's going to happen.

I'm not using this term in the broad, fuzzy sense of "anywhere something happens." Yes, the Web itself is a technology platform and network for delivering information and apps. And the library's common rooms can be—should be—platforms for meetings, learning, discussion. But that's too easy. It stops short of where we can be as 21st century institutions and it probably won't do much to help you get your next job, grow your business or connect to your cause.

Platforms, as discussed by Phil Simon and David Weinberger in the cover article, are designed not just to provide a particular set of services, but to allow and encourage others to connect to and build surprising, creative and innovative things.

Libraries, of course, can do that in spades. My library has a terrific set of programs that connect to our local art community. And others related to sustainability efforts. And still others that work with local authors. What differentiates the "Gang of Four" giants' efforts from programs like these, though, is that we tend to build them as one-at-a-time, "Hey, this is a neat idea!" activities. Someone has a need, we have a resource, there's a group of interested people…boom! A new program.

The Portage District Library is located in the heart of Portage, Michigan, just south of Kalamazoo, about 50 miles east of Lake Michigan.

Nicolette Warisse Sosulski is the Business Librarian for the Portage Michigan District Library and was the 2011 recipient of the Gale Cengage Learning Award for Excellence in Business Librarianship.

That's OK—many of them are great—but it's like building a new social networking service every time you make a friend. We need to think much more broadly about what it means to help connect people and programs in today's information environment.

I, and other librarian friends of mine, have had people come into the library because of recommendations they got on Twitter. Groups that formed on Facebook have come in for a real-life place to meet with those they've known only online. That may be one of the most important roles in our near future—the library as a "physical place to engage with virtual connections"—Ray Oldenburg's "Third Place" with an Internet component. Rather than doing this as one-off programs for specific local groups, though, what would it look like if we provided generalized tools and resources? What if we put our assets out there—like Amazon, Apple, Google and Facebook do—and let our users figure out what they wanted to do with them? Working with patrons until we are providing not just services, but meta-services.

We can't stop doing those things our users expect. I have to answer the question about how to fix bullets in Microsoft Word. And we have to teach basic "digital literacy," both to people who are, on the one hand, scared to death about privacy issues, and to those who are so gung-ho that they neglect even basic online security measures. But if we don't also start seeing the library as a place where others can design and promote their own answers, we'll lose out. Even if your next job is not directly building apps for the iPhone or selling crafts on Etsy, chances are greater every day that you will find it or do it with the help of a variety of networks and communities. And if I'm not out there making the library one of them…then I'm not doing my job. ■

Gates Foundation and OCLC continue partnership for library staff development

For more than 10 years, the Bill & Melinda Gates Foundation and OCLC have partnered to deliver programs that help libraries evolve their services to meet new community needs. Together, we created WebJunction, the learning place for libraries, and Geek the Library, a community awareness campaign. With renewed funding and partnership, both programs will continue to champion library staff and amplify the value of libraries in the communities they serve.

WebJunction: supporting librarians as they learn and lead

Recently, OCLC received a $4.1 million grant from the Gates Foundation to support five years of ongoing operations of WebJunction, the learning place for libraries.

The new grant will support OCLC's continued development of the programs, content and systems of WebJunction.org, and provide long-term sustainability of services that will help libraries thrive in changing and challenging technological environments today and into the future.

"Since 2002, we have worked with OCLC to ensure that public libraries—especially small and rural public libraries—have had the resources they need to be portals to vital information," said Deborah Jacobs, Director of Global Libraries at the Bill & Melinda Gates Foundation. "Together, our goal has been to equip these libraries with the technologies and skills needed to change lives and strengthen communities through access to information."

"Over these 10 years we have seen how offering technical assistance and training to library staff through the WebJunction.org online community can help us accomplish this goal and make a powerful difference in the effectiveness of a library," said Ms. Jacobs. "In these tough economic times, libraries are more of an essential community resource than ever. This grant will help them, many of whom face shrinking budgets, stay up to speed."

''Together, our goal has been to equip these libraries with the technologies and skills needed to change lives and strengthen communities through access to information.''

— Deborah Jacobs, Bill & Melinda Gates Foundation

Built with grant funding from the Gates Foundation and launched in 2003, WebJunction.org provides a range of resources—including online courses, webinar presentations, downloadable curricula and best practices from libraries—to share the knowledge, skills and support that librarians and library staff need to manage their libraries. Its programs and content have been used by staff in 69 percent of U.S. public libraries. From July 2011 through June 2012, staff enrolled in more than 19,000 courses, and more than 17,000 staff members registered for 26 free webinar programs offered on trends in the library profession.

Eighteen U.S. state library agencies partner with OCLC to offer their members sponsored access to self-paced courses and localized training content through WebJunction.org. One of the first state library partners was Connecticut State Library.

"For Connecticut, WebJunction is our main resource for library development," said Kendall Wiggin, State Librarian. "We use WebJunction to provide information and courses on technology, managing a library, advocacy at a time of diminishing resources, and ways to better assist people coming into the library. It is also a great place for librarians to share and discuss experiences on timely issues or projects."

Interested public libraries can get more information about WebJunction at **www.webjunction.org.**

Geek the Library: spreading the word about the vital role of public libraries and the critical funding issues they face

OCLC's Geek the Library community awareness campaign also recently received additional funds from the Gates Foundation that allows the program to expand to more libraries across the U.S. The $1.9 million supplemental grant ensures continued support for libraries already implementing local campaigns and support for 1,000 additional libraries that enroll prior to June 2014. The grant extends campaign support through June 2015, and will provide additional guidance and skills to library staff working to build community awareness about the benefits and value of local libraries.

Geek the Library was piloted in 2009–2010, opened enrollment to all U.S. libraries in the fall of 2010, and has since helped hundreds of U.S. public libraries across 40 states raise awareness about the library, the value they bring to individuals and communities, and their need to retain or increase funding.

"Here at Chelsea District Library, the Geek the Library campaign has allowed us to connect with new businesses and organizations in the community," noted Anna Cangialosi, Marketing Coordinator for Chelsea District Library in Chelsea, Michigan. "Holding monthly photo shoots in-house has opened up our library to many non-users, allowing us the opportunity to show how public libraries support everyone. In addition to the awareness we're building in the community, the lessons we've learned have helped staff understand the importance of consistent messaging in telling our story. The campaign has been a great way for us to get the Chelsea community involved to also tell their stories and how the library supports them, which will benefit the library even after we've completed our campaign."

Geek the Library was developed based on the results of OCLC's research published in *From Awareness to Funding: A study of library support in America*. The research and pilot campaign were also funded by a grant from the Gates Foundation. ∎

Interested public libraries can get more information about implementing the campaign locally at **get.geekthelibrary.org.**

''The campaign has been a great way for us to get the Chelsea community involved to also tell their stories and how the library supports them.''

– Anna Cangialosi, Chelsea District Library

Photo provided by Capital Area District Library.

The first Global Council President from the Asia Pacific Region, ChewLeng is Senior Director, Library and Professional Services, National Library Board in Singapore. He was elected Vice President/President-Elect of OCLC Global Council in April 2011 and began his term as President of Global Council on July 1, 2012.

ChewLeng Beh shares his thoughts on libraries, OCLC and the future

Tell us about the libraries in Singapore.

The National Library and all of the public libraries in Singapore are managed by the National Library Board since its formation in 1995. All of the libraries share a single network using one library management system. Collection development, procurement, cataloging, processing and distribution are centrally managed. Our collections are in four languages—English, Chinese, Malay and Tamil.

The National Library Board began humbly with only a National Library, a regional library and 12 community libraries. Today we are a wellspring of social capital and a much loved community with a comprehensive network that includes the National Library, three regional libraries and 20 public libraries.

In terms of library usage, we have come a long way, too. We have a population of 5.18 million in Singapore and last year, the NLB network of libraries received about 36 million visitors and circulation registered a new record of 33 million transactions. Electronic visits rose to about 8 million—an increase of 33 percent from the previous year. The number of electronic retrievals was about 47 million. NLB also organized over 6,300 programs and exhibitions, which attracted over 9 million participants. Library membership has steadily increased over the years to over 2 million.

How did you initially become involved with OCLC?

Before the year 2000, our library was building our own version of 'WorldCat' by requesting bib records from the Library of Congress, the British Library and the Australian National Library. The records were delivered on tape, usually late and sometimes we never got them! We were dependent on our computer department to load the records into our WLN system. Hits were low. When I took over the management of Singapore Integrated Library Automated Services (SILAS) in 2000, I learned that OCLC had the world's largest bibliographic database, which was available online through the Internet. Andrew Wang, Vice President, OCLC Asia Pacific, did not have to do much to convince me that that was the way to go.

We loaded all of the available SILAS holdings into WorldCat in 2002. I was invited by Andrew to give a talk in Dublin, Ohio, on the development of the national library and the public libraries in Singapore, which became my first trip to OCLC. That is how it all started. Later I was elected as an alternate and then a delegate to what was then Members Council (now Global Council).

What is your vision for OCLC in the Asia Pacific region?

I would like to see libraries in this region offer world-class library services by taking advantage of the many shared information resources and the affordable delivery technologies that are so pervasive nowadays.

Many countries in the Asia Pacific region are lagging behind in making access to information to their people. This could be due to economic, cultural or language reasons. If library services are readily accessible to all people, people could improve themselves in a social and economic sense. I believe that if people were better off in these respects, there will be less tension among people politically, and the region and the world would be a more harmonious one.

"If library services were readily accessible to all people, people could improve themselves in a social and economic sense. I believe that if people were better off in these respects, there will be less tension among people politically, and the region and the world would be a more harmonious one."

What is needed is for those who believe in the equity of access to information to come forward to lead the transformation.

Tell us about the Global Council action plan you are working on.

It will be in three areas: (1) communicating the shared values of OCLC to those who are not aware or do not understand them; (2) strengthening the relationship among members through more knowledge sharing; and (3) developing a sustainable business model so that OCLC can continue its mission and realize its vision.

In order to become a network of the libraries of the world, OCLC has started its journey of globalization. It is a new path the cooperative is embarking on. We have realized that we need to learn to communicate better, otherwise there will be confusion that could lead to losing members. If this is not corrected quickly, the business is not going to be sustainable. We have seen many profit and nonprofit organizations fail in this manner.

OCLC was able to become what it is today because of the shared values that bind members together and form a trusting relationship. Anything that jeopardizes the trust needs to be corrected immediately. Since this is a nonprofit organization, the incentive for coming together is the sharing of knowledge.

Currently, OCLC is being challenged by many disruptive technologies and game-changers. The business model that has worked well in the past and sustained the cooperative may well have to change in the future. We see many organizations come and go very quickly because they are not quick enough to respond to the new challenges. We will have to work fast, hard and be innovative about it.

Describe the challenges of setting up a meeting for such a large, diverse region.

The Asia Pacific is a very large geographical region separated by oceans, seas and mountains. Transportation and communication are not that convenient. Culturally and language-wise, it is a very diverse region. We do not have a big enough administrative support unit to help in the organization of the meeting. We have to rely on partners and the goodwill of membership organizations. Sometimes we have to do translation for the benefit of some of the attendees.

Despite all these challenges, I am happy to see that attendance to the Asia Pacific Regional conference is getting better and better each year. This year, 291 attended from 17 countries, which is almost three times that of the inaugural conference in Beijing four years ago. ∎

The 2012 Asia Pacific Regional Council Membership Conference, hosted by the National Library of Malaysia in Kuala Lumpur, incorporated several displays of Malaysian traditions.

Exploring shifting changes in user engagement

The Digital Visitors and Residents Project

BY LYNN SILIPIGNI CONNAWAY, PH.D., OCLC SENIOR RESEARCH SCIENTIST, CO-PRINCIPAL INVESTIGATOR

How do learners engage with the Web? How can educational services and systems attract and sustain a possible new group of lifelong learners? What motivates individuals to use particular technologies or spaces when engaging with the information environment?

These questions drive the Visitors and Residents activity, an OCLC- and JISC-funded collaboration between the University of Oxford (David White, Senior Manager in the Technology-Assisted Lifelong Learning [TALL] program at the Department for Continuing Education) and OCLC Research (Lynn Silipigni Connaway, Ph.D., Senior Research Scientist), in partnership with the University of North Carolina, Charlotte (Donna Lanclos, Ph.D., Associate Professor for Anthropological Research at the J. Murrey Atkins Library). This longitudinal project identifies the shifting changes in users' engagement with the information environment in order to develop better ways to attract and sustain new groups of lifelong learners, and to position the role of the library within the workflows of students and faculty.

''I use [Wikipedia], kind of like, I won't cite it on my papers but I, kind of, use it as a like, as a start off line. I go there and look up the general information, kind of, read through it so I get a general idea what it is. Then I start going through my research.''
(Female, Age 19)

> "I always stick with the first thing that comes up on Google because I think that's the most popular site which means that's the most correct."
> (Female, Age 17)

Digital "visitors" take a functional approach to their use of technology. Thinking takes place offline. They prefer to remain anonymous online, have a less visible online presence, tend to be passive consumers of online content and favor face-to-face interactions. They spend less than six hours online per week.

In contrast, digital "residents" demonstrate significant online presence and usage. They actively cultivate a visible online presence by collaborating and contributing online. This group does not hesitate to express opinions online or their identity in social networks. They are highly dependent on mobile devices, and they tend to spend more than 10 hours online per week.

What we are learning

Convenience trumps authority in the search for useful information. Sources such as Google and Wikipedia are common starting points for information seeking of all types.

Learners develop a variety of "digital literacies" in a social trial-and-error process, without the direct support or advice of educational institutions. This produces a "learning black market" where learners use nontraditional sources of information online, which may lack academic credibility. While these practices appear to be widely used and can be effective for their studies, students often are wary of citing such resources, and may even express guilt about using them and perceive that they have different opinions than their teachers about the quality of sources.

Students frequently have highly developed digital literacy skills, such as Internet searching and using technology (particularly social media) but their information literacy skills (specifically evaluating information for authenticity) lag behind. They often equate the popularity of a source (e.g., being highly ranked by Google) with being correct, and can be nervous about which sources are valid.

Findings suggest that library systems should look and function more like online search engines and services such as Amazon.com. Librarians need to advertise available resources, the library "brand" and the value of both. They also need to provide search help at time of need, e.g., chat and IM help during search, and suggestions for misspellings.

Librarians can provide authority by including Wikipedia and Google within larger search strategies, and by becoming actively involved in correcting Wikipedia inaccuracies and embedding sources in Wikipedia and Facebook. We need to educate our users, which involves providing information and digital literacy instruction, identifying critical evaluation skills, and teaching these early in the educational process. ■

The researchers maintain an active program of releasing outputs and communicating about this work. More information about these activities and the project itself is available from **www.oclc.org/research/activities/vandr.html.**

OCLC maps the future of cataloging, discovery and interlibrary loan

Over the next several years, OCLC's cataloging, discovery and interlibrary loan services will undergo significant changes that will make them more compelling and designed for a Webscale future. OCLC will move these services to a more robust, flexible and integrated platform. These changes will better accommodate the future needs of member libraries and their users.

The OCLC services that support cataloging, discovery and interlibrary loan operations already work together for libraries that use two or more of these services. For example, the OCLC FirstSearch interface supports searching for WorldCat Resource Sharing users. The emerging Webscale environment will increase this integration—and provide exciting opportunities to make OCLC services more powerful.

With help from member task forces and testing groups, OCLC is undertaking this work to create new efficiencies for libraries and introduce compelling search and discovery environments for library users.

Cataloging

On the cataloging front, the move to Webscale is already happening with OCLC WorldShare Metadata. In August 2012, OCLC introduced initial WorldShare Metadata collection management functionality that enables output of collections of customized MARC records from dynamically changing WorldCat knowledge base collections.

WorldShare Metadata collection management automatically delivers WorldCat MARC records for collections of electronic materials, and continually updates the metadata and access URLs for these materials. This improves user access, gives staff time for other priorities and enhances collection investments.

During the next few years, OCLC will expand WorldShare Metadata with new record management features that will complement the collection management functions. These new functions will provide catalogers with tools to more efficiently describe one-of-a-kind items, including electronic, digital and physical materials. New record management functionality will be used to create new WorldCat records and enrich existing records.

OCLC will also release new Web services for developers in the cataloging community. These services will provide support for adding new WorldCat master records and enriching those that already exist, WorldCat holdings maintenance, and customized local bibliographic data and local holdings records.
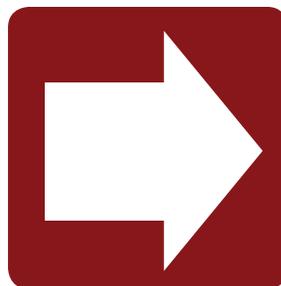
''The WorldShare Metadata collection management service is a step forward because we can now use the records in the WorldCat database to provide access to our electronic collections in a way that incorporates access changes quickly and easily.''
– Sarah Haight Sanabria, Electronic Resources Cataloger, Central University Libraries, Southern Methodist University

> *Library users need a unified and contemporary search experience that lets them see what's most meaningful to them.*

This will provide complete metadata management for physical, licensed and digital resources across multiple formats. In addition, the expanding cataloging functionality— to be available to all OCLC cataloging subscribers—will be integrated with OCLC WorldShare Management Services components, including acquisitions and circulation. And because it is being built on the WorldShare Platform, this functionality will work well with traditional integrated library systems, too.

Discovery

Library users need a unified and contemporary search experience that lets them see what's most meaningful to them. And library staff need expert search capabilities and expanded record views. With the help of a member advisory group, research and testing is under way at OCLC in order to meet these goals within one discovery experience. This new service will combine the reach of WorldCat.org and its user-friendly interface with the precision features of FirstSearch.

The new discovery service will replace the current FirstSearch service while providing expert functionality to current users of WorldCat.org and WorldCat Local. Active 'unlimited' subscriptions to the current FirstSearch service will automatically transfer to the new discovery service.

The advisory group review will continue through late 2012 with beta testing slated to begin in February 2013. OCLC will provide details on minor tasks that libraries will need to complete (e.g., obtaining new log-in credentials) when the new service becomes available in mid-2013.

Interlibrary loan

The new OCLC WorldShare Interlibrary Loan service is rolling out in an 18-month phased migration that began in July with targeted library groups. Most WorldCat Resource Sharing users can begin to use the new service in March 2013. Libraries with user-initiated interlibrary loan can begin to migrate in July 2013 when the new discovery interface becomes available. Non-U.S. libraries can migrate in the June–September 2013 timeframe. WorldCat Resource Sharing users will have until the end of December 2013 to move to WorldShare Interlibrary Loan—this is when access to WorldCat Resource Sharing will end.

WorldShare Interlibrary Loan will replace the WorldCat Resource Sharing service as part of existing OCLC resource sharing subscriptions. OCLC will provide comprehensive training resources to help library staff with transitioning interlibrary loan work to the new service.

WorldShare Interlibrary Loan will transform traditional interlibrary loan into a broader fulfillment service that supports evolving workflow changes such as purchasing needed items instead of borrowing them. This will position traditional interlibrary loan as one of many options a library may choose according to library policies and user needs.

"As a member of the beta test team for WorldShare Interlibrary Loan, I felt it was important to be a part of the advisory committee to ensure the work we did and the vision we have for this new ILL platform will be carried forward," said Franca Rosen, Head, Interlibrary Loan Services, Jefferson County Public Library, Lakewood, Colorado. "WorldShare Interlibrary Loan will present many new features that will facilitate the processing of requests, resulting in more efficient use of staff time and improved customer service."

Moving ahead

OCLC's WorldShare vision moves libraries forward into even greater collaboration and cooperation. These upcoming service enhancements for cataloging, discovery and interlibrary loan are key to that future. You and your staff may be asked for feedback on new functionality and workflows, so stay tuned. This exciting Webscale future will make information access easier than ever. ∎

Learn more

- **www3.oclc.org/app/listserv** (updates via the OCLC-CAT, OCLC-SHARING-L and OCLC FirstSearch listservs)

- **www.oclc.org/worldshare-metadata/** (details on WorldShare Metadata Management)

- **www.oclc.org/migrate-worldshare-ill/** (updates on the WorldShare Interlibrary Loan migration)

- **www.oclc.org/productworks/future-of-firstsearch.htm** (information about the new discovery service)

How Kindred Works…works

A look inside the new OCLC Research demo for content-based recommendations

There are many ways to find a new book to read or movie to view. For example, you can ask a librarian, consult websites that provide suggestions based on consumer purchasing behavior, or rely on the recommendations of other users. OCLC Research has developed an experimental service that provides a list of items similar to an item of interest. The prototype service uses various characteristics of a sample work, such as classification numbers, subject headings and genre terms, to retrieve related resources from WorldCat. This approach is called content-based recommendation.

The recommendations are accessible through a user interface and through an application programming interface (API). The user interface, Kindred Works, provides basic search functionality; users can search by author, title, ISBN or OCLC number. If more than one record is returned, the user is presented with a list of items to choose from. The recommendations may include books, e-books, audiobooks, music and video materials. The WorldCat Search API is used to retrieve results.

The Kindred Works interface provides a convenient means for viewing the results of the WorldCat Recommender API. The Recommender API requires an OCLC number or an ISBN to operate. A high-level architecture diagram of the Kindred Works interface and Recommender API is shown in the diagram to the right. Once the Recommender API is supplied with an OCLC number or ISBN, a supplemental database is searched to obtain work-level characteristics associated with the resource. These characteristics include:

- Dewey class number
- Library of Congress class number
- Fiction indicators
- Genre terms
- Audience indicators
- Subject headings

Kindred Works Recommender Architecture

A query is generated based on these characteristics and sent to the WorldCat Search API. The results of the query constitute a set of related items. The recommendations can be customized to the collection of an individual library by adding the library's OCLC holding symbol to the query. This feature is limited to libraries that participate in WorldCat.org. The machine service is intended to be used by software developers to integrate recommendations into another service or application, for example, a library catalog or other discovery interface. As an experimental service, the Recommender API is likely to be extended and refined over time. Similarly, the Kindred Works interface may evolve based on user feedback. ■

Interfaces

- The user interface is available at
  http://experimental.worldcat.org/kindredworks/.

- The API is available at
  http://experimental.worldcat.org/recommender/.
  Technical information about the Recommender API is accessible from the Kindred Works home page and through the OCLC Developer Network.

OCLC Research Team

Diane Vizine-Goetz, Senior Research Scientist
JD Shipengrover, Senior Web and User Interface Designer
Roger Thompson, Consulting Software Engineer
Harry Wagner, Consulting Software Engineer
Find us at: **http://oclc.org/research/people.html**

Member libraries to contribute metadata to Europeana

OCLC and Europeana, the provider of Europe's digital library, have agreed to an approach that will enable OCLC members to contribute metadata derived from OCLC's WorldCat database to the Europeana.eu portal in a manner consistent with OCLC's "WorldCat Rights and Responsibilities for the OCLC Cooperative." ■

For more information, visit
www.oclc.org/news/releases/2012/201257.htm

Nielsen adds WorldCat link to Nielsen BookData U.K.

In response to demand from library customers, Nielsen has added a link to records in WorldCat.org from within the Nielsen BookData United Kingdom service. Once a user clicks on the WorldCat.org logo, results open in a separate window and give instant access to library holdings information—sorted by distance—along with other content available through the WorldCat.org service. ■

For more information, visit
www.nielsenbook.co.uk/press.php?release_id=78

Italian public libraries add 1.2 million unique records to WorldCat

The 136 public libraries and branches in the Italian province of Trento are now OCLC members and will continue to add records from its Catalogo Bibliografico Trentino as the catalog is updated, which will significantly increase the number of Italian language records in WorldCat. The motivation for joining OCLC was to share their rich collections of Italian literature, history and culture with library users around the world. ■

For more information, visit
www.oclc.org/news/releases/2012/201252.htm

Tilburg University launches WorldCat Local

With the implementation of WorldCat Local, this university library in the Netherlands has chosen to focus first on the most user-critical service while taking a significant step toward migration of its entire library management workflow to the cloud with the adoption of OCLC WorldShare Management Services. ■

For more information, visit
www.oclc.org/news/releases/2012/201256.htm

Streamline ILL with IFLA vouchers from OCLC

OCLC members in the United States and Canada may purchase IFLA vouchers from OCLC and pay for them through their monthly OCLC billing or via Interlibrary Loan Fee Management (IFM). OCLC has added this purchase option to accommodate payment preferences and help streamline international interlibrary loan processes for OCLC members who use WorldCat Resource Sharing and ILLiad. ■

For more information, visit
www.oclc.org/us/en/resourcesharing/features/iflavouchers

First library in Spain selects WorldShare Management Services

The IE Library serving IE Business School in Madrid and IE University Library in Segovia cited efficiency improvements, cooperative sharing with OCLC member libraries worldwide, and increased exposure of its collections as reasons to move to OCLC WorldShare Management Services. ■

For more information, visit
www.oclc.org/news/releases/2012/201262.htm

Get together with OCLC Online and in person

OCLC blog listings

The OCLC Cooperative Blog
community.oclc.org/cooperative/

Lorcan Dempsey's Weblog
orweblog.oclc.org

Hectic Pace
community.oclc.org/hecticpace

Hanging Together
hangingtogether.org

025.431: The Dewey Blog
ddc.typepad.com

Outgoing
outgoing.typepad.com/outgoing

BlogJunction
blog.webjunctionworks.org

A View of South America
community.oclc.org/
aviewofsouthamerica/

**QuestionPoint:
24/7 reference services**
Questionpoint.blogs.com

OCLC Developer Network
www.oclc.org/developer/news

Follow us on Twitter
twitter.com/OCLC

Subscribe
www.oclc.org/rss/

**Become a fan of WorldCat
on Facebook**
www.facebook.com/pages/
WorldCatorg/81565002545

**Become a fan of OCLC on
Facebook**
www.facebook.com/pages/
OCLC/20530435726

OCLC events

**Americas Regional
Council Meeting**
Seattle, Washington, USA
January 25, 2013

**American Library Association
Midwinter Meeting**
Seattle, Washington, USA
January 25–29, 2013

Ontario Library Association
Toronto, Ontario, Canada
January 30–February 2, 2013

**OCLC Europe, Africa
and the Middle East
Regional Council Meeting**
Strasbourg, France
February 26–27, 2013

Electronic Resources & Libraries
Austin, Texas, USA
March 17–20, 2013

Alaska Library Association
Valdez, Alaska, USA
March 21–24, 2013

Computers in Libraries 2013
Washington, D.C., USA
April 8–10, 2013

ACRL
Indianapolis, Indiana, USA
April 10–13, 2013

Montana Library Association
Missoula, Montana, USA
April 17–20, 2013

Canadian Library Association
Winnipeg, Manitoba, Canada
May 29–June 1, 2013

Check the OCLC website for
upcoming conferences and events:
www.oclc.org/events.html