# Digital Public Spaces Trend-spotting Report: Detailed Trends

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# **Executive Summary**

The Detailed Trends report, along with the *Vision and Recommendations* report, are the product of the first project of the Digital Public Spaces Internship, beginning May 2013. EPL's Strategic Plan for 2014-2018 establishes the strategic goal to "create a digital environment that fuels Edmontonians' experimentation, discovery and wonder" and to "delight and engage our customers with incredible content, and rich, collaboratively-created and nurtured digital public spaces." While the *Vision and Recommendations* report outlines potential service directions towards achieving this goal, this report provides the information that supports those service directions.

A total of 12 trends were identified and are discussed in this report. The investigation included the review of 80 public library websites, 23 interviews with library staff involved in the development of digital projects, and a review of innovative digital projects in a broad range of cultural institutions. Information was gathered about the successes, challenges and technical and administrative infrastructure that made up their efforts to create digital public spaces. In many cases, the available information about these digital projects is limited by the fact that they were developed outside the structure of evidence-based practice; as a result, most of the information in this report is qualitative and anecdotal. A total of 61 projects are reviewed in this report.



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# Introduction

To work towards defining solid directions for EPL's 2014-2018 Strategic Goal to "evolve our digital environment," the Digital Public Spaces Intern investigated trends in the development of digital public spaces. The investigation included the review of 80 public library websites, 23 interviews with library staff involved in the development of digital projects, and a review of innovative digital projects in a broad range of cultural institutions.

A total of 12 trends were identified and are discussed in this report. Detailed case studies and examples of these trends are presented along with analyses of their applicability to EPL's stated goals. Each section of this report elaborates upon corresponding sections in the *Vision and Recommendations* report. At the beginning of each section, the Investigation Summary introduces the trend and the specific research conducted on the topic; the Project Descriptions include case studies and summaries of projects that constitute the trend; and the Conclusions synthesize the results and justify the vision and recommendations.



# Definitions

**Digital Public Space** – This concept is being actively explored and promoted by the BBC and experimental public/private research and development institute The Creative Exchange. The idea emerges out of a vision of a wholly compatible web through which "anyone, anywhere, anytime can access, explore and create with digital content" (The Creative Exchange).

Building on this definition, EPL's digital public space fuels Edmontonians' creative experimentation, discovery and wonder by developing a collaboratively built and continually growing online environment, which provides open access to multimedia resources and a content-creation platform.



Image retrieved from <u>http://thecreative</u> exchange.org/activity/reading-digitalpublic-space

**Crowdsourcing** – "an online, distributed problem-solving and production model that leverages the collective intelligence of online communities to serve specific organizational goals" (Brabham, 2013, p. xix).

**Gamification** – "the application of typical elements of game playing (e.g. point scoring, competition with others, rules of play) to other areas of activity, typically as an online marketing technique to encourage engagement with a product or service" (Oxford Dictionary, n.d.).

**API** – Acronym that stands for Application Programming Interface. According to *Webopedia*, an API "is a set of routines, protocols, and tools for building software applications." The most important things to know about APIs is that they are a tool that allows applications to talk to each other and that they "are ubiquitous and essential to the modern cloud-based technology landscape" (Cassano, 2013).

**Hyperlocal** – A term initially coming out of journalism (see Shaw, 2007) that "connotes information oriented around a well-defined community with its primary focus directed toward the concerns of its residents" (Wikipedia).



# Methodology

Research into digital trends in librarianship and advances in digital public spaces more generally was performed in three stages: 1) A review of urban library system websites; 2) A series of interviews with librarians responsible for innovative projects; and 3) A literature review surveying digital projects run by cultural institutions other than libraries.

# **Library Website Review**

Research included an online review of urban library services in the United States and Canada. Libraries in US cities with populations larger than 300,000 and Canadian cities larger than 285, 000 were investigated, as were libraries identified by the Urban Libraries Council as top innovators and libraries recommended by interviewees. A total of 81 library websites were reviewed. There were 11 Canadian libraries, 70 American libraries, with 8 of the American libraries falling under the population limit. The primary goal of this review was to identify libraries that had developed unique digital public spaces in order to study these projects in more detail. Each library website was reviewed for examples of digital projects, collaborative projects, online programming, digital media labs, open data projects and anything that could be described as a digital public space; strategic plans were also consulted for examples of future plans. See <u>Appendix A</u> for list of library websites reviewed. <u>Appendix B</u> details the broad trends in library web presences that emerged.

## Limitations

Any relevant projects completed before May 2013 without a residual web presence or projects begun after July 4, 2013 will not appear in the review data. It is also possible that relevant projects and services have been developed by public libraries but are not presently included on their websites, excluding them from the review data. Further, the size of an urban area does not necessarily correspond to the innovativeness of their public library programs and services. This method of delimiting the search was meant to find library systems relatively similar in scale to EPL and could potentially exclude some truly innovative projects. The review of the Urban Libraries Council awards for top innovators was meant to address this gap in the scope of the project, but exciting new digital public spaces could nevertheless be absent from this review.

# Interviews

Interviews were conducted with libraries identified as meeting the criteria of providing a digital public space. The criteria are as follows:

- 1) Opportunity for online participation/creation this excludes typical social media (Facebook, Twitter, Pinterest).
- 2) Identifiable central virtual space for online participation
- Creative use of new media and/or technology this specifically refers to new media/technology that interacts with/through the Internet as part of a program or service.

Libraries were consulted to determine to what extent their digital public space projects were successful in terms meaningful to EPL. Following the business plan, the objectives of the



strategic goal to "Evolve our digital environment" shaped the questions. Broadly-speaking, the author sought to determine if these libraries and organizations had

- defined and created a digital public space in collaboration with community and partners
- engaged new communities
- created a digital public space that
  - was easy to use
  - integrated existing content/services
  - was highly used and valued

Additional questions sought advice on best practices in terms of technology development and management and institutional engagement with the open data movement. (See <u>Appendix C</u> for the interview template).

A total of 26 libraries and organizations were contacted and 20 interviews were performed. An additional 3 libraries preferred to write their responses to the interview questions as a questionnaire. Including the questionnaire responses, a total of 36 services and programs were discussed at 20 libraries (see <u>Appendix D</u> for a list of libraries contacted). Persons identified as the head of projects or departments in charge of projects were contacted for interviews; in some cases the actual subject of the interview was recommended by the project leader or department head initially contacted.

#### Limitations

There were many more libraries and organizations that fit the criterion for contact described above, particularly in their online services for teens, than were actually contacted. The teen services contacted were chosen because the opportunities for online participation and creation that they offered appeared well used.

San José library was not contacted because the staff that ran the Scan José project are no longer employed there. Nate Hill, former San José Web Librarian, currently employed by Chattanooga PL, was contacted about the Scan José project. San José PL has not confirmed Hill's comments.

The projects reviewed tended not to have defined outcomes or measures and had rarely been submitted to formal evaluations. As such, the evaluations of projects' success and participation levels recorded in this report are often based on the informal observations of the interviewees. Information provided is limited by the interviewee's own knowledge of the project.

Whenever possible, the author requested documentation to support statistics provided by interviewees; however, attempts to follow up and clarify information were not often responded to, so the accuracy of information is subject to human error. Information from the interviews can be understood to be accurate as of the date of the interview as in many cases projects discussed were not complete. As the interview template in Appendix C suggests, the projects were quite different and the questions asked were adapted to the project under discussion. Interview question responses are not directly comparable.



# **Digital Trend Review**

Initial searches in the Library and Information Science Source database for case studies of innovative projects and theorizations of digital public spaces that could meaningfully frame or direct this project were unfruitful as most results discussed trends over five years old.

Developing a systematic methodology for searching the web for the new digital trends outside of libraries was difficult as the number of blogs and sites that discuss these topics is growing every day. A great deal of insight into digital trends came from researching projects identified by interviewees and other contacts and by following links posted on Twitter by leaders in tech and library innovation. Further trends were discovered by Googling key words "digital public space" and "open data"+"librar\*". The digital projects discovered through these routes are integrated into the report alongside interview results to provide context, alternative examples and innovative ideas.

#### Limitations

The international tech industry produces innovative and exciting ideas every day. The information-gathering phase of this project ended August 16, 2013, so it is possible that exciting trends have emerged during the composition of this report that are not included. More digital projects were investigated than are included in the report. Projects included in this report met the criteria of providing a digital public space, described above. Projects were also excluded if they were too similar in scope to other projects to meaningfully contribute new information, e.g., the British Library Labs' innovations are similar to those coming out of Europeana, the National Archives of America and the Digital Public Library of America, so they is not included.



# **Findings**

# 1. Makerspaces and Digital Media Labs

## **Investigation Summary**

Developing online spaces that support makerspaces and digital media labs are not a top priority for providers of these services, giving EPL an opportunity to be a leader in this area. Commonly, makerspace sites consist of a single page on a library website that lists upcoming programs or equipment. Occasionally, makerspace sites share program and equipment information as well as images and videos of events and activities in the space. This section summarizes findings from interviews with four libraries whose online spaces run the spectrum from participatory closed social network to single page blog. Jennifer Steele, Head Mentor, Chicago Public Library's YOUmedia Online, Nate Hill, Director of Chattanooga Public Library's 4<sup>th</sup> Floor, Corey Wittig, Mentor at Carnegie Library of Pittsburgh's the Labs, and Toby Greenwalt, Adult Services Librarian at Skokie Public Library's Digital Media Lab<sup>1</sup> were all contacted about their online components.<sup>2</sup> The recently announced Kansas City software library is also discussed as are relevant aspects of Cleveland Public Library's MyCloud service, based on an interview with CJ Lynce, Manager of Tech Central. Further, this section will report on creative efforts to engage customers in online open content including Europeana.eu, the Rijksmuseum's Rijks Studio, the National Archives of America's Digital Vaults Experience,<sup>3</sup> and NYPL Labs' Stereogranimator.

## **Project Descriptions**

# 1A. Chicago Public Library's YOUmedia Online

The online space supporting the Chicago Public Library's teen-focused YOUmedia space is a cloud-based, closed social network called YOUmedia Online. YOUmedia Online was developed with "explicit pedagogical and motivational purposes" and has gone through a number of versions since its launch in 2010. Like Facebook, YOUmedia Online allows teens "to create personal pages, join online groups, post and comment on multimedia, and message their peers" (Austin, Ehrlich, Puckett & Singleton, 2011, p. 14). In the first version of the site, teens were incentivized to contribute through the use of "iRemix bucks," which were earned by participating on the site and exchangeable for gift cards and digital media equipment. The Aviary suite of production tools was embedded in an earlier version of the site, but has since been removed because the company has changed directions and the tool is no longer available.

Site Development and Maintenance – YOUmedia Online is built on the iRemix Social Learning Platform, which was developed by Remix Learning in collaboration with the Digital Youth

<sup>&</sup>lt;sup>3</sup> Attempts to contact the National Archives to discuss this project were unsuccessful.



<sup>&</sup>lt;sup>1</sup> Labs Director Mick Jacobsen was unavailable during the information-gathering period of this research and Toby Greenwalt was recommended as an authority on the project by 4<sup>th</sup> Floor Director Nate Hill. <sup>2</sup> Indianapolis Public Library's CurveWorld and DC Public Library's Digital Commons were also contacted,

but they did not reply.

Network (a central partner in the development of YOUmedia). YOUmedia maintains a subscription to the service from Remix Learning.

Staff Responsibilities – According to Steele, YOUmedia mentors, staff that facilitate and support teens' usage of the tools and space, are expected to spend 1 - 2 hours of each shift online "commenting on artifacts, interacting with students, posting work, [and] sharing blogs." The site also has a professional development component which allows them to collaboratively design curriculum and share with other staff.

Content – Students must respect copyright by citing copyrighted materials they adapt into their own work. Work deemed explicit or in-appropriate is prohibited.

**Rights** – According to Steele, students are required to sign a release when they begin working with YOUmedia that acknowledges that program funders have the right to store and share their creations. Students themselves have the right to share their creations on social media.<sup>4</sup>

Storage – Mentors are responsible for saving digital "artifacts" created in workshops on an external hard drive and Dropbox. The benefits of saving work in this way are that it provides a backup for students – who regularly lose their work, that YOUmedia are able to use the artifacts to demonstrate what happens at YOUmedia to funders and board members and that reviewing student work assists mentors as they track the progress and skill-development of the students.

Challenges – Both the 2011 and the 2013 formal assessments of YOUmedia note that the online site was one of the least successful aspects of the project. The 2011 assessment reports that few teens were using the social networking tools, preferring to share content on Facebook. Staff admitted that they, too, rarely used the site – despite their responsibility to promote it (Austen et al., p. 39). The 2013 assessment reported that YOUmedia Online fell short of expectations because it was difficult to use and was not fulfilling its potential to extend learning outside the space (Bender Sebring, Brown, Julian, Ehrlich, Sporte, Bradley & Meyer, p. 55). The 2013 evaluation cautions,

the online space has not been as successful as a way to encourage socializing and friendships among teens. At the same time, the staff and Remix Learning have come to the conclusion that the site may support learning activities related to workshops and projects better than casual social networking. Other learning laboratories should think carefully about the purpose of an online network. (p. 53)

Successes – Despite these setbacks, YOUmedia has not given up on their online space. May 2013 saw the launch of iRemix 3.0, which attempted to address some of the site's identified problems. Steele reported that teens and staff were responding positively to the new version. Though it was too soon to have performed a formal evaluation of the new site, she attributed the apparent rise in site usage to two things:

1) Increased usability and attractiveness of design. An earlier version required "a lot of clicks" to navigate, while the current version is "brighter and a lot more colourful," "user friendly," and includes a newsfeed that shares activity on the site with all users. The new

<sup>&</sup>lt;sup>4</sup> Steele has not responded to requests for a copy of the release form.



site also facilitates sharing artifacts on social media like Facebook, Twitter, Pinterest and email. The result is that "both staff and students want to use it a lot more."

2) The online site has been integrated into Chicago's city-wide Summer of Learning initiative. Organizations from around Chicago developed self-paced training modules that lead to badges that students can share online, wear on their clothes and report on their resumes. Thirty high-level learning modules related to digital media, such as video, animation, photography, graphic design, music, podcasting and blogging are hosted on YOUmedia Online and supported by the physical space. When we spoke, the initiative was in full swing and they had not yet collected data on usage; however, informal observation suggest that the initiative is very popular.

Participation – In addition to accessing the site to participate in the Summer of Learning, students most often use the online space to upload content and comment on the content of other students. Steele emphasized that an important benefit of the online space is its ability to reduce barriers to participation for teens faced with a long commute to the physical space. Indeed the one success of the online site mentioned in the 2011 assessment was that "there were teens who participated exclusively or primarily with YOUmedia through the online space ... [because they] faced transportation issues or just wanted a space to broadcast their work" (Austin et al., p. 14).

Future Goals – According to Steele, the future of the online space is to expand self-paced learning tools to reduce barriers to the space.

## IB. Chattanooga Public Library's 4<sup>th</sup> Floor

Chattanooga Public Library's 4<sup>th</sup> Floor makerspace shares EPL's commitment to being community driven and is a model of the potential success of that strategy. Without the staff to run much programming themselves, they develop strategic partnerships with community organizations. Partners include Open Chattanooga, AIGA (formerly the American Institute of Graphic Arts) and startup incubator GIGTANK. The 4<sup>th</sup> Floor has been praised as "the center of innovation in Chattanooga" because of its success in "bringing together art, education [and] technology" (Chattanooga Public Library, 2013). Responding to the expressed needs of the community, the 4<sup>th</sup> Floor's programming and tools primarily support computer science and technology projects, with a 3D printer, vinyl cutter and laser cutter. A digital media lab is in the works, but there is less community push for it – so it has not been as much of a priority. Similarly, the 4<sup>th</sup> Floor's website is "constantly evolving" but not a top priority. The online space is currently a website that features a blog about events and programs in the space, a vision statement, contact information, the opportunity to join a mailing list, press coverage of the space and a collection of articles about and resources for their 3D Print Lab.

Content – The content policy for the space is currently under development. According to Hill they intend to mirror classic public library collections policies. Hill explains, "We want to represent the diversity of the community and not everyone is going to like what everyone is going to do."

Rights – Users of the 4<sup>th</sup> Floor maintain the rights to everything they produce in the space.



Archiving – The 4<sup>th</sup> Floor has no interest in archiving user-created content. Hill explains, "We look at this as a place where people experiment and try and fail and try again. I don't expect great genius to come out of most of the things that happen. The great genious comes later on after people have experimented with their tools and then decide ... to take it to the next level." Similarly, they make no effort to share or promote content created by users. Hill admits that though he respects efforts like Escondido Public Library's LibraryYOU project that produces, collects and shares library customer-created videos, he finds that "when actually thrown into the situation – users totally don't care ... There is no demand for it." This suggests that trying to provide a service that replicates the work of popular social media sites like YouTube or Flickr should not be the primary objective of a library's online makerspace efforts.

## 1C. Carnegie Library of Pittsburgh's The Labs

The Labs is a teen-focused digital media lab run in four of the Carnegie Library of Pittsburgh's 19 branches that began in September 2012. Their current website lists programs, events and locations; describes the space and its purpose; and introduces the mentors. In the words of mentor Corey Wittig, "[the site] seems like a resource for parents." Most of the Labs' outreach and sharing happens on their Facebook page, which they set up in Summer 2013.

Content – They have not developed a content policy because it has not been an issue for them, so far.

**Rights** – Posters are put up in the Labs that notify users that the library retains the right to save and share content that is created in the Labs. They encourage users to share their content using creative commons licensing and direct users to public domain content to use for their podcasts and other projects.

Storage – The computers in the lab are not connected to the library network and users are able to save content directly to the hard drive. When the spaces opened they handed out free 8 GB flash drives. A mentor with a curatorial background is responsible for collecting and saving digital projects made in the Labs. Projects are stored on Dropbox and an external hard drive. Storing content in this way is useful because users are always losing their work, and the images are good for "PowerPoints and grant proposals."

Future Goals – Wittig would like the site to be more streamlined and require fewer clicks. In his words, a good site would have "all the information that people need to get started with their project." They have considered an iRemix-like platform, but it is not a current priority. Wittig's rationale was based on his knowledge of the challenges that YOUmedia Online faced, but he had not heard about the release and success of iRemix 3.0. When asked if there was a demand for an iRemix-like platform, Wittig responded "No. Kids who would interact with us online wouldn't understand why we don't do it on Facebook."

#### 1D. Skokie Public Library Digital Media Lab

The Digital Media Lab in Skokie, Illinois' single public library branch opened in 2009 at the forefront of the trend. Their website is a blog run on WordPress, and as Greenwalt explained, the blog has three goals: 1) information 2) instruction and 3) documentation. The site contains



information about what tools are available in the space, how to troubleshoot common problems, and it showcases content created in the lab. Their homepage receives between 200 and 300 hits a day; a statistic which is partially influenced by the fact that it is programmed as the start page on the four Mac computers in the lab. The most popular content is the instructional blogs. Instructional material on the site compensates for the limited staff supervision of the space and is a useful reference for staff when they are helping users deal with common problems. The "Created Content" page showcases multimedia digital creations through regularly updated blog posts and a photo stream. Greenwalt explains, "we treat the blog like a public gallery space."

Site Development and Maintenance - The Lab's director designed and is primarily responsible for maintaining the site.

Staff Responsibilities – The Digital Media Lab is not consistently monitored by staff. When staff "run across" people in the Digital Media Lab they encourage them to share their creations with the public either online or in the physical gallery on the outside wall of the space. Staff are responsible for posting to the blog once every two weeks. With 8 staff members, the result is a steady stream of content.

Content – They do not have a content policy that regulates what people can make in the lab, but they do follow their library's main blog policy when deciding which user creations to share on their site. The rule is "keep stuff PG." They will relax their user content standards when they begin their plans to more aggressively collect and archive user content.



Figure 1.1 Screen cap of Skokie Public Library's Digital Media Lab website. Retrieved Oct 3, 2013 from <u>http://blogs.skokielibrary.info/medialab/</u>



Rights – Users retain all the rights to their creations; if they agree to share their creations online, they sign a release that gives Skokie Public Library permission to share their content.

Storage – The computers in the lab are equipped with DeepFreeze software which removes any content created or downloaded on to the computer when a user logs out. External hard drives are available for lending. Staff train users on saving with external hard drives and Dropbox. They have not formally investigated the possibility of offering an online storage space for Digital Media Lab users. Greenwalt explained that "maintaining separate server space brings up issues of responsibility and access the library isn't really willing to take on at this point."

Participation – Adults between 20 and 40 are more likely to share their content on the Digital Media Lab blog than teenagers are. Teenagers have shared some music. Adults tend to share before and after images of re-touched photos, music, and, on occasion, videos. Seeing the library's physical gallery motivates users to voluntarily share their content. Greenwalt estimates that 60% of content in the gallery and on the blog has been collected by staff and 40% has been voluntarily contributed for display by its creator.

Future Goals – The next step for the Digital Media Lab online space is to implement Innovative's Content Pro software so they can develop an archive of user content. Their idea is that the library is "a living portrait of the community." Greenwalt has found there is a demand for community documentation. His experience is that as soon as people hear about the lab, their first question is "well what are people making when they are using the space?" Their archive will offer an answer to this question for posterity.

#### 1E. Cleveland Public Library – MyCloud

Cleveland Public Library's MyCloud is a "personalized desktop experience," allowing users to borrow laptops for use within the library and in the surrounding area on which they can save content and download software. The project was developed to address the digital divide by providing the experience of full ownership and responsibility for a computer. Lynce said that the \$300 000 project has fallen short of its expectations in large part because the library's attempts to educate customers about the legal implications of the service formed a significant barrier to use. Initially, customers were required to attend an hour-long orientation. This requirement has since been reduced to watching a simple 10 minute video orientation. They hope to re-debut the service soon and anticipate a more positive response from customers.

#### 1F. Kansas City Public Library – Software Lending Library

Kansas City Public Library is developing a software lending library using funds granted them by the National Science Foundation and the Mozilla Ignite Challenge. Library card holders will be able to "borrow" software from the library while in the comfort of their own homes. The program seeks to address how the Adobe Creative Suite, Microsoft Office applications and Adobe Premier can be prohibitively expensive and newer versions require up-to-date computer hardware. The software lending library will make these productivity tools accessible by those without the means to purchase new hardware or software.



There are a number of steps to accessing the software, and Digital Branch Manager David LaCrone anticipates some user experience issues during the initial pilot of the project this fall. The customer first finds the scheduling tool on the library website and books a time to use the software. The scheduling tool emails the customer a confirmation that includes a one-time link that initiates a remote desktop on their home computer. The software is available through that remote desktop. Unlike Cleveland's MyCloud, this desktop cannot be personalized.

The library is purchasing new licenses for the software, which Enis reports may cost as much as \$100,000 a year, and expects that the software vendors may want to discuss new terms for offsite access to the software. LaCrone is optimistic that they will come to a mutually beneficial deal with the vendors, because the service is essentially an off-site version of their current model of providing access to software to customers: one customer at a time, per license. Library Director Crosby Kemper III believes the service will suit the vendors because it is "certainly a legal alternative to piracy and will also serve to increase the user base for the applications" (Lynce, 2013).

Project Development and Maintenance – The project was borne of the plan to install a gigabitspeed fiber network in Kansas City. Google is connecting all public institutions in the city to their fastest Internet. The high-speed connection makes the project possible. After winning the Mozilla Ignite Challenge, the library hired a contract programmer to develop the software scheduling tool for the library website.

Staff responsibilities – The library currently hosts online tutorials and in-person classes on how to use different productivity applications. Although these classes are poorly attended, LaCrone anticipates that attendance will increase once the lending library is up and running (Lynce, 2013).

Storage – The applications are hosted by a local data center. During the pilot they will determine if they want to host them on the library servers. Customers will be required to store their files and creations on their own computers.

Successes – Lynce declares that this project is an excellent example of a library achieving the Edge Initiative's Benchmark 2: "Libraries provide access to relevant digital content and enable community members to create their own digital content."

Future Goals – They hope to have the entire system running by early 2014. LaCrone and Kemper plan on making the source code for the service openly available to encourage other libraries to replicate the service. According to Lynce, they expect the project could work with conventional broadband.

#### 1G. European Union – Europeana.eu

Europeana is a web portal that makes 29,014,860 images, texts, audio files, video files and 3D objects available for creative, educational and commercial use through a Creative Commons CC0 Public Domain Dedication license. All of these artifacts are digitizations of significant items from Europe's rich cultural and scientific history, contributed by over 2,200 European libraries, archives and museums. This expansive and growing project is funded by the European Commission and the Ministries of Culture in 21 of the EU's member states. In addition to simply



making this content available online, Europeana is continually working towards increasing and promoting this digital library through the Europeana API.

Additionally, Europeana supports the development of new technologies for using and sharing digitized artifacts. The Europeana ThoughtLab website showcases open source technical initiatives related to the creative engagement with digital content as well as its aggregation and distribution. Particularly relevant to EPL's goal of delighting and engaging out customers with incredible content, and rich, collaboratively-created and nurtured digital public spaces is the subsection of the Europeana ThoughtLab that shares open source tools for supporting User-Generated Content. The EuropeanaConnect Annotation Suite is an open source tool that allows users to annotate digital images, maps, audio and video files; it is currently in prototype stage and the developer is looking for feedback (for a complete list of open source tech mentioned in this report see <u>Appendix E</u>).

#### 1H. Rijksmuseum – Rijks Studio

The Dutch national museum, the Rijksmuseum, is a partner of Europeana and has digitized 125,000 items from their extensive collection. Their own beautifully-designed site contains the Rijks Studio (https://www.rijksmuseum.nl/en/rijksstudio) - a suite of tools that facilitates the sharing and reuse of these digital artifacts. Users are encouraged to create their own Rijksstudio, which is, at its simplest, a curated collection of images. Users can crop and edit images, share them on social media, and print out high resolution copies to use without restriction. All of the Rijksstudios that have been compiled by both individual users and organizations can be browsed. The browsing process has also been gamified through their Master Matcher tool. Users answer five questions about their preferences and the tool creates a collection of items that should appeal to their tastes.

#### 11. National Archives of America – Digital Vault Experience

The Digital Vaults Experience is an educational tool that uses innovative embedded creative tools to help students engage with history through primary sources. Visitors to the Digital Vault Experience can create posters, movies and games using the 1,200 digitized documents selected for the site, including photographs, drawings, maps, and other materials. Creations can be shared over email. As in the Rijks Studio, users can curate and save their own collections of documents. Exploring the collection has been facilitated in interesting new ways: 1) keywords are visually linked to create a web of related information, each strand of which a user can explore, 2) a game called the Pathways Challenge has been developed which sends visitors searching through content motivated by a series of clues.



REATE A MOVIE  Start Your Movie  Add A Background  Add A Title Screen  Add A Scene  Size  Duration  Movement  None  PREVIEW  + ADD CAPTION		~
	🕥 PLAY 0:00 / 0:04	

Figure 1.2 Screen cap of the Digital Vaults Experience movie editor tool. Retrieved 26 August, 2013 from <a href="http://digitalvaults.org/">http://digitalvaults.org/</a>

#### 1J. NYPL Labs – Stereogranimator

The Stereogranimator is a relatively small scale tool coming out of NYPL Labs, a project described in greater detail in the <u>Community-Built Digital Collections</u> section. Inspired by an art project created by NYPL customer, artist and writer Joshua Heinemann, the tool helps customers create GIF animations and 3D images out of the library's large stereoscopic photography collection. Stereographic images were created to be viewed through a stereoscope device, which turns them into 3D images. Creating two frame GIFs out of stereoscopic images eerily re-creates the 3D experience of the photographs. The Stereogranimator's launch was the most successful of all of NYPL Labs' projects receiving, in the first month, "more visits than all of the NYPL's static online exhibitions put together over the previous year" (Vershbow, 2013, p. 92). This site did not maintain its initial popularity but retains a consistent "trickle" of visitors. Vershbow anticipates that more such creative reuse projects will be developed by creative library customers once NYPL opens up all of its digital collections through APIs.







#### Conclusions

Online Makerspace Content – The dramatic increase in customer use of YOUmedia Online is tied to their collaboration with Chicago's Summer of Learning. Further, participation in other digital trends, such as history crowdsourcing, open data events, children's literacy tools and teen book review projects all increased when tied to some kind of external motivation such as personal investment in a community of practice, programming in the physical space, and satisfying the requirements of school curriculum, respectively. This speaks to the fundamental need to build an online space that is thoroughly integrated with face to face services and initiatives. Rather than anticipating which kinds of participatory tools will be useful, the development and inclusion of these tools should emerge out of the needs and interests of makerspace customers. This approach is consistent with EPL's Community-Led Service Philosophy. <u>Appendix F</u> lists the types of customer participation encountered throughout the research for this report and can be used to inspire the development of a meaningful digital public space for makerspace customers.

None of the makerspaces and digital media labs interviewed embedded creative software options in their online space, and the only creative software discovered in this research that could be embedded, the Aviary suite, has ceased to provide the service. However, Kansas City's innovative software lending library provides an interesting alternative to embedded tools. It is a model EPL could follow to reduce barriers to our digital media tools and fulfill the business plan action to "provide online makerspace services that offer user-friendly creative software



options and instruction." What makes Kansas City's project particularly appealing is their plan to address usability issues in their pilot project and then release the code open source. Cybera, a non-profit technical agency in Alberta has recently expressed interest in collaborating with EPL. Their Alberta Enterprise Broadband Testbed project offers extremely broad bandwidth to partners in the interest of local innovation and has the potential to be a source of meaningful support for this type of project.

Chicago's YOUmedia Online, version 3.0, and Skokie's Digital Media Lab blog appear to be the most successful sites in terms of usage by customers. These were both developed with specific intentions to supplement the work in the physical spaces or in the community at large. In both cases learning was the most popular reason for customers to visit the site. Pittsburgh identified adding instructional materials that would help customers get started on their own projects as one of their website goals. Though the types of learning available online had different levels of interactivity, both sites tied their instructional content to the practical needs of customers taking part in programming in the physical space. EPL's online makerspace has the potential to meaningfully support digital media literacy by including instructional content created with the specific information needs of our customers in mind, such as instructional videos and detailed FAQs.

Customer Creations - Pittsburgh's The Labs, Chattanooga's 4<sup>th</sup> Floor and early iterations of YOUmedia Online found that customers had little interest in sharing their creations on the library website, preferring to share it on existing popular social networking sites like Facebook and YouTube. The active engagement of staff was essential to YOUmedia and Skokie's success in motivating their users to share content on their online space. Further, having staff curate which customer creations appear on library websites avoids the risk of customers uploading obscene or otherwise inappropriate content. The final set-up of EPL's makerspace computers will determine whether staff will follow Skokie's model and request content from customers, Pittsburgh's model and harvest customer content from computer hard drives, or develop a process somewhere in between.

Pittsburgh, Chicago and Skokie agree that a great benefit of maintaining a collection of customer creations is being able to share the images with potential funders. Skokie uses the Lab as a marketing tool and their archive of customer creations helps online visitors understand the Lab's potential. In all spaces, notices that customers are agreeing to be photographed or recorded at any time and that those photographs and recordings are the property of the library are visibly displayed on the walls. Photos and recordings of makerspace events and programming saved by staff and shared on the online site would also serve the purposes of marketing and advocacy.

Storage – The problem of how to store customer creations is addressed differently by each makerspace. Pittsburgh and Chicago both noted that students who use their space regularly lose their content and that making staff responsible for saving backup files on Dropbox and external hard drives helped to address that problem. Such a solution may be practical but it does not address the issue of students losing their creations, which is a digital literacy issue. Discussions with makerspace programmers should determine the need for staff intervention in



content storage and determine how issues of storage will be addressed on a case-by-case basis.

The issue of providing networked storage for customers raised legal issues that formed a barrier to usage of the system for Cleveland's customers and prevents Skokie from exploring the possibility of offering the service. Since the American legal context has significant differences from the Canadian milieu, particularly with respect to privacy, this may not be a similarly prohibitive problem for EPL. However, when asked what challenges each space had faced, no one mentioned storage of customer creations. Beyond promoting cloud storage, Pittsburgh gave out flash drives to customers and Skokie lends external hard drives to customers with projects too large to fit in Dropbox or Waula. This suggests that teaching customers how to use existing free cloud storage services in combination with the lending of external hard drives and thoughtful advanced planning addresses the storage needs of most makerspace customers.

Open Content – Projects such as Europeana.eu, the Rijks Studio, the Digital Vaults Experience and the Stereogranimator require extensive programming knowledge and staff time to construct and are motivated by large collections of digitized public domain content. Any attempt by EPL to create a similar project would be hugely ambitious as we would start with a busy web team and only a very small collection of public domain digitized materials. Partnerships with cultural institutions around Edmonton could provide access to such a collection, but this would have to be further investigated. Creating a tool for creatively reusing and sharing public domain content would contribute to our goal to support community-created content, but should perhaps be revisited after the demonstration project described in the Community-Built Digital Collection section of the Vision and Recommendations report.

Aside from creating a tool for editing open content, these projects are inspiring in terms of the opportunities they raise for programming at EPL. Customers of our makerspace will have access to digital media editing tools that can be used to creatively reuse multimedia public domain content (See <u>Appendix G</u> for a preliminary list of sources of open content). Classes on using these tools could benefit from having raw materials to experiment with, for example, a class on Adobe Photoshop could edit images from Flickr's The Commons or a class on podcasting could use music from the Free Music Archive.<sup>5</sup> Including links to public domain resources on our online makerspace and making sure that staff are aware of these resources could enhance the experiences our makerspace offers our customers.

See <u>Organizational Structure</u> for information on the Digital Public Spaces Librarian and Web Programmer positions.

# 2. Community-Built Digital Collections

#### **Investigative Summary**

Over half (57.5%) of the library sites reviewed shared digital collections of local history artifacts. In most cases the collection was made available using OCLC's CONTENTdm software. Of

<sup>&</sup>lt;sup>5</sup> Corey Wittig of Carnegie Library of Pittsburgh's The Labs has integrated the Free Music Archive into his podcasting program and takes the opportunity to teach his students about Creative Commons licensing.



these libraries, only four have built crowdsourcing platforms that collaboratively develop and improve the archive. However, this trend is much broader than public libraries, with similar projects emerging from the National Archives of America (NARA), University of Iowa Libraries, the Citizen Science Alliance and the Open Knowledge Foundation. This section reports on interviews with NYPL Labs Director Ben Vershbow on the Map Warper and What's on the Menu projects, Denver Public Library Archivist and Librarian Sally McDonald on Creating Your Community, Orange County Library System's Department Manager for Reference Central Donna Bachowski on Orlando Memory and Iowa City Public Library's Adult Services Librarian Jason Paulios on the community-focused but library-led Local Music Project. This section also reviews NARA's Citizen Archivist Dashboard and the University of Iowa's DIY History project.<sup>6</sup>

# **Project Descriptions**

## 2A. NYPL Labs – The Map Warper & What's on the Menu?

Acquiring full time staff in 2012, NYPL Labs' seven-person team was envisioned as a kind of "inhouse technology startup" with a digital humanities bent (Vershbow, 2013, p. 80). The team has developed creative projects that increase access to and public awareness of NYPL's Digital Gallery through tools that facilitate crowdsourcing, creative reuse and simplified searching. All tools developed by NYPL Labs are freely available in open code repositories. Tools for creatively reusing content are described in the <u>Makerspaces and Digital Media Labs</u> section.

The Map Warper, a complex and ambitious project, was launched in 2010 and became the first responsibility of the Labs. In brief, the project's goal is to crowdsource the creation of a historical equivalent of Google Maps for New York City. More than producing simple digitized maps, the Map Warper is a tool for extracting and making available all the content of a typical map that isn't captured in the metadata of a digitized image. Users of the Map Warper create an account to access a number of user friendly, but sophisticated, tools, which they can use to populate the map of New York City with data. The first tool is the actual warper which facilitates georectification - a "process of aligning pixels on an old map to precise latitude/ longitude points on a contemporary virtual map" (Vershbow, 2013, p. 83). Additionally, users can access polygon tracing and text transcription tools with which they can render map features such as "ward boundaries, landmarks and points of interest,

hydrography, building footprints of interest, hydrography, building footprints, addresses, and anything else the map may convey via writing, color coding or other markings" machine readable (Vershbow, 2013, p. 84). As of the publication of "NYPL Labs: Hacking the Library" in January 2013, "over 58,000 building footprints with their corresponding attributes have been traced from the georectified map mosaic."

"One user, for instance, single-handedly georectified nearly an entire Brooklyn street atlas, well over 200 sheets" -Ben Vershbow, 2013, p. 86

<sup>&</sup>lt;sup>6</sup> The Citizen Science Alliance's Zooniverse (<u>https://www.zooniverse.org/</u>) and The Open Knowledge Foundation's Crowdcrafting (<u>http://crowdcrafting.org/</u>) are not described here because their focus on science research puts them just outside this project's scope.



What's On the Menu (WOTM), the first project to be launched entirely by the Labs, is a tool for transcribing content from NYPL's 45,000 item large historical menus collection. The menu collection has always been quite popular, though it has been historically difficult to access and search. WOTM attempts to resolve this problem of access by creating a full text digitized collection through crowdsourcing. Created in-house as a spare time project, the goal of the Labs developers was to make the tool interface simple, easy and fun. The tool was promoted with the clear motivational message, "Help the New York Public Library improve a unique collection" (Vershbow, 2013, p. 88) and was an instant success. The Labs has since released an API of the data set.

Site Development and Maintenance – The development of the Map Warper toolkit was outsourced to geospatial technology firm Topomancy. WOTM was developed in house. Labs staff are responsible for the day-to-day maintenance of the tools.

Storage – To allow each project to develop quickly, they have each been developed outside of the infrastructure developed for the Digital Gallery. As each project produces more data, that data is stored separately from the original items in the Digital Gallery. Although this is functional in the short-term, their long term goals include combining the separate data storage spaces into one.

Challenges - Though the *modus operandi* of the Labs is innovative research and development, a workflow has not yet been established that removes Labs staff from maintaining the sites they create. At the moment, the Labs' creative time is problematically limited by day-to-day maintenance of their tools and assisting other departments of NYPL with tech infrastructure issues. Vershbow believes that solving this problem involves thinking through each new project's whole lifecycle development from the beginning.

"Just because there isn't a demonstrated demand for it yet – doesn't mean it is not worth investigating" -Ben Vershbow Though the Map Warper benefits from crowdsourcing efforts, the majority of the work is done by staff in the Library's Map Division. After years of work, there is still a great deal to do. Labs are working on making the Map Warper's sophisticated tools simpler and perhaps adding "game-like experiences" so that they appeal to a wider audience (Vershbow, 2013, p. 86).

WOTM was designed to have as few barriers to use as possible. There is no option to register or create an account; instead, security measures were built into the tool. This has been a very successful approach, but it has limited the Labs' ability to develop more sophisticated user experiences. Labs staff would like to identify active and skilled users and provide them with more complex tasks. WOTM users have also contacted Labs staff to request more work.

Successes - In the first few months following the launch of WOTM they almost ran out of digitized content for users to transcribe because the tool was so popular. The quality of transcription is consistently high, and the continued popularity of the tool has raised NYPL's profile and the profile of its digital collections.



Participation – According to Vershbow, demographic information about WOTM users comes from anecdotes or web analytics. The users most often in contact with Labs staff are women. About 90% of users come to the site every day. Less than a quarter of users access the site from within the state of New York; however, about 75% of users access the site from within the United States.

"A class of deaf fourth graders in San Antonio were even using the site to practice typing skills" -Ben Vershbow, 2013, p. 96

The general audience of the Labs' project is intended to be very broad. Their efforts are meant to straddle the gap between scholarly sophistication and mass appeal. Vershbow describes their audience as "digital culture-makers" interested in mashing up data in new ways. However, he added that the team is also interested in developing tools that are so easy and fun to use that even school children could contribute.

Future Goals – Influenced by projects like the Citizen Archivist Dashboard (discussed below), the Labs has begun to discuss creating a crowdsourcing platform that would act as an entry point to their collection of tools. A crowdsourcing platform would allow them to create a single account sign on for all tools and provide a consistent user experience. It would also allow them to standardize the back end management and storage of each project making storage simpler.

In collaboration with Topomancy, the Labs are developing a project extending the work of the Map Warper, tentatively titled "NYC Chronology of Place." It will combine existing public data sets with the data and structure of the Map Warper.

They are in the process of proto-typing a transcription tool for their collection of theatre and dance playbills that will share characteristics with WOTM but aims to be a much larger project. The 1.5 million+ theatre and dance playbills preserved by the Lincoln Centre Performing Arts Library constitute a collection more than three times the size of WOTM's menu collection. The eventual goal of the project is to create an open performing arts database. The development of the project is based on a hunch that grew out of the success of WOTM and the recognition that theatre and dance have "a strong community of practice and enthusiast community that might identify with the project." Though community consultation did not form the initial spark for the project, Vershbow was enthusiastic about the benefits of community outreach at a later stage.

Vershbow does not readily limit the potential direction of the Labs. When asked about directing their skills towards community outreach and supporting branch programming he responded enthusiastically, pointing to the development of educational tools or physically situated technologies as potential sites of interesting growth. He expanded that vision to include breaking into the "civic tech space" and learning "how the library could be part of the way that data flows in the city" and developing tools to support reader advisory and book recommendation.

# 2B. Denver Public Library – Creating Your Community

Creating Your Community is a participatory digital archive that allows users to create "a community" around a place or a theme: upload related images, write stories and make connections between items. Users can share content on social media, create personal profiles,



moderate content and browse. The project developed out of the successful Creating Communities digital archiving project launched in August 2010.



Figure 2.1. Screen cap of Denver Public Library's Creating Your Community homepage. Retrieved Aug 30, 2013.

Site Development and Maintenance – The archive is built on CONTENTdm with a Drupal interface. They contracted the development of the interface out to a third party. The goal was to create "a Facebook for history" and have the archive directly interact with Facebook; an unfortunate series of glitches led them to remove the site's Facebook interactivity. McDonald is primarily responsible for maintaining the site. She is notified every time someone uploads content; until they set up the Mollom content monitoring software and CaptCHA she would receive up to 50 SPAM emails a day.

Staff Responsibilities – Sally McDonald is solely responsible for maintaining the project. Her responsibilities include mediating content as it comes in, giving presentations to different organizations to teach them about the tool and promote its use, and creating content herself by taking photos in the community.

Rights – Users maintain the rights to their images. They are stored on a low resolution to avoid copyright infringement.

Challenges – The site has not fulfilled its expectations. Based on a usability study performed by a third party and anecdotal evidence, McDonald attributes this to a number of factors:

1) The target audience of the service is older users, and although there is interest in the project, there is a significant technological skill gap preventing this audience from



contributing. In order to address this gap, they ran public scanning days once a month for a year. Unfortunately, these garnered low participation.

- 2) Interested customers who did have the skills to participate were younger adults who were too busy with jobs and families to prioritize contributing.
- 3) Customers find the site difficult to navigate. The site design is quite attractive but it incorporates a tabbed navigation tool that customers have found counter-intuitive.
- 4) Customers do not understand how they relate to the project. Participants have expressed uncertainty about the concept of *community*. McDonald explains that "a lot of people don't recognize that they are part of a community," instead they associate the term with specific community groups.

Successes - The original site Creating Communities was an attractive digital archive of local history populated with content from the library's collection. In 2011 it was receiving an average of 100 hits a day. Today the most popular activity performed by visitors to the Creating Your Community site is still browsing through pictures. Visitors most commonly find the site by searching for street addresses.

To initiate participation in the site, McDonald began approaching schools and churches and has received enthusiastic responses. A presentation at a high school reunion yielded 100 new photos for the site.

Future Goals – The entire Western History and Genealogy Department website is being re-done, including the Creating Your Community page. They plan on removing the account log-in function so that customers can upload content without having to sign up. They also want to address the usability issues mentioned above.

#### 2C. Orange County Library System - Orlando Memory

The Orlando Memory Project is a participatory archive quite similar in premise to Denver's Creating Your Community. It originally launched in 2007, and an updated version of the site launched in July 2013. The site is organized around "memories": stories that can be connected to image, audio and video files. The memories can be about a particular topic, place, person, event or organization. The site receives between 3500 and 4500 hits a month.

Site Development and Maintenance – The most recent update of the site was outsourced to a local developer. The database was transferred onto Drupal, a platform that many staff are trained in using. After the initial, inevitable kinks are worked out of the new version, staff will be entirely responsible for maintaining the front and back end of the site. The front end of the site is designed to address usability issues identified through usability testing and the experiences of staff. The new ability to block upload content has simplified the uploading process for customers and the content moderating process for staff. The greatest challenge in the development of the new site was content migration into Drupal. The original database was coded using a "flavor of Ruby on Rails" that posed a significant challenge to the developers as they transferred the content and tried to maintain all the relationships between data tables.

Staff Responsibilities – All public service librarians at the Orange County Public Library have been given training on how to use a digital camera, recorder, and scanner as well as on



interviewing techniques and film editing. This was done over the course of one intensive training day that was very well received and enjoyed by staff. Each branch hosts at least one digitization event a year that can last as long as a week. Librarians assist customers by scanning items and recording oral histories. Librarians moderate every item that is uploaded to the site.

Content – their content policy is very broad. Since 2007 they have had only two problems with obscenity and they were both SPAM.

Challenges – When the site initially launched, they realized that despite its universally positive reception, few customers were actually interested in doing the work of scanning and uploading themselves. They trained staff on digital media tools and planned digitization events to make the process easier for customers.

Successes – The digitization events held at each branch have been very successful, often requiring extra staff to work at the branch for the duration of the event. The events are usually given a local brand or theme, such as "I Love Ocoee" (an Orlando neighbourhood) or "Veterans' Histories."

Orlando Memory has helped the library engage new communities. They find that the project attracts people who are comfortable financially - who buy their book rather than borrow them. Staff take the opportunity of the digitization events to promote other library services and show people that the library provides more than just books.

#### 2D. Iowa City Public Library – Local Music Project

Unlike the other projects described in this section, Iowa City Public Library's Local Music Project did not employ crowdsourcing to develop their digital collection, but the project is an exciting example of a new model of collection development and access for local music. Recognizing that the local music scene in Iowa City was both vibrant and underappreciated, music-loving librarian John Hiett struck out to find a way to share and celebrate the local music scene. The concept is quite simple, the library seeks out local musicians and leases (for a fee) the right to make their albums freely available and downloadable through the library website for library card-holders. The library then converts the album into desired file types, catalogues it and makes it available for free download through the Local Music Project page. The project launched in June 2012 and the collection currently holds 179 albums.

Site Development and Maintenance - The project required the collaboration of a few different departments: they consulted the City of Iowa City's attorney, Hiett approached bands to be included in the project, the library web developer programmed the site and the graphic designer developed the project's logo and branding. It took less than a year to bring the project from conception to launch.

Building the site from scratch required the team to sort through many complex details. Challenges they encountered during the process included designing a site that would only allow library card-holders to access the music, embedding 10 second streaming clips of songs (a process made much easier with the development of HTML5), and automating the display of album artwork and artist descriptions. They are currently preparing to make the site's back-end code openly available.



Staff Responsibilities – According to Paulios, the amount of work hours required to sustain the project now that it is launched varies and could range from a few hours a week to a full-time job. Paulios is responsible for seeking out new musicians and collecting the signed contracts, W-9 tax forms and digital copies of the music. Albums tend to be provided in CD form, and the process of converting them to FLAC, MP3 and Ogg Vorbis files and zipping the album together usually takes less than an hour. Paulios finds his time has been taken up by doing a lot of PR work lately, and he wishes he had more time to spend seeking out and connecting with new artists. If he had the time he would be attending more local concerts and reaching out to the local music industry including music reviewers in the local scene paper, recording studio managers and music stores. As Adult Services Librarian, Paulios has many responsibilities outside of the local music project.

The library has also hosted concerts to promote the project. As a part of a local indie music festival called Mission Creek and in collaboration with their partners – an afterschool drop in center that encourages teens to play music – then library hosted three teen punk bands in the library. They then made a compilation album of the teen's music and made it available through the site.

**Rights** – The contract offered to musicians leases the rights to provide free digital copies of each album to library card-holders for two years. The artists are paid \$100 plus the cost of their album. Paulios feels that \$100 is a fair payment relative to the amount that the albums have been downloaded so far. He tries to provide a link to sites from which interested library customers can buy the music if they choose.

The two year limit was written into the contract because the library feared they couldn't convince artists to take part without it, though they did not investigate this in advance. Paulios is not entirely happy with the limit, but admits that it will function as a "built in weeding tool" that will force the library to reflect on the project and give them an opportunity to improve it through new contracts. The current contract also limits the library's ability to share the collection with reciprocal borrowers from nearby towns.

"I was having to tell people that yes, I wanted their music, but I'd have to wait for my new budget. They were like, "Just take it! Put it up!"" - Jason Poulios

Artists tend to be "flummoxed" by the contract and ask for assistance filling it out. When Paulios sends it to them, he includes a brief cheat sheet outlining the terms. On occasion, the rights to artists' music are held by recording companies. Recording companies have never responded to the library's attempts to contact them. The project's FAQ page suggests that libraries record live versions of the music and obtain the rights in that way, although Iowa City Public Library has never tried this themselves.

Storage – The library has a large server to support their television station and their digital collections, the music collection is stored on it as well. The local music project is currently 80GB. They save the original high quality FLAC files in case they want to use them for something else and that accounts for about half of total collection size. In addition to MP3, they make albums



available in the non-proprietary, "lockless" Ogg Vorbis file format, which tends to be twice the size of MP3s.

Challenges – The amount of music they are able to include in the collection is limited by their collection budget. At one point they ran out of their budget and Paulios had to tell artists interested in being in the collection that he would have to wait to include them. He found that artists tended not to care about being paid for their albums and were more interested in having it in the collection. Accepting albums as gifts ended up complicating the legal process they had established for the collection and Paulios resolved to hold on to the albums until he could pay for them, and then put them up.

The project is struggling with how local they want to be. Paulios would like to increase the profile of the collection by organizing a concert at a local bar during a popular state music festival. However, he is concerned that the limitations on who can actually access the collection would cause some conflicts if the project were promoted to such a wide audience. He is also interested in including the work of artists who regularly play in Iowa City but who may be from other nearby cities.

Successes – So far, every artist they have approached has been happy to be part of the collection. The project has received a lot of positive press from local and national media and has been praised for its innovation.

Participation – Since the launch in June 2012 there have been about 1,800 downloads. This number is not high in itself, but it is a high turnover number based on the size of the collection. Paulios would like the number to be higher based on the amount of money they spent.

Future Goals – There are lots of ideas for how the project could develop. Paulios is interested in expanding the collection to include local music history. He also wants to start thinking about mobile users, particularly after the Pew Research Center study released in August revealed how often low income people access the Internet via smartphones (see Zickhur & Smith, 2013). The existing collection is difficult to access over mobile devices because albums are downloaded as zip files.

#### 2E. National Archives of America - Citizen Archivist Dashboard

NARA aspires to one day have all of its archives digitized and available online. The Citizen Archivist Dashboard is a tool for crowdsourcing the tagging, transcription, dispersion and development of digitized archival content. The Dashboard grew out of an earlier crowdsourcing effort using Flickr to which NARA uploaded around 10,000 images. By the 2011 launch of the Dashboard they had tens of thousands of tags helping to organize and identify their Flickr collection.

Currently, the Dashboard tagging page promotes themed tagging "missions" and directs users to the NARA catalogue and Flickr collection. The transcription page directs users to the Transcription Pilot Project and to NARA's page on "Crowdsourcing activities using social media tools aren't fluff, it isn't gravy, it isn't the extra stuff that we do – but rather, it is a vital role in how citizens participate in and with the government." -Patricia Wright, 2011



WikiSource. WikiSource is a crowdsourcing transcription tool developed by Wikimedia. There are few documents available through the pilot project for transcription. This is in part because the tool has been very popular: once the project launched, it took less than two weeks for enthusiastic users to transcribe 1000 documents. The Dashboard also encourages users to edit articles in the NARA's own wiki, in Wikipedia, and to take part in the "Today's Document Challenge," a contest that encourages users to compete to produce the best wiki article on a chosen document. The Dashboard also facilitates the growth of the digitized document collection by providing a simple tool for researchers to upload and share their own images of NARA's documents in the Citizen Archivist Research Flickr group. In two years the group has grown to include 38 members and 137 photographs.<sup>7</sup>

The first iteration of the Dashboard homepage included a link to contests related to digitized archival content. NARA's first contest was the History Happens Here contest, which encouraged users to submit photos that "mashed up" history and the present day.



Figure 2.3 Augmented reality photo mash up from the History Happens Here contest. Retrieved 29 Aug, 2013 from http://challenge.gov/NARA/86-augmented-reality-photo-contest

The second contest was the I Found it in the National Archives contest, which encouraged users to write short essays or create short videos about their experience finding something compelling in the Archives. The third and, for the time being, final contest was the Document Your Environment Student Multimedia contest, which encouraged high school students to submit multimedia presentations about the Archives' Documerica collection.

The contest link has since been replaced by a link to the collaborative "Old Weather" project – a joint venture of NARA, the National Oceanic and Atmospheric Administration and the Citizen Science Alliance (described below). The Old Weather project seeks to crowdsource the transcription of ships' logs dated as early as before the American Civil War. With the data provided from these transcriptions, scientists will be able to learn more about the history of weather patterns and contribute to climate change research.

<sup>&</sup>lt;sup>7</sup> The group was launched August 25, 2011 and the given data was retrieved August 29, 2013.





Figure 2.2. Screen cap of the Citizen Archivist Dashboard. Retrieved Aug 29, 2013

In advance of the launch, the Dashboard benefitted from the presence of a part-time Wikipedian in Residence, Dominic McDavitt Parks. Presenting in 2011 at the 7th Annual William G. McGowan Forum on Communications, National Archives Chief Innovation Officer Pamela Wright described the ways that McDavitt Parks supported their efforts. Between May and November 2011, he digitized and uploaded 90,000 archival records to Wikipedia. He also brought members of the local Wikipedia community on behind-the-scenes tours of the archives, engaging a dedicated group of people interested in history to work voluntarily in the service of the Archives' digitization goals. The Wikimedia page on Wikipedians in Residence explains that that the goals of the position are to develop strong working relationships between Wikimedia and the host organization "enabling the host organization and its members to continue a productive relationship with the encyclopedia and its community after the Residency is finished." The position is typically financially compensated by the institution or a local Wikimedia chapter.

# 2F. University of Iowa - DIY History

Similar to the Citizen Archivist Dashboard, but smaller in scope, the University of Iowa Libraries runs the crowdsourcing transcription tool DIY History. The project began in 2011 asking interested users to transcribe the content of the digitized Civil War Diaries and Letters Collection. In a presentation given at a Code4Lib conference on Feb 13, 2013 project developers Shawn Avercamp and Matthew Butler reported that the launch of the project was so popular their website crashed: web hits went from 1000 to 70,000 in one day. It took only a year and a half for the entire 15,000 document collection to be transcribed. They have since offered a steady stream of content for transcription and Butler and Avercamp have made a point of



enthusiastically documenting their work and encouraging other institutions to take up similar projects.

Participation in the project is varied. Jen Wolfe, Digital Scholarship Librarian at University of Iowa Libraries explains that a small percentage of users do most of the work, which is typical of crowdsourcing projects. They have had very few problems with vandals. To maintain the quality of the work they had originally hired people to double check completed transcriptions. However, they were unable to keep pace with the site's enthusiastic users. Their elegant solution was to build a crowdsourcing review process into the tool (Schwarz, 2012, Oct. 12).

According to the project's About page, "Digitized artifacts are migrated from the Iowa Digital Library, which is managed by CONTENTdm software. The transcription pages use Omeka for content management, the Scripto plugin for transcribing, and Twitter Bootstrap for the "We found that the software makes up only half of the recipe for success. Do you have compelling content? A long term commitment to engaging with your users? Are you ready to promote your project far and wide? If so, then deploying a crowdsourcing initiative may be easier than you think." -Shawn Avercamp and Matthew Butler, 2013

frontend framework. The community forum is powered by Vanilla Forums. Image tagging and commenting is available through Flickr." There is a wealth of information about this project available online including the project's source code and related documentation.

#### Conclusions

Each successful project described (with the exceptions of Orlando Memory and The Iowa City Local Music Project) began with a collection of digital content. Creating and maintaining an archive is not and has not been EPL's priority, leaving us without a foundation of digital content to build on. However, there are many institutions in the city similarly invested in supporting local culture and promoting local history that *do* have a preservation mandate that EPL could partner with to develop a project of this nature. The University of Alberta Libraries actively collects local music and has expressed interested in working with EPL. Such a partnership would be mutually beneficial because the crowdsourcing projects described consistently produce high quality work and because "public access is tactical preservation" (Nowviskie, 2012, 20 Jun). The Iowa City Local Music Project has begun to experiment with new collection and access models for providing their customers with digital music and have been met with a positive response. Inspired by the projects described in this section and motivated by our commitment to engaging new communities and providing highly used online services, EPL could take the public library local music collection to innovative new heights way beyond the scope of a local archive or museum exhibit.

Another common characteristic of successful crowdsourcing initiatives was that they tended to hold particular appeal to a community of practice or enthusiast group. Denver's Creating Your Community struggled to find participants precisely because their audience did not recognize themselves as part of a community, and the best success that project has experienced has come out of their efforts to reach out to specific identified communities.



Digital Archivist at the Library of Congress and blogger Trevor Owens argues that "meaningful activity is the apex of user experience for cultural heritage collections" and that employing crowdsourcing as a tool for building a collection is a way to give users a meaningful experience with that content. All of the projects described strive to provide their customers with a meaningful experience as they develop their collections. In the case of NYPL Labs, NARA and University of Iowa Libraries, this meaningful experience comes from providing their communities with specific, directed activities and a clear overall goal. The UX of their sites make it easy for customers to get right to the fun of working with the material. Although Owens argues that gamification is a false motivator that distracts from the more meaningful pleasure of collectively

"Far from being an instrument which enables us to ultimately better deliver content to end users, crowdsourcing is the best way to actually engage our users in the fundamental reason that these digital collections exist in the first place" -Trevor Owens, 2012

building a collection, NYPL Labs and NARA agree that gamification strategies, such as creating contests and tracking individual progress and the progress of the project overall, provides their community of users with a sense that they've contributed to the whole and achieved something on their own.

A third common quality of successful crowdsourcing projects is skilled and motivated staff to develop and maintain the service. NYPL Labs' staff struggles to continue their R & D efforts while maintaining the back-end of their existing projects. Orlando Memory attributes its lively participation to digitization events held across the city every year by trained staff. Both libraries were caught off guard by this necessity and had to adapt their workflows and job descriptions to accommodate their new service obligation. To avoid this, a crowdsourcing digital public space project initiated by EPL should be easily and seamlessly integrated into existing services and the responsibilities of staff in DLI/Web Services as well as Library Services. For example, all staff would be trained on contributing to the digital public space and encouraged to integrate it into programming; the makerspace team could use the project to engage and support users of digital media tools. Further, assigning a staff member, like the new Digital Public Spaces Librarian, to direct and shape community engagement by developing goals and contests and to respond to community interests and requests by regularly assessing and updating the site would keep the UX of the site meaningful and relevant.

# 3. Livestreaming Events

#### **Investigation Summary**

Livestreaming and providing access to livestreamed events is an emerging digital trend picked up by few libraries but enthusiastically embraced by the BBC in their first attempt to manifest their theorization of a digital public space: The Space (<u>www.thespace.org</u>). This section describes BBC's The Space project and reports on interviews given by Thom Southerland, Cable Channel Coordinator at Lexington Public Library about Library Channel 20, Carolyn Coulter, IT Officer at Pikes Peak Library District (Colorado Springs, Colorado) about PPLD.TV



and Amy Calhoun, Virtual Branch Coordinator at Sacramento Public Library about the Game of Thrones Hangout.<sup>8</sup>

## **Project Descriptions**

## 3A. BBC – The Space

The Space is a collaboration between BBC and Arts Council England; it is the first effort of the BBC towards achieving its long term goal of creating a digital public space that unlocks the incredible value of their archives. The Space was a temporary project beginning in May 2012 and ending in March 2013 – some of its content is still accessible online through thespace.org, but it is no longer actively curated and maintained. Jake Berger, the Digital Public Space's Head of Technology and Distribution, summarizes the Space as "a multimedia, multi-platform, cross-genre, global arts service that supports video, audio, articles, image galleries, games, interactive applications and live streams and is available on smartphones, tablets, computers, smart TVs, and Freeview HD" (15 June, 2012).

Fifty-three art pieces were commissioned for the Space that span a wide breadth of mediums, including recorded performances, interactive events and livestreamed performances, as well as multimedia poetry and argumentative essays. The content is similarly expansive, including performances of Shakespeare plays at the Globe theatre, a livestream feed of the Overworlds & UnderWorlds performance festival in Leeds and a musical representation of the sentiment and meaning of the tweets of prominent British professionals as performed by the experimental Britten Sinfonia. Though web analytics are not publically available for the site, The Space's Managing Editor Heather Bishop reported in a blog post that in the first few weeks following the soft launch of the Space, the site was visited 250,000 times. A two-hour livestreamed performance of Britten's War Requiem was viewed by 3000 people<sup>9</sup> and the OverWorlds & UnderWorlds festival stream was watched live by more than 6000 viewers. Bishop also reported that The Space received "constant audience demand" for the Shakespeare recordings (22 June, 2012).

# 3B. Sacramento Public Library – Game of Thrones Book Hangout

In April and June 2013 the Sacramento Public Library ran a pilot project to test Google's Hangout On Air tool and the popularity of an online discussion with library customers. Hangout On Air is a Google Plus tool that livestreams video chats to the public and then saves the recorded proceedings on YouTube for free. The Game of Thrones Book Hangout was a series of two online discussions about Season Three of HBO's *Game of Thrones*. The TV series was selected because it is based on a book and because they hoped that the popularity of the show would help them reach new communities. Three staff members discussed the episodes in comparison to the books and they answered questions that had been written in by audience members.

<sup>&</sup>lt;sup>9</sup> This statistic includes viewers watching the recording of the event up to two weeks after its live performance.



<sup>&</sup>lt;sup>8</sup> The BBC's The Space was contacted but did not respond.

Staff Responsibilities – Any interested staff are able to host a Google Hangout. The Virtual Branch Coordinator is responsible for posting videos online and promoting them.

Challenges – They reached out to a local Meetup group<sup>10</sup> called SACgeeks to promote the event and it was received positively. A member of the group was initially enthusiastic about taking part and wanted to be on the panel but did not follow through.

Participation – The audience of the first live Hangout was very small – only five or six people. However, less than 24 hours later the video had been viewed 85 times on YouTube. Between the two events, a total of three people sent questions to the discussion, but each person sent four or five questions each.

Future Goals – The project has been "boxed" and made available to library programmers. Instructions for how to set up a Hangout and all the necessary tools are stored together and easily transferable between branches. Calhoun hopes that creative programmers will come up with new ideas for adapting the tool and can imagine real potential for children's programming.

Since staff enjoyed hosting the event, they would be happy to re-start the Game of Thrones Book Hangout to coincide with the show's fourth season. Calhoun explained that they would really like to include authors in future discussions.

#### 3C. Pikes Peak Library District – PPLD TV: The Library Channel

The Pikes Peak Library District began livestreaming and recording programming in 2009. The project developed organically out of the library's existing television station. After events are livestreamed, they are posted online. The PPLD.TV Vimeo channel contains 769 videos, primarily clips and highlights of television broadcasts. Their YouTube channel hosts 58 full-length videos. PPLD.TV broadcasts local history symposiums, musical events and author talks as well as original documentaries and has partnered with the local Better Business Bureau and the Story Project to produce videos with local content. They use UStream's Pro Broadcasting platform to record and livestream events.

Site Development and Maintenance – Coulter explained that the library first used UStream as a video conferencing tool to support large staff meetings. Its success in this area motivated them to expand its use.

Staff Responsibilities – Pikes Peak employs three full time videographers who are responsible for recording and livestreaming events and producing documentaries on topics of local interest.

Challenges – Initially the library was using Ustream's free service. This service is supported through advertising and the library found these advertisements to be distracting. They have since switched to a paid professional package.

<sup>&</sup>lt;sup>10</sup> Meetup (<u>http://www.meetup.com</u>) is a social networking site that facilitates in-person meetings between people with similar interests. As of September 3, 2013 the site boasted 14.73 million members and 136,047 groups, including 357 groups "near" Edmonton (meetup.com/about/ and meetup.com/cities/ca/ab/Edmonton/).



To livestream a Colorado Public Library Association conference, they experimented with the livestreaming/video conferencing tool Spreecast. The advantage of using Spreecast was the ease of use. However, after the conference, the Spreecast servers crashed and the company had not backed up their data. All Spreecast users lost their content, including the conference proceedings. Coulter notes that Ustream is comparably easy to use, but has the advantage of providing more sophisticated tools for video editing for the skilled user.

Successes – As the service becomes more popular, they are receiving requests from groups who would like their events livestreamed.

Participation – On June 30, 2013 they livestreamed a talk by author Blake Bailey. During the talk, customers were logging in an out intermittently. The largest number of customers accessing the stream at one time was 38 people. PPLD did not record the total number of unique visitors, but according to Ustream's website, the service provides detailed web analytics.

Future Goals – PPLD.TV have begun speaking with Fanngle, a vertical cloud platform provider that has developed a GoogleTV app for libraries. The app, called LibraryTV, helps libraries deliver digital content directly into the living rooms of their customers. Coulter is interested in this project, but hesitant to commit to offering a service exclusively through Google rather than one that interacts across proprietary devices. Coulter identified smart TVs as a trend to watch.

## 3D. Lexington Public Library – Public Library Channel 20

Lexington Public Library, like Pikes Peak, runs its own public access television station. They have begun to livestream their channel through their website in the last year to supplement their long-running YouTube channel. The content broadcast by the channel is very diverse. They produce documentaries on topics of local importance: veterans, African American cemeteries etc. They document the work of local artists and other interesting local projects; promote and support library events; broadcast political forums and live music; and offer Kentucky Radio Eye, a service for the blind that reads articles from daily newspapers and magazines out loud. They have also begun to broadcast teen creations coming out of the library's digital media lab.

Site Development and Maintenance – Southerland engineers the livestreaming server himself. He describes it as a mid-level quality, third-party broadcast server.

Staff Responsibilities – Southerland and his one part-time support staff create around 100 hours of original content a year.

Challenges – They considered using Ustream, but decided against it for security reasons. In order to livestream through Ustream, Ustream would need access to their broadcast server. Southerland's IT department was concerned that their server could be tampered with through Ustream.

Successes – Only half of Lexington's population lives within range of the city's cable network. Livestreaming content online has increased access to the service and the content. The most popular content they broadcast is the local documentaries. Subjects of the documentaries report that every week they are stopped in the street by someone who recognizes them and wants to chat.



Participation – Creating documentaries about different communities has been a successful strategy for introducing that community to the library and its services. Lexington has a growing Pakistani community and the process of documenting the growth of the community built a connection between them and the library.

Future Goals – Southerland hopes to begin broadcasting more and more content coming out of the digital media lab. Their lab has been open for four years and he is increasingly impressed with the quality of content produced by teens who have been using their equipment for those four years.

#### Conclusions

The BBC, Pikes Peak Library District and Lexington Public Library's move to livestreaming events were all predicated on their existing access to video production and broadcasting infrastructure and their pre-existing audience. EPL would face a steeper learning curve were we to start livestreaming events and broadcasting library content; however, there has never been an easier time to begin such a project. Sacramento's experimentation with Google Hangout On Air is a perfect example of how creating interactive, live, video content is possible for staff with limited professional broadcasting skills and limited access to sophisticated equipment. Additionally, Bibliocommons has recently announced the development of their new Remote Author Talks tool, which allows libraries to host author talks online.

Reaching a broad audience is likely a greater challenge for EPL. Sacramento cultivated an audience by picking a popular topic. The most popular Pikes Peak content is livestreamed symposia on local topics and talks with well-known authors. Lexington is able to appeal to new communities by making them the topic of documentaries. The BBC's audience was clamoring for more Shakespeare. What appeals to a particular community will depend on that community, so EPL's existing commitment to responding to community needs provides the best direction in terms of deciding what content to begin providing online.

It is worth noting that much of the appeal of livestreaming events is that it provides customers with the opportunity to watch the event after the fact. An anecdote offered by Orange County Librarian Donna Bachowski during an interview on their Orlando Memory project speaks to this fact. Though Orange County Public Library received recognition from the Urban Libraries Council for livestreaming online classes, Bachowski noted that this particular type of online learning was not well received by customers. Feedback from customers explained that they preferred online courses that could be flexible around their schedules. Success measures of any livestreaming project would need to take this in to consideration.

# 4. Online Book Discussions

#### **Investigation Summary**

Of the websites reviewed, 23% offered online book discussions to their customers. Ten of these discussion groups were offered through the vendor DearReader.com.<sup>11</sup> Neither Ottawa Public

<sup>&</sup>lt;sup>11</sup> Both Winnipeg Public Library and Pikes Peak Public Library were contacted about their experience with


Library nor Calgary Public Library provided easy to find links to their online book clubs, and it was only by searching the DearReader site that their uses of the service were discovered. Of the remaining eight libraries, five offered book discussions on their own platform and three used different external services: my-bookclub.org, litlovers.com and GoodReads. This section will report on the unique book discussion platforms offered by Toronto Public Library and New York Public Library. Catherine AuYeung, Manager of Collections, Programs and Services, at Toronto Public Library was interviewed about Book Buzz, and Ben Vershbow Director of NYPL Labs at New York Public Library, was interviewed about Candide 2.0. This section will also consider DearReader.com, the MacArthur Public Library's Maine Student Book Award Book Club and Sacramento Public Library's Game of Thrones Book Hangout.

# **Project Descriptions**

# 4A. Toronto Public Library - Book Buzz

Book Buzz is an online book club launched by Toronto Public Library in 2007. Their goal was to create a book club that would engage adults under the age of fifty. The organization of their club was based on an extensive literature review and customer consultation process. The design included providing easily accessible discussion forums, blog postings, a series of notification preference options, and live online chats with authors. Initially the plan was for the club to be moderated by a part-time librarian, but, in practice, running the site successfully required a full-time librarian.

Site Development and Maintenance - The site was built by contract developers. The platform that supports their forum discussions is called Web Crossings. The Book Buzz Librarian has access to the back-end of the site and is able to delete posts and add new blog posts on her own.

Staff Responsibilities - The Book Buzz Librarian position is responsible for choosing titles and themes, researching support materials, creating webpage content, creating read-alike annotated lists, guiding discussion, coordinating with other programmers, marketing and responding to technical issues.

Content – According to their discussion forum rules, Book Buzz will not tolerate personal attacks, swearing, threats, or any posts that include personal contact information, requests for personal contact information, commercial advertising, pornographic material or links to such material. Failure to comply with these rules will result in posts being deleted.

Dear Reader, but neither responded. As of the submission of this report, DearReader has not responded to a request for statistics about the adoption and usage of their service.



Challenges – Web Crossings, the company that created the platform their forums are on, no longer exists. If anything serious happens to the back-end of the site, they would have to create a new forum from scratch and would lose all of the forum's content.

Successes – The most actively discussed book on Book Buzz was the critically-acclaimed *Fingersmith* by Sarah Waters. AuYeung, Dalton and Gornall (2007) attribute this to the "mildly controversial" subject matter (p.10). The issues raised by the book were discussed in a record number of posts that month.

Participation – In their first year they averaged about 150 forum posts and 11,000 page views a month. From surveys of Book Buzz participants in 2008 and 2010 they have been able to determine that around 80% of participants are female, and about 56% of participants are between the ages of 18 and 50 (their target audience).

"One of our members who was very active suddenly said that she had to say goodbye because she was moving into a nursing home. She was very sad about it you know? ... The more isolated you are the more you need this sort of thing. So, low and behold a few days later we heard from her again and she was just thrilled to bits that when she went [to the nursing home] there was a computer she could use." -Catherine AuYeung

AuYeung mentioned anecdotally that she was

contacted by a deaf library customer who expressed that she was very happy that Book Buzz allowed her to actively take part in a library book club for the first time.

Future Goals – The participation on Book Buzz has slowed down in recent years. AuYeung attributes this to changes in the ways people use the Internet and the fact that the current Book Buzz Librarian is unable to spend as much time on the site as the original librarian. In late March 2013 they began to explore using the social media site Goodreads.com for online book discussions. According to AuYeung "it hasn't really picked up." If they do use Goodreads as their forum platform, they will try to integrate it into the Book Buzz site. The drawback of this plan is that library customers will be required to sign up with Goodreads in order to interact with the library.

### 4B. New York Public Library – Candide 2.0

Candide 2.0 was the online component to a New York Public Library's exhibit celebrating the 250th anniversary of the publication of Voltaire's *Candide*. The project's homepage describes it as "an experiment in public reading and communal annotation." The full text of *Candide* is available online and an experimental WordPress plug in called digress.it allows users to contribute to discussions about the text in its digital margins. Scholars and other experts on Voltaire and Candide were asked to annotate the book as a way of initiating the conversations. In Figure 4.1 you can see a navigation bar on the left side of the screen helps users to move between chapters. Each paragraph is numbered and the number of comments attached to each paragraph appears beside a speech bubble to the right of the text. The comments appear in the margin.



Site Development and Maintenance – Digress.it is a spin-off of CommentPress, a WordPress plugin developed at the Institute for the Future of the Book. Ben Vershbow, current Director of NYPL Labs worked previously with the Institute and was able to convince a friend to customize the tool for Candide 2.0 for a relatively low cost. According to Vershbow, developing the technical side of the project was considerably simpler than doing the curatorial work of the project, which included outreach, marketing, and developing content.

Staff Responsibilities – Once the site launched, the Editor-in-chief, Alice Boone, wrote blog posts that delved into some of the novella's themes in detail.

Challenges – The Editor-in-chief put together a list of people she wanted to participate in the project. She contacted them and asked them to participate for free. According to Vershbow, around 15% of the people contacted agreed to participate.

Successes – A class in Miami that was learning about Candide at the time found the website and contributed many comments. For Vershbow this is evidence of the potential success of this particular kind of collaborative reading in an educational setting.

Participation - There were a total of 226 comments made throughout the novella. The majority of comments are in the first few chapters and the final six chapters have no comments.

New York Public Library	Canc A networked edition of Voltaire	Candide 2.0 networked edition of Voltaire's 1759 classic		
Chapter 3 – How Candide Made His Eso Bulgars, and What Afterwards Became	Home   About   How to Read this Book   Comments   Blo cape from the of Him	g   Exhibit   Hit the Road		
<ul> <li>Previous</li> <li>There was never anything so gallant, so spruce, so brill well disposed as the two armies. Trumpets, fifes, hautboc cannon made music such as Hell itself had never heard first of all laid flat about six thousand men on each side swept away from this best of worlds nine or ten thousand infested its surface. The bayonet was also a sufficient re death of several thousands. The whole might amount to souls. Candide, who trembled like a philosopher, hid hi he could during this heroic butchery.</li> </ul>	Next - iant, and so pys, drums, and d. The cannons e; the muskets id ruffians who eason for the p thirty thousand imself as well as Next - 5 1 Ge 1 5 comments Stanton Wood, playwright, Ca says: February 11, 2010 at 10:20 pm When I set out to do a <u>moder</u> adaptation of Candide where through America, one of the	neral Comment (2) (2) n <u>dide Americana</u> (2) <u>m stage</u> he travels first things I did		
At length, while the two kings were causing Te Deum to in his own camp, Candide resolved to go and reason els effects and causes. He passed over heaps of dead and dy reached a neighbouring village; it was in cinders, it wa village which the Bulgars had burnt according to the la old men covered with wounds, beheld their wives, hugg children to their bloody breasts, massacred before their their daughters, disembowelled and breathing their las satisfied the natural wants of Bulgarian heroes; while o in the flames begred to be desnatched. The earth was c	o be sung each       Image: Sewhere on ying, and first is an Abare       Modern Thought, which is a her philosophy deals with the program of the Seven Years' War, in which were butchered for no reason The inquisition really did but the name of Godwomen re a matter of course in wartim others, half burnt	ne book <u>Evil in</u> nistory of how oblem of evil. This he book begins in ich people really n whatsoever. win strangers in ally are raped as ne." And after a		

Figure 4.1 Screen cap of the beginning of the third chapter of *Candide* from Candide 2.0. Retrieved from <u>http://candide.nypl.org/text/chapter-3</u>



**Future Goals** – There are no plans to extend Candide 2.0. Vershbow is enthusiastic about the future of the project's unique collaborative reading structure. He points to the publishing venture "Social Book" currently in development by Bob Stein, formerly of the Institute for the Future of the Book (<u>http://theopenutopia.org/social-book/</u>), as an example of the growth of this medium. Through Social Book's free service, users can discuss or collaboratively annotate Thomas More's *Utopia* with classmates, a defined circle of friends or with the "Open Utopia" community.

### 4C. DearReader.com Online Book Clubs

The premise of DearReader.com is unique: a customer signs up for email book clubs (e.g., romance, horror, non-fiction etc.) and they are sent emails containing excerpts from books that should appeal to their interests. A new book is begun each week and by Friday the customer has been sent at least the first few chapters. After a week a customer can decide whether they are compelled enough by the excerpts to seek out their own copy of the book. The e-mails include links to online forums in which customers can discuss the week's book with a community of American and Canadian booklovers. In addition to book clubs organized around genre, customers can sign up for St. Martin's "Read it First" book club, which sends out new releases; the Penguin Classics book club; Kids Buzz book club for children; the Teen Writing club, which gives teens the chance to write intros to the books sent out in emails; or the Author Buzz club, in which the customer can expect to receive personal notes from 4 to 5 authors a week.

According to the DearReader.com site, the service can be branded and customized for individual libraries. They have developed extensive marketing collateral that libraries can use to promote the service. Libraries are also able to add their own content to the daily emails sent to users. DearReader is responsible for contacting publishers, preparing daily emails, updating book jacket art and moderating discussions.

There are some drawbacks to the service as well. AuYeung, Dalton and Gornall (2007) explain that Toronto Public Library decided against using the service because of its limited Canadian content. Additionally, Fort Worth Library writes that if a customer enjoys a book that is emailed to them, they can "probably" find that book in the library. This suggests that encouraging EPL customers to use DearReader.com could potentially direct them away from our collection and our resources. More information is required to confirm this.

# 4D. MacArthur Public Library – Maine Student Book Award Book Club

MacArthur Public Library's Maine Student Book Award Book Club is described by the Techsoup for Libraries blog as a "book club for the 21<sup>st</sup> century." The project is celebrated as an example of a library that has successfully met the Edge Initiative Benchmark 5: "Libraries build strategic relationships with community partners to maximize public access technology resources and services provided to the community." In collaboration with the local intermediate school, librarian Deanna Gouzie integrated new digital tools into a book club for young readers. Originally based out of the library and then in the school as an afterschool program, readers in the book club use blogs, video software, Twitter, and Skype to engage with their favourite books. In addition to reading books and discussing them together, club members write book reviews, create book



trailers, and Tweet and Skype with authors. The club members are also connected over Skype with students across the United States who are reading the same books as them. The library is responsible for providing laptops for the children in the club. The creations of the club's young members are shared on the club's blog: <u>http://msbabookbuzz.wordpress.com/</u>

# 4E. Sacramento Public Library – Game of Thrones Book Hangout

This project was discussed in detail in the section on <u>Livestreaming Events</u>. It is worth mentioning in this section as well because as a livestreamed, interactive video event it is a distinct and new format of online book discussion. Different versions of video book discussions are described in Beth Wortman's 2013 report "Book Clubs Literature Review."

Sacramento Public Library also provides supplementary material about their book club meetings and book-related events online. For example their wildly popular, now-completed, bi-monthly Jane Austen book club has an associated website "How Austentatious" (<u>http://www.saclibrary.org/Home/Past-Events/How-Austentatious!</u>/). Podcasts of lectures, transcripts, handouts and related maps and images are all posted online for customers to access after the fact, or to look at to determine if they'd be interested in attending the next event.

# Conclusions

How to consistently engage customers with books online has not been firmly established, and we are in an exciting period of experimentation. The examples given in this section differ significantly in their method of engagement: forums, live chats, emails, Google Hangouts, Skype conversations, Tweets, collaborative annotation and sharing digital creations inspired by books. These examples demonstrate how a creative approach to online book discussions can help us to achieve our business plan goals. Online book discussions are an example of online programming that are also an excellent way to provide library services to homebound and disabled customers.<sup>12</sup> Following MacArthur Public Library's example, online book discussions are also an opportunity to integrate online and in-branch services and develop meaningful partnerships to promote literacy.<sup>13</sup>

The experiences of Toronto Public Library and New York Public Library demonstrate that facilitating online discussion can require a surprising amount of staff support. Developing a platform for online discussion unique to EPL would be a significant investment of staff time and skill and should follow Toronto's example of performing extensive community consultation before any development begins. As the above list suggests, there are many ways to discuss books online so an EPL-based discussion platform is not necessarily a tool that would truly

Expand literacy programs to better meet demand and seek opportunities to partner with other organizations.



<sup>&</sup>lt;sup>12</sup> This relates to the following business plan actions:

<sup>•</sup> Pilot and evaluate online programming.

<sup>•</sup> Expand homebound service beyond those already served by our existing Library Access Service. <sup>13</sup> This relates to the following business plan actions:

<sup>•</sup> Assess and leverage opportunities to integrate online and in-branch services to offer a rich customer experience and attract new customers.

engage our customers online. Using Google Hangout, Skype or Twitter to engage EPL customers with authors, integrating in-person book clubs with makerspace programming, and even posting a public domain work of classic literature on WordPress with a customized version of digress.it would be simpler and smaller scale ways to experiment with digital book discussions.

Sacramento's How Austentacious book club site provides a single point of information about the series and a sense of continuity and consistency between club meetings. Club members can share their favourite aspects of their club online. EPL has run many examples of programs that might benefit from a similar web presence. A prime example is the previously run TEDtalks Discussion Series. A site for that program might include links to TED videos and related materials to motivate potential attendees and keep regular attendees informed.

# 5. Kids Spaces

### **Investigation Summary**

Of the 80 library websites reviewed, 32.5% had pages designed specifically for children and two of those provided tools for online participation embedded in the site: Toronto Public Library's Kids Space and the Carnegie Library of Pittsburgh's my StoryMaker. Interviews were performed with Toronto Public Library's Kids Space Coordinator Sheilah O'Connor and Carnegie Library of Pittsburgh's Head Children's Librarian Patte Kelley.

### **Project Descriptions**

### 5A. Carnegie Library of Pittsburgh – My StoryMaker

My StoryMaker is a tool that allows children to create and animate a narrative scene-by-scene. It is the sole participatory aspect of the library's kids site and it is one of the most popular pages on the library's entire website. The project was initiated in 2006 and was launched in 2007. The tool was designed with longevity in mind – it is a tool for making stories rather than a game because as a tool it can be used repeatedly and enjoyed myriad new ways. The tool facilitates the development of narratives by helping customers select the protagonists and conflicts they will encounter. Initially it was only accessible on in-library computers, but its popularity motivated staff to adapt it for the Internet, where it finds customers all over the world.

Site Development and Maintenance – My StoryMaker was developed through a collaboration between CLP and Carnegie Mellon University's Graduate program in Entertainment and Technology with the help of a grant from the Grable Foundation. User testing was performed on prototypes of the tool by school classes. In 2012 the library worked with the non-profit Idea Foundry and software development firm Electric Owl Studios to improve the interoperability of the tool with different systems and add new characters.

After ironing out the inevitable initial bugs after the update, my StoryMaker has become an automated library service that does not require active maintenance by staff. Staff are able to curate collections of customer creations and promote them and the tool via their kids site and an interactive kiosk in the children's library.





Figure 5.1. Screen cap of the My StoryMaker interface.

Rights – Kids are asked when they make a story if they are comfortable with sharing their story on the library's interactive kiosk.

Storage – They did not anticipate the popularity of the tool and do not have enough storage space to save all the content created using the tool. The my StoryMaker homepage was recently updated to explain that content will only be saved for a month before it is deleted. Kids are encouraged to save their stories as PDFs and print them out. The library has no interest in archiving the stories.

Challenges – Making the tool openly accessible through the Internet raised a number of unanticipated technical difficulties. Firewalls, differing versions of Adobe and outdated school equipment all made it difficult for customers to take full advantage of the tool. Since the update in 2012 they no longer receive negative feedback about technical difficulties.

Successes - Feedback from public school teachers revealed that using the tool in the classroom is successfully motivating young students to write.



"In addition to creating stories and tapping into that tradition we had of storytelling ... we also created a tool that we hear from teachers and parents really gets the kids excited about writing!" -Patte Kelley The simplicity of the tool's design makes it accessible to children with first-languages other than English, and including multi-lingual stories in the kiosk gives librarians the opportunity to showcase and celebrate the diversity of their community.

Participation – According to Kelley, "thousands and thousands" of stories have been created using my StoryMaker since its launch in 2007. The target demographic is early elementary students. Kelley has seen children as young as three or four using the tool with their older siblings or parents.

Future Goals – They are very happy with the tool as it is and will try to keep it interoperable with new technology as it develops.

#### 5B. Toronto Public Library – Kids Space

Toronto's Kids Space encourages online participation through discussion boards, polls, book review submissions, a homework help page, and the Tell-a-Story story-building tool. During the SRC they collect and share children's jokes. Toronto's Tell-a-Story has developed a broad audience and is used in classrooms around the world. The site was developed after extensive consultation with stakeholders and has an impressively up-to-date aesthetic despite having been designed in 2006.

Site Development and Maintenance – The site was developed by an external web development company that has since evolved to code mobile apps exclusively. The library maintains the back end of the site. They license Tell-a-Story from the web developers and do not maintain it themselves. The source code for the site is proprietary.

Staff Responsibilities – O'Connor herself is responsible for regularly updating the site.

Storage – The developers who run the back-end of Tell-a-Story are responsible for storage of customer-created content.

Challenges – They had a hard time finding a developer who understood how kids use the Internet and what the priorities of a library web-space were compared to a commercial site.

Successes – Their vision of the Kids Space was that it would "mimic everything you could get in a branch." O'Connor wanted kids to come to the site to talk to a librarian, get a good book, find homework help and discover new things. Feedback they have received on the site suggests that kids, parents and teachers are finding what they are looking for. They have ceased performing regular assessments because they find that the site consistently meets expectation. O'Connor attributes this success to the extensive community consultation they performed during the development stage.





Figure 5.2 Screen cap of the Tell-A-Story interface.

Participation – The average age of participants is 9 and 10, the age group specifically targeted by the developers. There is a 60:40 ratio of female to male customers. They make a point of keeping the language as simple as possible to make the site more accessible to younger kids and kids whose first language is not English.

The most popular aspects of the site are the games hosted off site and the homework help sections. Homework help is developed specifically to support Ontario curriculum. Users regularly write to librarians requesting research help. Much of the traffic comes from schools that actively promote the site.

Assessments of the site show that kids do not tend to respond to prompts for participation. The most popular poll ever posted to the site asked whether the user was a boy or a girl. O'Connor says that the easiest most thoughtless kinds of participation tend to be the most popular. Participation has been de-emphasized on the main page. O'Connor observes that lack of participation tends to snowball. If a kid notices that no one has responded to a prompt they will decide not to as well. Despite this, there are examples of meaningful interactions on the discussion boards, including a year and a half long discussion about bullying.



Future Goals – They will redo the site soon, but they have not discussed their future plans in detail. O'Connor would like the update to be built in house and is considering using Drupal. They want to evaluate what makes their site distinct from all the other sites for children and are proud of the "strong Toronto presence" on the page. They are also interested in responding to the Public Library Association's Every Child Ready to Read push by developing a site for preschoolers.

#### Conclusions

Pittsburgh's my StoryMaker is a model of a library service that has successfully implemented EPL business plan goals of expanding literacy programs through partnerships and developing online learning and creating environments. Although my StoryMaker and Tell-a-Story are freely accessible to all and could be utilized in existing EPL programming for free, adapting these projects to respond to the gaps and needs in Edmonton's literacy education has the potential to meaningfully achieve business plan goals.<sup>14</sup>

Developing a digital literacy learning tool that supports customer creation and experimentation would be consistent with both EPL's Business Plan goals and the Edmonton Learning City Initiative: Community Foundational Learning Plan's (2013) priority goals of Early Learning and Literacy. The Early Learning goal calls for the championing "the creation of early development environments" (p. 6). The strategies associated with the Literacy goal include "lead an initiative to share services, resources, tools and effective literacy practices" and "champion actions to increase literacy programming for adults with low literacy and young children" (p. 6). Though using technology to implement these strategies is not explicitly recommended, Pittsburgh's my StoryMaker is an example of using technology to create an early development digital environment, increase literacy programming and develop a library service that is easily integrated into other institutions.

Though both Tell-a-Story and my StoryMaker are successes in their own right, they provide models that can be creatively improved upon. The success of my StoryMaker was unexpected and infrastructure was not initially established to respond to customers' desires for their stories to be saved an easily retrievable. Their eventual solution, making it easier for customers to save and print their stories using their own devices, could be integrated into a lifecycle plan for a new project. Additionally, my StoryMaker and Tell-a-Story both require Flash which limits the number of devices that can access and use the tool. Making a touch-screen compatible free literacy learning tool would be a real innovation on my StoryMaker and Tell-a-Story's excellent and successful premises.

<sup>14</sup> This applies to the following business plan actions:

Identify opportunities for growth within existing partnerships and create new partnerships, celebrating and communicating outcomes.



<sup>•</sup> Further engage with communities to identify strengths, gaps, needs and priorities around EPL services.

<sup>•</sup> Create sustainable, flexible, virtual and physical learning environments at EPL, for online and inperson courses delivered by EPL experts and/or partners.

<sup>•</sup> Facilitate the implementation of the City of Learners strategic plan.

# 6. Teen Spaces

#### **Investigation Summary**

A full 50% of reviewed library websites attempt to engage teens with a web space designed with their age group in mind. A majority of these share teen-created content online, including book reviews, book lists, poetry, art, videos and creative writing. This section reviews interviews conducted with Sophie Walker, Information and Virtual Services Librarian at Winnipeg Public Library; Brooke Askew, Teen Librarian at the Carnegie Library of Pittsburgh and a questionnaire submitted by Shannon Curry, Content Editor, Virtual Services at Calgary Public Library.

#### **Project Descriptions**

### 6A. Winnipeg Public Library – Booked

Winnipeg Public Library's teen site, Booked, was developed in 2007 and was made possible by a grant from Great West Life. The Young Adult Services positions had just been created at the library and developing the site was one of the roles of that position. A survey of what teens would like to see on the library website suggested that teens would respond to content that was developed specifically for them. The primary goal set for the site was for it to be interactive with regularly changing content. The site has not changed since 2007 so the opportunities for participation remain the same: teens can contribute to the content in three ways: they can post top ten lists, book reviews and "mashups," which can include photos and text. Posting is as easy as filling out an online form.

Site Development and Maintenance – The library's Youth Advisory Council was consulted during the development of the site. They offered feedback on colour-scheme, graphics, terminology and content.

The site was outsourced to private web developers and is hosted on an outside server. Working with the external web developers was a positive experience. However, the site was built on Cold Fusion, a platform that no one on staff knows how to run, which means that they must pay the company to maintain it. In their agreement with the company they guaranteed that Winnipeg Public Library owns the code, so they could take over its maintenance if a staff member learned to use Cold Fusion.

Staff Responsibilities – The Booked blog is high maintenance because they have set a goal of having two new posts a week. The Young Adult Services Librarian and part time staff who provide services to teens are responsible for coming up with blog posts. Teens from the Youth Advisory Committee also post to the blog.

Content – Terms of Service are linked from every page of Booked. The two pages of terms explain that WPL does not monitor content and that posters are responsible for anything that they post. Customers using the site accept the risk of being exposed to objectionable content. Using the site also obliges customers not to post illegal or spam materials.



Challenges – They have not received as much "buy in" from teachers as they had hoped. Walker believes that if teachers used the site or encouraged its use there would be more participation on the site.

They have learned that teens who are inclined to post their content save it throughout the year to post during the summer reading club. The prizes offered during SRC incentivize online participation in the summer and de-incentivize participation during the rest of the year.

Successes – During June, July and August they get "dozens and dozens and dozens" of contributions for the SRC.

Participation - Since 2007 teens have posted approximately 457 mashups, 162 book reviews, and 181 top ten lists. Most of these contributions happen during the SRC. Walker estimates that during the rest of the year they average one or two submissions a month. When the site first launched, participation was more evenly distributed throughout the year and occasionally a teacher would integrate it into coursework and they would get 30 book reviews at once. The most recent statistics show that traffic to the site is going down.

Future Goals – They would like to re-build the entire site to make it easier for staff to maintain, but they do not have the funding.

#### 6B. Carnegie Library of Pittsburgh - Teensburgh Blog

The Teensburgh Blog is the participatory aspect of the Carnegie Library of Pittsburgh's teen site. It is hosted on WordPress and run by the rotating chair of the blog committee. The blog is updated Monday, Wednesday and Friday and they try to include teen-created posts at least once a week. Blog posts from teens are usually book reviews, while library staff posts have a broader scope. The site includes bios of 27 teen bloggers. All teen bloggers are volunteers and as such they receive a series of perks: they can keep advanced reading copies of books they review, they can report their volunteer hours to satisfy school requirements, librarians provide them with work and school references and they get invited to volunteer-only parties. Askew became involved in the Teensburgh Blog after its launch so she wasn't able to speak to its initial development.

Staff Responsibilities – Staff blog posts are written by every member of the Teen Services Department. The Chair is responsible for coordinating teen contributions and reviewing the quality of teen content. She sends feedback and suggested edits to teens before she posts their reviews. She is also responsible for formatting the content. Askew estimates that running the blog takes about 5-10 hours a week, including the time she takes to write her own blog posts.

Content – They do not have a content policy. Askew has not encountered anything questionable.

Rights – They do not have an established policy on who owns the rights to the content created by the teens. It is understood that they teen's content will be posted on the library's blog. She respects their creations and only edits teen posts for punctuation and spelling.



Challenges – It is difficult for teens to submit multimedia posts because they do not have access to the webpage formatting themselves. Askew is happy to post legal multimedia content in their blog posts if they request it.

The blog's readership is skewed to adults; most readers are in their 20s. Askew believes that it is good for this community to get information about the library, but she is disappointed that more teens do not access the content.

Successes – The blog gets an average of 3,259 hits a month.

Participation – Of the active teen bloggers, Askew estimates that 60% are experienced bloggers and 40% are new this year. There is a slight majority of female bloggers, but there are some male bloggers who contribute a lot of content making the submission ratio equal. Submissions to the site tend to ebb and flow over the year with few at the end of the school year and many at the new year when teens have more time.

Askew notes that teens regularly come in to the library asking if there is any way they can volunteer and that the blogs are a great way to engage these teens. High school graduation in Pittsburgh requires a certain number of volunteer hours, which really motivates participation. It is an appealing way to volunteer for the library because the teens can do it in their own time from home or from the library.

Teens are also motivated to blog because every volunteer hour can count towards forgiving their late fines.

Future Goals – They would like to increase teen readership of the blog. They are pursuing this goal by investigating their options for publicizing blog content.

# 6C. Calgary Public Library – Teens Create<sup>15</sup>

The Teens Create page is a section of Calgary's Teens page that allows teens to upload multimedia content and showcase their creations. The goals of the site are to provide a space where the library can connect with teens and where teens can show off their work. They promote the site through Twitter, programming and online contests.

Site Development and Maintenance – The design priorities of the site were that it be appealing to teens, accept photo, text and video submissions and be simple for staff to use. The Teen Librarian consulted with teens involved in different library groups to get feedback on the site.

The web design and programming for Teens Create was done entirely by staff programmers. They used some open source tools such as jQuery, tinyMCE and video.js. The code for the site is not currently openly available.

Challenges – The biggest challenge they face is maintaining a regular stream of content. Like Winnipeg, they receive lots of submissions during the SRC, but very few over the course of the year.

<sup>&</sup>lt;sup>15</sup> The given information was generously provided by Curry in the midst of the recent flooding in Calgary and is limited by the inaccessibility of records in their Central Branch.



Participation – They have not formally evaluated participation in the site. Curry speculates that the majority of participants are female.

Future Goals – They are considering developing monthly themes or challenges to motivate more participation. They would also like to re-organize the gallery of teen content to make it easier to browse.

### Conclusions

Although this is one of the most popular trends that research identified, interviews with teen sites that appeared to have the most active participation revealed that getting teens to participate was consistently a challenge. Winnipeg, Pittsburgh and Calgary all noted that the active participation of teens was tied to some form of external motivation like high school volunteer requirements or SRC contests. This is consistent with the findings of Chicago's YOUmedia Online project which found usage increased when they began hosting learning modules for Chicago's Summer of Learning programming. Further, Pittsburgh found that teens were not interested in visiting the site, despite the regular submission of content by their peers. Calgary and Pittsburgh are both pursuing plans to increase traffic to their teen space and EPL should consider following up on their progress. Unless Edmonton teens begin regularly requesting a participatory teen site, the evidence does not support pursuing this trend.

Online SRCs are a definite trend, with 31% of libraries reviewed offering them. Winnipeg and Calgary noted that their sites received the most active participation during this time. Offering prizes for submissions in different media successfully encouraged teens to contribute their creations. EPL has previously experimented with an online SRC, but the effort may have been before its time. The new SRC Chair Tamara Van Biert is enthusiastic to champion an online SRC. Bibliocommons has developed new tools for supporting SRCs that include online badges. Adding this tool to our website has the potential to engage teens during the SRC, while being easy to integrate into our existing infrastructure. If EPL did make an effort to engage teens online, it might be useful to note the successful efforts of Chicago and Pittsburgh whose staff stay in weekly contact with their site participants. Indeed, to achieve the active participation of teens online, the site would need active support in library branches. A successful online SRC could contribute meaningfully to achieving business plan goal to "contribute to increased literacies of all types, growth of life skills, and an increase in high school completion rates."

# 7. Local History Apps

### **Investigation Summary**

Mobile apps that celebrate and promote local history constitute 5 of the 9 mobile apps created by reviewed libraries, these include: Virginia Beach Public Library's TagWhat project, San José Public Library's Scan José, Tulsa Public Library's Tulsa Then-and-Now and the Beryl-o-Gram, Cleveland Public Library's Cleveland Historical and Sacramento Public Library's SacQR. Denver Public Library also built an app to support their Creating Your Community participatory local history archive. Additionally, 12 reviewed libraries shared digitized local history collections using the social media site History Pin. This section reports on the interviews conducted with



Nicole McGee, Emerging Technologies Librarian at Virginia Beach Public Library; Nate Hill, former Web Librarian at San José Public Library; and Jen Gal, Manager of Local History and Archives at Hamilton Public Library. It also discusses the questionnaire filled out by Sheri Perkin, History and Digital Collections Librarian, at Tulsa Public Library.

### **Project Descriptions**

#### 7A. San José Public Library - Scan José

Scan José is an augmented reality app built primarily for smartphones that promotes the local history of San José. Users have access to three walking tours which direct them to a series of historical locations associated with images from the San Jose Public Library and Sourisseau Academy historic collections. Users are encouraged to write comments and provide related historical information in order to add to the collective history of the images and the locations. The app also uses the Layar augmented reality browser to experience the locations in 3D. At its creation, there were a total of 31 stops and 113 images in the three tours.

Site Development and Maintenance – The app was built in-house by then-Web Librarian Hill using HTML5 and JQuery Mobile, which are languages that work across devices. They used the Google Maps API to create the walking tours and Layar to create the augmented reality aspect. Hill no longer works at San José Public Library and was not able to speak to the app's continued maintenance.

Challenges – The original plan was to outsource the development of an expansive augmented reality app, but they were unable to find developers who could create what they wanted within their budget. As a result, they reduced the scale and designed it in-house.

Hill explained that the library did not have the organizational structure at the time to support the project; however, the process of developing the app helped them to realize what they did need. Another challenge was communicating with the library's history team who had trouble imagining the user experience of an augmented reality app.

Participation – The Urban Libraries Council reports that "Between going live in July 2011 and August 31, 2011, there were 2,400 visitors to Scan José. On average each visitor views up to 30 pieces of historical content from our collection browsing an average of 6 pages which contain between 3 and 5 historical photos and informational captions" (2012).

#### 7B. Virginia Beach Public Library – TagWhat App

TagWhat is a smartphone app that uses augmented reality technology to share multimedia stories associated with geographic locations. In 2011 Virginia Beach Public Library chose to use this free app to achieve their business plan goal of promoting their local history collection. They put together a series of local history "stories" tagged to locations around the city's tourist areas that utilized archival photographs, oral histories and video content.



Site Development and Maintenance – At the time, TagWhat provided a user-friendly dashboard for publishing content that utilized a simple Google Maps app and a form.<sup>16</sup> The administrators of the app maintain certain quality standards for the uploaded content and review and provide feedback on content before they publish it. TagWhat also provides all the site maintenance.



Figure 7.1 Slide used by Virginia Beach Emerging Technologies Librarian Nicole McGee to propose the project to the Library Board.

Staff Responsibilities – McGee described developing and uploading the content for the app, particularly recording the oral histories and creating the video content, as taking "a lot of time" and "time consuming."

Challenges - They initially hoped to collaborate on the project with other institutions in Virginia Beach, and were disappointed when their e-mails suggesting collaboration were not responded to. McGee believes the project would continue to grow today if they had more local support.

Successes –The project raised a lot of publicity for the library when it was launched, which did promote their local history collection.

Participation – The particular target audience of the project was tourists, though city policies prevented them from using posters to advertise the project in tourist areas. TagWhat provides

<sup>&</sup>lt;sup>16</sup> Articles discussing TagWhat from 2012 describe the app as a tool for learning about local history (Ha; Gilbert); however, the TagWhat website as of September 6, 2013 describes itself first and foremost as an app that allows customers to "Discover up-to-the-minute deals and events from nearby businesses."



information on how often tags are accessed; however, the library did not actively track it and was unable to provide that information.

Future Goals – The library has changed the focus of its emerging technologies initiatives since the launch of their TagWhat project in 2011. Currently they are developing a portable digital media lab in the spirit of the YOUmedia labs. McGee reported that they are planning on hosting a mini maker faire to assess customers' interests.

### 7C. Tulsa City-County Library - Tulsa Then and Now & Beryl-o-Gram

The Tulsa Then and Now iPhone app allows customers to browse, search, view, and share historic images of Tulsa. The 300 original images come from the library's Beryl Ford Collection. The historic photographs have been geo-located to allow for location-based browsing and to help customers find images near them. Using the Beryl-o-Gram app, customers can juxtapose images of contemporary Tulsa with historic images, either side-by-side or by overlaying the historic images onto the view through their iPhone cameras.

Tulsa's local history apps are unique because they are the product of collaboration between the library and a local hacker group called Tulsa Web Devs (TWD). The TWD built the apps for fun and did not charge the library for their work.

Site Development and Maintenance – The library considers working with the TWD a success both because of the costs they saved and because they value community partnerships. They did point out that it took quite some time to develop and they expect it would have come together faster had they outsourced the project.

Challenges – The metadata for some of the images they hoped to include in the collection was questionable or did not exist. They had to decide between including a smaller number of images in the app or uploading the whole 23,000 item collection and crowdsourcing the fact-checking process. As a result of unrelated size restrictions placed on the app, they resolved to include only a small number of the total images.

Participation – Although the library indicated in the questionnaire that the app had helped them to reach "new communities" they did not elaborate.

### 7D. Hamilton Public Library - HistoryPin

Hamilton Public Library's Local History Department (HPL), which is the city's sole archives, has posted about 600 images from their collection on the social media site HistoryPin since the summer 2012. Their use of HistoryPin was established as a pilot project to test out social media tools as a way of expanding the reach of their department and broadening their audience.

HistoryPin is a social media website on which users can post digital images, audio and video content tagged to a particular time in history and location on a Google Map. The expansive goal of HistoryPin is to "build up the huge story of human history" one historical artifact at a time. As Figure 7.2 demonstrates, as of September 6, 2013 280,666 items had been "pinned" by 50,689 users and 1,398 institutions. A total of 120 libraries, (national, state, university, public and school), share their content with HistoryPin. There are currently 11 items pinned to Edmonton.



HistoryPin was developed by the award-winning non-profit We Are What We Do in partnership with Google.



Figure 7.2. Screenshot of the HistoryPin homepage taken September 6, 2013. Retrieved from <a href="http://www.historypin.com">http://www.historypin.com</a>

Site Development and Maintenance – Since it is a free tool, users, including institutional users, do not typically interact with the HistoryPin staff. Contributing to the site and getting full use of its functionality is entirely dependent on the motivation of the user. HPL hired some part-time summer students using grant money to upload content, and Cataloguing Librarian Chris Carr refined the metadata. The library does not update the site consistently, but considers this a benefit of using this particular image-sharing social media tool, as opposed to Pinterest. It is possible to upload content in collections and users do not expect daily updates.

**Rights** – The images HPL includes on HistoryPin are public domain, but they do not upload high resolution copies. They have recently begun selling high resolution copies of images from their collection. HistoryPin does not allow high resolution images to be downloaded from the site and protects images by preventing both public and commercial use.

Challenges – According to Gal, the biggest challenges of using HistoryPin are taking full advantage of the functionality of the site and making sure the metadata of the uploaded images is as accurate as possible. This is particularly the case because the map users pin items to is a contemporary map that does not reflect geographic changes throughout history. The ability to



include detailed metadata is valuable from an archival perspective, but the work of filling it in took much longer than expected.

Successes – One of HPL's images was selected as the picture of the day last March and it spiked their visitor numbers. Gal believes they have achieved the goals of their pilot projects in terms of experimenting with the usefulness of using social media to reach new audiences.

Participation – Since the launch in summer 2012, they have had around 5000 views of their HistoryPin "channel." They do not have a sense of the demographic trends of the audience and they have not received very much feedback from their audience. There is no way to receive feedback through HistoryPin. Gal points out that, though their goal is to reach out to all non-users of their collection, the audience they reach through HistoryPin is necessarily a niche audience.

Future Goals – They have shifted their focus towards submitting their Flickr digital image collection to Flickr's The Commons collection. Once that is in order, they plan on returning to HistoryPin to explore its guided tour functionality. The Local History Department organized a walking tour in May 2013 and were surprised to find 100 people show up. They would like to use HistoryPin to support the development of this program. They also plan on offering Introduction to HistoryPin classes in late fall 2013.

HistoryPin itself is in the process of developing an API, which opens up the potential uses of the content.

#### Conclusions

Each of these projects has begun and ended suggesting that creating a local history app is a trend that has already seen its day. HistoryPin has emerged out of this trend as a viable tool for sharing local history with an interested global audience without having to develop an app from scratch. However, even when using HistoryPin, these projects require an immense amount of time and labour and a commitment to sharing a local history collection. It worth noting that CBC Edmonton has created a website, Downtown Story, that serves a function similar to the described local history apps. It stands to reason that EPL should not prioritize developing a local history app in the vein of those described.

There are some useful lessons coming out of these interviews, however. Tulsa's Tulsa Then-And-Now app was created with the help of enthusiastic volunteers, which is an exciting example of a hacker community devoting their time to civic projects. Becoming an active member of Edmonton's tech/digital community is a business plan goal and indeed, the possibility of forming a similarly productive partnership with the hacker community in Edmonton is worth pursuing.

Although we do not currently have digital content to populate a local history app with, as we pursue our business plan action to establish partners with local organizations in order to showcase Edmonton's past, present and future, we will likely gain access to historical content or develop an opportunity to share existing content. The given examples demonstrate some of the many directions our crowdsourcing history project could develop. Working with HistoryPin could also support the development of our local history project, particularly when they make their API



available. Following the lead of HPL, EPL could teach customers to pin their own content, growing the collection of Edmonton historical content that exists online.

# 8. Hacker Events and Open Data

#### **Investigation Summary**

Local open data efforts were almost never clearly advertised or linked to from public library websites. Of the 20 libraries interviewed, nine shared library data with local open data portals. Four libraries discussed their experiences actively cultivating their relationship with the local hacker community and an additional four libraries expressed interest in reaching out to that community in the future. This section will describe the experiences of public libraries reaching out to hacker communities, holding related events, making their data openly available and the results of those efforts. This section will review the questionnaire submitted by Sheri Perkin at Tulsa City-County Public Library (TCCL) about that library's experience connecting with the hacker community, and interviews with Nate Hill, Director of the 4<sup>th</sup> Floor at Chattanooga Public Library and Jesse Montero at Brooklyn Public Library. It will also consider interesting intersections of the open data/hacker movement and libraries including the Digital Public Library of America and non-profit code-training organization Young Rewired State, as well as examples of library open data becoming public art as Seattle Public Library's "Making Visible the Invisible" and the 2011 Apps4Finland contest.

### **Project Descriptions**

### 8A. Tulsa City-County Library – Hackathon and National Day of Civic Hacking

TCCL has developed a productive and reciprocal relationship with the hacker community in Tulsa. The relationship between the Tulsa Web Devs (TWD) and the library grew from a personal relationship between a librarian and a TWD member. Many TWD members are also members of the civic hacking group Code for Tulsa, which is a Code for America Brigade.<sup>17</sup> Once the relationship between the library and TWD was established the library's position in the hacker community grew.

According to the questionnaire, when the TWD was planning their 2011 Hackathon, they asked the library for project ideas. The library proposed the Tulsa Then and Now and Beryl-o-gram apps described in the <u>Local History Apps</u> section.

More recently, Code for Tulsa collaborated with the library on the city's first National Day of Civic Hacking event on June 1, 2013. The library hosted the event at their central branch, providing PCs, plugs, Wi-Fi and space. They agreed to make the event broadly accessible to Tulsans with all levels of technical skills. They achieved this by focusing on the library's own

<sup>&</sup>lt;sup>17</sup> Code for America is a non-profit organization that organizes a series of projects to improve the functioning of government in the United States through innovative digital solutions. Code for America Brigades are "an organizing force for local civic engagement - a national network of civic-minded volunteers who contribute their skills toward using the web as a platform for local government and community service" (Code for America, 2013). The National Day of Civic Hacking is organized in part by Code for America.



Code for America project, the TulsaWiki,<sup>18</sup> which is as simple to use as Wikipedia. In addition to populating the local wiki, the day included an introduction to both TCCL resources and Code for Tulsa and its projects. This was followed by a discussion about how the local hacker community can support the municipal government. These events, as well as an offsite event hosted by the Tulsa chapter of Random Hacks of Kindness,<sup>19</sup> drew in 70 total participants. Over the course of the event, the TulsaWiki gained 85 pages, 33 maps, and 23 users. Code for Tulsa attributes their collaboration with the library and their combined promotion of the National Day of Civic Hacking with a 530% increase in content on the TulsaWiki in the three months leading up to the event (2013, June 6).

# 8B. Chattanooga Public Library – 4<sup>th</sup> Floor

Chattanooga Public Library's makerspace the 4<sup>th</sup> Floor has hosted the first Digital Public Library of America (DPLA) Appfest and a 2013 National Day of Civic Hacking Event. The staff of the 4<sup>th</sup> Floor are also responsible for developing the Chattanooga Open Government Repository. According to Director Nate Hill, developing a relationship with the local hacker community is a top priority for the 4<sup>th</sup> Floor. Before the space was open and running, Hill contacted members of the local LINUX users group and told them that the 4<sup>th</sup> Floor was theirs to grow. He made sure that the site's first improvement was "fantastic wireless." Since then, Hill says, "The 4<sup>th</sup> Floor has just become the go-to space for [hacker events]. Hackathons just sort of happen here because we have good infrastructure to support it." They also host events of interest to the tech community and its sister community, local entrepreneurs, including talks on intellectual property rights and demo days, during which entrepreneurs can pitch ideas to potential investors.

The DPLA Appfest was one of the first events held at the 4<sup>th</sup> Floor on November 8 & 9, 2012. Hill had been working with DPLA for two years before the event and was able to push the organizers to hold their first appfest in Chattanooga. Around 100 hackers and coders from around the United States came to the Appfest to propose or create web and mobile apps, data visualization hacks, and dashboard widgets that are interoperable with DPLA's platform. The event was livestreamed and the ideas generated were stored all together in a wiki for the event. Ideas and apps created by the end of the day on the 9<sup>th</sup> were presented to a panel of judges and a trophy was awarded to the most compelling project. A total of 11 projects were developed over the course of the event.

The 2013 National Day of Civic Hacking in Chattanooga was hosted jointly by the 4<sup>th</sup> Floor and Open Chattanooga. The two-day event was structured similarly to the DPLA Appfest, with an initial identification of the event's objectives followed by two days of hacking and a final presentation of projects and award distribution. Participants were encouraged to discuss their

<sup>&</sup>lt;sup>19</sup> Random Hacks of Kindness (RHOK) is an international non-profit organization that connects hackers with problems in need of digital solutions. See <u>http://www.rhok.org/</u> for more information. RHOK is also an organizing partner for the National Day of Civic Hacking.



<sup>&</sup>lt;sup>18</sup> The LocalWiki software, promoted by and freely available through Code for America, supports the crowdsourcing of specialized local information and will be discussed further in the <u>Community Information</u> <u>Sites</u> section.
<sup>19</sup> Random Hacks of Kindness (RHOK) is an international non-profit organization that connects hackers

projects in advance of the event using Hackpad, an open source collaborative document provided by the event organizers. The library provided breakfast and lunch for the participants.

The Chattanooga Open Government Repository is hosted by the public library using DKAN, a Drupal-based portal for open government data. The new mayor, Andy Berke, ran on a platform of transparency and Hill sees this work as a way to make the public library indispensable to the city government. Chattanooga Public Library provides data on their catalogue records, their active patron count by zip code and the most popular nonfiction subjects at their downtown library in May 2013.

### 8C. Digital Public Library of America

The DPLA launched in April 2013 following the Appfest in Chattanooga. Making their data as open as possible and providing it through an API is central to the organization's goal of expanding the realm of openly available materials and making those resources more easily discovered, usable and used. The DPLA provides extensive support for developers. In addition to providing their API, they make the code powering the DPLA portal available on the open source code repository GitHub. The entire catalogue and the catalogues of individual partnering libraries, archives, and museums are available for bulk download, they host a tech discussion form and they provide examples of sample code, libraries and wrappers so that developers don't need to "reinvent the wheel." The Appfest in Chattanooga is an example of their efforts to reach out to developers as is the hackathon occurring during the first annual DPLAfest this October.

There are currently twelve apps showcased on the DPLA apps library. Each app is an example of a different way to use and experience DPLA's collection. The Library Observatory, StackLife and DPLA by State and County offer visualizations of the collection; Search DPLA and

Europeana and the Serendip-o-matic are tools for searching DPLA's catalogue and other online catalogues from one search bar; Open Pics and Culture Collage help users view images from the collection, the DPLA Map searches for catalogue items near the searcher using a geolocation tool, MINT Services is a DPLA-specific metadata mapping tool; and the @DPLAbot is a Twitter bot that regularly tweets links to random items in the collection.

"We'll be actually serving the data so that developers can ping the library and build their applications off of us. It is like a live digital version of what libraries have always done." -Nate Hill

The WP DPLA app is particularly interesting in light of EPL's Business Plan action item to "get EPL's online content into new spaces." This app, created by developer Boone Gorges, is a WordPress plugin that can be added to any blog. The app uses tags from the blog to query the DPLA catalogue and displays the results of the query in a browsable widget on the blog page. The WP DPLA app was created during the 2013 THATcamp maker challenge and took home the top prize. Since its creation in June 2013 it has been downloaded from the WordPress Plugin Directory 202 times. See <u>Appendix E</u> for a link to the code.



# 8D. Brooklyn Public Library – Open Data& NYC BigApps

Jesse Montero, Coordinator of Information Services and Public Training at Brooklyn Public Library's Information Commons spoke to me about his experience working on the Web Services team, when NYC Open Data contacted them about sharing the library's data. The NYC Open Data team initiated contact and sent the library a list of the data they wanted and the formats they wanted them in. According to Montero, the motivation for data collection was twofold: 1) transparency – city agencies are increasingly expected to open up their data in the name of transparency and accountability; 2) improving New York City's user-friendliness – NYC Open Data hopes that providing data for the local coder community will result in tools and apps that make the city easier to interact with and more efficient.

Brooklyn's catalogue is available through NYC Open Data, though the information is static and not regularly updated. They spoke with legal counsel in regards to the sharing of their catalogue information and it was agreed that it was a fair use issue. The catalogue was first uploaded to NYC Open Data in October 2011 and was most recently updated in June 2013. The entire catalogue has been downloaded 649 times since 2011. It is unclear what the data has been used for at this point.

NYC BigApps is a competition that gives out large cash prizes to developers who create civicfocused apps in any four categories, including: Jobs & Economic Mobility, "The Cleanweb," Lifelong Learning and Healthy Living. The competition has recently announced its top seven winners and none of have used library data. This appears to be a missed opportunity for the library and the app developers, as two of the winning apps offer services with goals similar to emerging public library goals. The ChildCareDesk app reviews and recommends local childcare services and the Helping Hands app aims to connect people who need hope and organizations that provide help. The description of Helping Hands notes that they were motivated by the recent Pew Research Centre poll on the use of smartphones by low-income persons (see Zickur & Smith, 2013).

### 8E. Young Rewired State & the Social Library App

Young Rewired State is the philanthropic arm of Rewired State, a large network of developers based in the UK. Young Rewired State began as a free coding weekend for children, grew to be a week-long summer coding camp and has since expanded into a network of developers under 18 that support each other's efforts at learning code year round. The current goal of the organization is to create "a worldwide, independent, mentored network of young programmers supported and supporting through peer-to-peer learning. Ultimately solving real-world challenges [sic]."

Central to the work of Rewired State and Young Rewired State is a commitment to working with government data in creative ways. The winner of Young Rewired State 2010's Best in Show prize went to Damon Hayhurst's Social Library app. The Social Library project envisions a highly social interface for public library websites and catalogues. Most of his ideas for integrating social media into library catalogues currently exist in Bibliocommons; however, from a public library perspective, it is exciting that young Hayhurst was motivated to work with library data and spend



his time imagining ways he could support and promote his local library. It is doubly exciting that his efforts captured the imaginations of his colleagues and the event's judges.

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Figure 8.1. Screen caps of Damon Hayhurst's Social Library project, developed at Young Rewired State 2010. Retrieved September 19, 2013 from <u>http://blogs.gridfusions.com/lawrencejob/sociallibrary-tubesmart-res-95.html</u>

The success of their efforts has led them to launch YRS Everywhere, a pilot project to expand Young Rewired State outside of the UK. Their site notes, "Physical country borders mean little in the digital space and even less to young programmers." The idea is to imitate the successful scaling of their UK efforts. YRS will begin by supporting and facilitating a weekend of coding for kids in collaboration with partners in cities around the world and grow their efforts from there. Funding for the events comes from both the YRS and local fund-raising efforts. The cost and amount of local labour required to host the event depends on the location. The local partner will be required to help recruit 50 kids to attend and must have at least one staff member available to work with YRS in the four weeks leading up to the event. The cities that held YRS Everywhere events in 2013 are Berlin, Johannesburg and San Francisco. YRS New York is planned for 2014. They are currently accepting applications to host YRS events in cities around the world.

### 8F. Seattle Public Library – Making Visible the Invisible

Artist and engineer George Legrady's Making Visible the Invisible is an art installation on the fifth floor of the Seattle Public Library's central branch. It consists of six LED screens that animate circulation data in real-time. The art piece has garnered local, national and international publicity for the library.



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Figure 8.2 Photograph of the keyword visualization at the Seattle Public Library. *Keyword Map Attack* @ Seattle *Public Library* by Joe McCarthy Photo taken November 17, 2007. Retrieved September 25, 2013 from <a href="http://www.flickr.com/photos/gumption/2104000152/">http://www.flickr.com/photos/gumption/2104000152/</a>

### 8G. Apps4Finland

Apps4Finland is an annual contest run by Finnish digital development associations. Participants compete to win up to € 20,000 in prizes by submitting entries to one of the four categories: Inspire, Decipher, Impact and Enable. Alternatively, participants can attempt to find the best digital solution to any of the problems identified by contest partners.

The Winter 2012 issue of *Scandinavian Library Quarterly* reported that the 2011 winner of the Apps4Finland prize for best use of cultural data was a visualization of the most popular works of fiction in the Helsinki Metropolitan Region's library collection. The visualization is available online: <u>http://vimeo.com/30854725</u>. Library open data was also used to develop two billboards in Helsinki that promoted the visualization of open data and the city's status as World Design Capital for 2012. The billboards represented the most wanted titles and the most popular books at the library (Jokitalo).



# Conclusions

Tulsa, Chattanooga and the DPLA provide some useful models for building a productive and mutually supportive relationship with the hacker community. Crucial to Tulsa and Chattanooga's involvement in these communities is their ability to host hacker events. This involves advertising for the event and providing high speed wireless Internet access, computers, space, and food. Taking part in highly publicized events like the National Day of Civic Hacking raises the profile of the library in the hacker community and gives the library a chance to showcase their resources. American libraries are at an advantage when it comes to hosting hackathons because of the growing number of national organizations promoting and supporting civic hacking. The Canadian government, particularly President of the Treasury Board MP Tony Clement, is increasingly promoting open data around the country – though their emphasis is on supporting entrepreneurs rather than civic-minded volunteerism. For this reason, EPL should look to active local organizations like Startup Edmonton and Ladies Learning Code or international organizations like Young Rewired State and possibly Random Hack of Kindness as collaborators on hacking events.

Another important support to this community is the provision of data itself. The DPLA, the Helsinki Metropolitan Region's Library and Seattle Public Library have all benefited from making their data available for experimentation. Helsinki and Seattle benefitted from increased exposure and publicity, while the DPLA's open data supports its goal of increasing exposure to their collection. In contrast, the popularity of Brooklyn Public Library's collection data hardly compares to the popularity of other data sets on NYC Open Data,<sup>20</sup> and it is unclear what has been done with the data the 649 times it has been downloaded. This may be in part because the library's data is not associated with any popular hacking events or contests. As civic hacking increases in popularity as a way for citizens to interact with city services and celebrate their local identity, libraries whose data is not publicly available or actively promoted are missing out on opportunities to engage new communities, increase the accessibility of their collections and promote their programs and services.

Although there are many benefits, real and potential, to sharing library data, there are also associated risks. It is worth noting that none of the libraries investigated provide all of their data and little of the data provided is updated daily. EPL's Open Data Policy should be informed by current EPL policies, the Freedom of Information and Protection of Privacy Act and an awareness of additional risks associated with making data publicly available.

# 9. Community Information Sites

### **Investigation Summary**

Municipalities, like Edmonton and Toronto, are increasingly offering a host of information about local services through attractive and (relatively) easy to navigate websites. These sites rarely offer opportunities for citizens to provide their own content about local events, groups or

<sup>&</sup>lt;sup>20</sup> The most popular data set on NYC Open Data is a map of Wi-Fi hotspots, which was uploaded in April 2013 and has been downloaded 4095 times.



services, which means that they tend not to accurately reflect the opportunities and character of their communities. This section reports on applications and websites whose participatory structures or wide scopes compensate, in part, for this lack in municipal websites. This section will review two unique applications, LocalWiki and Polaris Community Profiles, that support the creation of highly-localized participatory community information sites as well as Cambridgeshire.net, which brings municipal information together with other relevant local information. Also considered is Everything Austin, Texas, a project of the Austin Public Library.

#### **Project Descriptions**

### 9A. LocalWiki

LocalWiki is a non-profit organization based out of San Francisco that develops open source code for hyperlocal wikis. These wikis, like Wikipedia, are editable pages of information organized loosely like an encyclopedia. The difference is that LocalWiki has a 100% rich text graphic editing interface, which makes it incredibly easy to use. LocalWiki has also developed a user-friendly map-editing interface. Further distinguishing LocalWiki from Wikipedia is its emphasis on collecting and sharing hyperlocal information – where Wikipedia does not publish original research, LocalWiki recognizes that community members' personal experience is an authoritative source of local information and facilitates its sharing.

The first LocalWiki was launched in 2004 for Davis, California, and Davis remains the prime example of what a successful LocalWiki looks like. After receiving a grant from the Knight Foundation and running a successful Kickstarter campaign, LocalWiki launched 6 pilot projects in 2011. Today the localwiki.org site brags 70 independent projects in 10 countries and 7 languages. Included on this list is the TulsaWiki, hosted by the Tulsa City-County Library.

Site Development and Maintenance – Anyone can choose to host the LocalWiki for their community, provided they have a basic proficiency in Django and Python coding. The code for the software is available on GitHub and the LocalWiki developers' page provides extensive support for installation and maintenance, including screencasts of code walkthroughs, listservs and links to lessons on Django and Python.

An Edmonton Wiki was created in April 2012 but was taken offline as of April 2013. The listed contact for the Edmonton Wiki is Tyler Style and the site is hosted by My Solutions IT (<u>https://guide.localwiki.org/Edmonton\_Wiki</u>).

Challenges – In a recent blog post, LocalWiki creator Philip Neustrom listed some challenges they are facing in their efforts to increase the impact and usage of their software. The blog post the challenges in detail, but they are summarized here into three main challenges. The first challenge is that there remains a certain amount of specialized knowledge required to establish a LocalWiki, which deters project enthusiasts with limited skills from initiating the project. The second challenge is that the autonomy of every individual LocalWiki constrains the growth of the overall project and limits things like bulk uploads of data relevant to many wikis at once (for example a data file with information about many cities); the improvement of the sites' search engine rankings; and LocalWiki's ability to develop code for a mobile site that suits the needs of



each individual wiki. The third challenge is determining appropriate geographic subdivisions (July 25, 2013).

Successes – The DavisWiki became an important community rallying point following the infamous Occupy Davis pepper spray incident on November 18, 2011. A line of peaceful protesters on the UC Davis campus were gratuitously pepper sprayed by a police officer. In the following week, DavisWiki pages related to the event had 25,000 visitors, and 700 edits made by 100 contributors. LocalWiki's 2011 report explains the impact of the site: "residents didn't simply read and share online — they turned this information into real-world action, including the largest protest in the city's history."

Participation – According to the 2011 report, DavisWiki and the 6 active pilot projects that year received a total of 270,000 unique visitors per month and 26,688,000 page views a year.

The DavisWiki is the most actively used LocalWiki, with 1 in 7 residents of Davis having contributed to the site. The site is used for local news, local history and even helping to return lost pets. According to LocalWiki, "In a week, nearly half of residents use the Davis Wiki; in a month, nearly everyone uses it."

Future Goals – The creation of a LocalWiki hub to resolve the issues related to development and scalability described above.

### 9B. Polaris Community Profiles

Polaris Library System has developed the Community Profile add-on feature for their ILS that aims to "provide a network of community organizations and information to your members both in and outside the library." The Community Profiles add-on was launched in March 2013 and had been adopted by 30 libraries by the beginning of July. There are four components to Community Profiles. The first is the Community Profile itself – using Polaris' ILS libraries can feature a community organization on the homepage of their website. The second component is the Integrated Community Information tool: keyword searches of the catalogue bring up listings for related community organizations and events. Third, community organizations can manage their own profiles using an individual patron account – these profiles can list events and program calendars as well as general information and relevant links. Fourth is the ContentXChange tool, which allows organizations to post "content carousels" of library materials on their own websites that link back to the library. Each unique profile can be easily shared on social media. Unfortunately, despite the innovative concepts behind the tools, they have a distinctly dated appearance.

#### 9C.Cambridgeshire.net

<u>Cambridgeshire.net</u> is a centralized source for information and services related to Cambridgeshire, England, created for the benefit of the area's residents. Their community database contains information about over 4500 local organizations and local government has provided an "A-Z list of local public services." Users can navigate by browsing sites titled Events and Activities, Local Groups & Organizations, Courses, and Local Public Services, or users can search by keyword or date. The site is built to be interactive, allowing registered users to list



their events, courses and activities or suggest a group, event or activity. The site also links to Shape Your Place a community engagement platform (discussed in the <u>following section</u>) that facilitates discussion of local issues. The site is run collectively by the district councils of Cambridgeshire, the local Constabulary and private company Eventility, which maintains the site's interactive platform.

Cambridgeshire's open data portal provides statistics on the usage of Cambridgeshire.net. Since the site's launch in April 2009, the average number of unique visitors per month has risen from 17,347 to 39,576, which is about 5% of the county's population.



Figure 9.1 Screen cap of the Cambridgeshire.net homepage. Retrieved from http://www.cambridgeshire.net

### 9D. Austin History Center – Everything Austin Texas

The Austin History Center, a division of the Austin Public Library, has hosted a community information site called Everything Austin Texas since around 2000 (<u>http://www.austinlibrary.com/library/ea\_index.htm</u>). The site describes itself as "favorite links from the Austin History Center." As it provides information on a wide diversity of aspects of Austin from local history to current job ads, it integrates images from the History Center's digital image collection. There are no participatory aspects of the site. Though the site links to a vast amount of local information, it is not regularly updated anymore. According to Nicole Davis, Photography Archivist at the History Center, the site averages about 455 hits a month, which is about 0.06% of the local population.





Figure 9.2 Screen cap of the Everything Austin Texas site hosted by the Austin History Center. Retrieved September 23, 2013 from <u>http://www.austinlibrary.com/library/ea\_index.htm</u>

# Conclusions

Developing a participatory site with hyperlocal information like LocalWiki or Cambridgeshire.net requires a long term commitment. Participatory sites like these take time to be adopted. The popular DavisWiki has been around for almost 10 years and it can take years for individual wikis to rise in Google search rankings. The number of unique visitors to Cambridgeshire.net has doubled in four years, but it remains a small percentage of the area's community. The Everything Austin Texas site has not stood the test of time and is rarely accessed. A drawback to the LocalWiki software in particular is the requirement that the initiator of the project host it locally. However, there are benefits to developing a site like this. In the case of the TulsaWiki, described above, the fact that the library was hosting this project made them ideal partners for Code for Tulsa in their efforts to run the National Day of Civic Hacking. It would assert EPL's commitment to being a member of the tech community and identify the library as a digital public space provider. In this regard, these community information sites appear to be digital public spaces along the lines of the local music demonstration project, only much wider in scope. The process of developing and launching the demonstration project will go a long way towards informing whether EPL develop a community information site in this vein.

At this point we only have evidence that community organizations wish to share their content with us, not that it is a priority of library customers to find information about community organizations through us. Any large-scale effort to develop a community information site should be preceded by a study of the community need for such a site. In the meantime, it could save EPL staff time and effort if we offered an online tool that allowed community organizations to share their information through our site or on screens in our branches. Switching to Polaris' ILS



to have access to Polaris' Community Profiles is not a desirable course of action. Bibliocommons may be able to develop similar tools if EPL discussed the issue with them.

# **10. Digital Community Consultation**

#### **Investigation Summary**

Community consultation is increasingly central to the growth and development of public libraries at the same time as new and exciting methods for consulting online become available. This section reviews an interview with Monique Brulé, Manager of Ottawa Public Library, on July 17, 2013 about their Imagine Campaign, and the questionnaire returned by Tulsa Public Library on their Library Engage project. It will also consider municipally run sites Cambridgeshire's Shape Your Place and London, Ontario's Neighbourgood Guide, as well as the experimental consultation projects Open Planning by the Creative Exchange and Engagement Game Lab's Community Planit.

#### **Project Description**

# 10A. Ottawa Public Library – Online Ideas Campaign

The Ottawa Public Library (OPL) has run online consultation campaigns to engage both staff and customers. Following a 2009 staff survey meant to measure engagement, library management used a crowdsourcing tool on the staff intranet to clarify key issues and develop actions to address them. A public campaign took place this year to gauge what OPL customers wanted the future of the library to look like. The results will be integrated into their 2015 Strategic Plan. Using an online consultation tool was ideal for this purpose, because it allowed the library to ask broad qualitative questions, which can be difficult to do using traditional customer surveys. The questions they asked were "What do you want us to add, what do you want us to stop and what do you want us to continue?" Customers posted answers to these questions and categorized their answers under community development, leisure, learning, creation or celebration. The interface allowed customers to discuss each other's recommendations and "like" them. The most popular recommendations automatically appeared at the top of the list of recommendations.

Site Development and Maintenance – OPL hired a Canadian company called IdeaVibes on the recommendation of one of the Library Board Members. IdeaVibes offers a variety of options for crowdsourcing platforms. They offered the library the opportunity to design the front end of the site themselves, but the library did not have the staff to support that kind of work, so they opted to have IdeaVibes design and host the site themselves. IdeaVibes was also responsible for vetting customer recommendations before they appeared on the site.

Staff Responsibilities – Brulé was seconded to the project and it was her full time responsibility until it launched. She performed a literature review and created multimedia presentations to explain the project to the public, including an animated graphic, PowerPoint presentation and video. During the campaign, between May 15 and June 15, 2013, she worked on the project part time. Since it has completed, the data analysis requires her full time attention. The library assembled a team of cataloguers to code the data. Brulé mentioned that the cataloguers



enjoyed the process and appreciated the opportunity to use their skills in new ways. At the time of the interview, Brulé had not completed the analysis.

Challenges – Finding a company that could provide a crowdsourcing platform for a project of this scale for a reasonable price was difficult.

They were overwhelmed by the response to the project and IdeaVibes did not have the technological or staff infrastructure established to support the amount of recommendations and comments they received. It took three hours for the first comment they received to appear live on the website. The large amount of data stored on the site slowed it down, inconveniencing customers trying to contribute.

They did not collect the demographic information of participants and must now gather additional data from demographic groups they suspect were not represented in the campaign. At the time of the interview they were in the process of running focus groups with teenagers, newcomers, people with disabilities, the business sector and low-income populations. Brulé does not think the campaign reached the city's non-library-users either.

Successes – The library was very happy with the site IdeaVibes designed. Brulé described it as "very engaging with nice colours and good graphics." The greatest success was the extent of participation in the project. Brulé was hoping for 4,000 participants, but the site had over 15,000 unique views. Brulé also considers their media campaign as success. Promoting the campaign through social media was the responsibility of the board members, who used Twitter and Facebook. The local media also highlighted the campaign.

Participation – To launch the campaign, the library sent out an email to all active customers asking to hear from them. Within five minutes of sending the email, 500 ideas were posted to the campaign. There were 1,400 unique participants who submitted ideas and comments. There were 1,338 total ideas and 1,391 total comments. Over 27,000 votes were cast. Ideas and comments were submitted in both French and English.

Much of the supplementary material developed to provoke conversation and explain the project were not used. Web analytics suggest that the majority of people who accessed the site already had ideas because they typically went straight from the main page to the idea submission page. However, the video created for the project was viewed on YouTube 1,600 times.

Although the library was looking for advice on broad strategic directions, many of the recommendations are very concrete. They also received many recommendations for services that the library already provides. Brulé noted that in the comment sections, commenters would discuss and recommend existing library services.

Future Goals – The library is planning on using IdeaVibes again to "keep the conversation going" around their Strategic Plan. Once they have established broad strategic directions, they plan on posting them online for customers to vote on. However, she has a list of modifications that must be incorporated into the platform before this next phase begins. She would like to add a few demographic fields to the registration page. She'd like to implement a "dislike" button, on the recommendation of customers. She also would like to rearrange the way the ideas are displayed so that it is easier for customers to view the most recent ideas, as well as the most



popular. She also requires that IdeaVibes increase the speed of the site so that customers do not have to wait while it loads.

### 10B. Tulsa City-County Library – Library Engage

TCCL's Library Engage project was launched in March 2013 through the crowdsourcing platform Mind Mixer (http://engage.tulsalibrary.org/). The platform provides the library with an opportunity to generate community feedback and discussion that can give library staff insight into programming, collections and services. To use the platform, customers must register and login. Then they are able to respond to polls, submit ideas for improving the library and comment on the responses of others. Library administrators publicly respond to customer comments and ideas and review each idea. As Figure 10.1 shows, as each idea passes through the stages of review, its status is updated online. Customers are given points for participating that they can redeem for library merchandise. At the time of research, the site was soliciting feedback on how library customers prefer to access movies and encouraging customers to post pictures of the aftermath of this summer's devastating tornado season.

Site Development and Maintenance – The library chose to work with Mind Mixer because their services are easy to use. The platform is managed off-site by Mind Mixer, who provide all necessary technical support.

Challenges – The library has found it difficult to garner participants. They believe that they may have more customers participate if the registration and log in process were simpler. To address this they have made it possible to log in through Facebook, but "it's still awkward."

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Figure 10.1 Screen cap from the reviewed ideas page of TCCL's Library Engage. Retrieved September 24, 2013 from <u>http://engage.tulsalibrary.org/reviewedideas</u>



Successes – The goal of the project is to provide a constant point of engagement with the community, regular topics for discussion and speedy feedback on customer input. The library believes they have met these goals.

Participation – The site is geared to community members over the age of 18 who can give the library insight into overall community needs and desires. Of the actual participants, 38% have been men and 62% women. The age of participants ranges between 25 and 64, and members of the 25-34 age group contribute the most. The most contributions come from people living in an area of town called "Midtown." This is the same area that provides the highest levels of monetary donations to the library. They are uncertain if participants are library users or not.

There have been 59 ideas submitted so far; 28 of these ideas are in the review process and only three have been rejected as not feasible.

Future Goals – They have not yet formally evaluated the program, but they plan to this year. They are also planning on giving the project "a strong push" to see if it can meet their needs.

#### 10C. Cambridgeshire, UK – Shape Your Place

Shape Your Place is a platform hosting 18 community websites, all run by a partnership between Cambridgeshire's County Council, Constabulary and Fire and Rescue Department (http://shapeyourplace.org/). The site allows users to report issues affecting their neighbourhood directly to local public services; view comments from local services about how they can resolve issues; suggest ideas for local improvements; view and comment on what their neighbours have reported; and share news and promote community events via blogs, videos and images. The County Council is responsible for maintaining and administering the site, daily, but local services including the police and fire department are committed to responding to any post directed to them within 10 business days. As of September 25, 2013 each site hosted an informal poll asking if Shape Your Place is useful in communicating local needs to public services. On average, 68% of respondents answered yes.<sup>21</sup> Shape Your Place is hosted on WordPress.

#### 10D. London, Ontario – Neighbourgood Guide

The Neighbourgood Guide is a participatory website coming out of the London Strengthening Neighbourhoods Strategy (<u>http://neighbourgoodguide.ca</u>). The site serves two apparent functions 1) To facilitate the nomination of and voting on a "Little Gem" or project in London that deserves city funding; 2) To provide a venue for residents of different neighbourhoods around London to share local information. The site is also a source for information on how to start or join an organization that works to improve local neighbourhoods. This unique site is similar in function to the Community Information Sites, but the "Little Gem" contest appears to drive participation on the site and so is an interesting model for gauging public interest in small projects.

<sup>&</sup>lt;sup>21</sup> These polls are informal and likely biased by their presence on Shape Your Place sites. It is unclear how many people had answered these polls when they were viewed. The polls on two sites had no results and were not included. The results of these polls could have changed.



# 10E. The Creative Exchange – Open Planning

The Creative Exchange is a kind of research institute that funds PhD students in Digital Innovation and brings them together with creative private businesses and Humanities researchers interested in their six driving concepts: personalization, experience, participation, connectivity, narrative and identity. Open Planning is one of the many ambitious projects in their Public Service and Democracy "cluster." The goal of the project is to investigate "the current limitations when engaging the public in the urban planning process, and developing new systems using narrative processes and digital technologies such as visualization to better articulate and understand design proposals" (http://thecreativeexchange.org/projects/open-planning). The project began in March 2013 and has reported very little on its progress other than its interest in developing a mobile app. It is mentioned here because the emphasis on using technology to creatively visualize planning proposals and thereby improve the public's engagement with these proposals takes the idea of digital community consultation a step farther than Ottawa and Tulsa's efforts have. More than re-locating in-person discussions to digital spaces, this project recognizes the potential for using interactive multimedia to meaningfully enhance the consultation process.

### 10F. Engagement Game Lab – Community Planit

Community PlanIt is "a local engagement game designed to make community-planning fun, while providing a context for learning and action" (https://communityplanit.org/about/). It has been developed by Emerson College and the Engagement Game Lab and funded by the Knight Foundation. The game frames providing feedback on important issues as missions. Participation in missions is rewarded with in-game coins that translate into actual funding for the local project of your choice. Six communities of ranging sizes have engaged with Community Planit for various ends: the Philadelphia neighbourhood of University/Southwest used the game to gather information for the city-wide Philadelphia2035 project, and Augustus Hawkins High School in Los Angeles is currently running the game with its students to get input on the school's social media policies. The games are open for participation during a pre-established period of time. The data assembled during the games is organized by the Engagement Game Lab and made publicly available online through a Creative Commons Attribution-Share Alike 3.0 license for the use of the community. According to the available data,<sup>22</sup> Philadelphia's game garnered the most participants: 318 active players leaving 4,893 responses and earning 179,110 coins.

#### Conclusions

Ottawa's Online Ideas project and London's Little Gems competition suggest that creating short term projects with clear goals is one results-based strategy for running meaningful online community consultations. Ottawa's project was impressively successful and their insights into

<sup>&</sup>lt;sup>22</sup> Data was available for Philadelphia's project, Cape Cod's Cape 2.0 project and Salem Massachusetts' What's "The Point" project.



how to improve user experience and the quality of contributions provides a solid foundation on which EPL could develop its own similar community consultation project.

Open Planning and Community Planit are examples of creative approaches to community consultation. Neither has produced a great success yet, but they are projects to watch, if only because they endeavor to break the mold of traditional community consultation and then improve it!

Both Tulsa's Library Engage and Cambridgeshire's Shape Your Place are models of ongoing efforts to garner and respond to customer/citizen feedback. Shape Your Place appears to be the more successful project in terms of active participation, though this does not necessarily reflect well on the city councils maintaining the sites. It is not uncommon for Shape Your Place users to publicly hold local officials accountable for their unpopular actions through the site. In contrast, Tulsa's Library Engage project is not as well used, though this, too, reflects poorly on the library's ability to meaningfully engage its public and put public funds to good use. That both sites guarantee a response to feedback within a certain amount of time demonstrates a respect for the contributions of their participants; however, neither Shape Your Place nor Library Engage presents compelling evidence that an ongoing public feedback forum is a desirable tool for a public library.

# 11. Unique Ideas

#### **Investigation Summary**

Throughout this research many creative ideas for digital programs or services emerged, though they could not rightly be described as large-scale trends. This section reviews these interesting and innovative library projects: Arlington, Texas' Public Library's Geocaching Challenge; Contra Costa County Library's Snap & Go App; the Readers Advisory Apps Fastmatch, Gimme, and Whichbook; Escondido Public Library's LibraryYOU project and the Internet Archive's Tumblr Residency.

### **Project Descriptions**

### 11A. Arlington Public Library – Groundbreaking Reads Geocaching Challenge

Debi Wood, Libraries Services Manager, filled out a questionnaire about the Arlington Public Library's experience hosting a geocaching challenge. To celebrate their 90<sup>th</sup> anniversary and to add the fun of a game to their summer reading club activities, Arlington Public Library set up the Groundbreaking Reads Geocaching Challenge in the summer of 2013. In the words of Geocaching.com, geocaching is "a real-world, outdoor treasure hunting game using GPS-enabled devices. Participants navigate to a specific set of GPS coordinates and then attempt to find the geocache (container) hidden at that location." They developed the project in collaboration with the SouthWest Arlington Geocachers group and they used Geocaching.com as a platform for their project. Individuals, families or small groups could look for the geocache hidden at each library location at any time during June and July and then log their findings on the website. The first 90 geocachers to find and log every cache were awarded a


commemorative pathtag – which are nickel-sized medallions with unique designs used by geocachers to identify where they have gone and who they have crossed paths with.

Project Development and Maintenance - Most of the work on this project was done by community volunteers and experienced geocachers. The library paid for the commemorative pathtags and hosted two Geocaching 101 classes, which were led by community volunteers. They also hosted the closing party on July 25, 2013.

Successes – The library had hoped that the project would introduce a new community to the library and they were successful. Wood writes, "We had many comments from Arlington residents who said they did not know that the city had such a great library system, or that they had never been to such and such branch, or that they had not been to a library in years. They got new library cards, renewed old ones, and checked out books."

Participation – Geocaching is a popular hobby amongst retired people, so Wood believes there were a large number of seniors participating. Participants also included families, individual teens and college students. Though they offered prizes for the first 90 geocachers to complete the challenge, they only expected 50. They were pleased that 75 teams and individuals completed the challenge. The final party hosted 63 guests, more than twice the number of people they expected.



Figure 11.1. Screen cap of Geocaching.com showing all the caches hidden around downtown Edmonton. Retrieved September 30, 2013 from <u>www.geocaching.com</u>.



Future Goals – They do not plan on repeating the geocaching project, but they do plan on repeating the process of identifying a particular community and reaching out to try and draw them to the library through a fun activity.

#### 11B. Contra Costa County Library - Snap & Go App

Contra Costa County in California won the Institute of Museum and Library Services National Medal for Museum and Library Service in 2012 for their Snap & Go app. The app uses QR (Quick Response) code technology to bring a library presence to public spaces all around the county. Since its launch in 2011, the library has used this app in many creative ways. QR codes that direct smartphones directly to different pages of the library's site are used in advertising campaigns around the county. The codes link library card holders to the library catalogue and to downloadable free passes to local museums and galleries. In a new program, eBooks and audiobooks can be downloaded directly onto cell phones using Wi-Fi installed in local public transit. The app offers readers advisory by posting images of the covers of popular books with attached QR codes linking to similar authors and narratives. In November 2010 they ran a scavenger hunt using QR codes in library branches. A 2012 case study of the project reported that use of the library's website was up 16% since the app was launched (American Library Association).

The project was developed in partnership with private software developers Quipu Group and funded through a grant from the Bay Area Library and Information Systems. QR codes can be created for free using online applications, but Quipu developed a user-friendly desktop application for the library.

#### 11C. Reader's Advisory Apps – Fastmatch, Gimme & Whichbook

Readers Advisory is a definite trend online, as book sellers' websites are able to collect data about their customers and make recommendations based on their browsing and purchasing history. Libraries' continued respect for the privacy of their customers makes this a more difficult tool to develop; however, there are libraries developing advisory apps that don't require individually identifying the collection of customer information. The premise of all these advisory apps is simple: the customer inputs qualities of the item they are interested in finding and the app suggests something they would like. This trend is reviewed quickly in this section, as opposed to its own section, because the scope of the projects is so small and simple.





Figure 11.2 Screen caps of the two search options provided by Whichbook. Retrieved from <a href="http://www.openingthebook.com/whichbook/">http://www.openingthebook.com/whichbook/</a>

Skokie Public Library's FastMatch, Film FastMatch and Kids BookMatch are readers' (or viewers') advisory apps built by the library's web programmer Esther Verreau. FastMatch and Film FastMatch ask customers to input their preferred genre, while Kids BookMatch asks customers to select a genre and rate books in that genre to refine their preferences. The tools take customers to reviews written by staff. From the review page, customers can perform further searches or browse other book reviews. The tool took Verreau only one day to build, though the library's web stats for this past July, FastMatch was used 242 times and Film FastMatch was used 251 times that month. Their web team is planning to re-vamp the website in the coming year and Verreau hopes to connect the tool to the catalogue to make it easier to navigate.

Gimme is a tool developed by Scottsdale Public Library that also sends customers to a book review written by staff. Customers can place a hold on the book in the library catalogue and ask



for another recommendation from the review page. If customers click the "more" link at the end of the book review, they are taken off the library's site to the library's page on Goodreads.com.

Whichbook is the most elaborate of these tools, and was developed by the UK library consultancy Opening the Book. As Figure 11.2 shows, users of Whichbook can select 4 of 12 sliding scales to identify their preferences or they can search by character, plot or setting. They can narrow their search to eBook, audiobook or large print. Whichbook recommends a series of books and offers customers the option of buying them through Amazon or finding them in the closest library. The tool finds the closest library by searching OCLC Worldcat, which means it can help Edmontonians find books at EPL. Unfortunately, the process is convoluted and requires existing knowledge of how to navigate OCLC Worldcat. Whichbook has a changing team of 70 people reviewing and coding books for the site. They intentionally select lesser known works and they only include books written in the last 10 years.

## 11D. Escondido Public Library – LibraryYOU

LibraryYOU is a three part digital media literacy project run by Escondido Public Library in California. Like a local YouTube channel, the library hosts amateur how-to videos created by library customers. The library has a recording studio to help the public record video and podcasts and they also teach classes on creating videos and posting them online. The idea is to collect and share local knowledge through the library website. There are 4 podcasts and 46 videos embedded in the library site that cover a variety of topics from computers to history to self-help. The project is run by librarian Donna Feddern and began in October 2011. A film festival celebrating the first year of the project was held in August 2012.

This project was referred to in two interviews. Hill at Chattanooga's 4<sup>th</sup> Floor expressed admiration for the project, but noted that he has never found library users interested in storing video content in the library catalogue rather than on YouTube. Coulter at Pikes Peak Library System identified the project as an excellent model of parameters for publishing customer content through the library website (those parameters can be found on their General Rules page: <u>http://libraryyou.escondido.org/participate.aspx#generalrules</u>).

## 11E. Internet Archives – Tumblr Residency

The Internet Archive is a well-known and ambitious non-profit organization attempting to archive and preserve the Internet and born-digital items for posterity. According to their tumblr, "the Archive contains over 1 million video files, 100 thousand music files, 1.5 million audio recordings, 45 thousand software programs, 280 billion web pages, and almost 4.5 million texts." The scope of the collection is so large that to meaningfully use it a visitor requires UNIX programming skills. Over time they hope to develop tools and methods to increase the accessibility of the collection for a wider audience.

One such method is the recently announced Tumblr Residency. An open call went out early this summer requesting applications for 52 separate week-long residencies. These unpaid "residents" will curate a collection of content from Archive.org that will each be showcased for a week on the Internet Archive tumblr page. The residents gain the pleasure of putting the



collection together and publicity from collaborating with Internet Archive and the archive is able to increase access to their collection.

## Conclusions

Using digital tools to find new ways to interact with digital space is a common theme in these disparate examples. Geocaching is an interesting trend that no other libraries have taken advantage of. As the screen cap from geocaching.com suggests, there is a geocaching community in Edmonton–they can be contacted via <a href="http://geocachingedmonton.com/forum/">http://geocachingedmonton.com/forum/</a>.

Although Contra Costa has found many innovative ways to use their QR code app, many argue that QR codes are a trend that is on its way out. Strout (2013), blogger and author of *Location-Based Marketing for Dummies*, argues that the disadvantages of QR codes outweigh the advantages. One of the primary and most oft-cited disadvantages include the fact that neither Apple or Android pre-load QR code reading apps onto their devices, forcing potential users to search out and download an app before they can read the code. Some alternative technologies Strout recommends exploring instead include SMS short codes (text messages), augmented reality apps (like Scan José), mobile apps, and Bluetooth or NFC (near field communications).

The Readers' Advisory apps are cool ideas, and there is appeal in the idea that a library could create a fun little game with only a day's work. FastMatch's stats were not inspiring though, so it may not be worth even that day's effort. Likewise, Escondido's LibraryYOU project brings together many library values and goals in compelling ways, but participation in the project has not been high. EPL should not pursue similar projects unless there is a significant demand from the community.

The Tumblr Residency is the most inspiring project and a very similar project to EPL's new Great Stuff Crew. As the business plan includes an action to increase residency programs, it is worth considering how "online residencies," could be organized, perhaps through the Great Stuff Crew, to promote our content and programs. Indeed reaching out to well-known Edmontonians or partners and asking them to guest host our website by sharing their favourite EPL content or programs or services could be a mutually benefitting effort.

## 12. Organizational Structure

## **Investigation Summary**

As libraries come to adopt and create digital trends, they begin also to see the necessity of developing an organizational structure that supports an increased online presence. Indeed pursuing the recommendations in the *Vision and Recommendations* report will likely require additional administrative and programming support. No libraries were contacted specifically to discuss organizational structure, but examples of projects struggling from lack of support, interesting new job descriptions and department restructuring came up regularly in interviews. Rather than outline projects, this section will provide short summaries of the advice about and insight into organizational structure that came up during interviews with Amy Calhoun at Sacramento Public Library, Nate Hill at Chattanooga Public Library's 4<sup>th</sup> Floor, and Ben



Vershbow at NYPL Labs. It will also review relevant aspects of the Carnegie Library of Pittsburgh's Strategic Plan and the Edge Library Benchmarks.

### **Project Descriptions**

## 12A. Sacramento Public Library

The Virtual Branch Coordinator position was created at Sacramento Public Library in early 2013. According to Calhoun, the creation of the position marks a shift towards online space management as an extension of customer service rather than as an extension of the IT department. Before the position was created, Calhoun was involved in the development of a new content management system (CMS) in collaboration with contract web developers. The user-friendliness of the back-end of their new CMS is integral to their strategy of focusing on customer service: with "some web development skills" the Virtual Branch department, which consists of Calhoun and an associate level position, are able to run the site themselves. The external web developers who developed the CMS remain contact persons for their occasional questions. This streamlined system allows them to maintain the same voice and tone throughout the website and centralize their web strategy.

The Virtual Branch Coordinator is called *Coordinator*, rather than Supervisor, because much of the position involves liaising between different departments. She is also responsible for training staff on new technologies. When a staff member suggested experimenting with Google Hangout she supported his efforts. After the fact, she was responsible for putting together a Google Hangout "box" or kit with instructions and supplies that are transferable so staff in different branches can continue to experiment with the digital tool.

## 12B. Chattanooga Public Library – 4<sup>th</sup> Floor

Speaking primarily of the organizational structure required to support the makerspace and develop an open data portal, Hill emphasized the importance of having a good front-end (clientside) developer and a good back-end (server-side) developer. He also emphasized the importance of providing managers of these spaces with flexibility and room to be spontaneous so that they can really respond to the needs of the community as they arise. He claims "You can't hire all the staff you need to maintain this kind of project" – so, building strong mutually supportive relationships with community organizations is key to the longevity and sustainability of a makerspace.

#### 12C. NYPL Labs

The organizational structure at NYPL that has supported the development of their online presence has changed regularly over the last ten years. NYPL Labs follows the Digital Library Program, which ran from 2000-2008 as a "digital production and curation team, covering everything from scanning to metadata creation to software development" (Vershbow, 2013, p. 80). The NYPL Labs is a small scale research and development group that consists of a manager (Vershbow), four applications developers (including one senior developer), a project manager and an interaction designer/developer. They are allowed time for spare time projects, which is where the successful What's on the Menu project came from. The group was originally



envisioned as a kind of fringe project group who were released from the library's bureaucracy in the service of creativity and innovation. This outsider position was the context for their most well-known successes, but their freedom to experiment is slowly being eroded as their expertise is increasingly relied upon to support the library's core digital services. Negotiating the Labs' position in relation to the larger institution is a challenge that Vershbow expressed some frustration about. The long term sustainability of the Labs' projects depends on their integration into NYPL's technical and administrative infrastructures; Vershbow would also like to see innovations coming out of the Labs have a greater impact on the overall direction and growth of library services. However, the more time the Labs' staff spends on core services, the less time they have for experimentation.

Vershbow advises that digital projects must be conceived of with a lifecycle which includes either how they will be sustained or at which point they will be shut down. He believes an R&D group should be encouraged to "have interesting failures" and recommends documenting failures, because they provide interesting information.

#### 12D. Carnegie Library of Pittsburgh

The Carnegie Library of Pittsburgh's 2013-2017 Strategic Plan involves creating an Office of Digital Strategy in order to "develop a comprehensive plan to position the Library to anticipate and respond to technological change; improve options for library service using existing and emerging technologies; keep information accessible as the publishing and media worlds evolve; and expand opportunities for people to create and contribute content." The Office of Digital Strategy will guide "library decisions about effective use and application of technology to improve customer service and access to information as publishing and media channels evolve." Additionally, their staff will "regularly review options for new and best e-devices and e-services to ensure that CLP is using current and emerging technologies that complement existing and future formats and services" (p. 6).

#### 12E. The Edge Library Benchmarks

The Edge Initiative provides libraries with benchmarks that "support continuous improvement and reinvestment in public technology services." The initiative is the result of collaboration between 13 organizations and institutions invested in the future of public libraries, including the American Library Association, the Bill and Melinda Gates Foundation, the Public Libraries Association, and many others. The benchmarks were published this year and the full project will be launched in the United States in 2014. Opportunities for Canadian libraries to take part in the program are under investigation. In the meantime, the benchmarks provide a sense of what efforts public libraries will be taking in the coming years towards improving their digital services and resources. Many of these benchmarks describe priorities and responsibilities already accounted for by EPL's existing staff. The following benchmarks describe responsibilities specifically relevant to the *Vision and Recommendation* report:



Benchmark 4: Libraries make strategic decisions based on community priorities for digital inclusion and innovation	Benchmark 5: Libraries build strategic relationships with community partners to maximize public access technology resources and services provided to the community
<ul> <li>4.1 The library has leaders who maintain ongoing relationships with community leaders.</li> <li>A presentation about library technology is made to a community group at least annually (e.g., Kiwanis, Chamber of Commerce)</li> <li>4.2. The library gathers feedback from the community about its public technology needs.</li> <li>The library holds advertised forums on the community's technology needs</li> <li>The library conducts a community needs assessment for technology resources for people with disabilities</li> <li>4.4. The library evaluates its technology programs and services.</li> <li>The effectiveness of digital literacy programs and services is evaluated annually</li> <li>Web analytics are used to evaluate the use of online library resources annually</li> <li>The effectiveness of partnerships is evaluated biennially</li> <li>The effectiveness of partnerships is evaluated biennially</li> <li>4.5. The library makes strategic decisions based on information about community needs and priorities.</li> <li>Staffing plans reflect community needs related to digital inclusion</li> </ul>	<ul> <li>5.1. The library develops and maintains partnerships that amplify the library's reach, avoid duplication of effort, aid the library in planning or advocacy, or are otherwise mutually beneficial.</li> <li>The library has strategies for strengthening existing partnerships and developing new partnerships to advance digital inclusion and innovation goals</li> <li>The library engages in resource-sharing partnerships benefitting the library (with expertise, in-kind contributions, programming, or workspace) with some/all of the following: <ul> <li>A workforce development organization</li> <li>An educational organization (K-12, community college, university)</li> <li>A local government or social service organization</li> </ul> </li> <li>Devices or space are loaned to community organizations for technology-related training classes in the library</li> <li>The library engages in technology outreach activities.</li> <li> The library tracks emerging technology trends and applications in the community (e.g., new eGovernment portals, community technology centers, technology programs, etc.)</li> </ul>

## Conclusions

Digital Public Spaces Librarian – The 2014 budget includes funding for a full time librarian. This new librarian has been identified as the lead on three business plan actions:

- Seek out, crowdsource and host open, local, digital content online.
- Investigate options for providing online space and services that promote local community events and information.
- Develop an Open Data policy that includes how we will use and share our own data, participate in Edmonton's Open Data community and support data literacy initiatives.

Recommendations in the *Vision and Recommendations* report are tied to these actions and provide additional detail about the responsibilities of the Digital Public Spaces Librarian. These include



- supporting the development of EPL's innovative participatory online spaces, including • the online makerspace (Recommendation 1.13)
- supporting the development of the local music demonstration project, which requires implementing the project proposal following April 2014 (Recommendation 2.7)
- documenting all aspects of the project including community consultation strategies, • partnership development processes, staffing and technical infrastructure requirements in order to establish best practices for future initiatives (Recommendation 2.8)<sup>23</sup>
- working with Marketing to establish production standards and training to teach EPL • programmers how to run their own livestreaming events (Recommendation 3.3)
- working with Marketing to define best practices for teams to use to maintain meaningful • and regularly updated content on web pages supporting in-person programs such as book clubs (Recommendation 4.4)
- working with DLI/Web Services to investigate options for providing online space and • services that promote local community events and information (Recommendation 9.1)<sup>24</sup>

The examples given in this section provide further insight into the role the Digital Public Spaces Librarian could play as champion of our digital public spaces. Implicit in the positive experiences of Calhoun and Hill, and the frustrations of Vershbow, is the usefulness of having a staff member who champions the move to the digital. Both EPL's Director of Collections and Technology and the Manager of DLI/Web Services play a role in this, but there is a place for a librarian "on the ground" working closely with teams and staff to develop online programs and services. Calhoun in particular works to make it easier for staff to engage with customers online by putting together the tools to create digital programming and sharing them amongst the branches. She keeps the staff up to date on new technologies and her specialized knowledge and access to web development make her a resource for staff with ideas for piloting online programs.

A crucial aspect of Calhoun's ability to provide customer-service focused technical support to her colleagues is the simplicity of Sacramento Public Library's CMS. With basic coding skills, Calhoun is able to manage much of the site and reduce the number of mediators between a library assistant with an innovative idea and its technological implementation. Sacramento had their CMS developed just for them by external web developers; however, this is not the only possible approach to adopting a user-friendly CMS. For example, Bibliocommons offers BiblioCMS which claims to be easy-to-use and has the advantage of being consistently maintained and updated as technology advances. The need for a new EPL public website has been acknowledged and is currently under review. The evidence in this report suggests that to support the piloting of online programs and enhance the web presence of existing in-person programs and services, EPL needs a web platform that is simple enough that it can be edited by staff with limited coding skills, but flexible enough that it can host a diversity of participatory tools.

online." <sup>24</sup> This is related to the business plan action to "Investigate options for providing online space and services that promote local community events and information."



<sup>&</sup>lt;sup>23</sup> This relates to the business plan action to "Seek out, crowdsource and host open, local, digital content

Both Pittsburgh's Strategic Plan and the Edge Benchmarks identify staying on top of digital trends as integral to creating and maintaining a meaningful digital presence. As a champion of EPL's digital public space, the Digital Public Spaces Librarian could be a key resource for teams and staff as they develop new online pilot projects and grow EPL's digital environment (Recommendation 1.2).<sup>25</sup> In the long term, this position could be responsible for evaluating and updating the local music project and maintaining activity on the site through the development and promotion of new missions and contests.

The new Digital Public Spaces Librarian should have excellent written and oral communication skills and a demonstrated interest in and knowledge of emerging digital trends. Knowledge of some web infrastructure and programming languages would be a definite asset in terms of communicating between web programmers and library programmers; it would also be useful were EPL to simplify its web maintenance with a user-friendly CMS. As a point person for the local history demonstration project, project management experience would be an asset as would both ability to work efficiently both independently and as a part of a team. The position is customer services focused and must have a passion for serving Edmontonians.

Web Programmer – The 2014 budget also includes funding for a part-time web programmer. Of the potential projects described in this report, most require the support of a front-end programmer able to develop a variety of easy-to-use participatory tools that EPL's customers can use to interact with the library and each other online (Recommendations 1.1, 1.13). As the simplicity of use and the appeal of design have been crucial to the success of many of the projects described, it is important that knowledge of UX (user experience) design should be represented on the web programming team. The possible exception to the need for a front-end programmer could arise in the development of the local music demonstration project. It is unclear what precise role EPL will play in developing and promoting this project, it is likely that the development of a database of digital local music will require back-end programming expertise. The job description of the part-time web programmer should be informed by knowledge of the existing web programming skills in the Web Services Department (Recommendation 2.5).



<sup>&</sup>lt;sup>25</sup> This also relates to the following business plan actions:

<sup>•</sup> Promote new program pilots to ensure continual innovation.

<sup>•</sup> Pilot and evaluate online programming.

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Urban American Libraries	Boston PL	Raleigh PL	Orange County Library System (Orlando, FL)
New York PL	Seattle PL	Omaha PL	Non-Urban American Libraries
Los Angeles PL	Denver PL	Miami PL	Portland PL (ME)
Chicago PL	District of Columbia PL	Oakland PL	King County PL (WA)
Houston PL	Nashville PL	Tulsa PL	Chattanooga PL
Free Library of Philadelphia	Baltimore PL	Hennepin County PL (Minneapolis, MN)	Skokie PL (IL)
Phoenix PL	Louisville PL	Cleveland PL	Escondido PL (CA)
San Antonio PL	Multnomah County PL (Portland, OR)	Wichita PL	Scottsdale PL (AZ)
San Diego PL	Oklahoma City PL	Arlington PL	MacArthur PL (Biddeford, ME)
Dallas PL	Milwaukee PL	New Orleans PL	Canadian Libraries
San Jose PL	Las Vegas PL	Bakersfield PL	Toronto PL
Austin PL	Albuquerque PL	Hillsborough County PL Cooperative (Tampa, FL)	Vancouver PL
Jacksonville PL	Tucson PL	Hawaii State PL System	Calgary PL
Indianapolis PL	Fresno PL	Anaheim PL	Ottawa PL
San Francisco PL	Sacramento PL	Aurora PL	Winnipeg PL
Columbus PL	Long Beach PL	Santa Ana PL	Hamilton PL
Fort Worth PL	Kansas City PL	St. Louis PL	Kitchener PL
PL of Charlotte and Mecklenburg	Mesa PL	Riverside PL	London PL
Detroit PL	Virginia Beach PL	Corpus Christi PL	Victoria PL
El Paso PL	Atlanta PL	Carnegie Library of Pittsburgh	St. Catherines PL
Memphis PL	Pikes Peak Library System (Colorado Springs, CO)	Lexington PL	Halifax PL

## Appendix A – Library Websites Reviewed



Broad Trends				
	Canadian	American	Urban	Total
Total	11	70	62	
1 : Public Libraries with Apps - these libraries have developed unique apps with functions beyond the standard mobile website/catalogue search	0	9	9	9
2 : Public Libraries with Online Book Discussions	5	14	16	19
3 : Public Libraries with Online Classes	0	17	16	17
4 : Public Libraries with Online Tutoring - these libraries offer access to professional tutors responding in real time	0	18	17	18
5 : Public Libraries with Online Summer Reading Club - these libraries offer ways to participate in their summer reading club online	8	17	16	25
6 : Public Libraries with Kids Sites - the kids pages of these library sites had a unique UX designed for their demographic	6	20	22	26
7 : Public Libraries with Teen Sites - the teen pages of these library sites had a unique UX designed for their demographic	8	33	36	41
8 : Public Libraries with Digital Local History Archives	8	38	43	46

## Appendix B – Broad Trends in Library Web Presences



## Appendix C – Interview Template

## Q. 1 – Development process: Why did you choose this project? What was your motivation?

-did community consultation or needs-assessment inform decision making?

# Q. 2 – What goals did you set for \_\_\_\_\_(the project) and do you feel that you've achieved them?

-challenges we could learn from?

-audience:

- (if unknown) targeted and promoted to whom?
- (if open) who participates in it? (notable demographic trends?)
- Has the project engaged new communities/customers?

-have you performed any formal evaluation or assessment?

-what is the most useful feedback you have received?

-what does the future hold for this project? Will it continue or expand?

# Q. 2 – I'm interested in your experience developing and managing the technological side of this project...

- (if unknown) outsourced or staff programmers?

-what were your priorities when designing/selecting the interface?

- (if unknown) open source code - did you use it? Is your code available?

-hardware/software recommendations?

# Q. 4 – To what extent do you participate in local open data communities or projects? Is it or will it be a priority?

## Questions for Hacker Communities

-how did the library get involved in the national day of civic hacking and hackathons?

-do you plan on maintaining or expanding your support for this community? In which ways?

-what technical infrastructure do you use to support this community?

-has the library contributed data to open data projects? What kind of data? Were there any challenges with this process?

## Questions for Labs

-What are the goals of your online space? Have you achieved them?

- (if unknown) would you say your online space is primarily for marketing or is it more of a digital tool?

-Who participates in your online space? (notable demographic trends?)



-How is it run - do you have full time moderators?

-Do you have a content policy? Are there limits to what people can make/share?

-Do you offer online storage space for digital content created at \_\_\_\_\_? Why or why not?

-Are you archiving user creations in any way? Is that a priority? Why or Why not?

-Do you promote a particular type of licensing / Creative Commons or public domain? Who owns the content? Do you include it in your library's collection?

-Do you have a relationship to other library makerspace online communities?

-have you performed any formal evaluation or assessment?

-what is the most useful feedback you have received?

-what does the future hold for this project? Will it continue or expand?



## Appendix D – Libraries Contacted

Library	Contact	Digital Project	Date (2013)
Arlington Public Library	Debi Wood	Geocaching	Aug 13
Brooklyn Public Library	Jesse Montero	Open Data	Aug 22
Calgary Public Library	Shannon Curry	Teens Create	July 22
Carnegie Library of Pittsburgh	Brooke Askew	Teensburgh Blog	July 24
	Patte Kelley	My StoryMaker	July 11
	Corey Wittig	the Labs @ CLP	July 22
Chattanooga Public Library	Nate Hill	Open Data	July 16
		4th Floor	
Chicago Public Library	Jennifer Steele	YOUmedia Online	July 18
Cleveland Public Library	CJ Lynce	myCloud	July 25
		Tech Central	
Denver Public Library	Sally McDonald	Creating Your Community	July 17
Hamilton Public Library	Jen Gal	History Pin	July 25
		Flickr Commons	
Iowa City Public Library	Jason Paulios	Local Music Project	Sept 19
Lexington Public Library	Thom Southerland	Library Channel 20	July 16
		Digital Media Lab	
New York Public Library	Ben Vershbow	NYPL Labs	July 19
		Candide 2.0	
Orange County Public Library	Donna Bachowski	Orlando Memory	July 30
Ottawa Public Library	Monique Brulé	IdeaVibes	July 17
San José Public Library <sup>26</sup>		Scan José	

<sup>&</sup>lt;sup>26</sup> Information about Scan Jose was actually provided by Nate Hill of Chattanooga Public Library. San Jose Public Library was not contacted about their digital projects.



Pikes Peak Public Library	Carolyn Coulter	Ustream	July 11
		Digital Media Lab	
Sacramento Public Library	Amy Calhoun	GoT Hangout	July 9
		SacQR	
		Virtual Branch	
Skokie Public Library	Toby Greenwalt	Digital Media Lab	Aug 1
	Esther Verreau	Fast Match	Aug 9
Toronto Public Library	Catherine AuYeung	Book Buzz	July 12
	Sheilah O'Connor	KidsSpace	July 11
Tulsa City-County Library	Sheri Perkin	Tulsa Then and Now	July 23
		Beryl-o-Gram	
		National Day of Civic Hacking	
		Library Engage	
Virginia Beach Public Library	Nicole McGee	TagWhat	July 10
Winnipeg Public Library	Sophie Walker	Booked	July 5



## Appendix E – Open Source Technology

Cloud Storage	
Dropbox* www.dropbox.com	
Wuala*	www.wuala.com

Crowdsourcing Tools			
Title	Address	Description	
Europeana Thoughtlab	http://pro.europeana.eu/web/guest/thought	Collection of annotation	
EuropeanaConnect	http://www.europeanaconnect.eu/results-	Collection of annotation	
Annotation Suite	and-resources.php?page=7	tools	
HackPad	https://hackpad.com/	Communal note pad	
Iowa City Local Music Project		Forthcoming	
LocalWiki	http://localwiki.org/	Community-driven wiki	
NYPL Labs	https://github.com/topomancy/nypl-warper	Code for Map Warper tool	
PyBossa	http://dev.pybossa.com/	Science crowdsourcing apps, including sound pattern recognition and transcription tools	
Scripto	www.scripto.org	Transcription tool	
Vanilla Forums*	www.vanillaforums.org	Community forums	
WikiSource	http://en.wikisource.org/wiki/Wikisource:Co mmunity_portal	Transcription tool	

Platforms		
Drupal	https://drupal.org/	Open source CMS
Omeka	http://omeka.org	Web-based web publishing platform for libraries
WordPress	http://wordpress.org	Blog site

WordPress Plugins			
CommentPress Core	http://wordpress.org/plugins/commentpress- core/	Text annotation	
Digress.it	http://digress.it/	Text annotation	
WP DPLA	http://wordpress.org/plugins/wp-dpla/	DPLA related content app	

	Front End Design Tools	
tinyMCE	http://www.tinymce.com/	Web based Javascript HTML WYSIWYG editor
Twitter Bootstrap	http://getbootstrap.com/	"Mobile first" design tool

	APIs
DPLA API	http://dp.la/info/developers/codex/
Europeana API	http://pro.europeana.eu/api
Google Maps API*	https://developers.google.com/maps/
HistoyPin	Forthcoming

	Free Services
Flickr*	www.flickr.com
Geocaching.com	www.geocaching.com
HistoryPin	www.historypin.com
TagWhat*	www.tagwhat.com
YouTube	www.youtube.com
Google Hangouts on Air	http://www.google.com/+/learnmore/hangouts/onair.html
Ustream*	http://www.ustream.tv/

\*Includes fee-based options



## Appendix F – Types of Online Participation

Participation on Library Websites				
Annotating digitized content	Creating mashups	Playing with readers		
		advisory apps or tools		
Answering polls and quizzes	Creating stories using a	Providing solicited		
	story making animation tool	feedback to the library		
		(Including proposing		
		solutions to problems		
		identified by the library)		
Blogging	Creatively reusing digitized	Reviewing or discussing		
	content	library content		
Building networks (sharing content	Discussing books	Sharing videos of		
from the library site on social		customers at programs		
networking sites)				
Commenting on or discussing their	Entering contests	Transcribing digitized		
own or other customers' content		content		
Commenting on/sending questions	Following a self-directed	Uploading content they		
to/Watching livestreamed events or	tour of a space	own the rights to – to be		
Google Hangouts	(city/neighbourhood) with	publicly displayed or to be		
	their mobile device	archived		
Creating apps with open data,	Learning via self-directed	Using crowdsourcing tools		
including library open data	learning modules	to develop new resources		
Creating data visualizations from	Playing a Geocaching	Watching videos of online		
library data	game	programs		

Online Participation Not Yet Adapted by Libraries		
Contributing to collaborative art projects	Using "reach-in" technology	
Micro-volunteering or micro-crowdsourcing	Wearables (e.g., Google Glass)	



## Appendix G – Preliminary List of Public Domain Content

Images		
Rijks Museum	https://www.rijksmuseum.nl/en/rijksstudio	
Digital Public Library of America	http://www.dp.la	
Flickr: The Commons	http://www.flickr.com/commons	
The Getty Museum	http://www.getty.edu/art/	
The Apollo Archive	http://www.apolloarchive.com/apollo_gallery.html	
-		
The British Library	www.bl.uk/	
US National Archives	http://www.archives.gov/	

Music		
Free Music Archive	https:///www.freemusicarchive.org	

Multimedia		
Europeana.eu	http://europeana.eu/	
Wikimedia Commons	http://commons.wikimedia.org/wiki/Main_Page	

Public Domain Blogs		
Public Domain Review	http://publicdomainreview.org/	
Open Culture	http://www.openculture.com/	

