Technologies to Watch
Top Emerging Technologies for Archives and Special Collections

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Whether building stronger relationships with patrons, highlighting collections and exhibits in new and creative ways, or preserving digital information for future generations, the following emerging technologies will help archivists and special collection librarians meet their goals in the 21st Century.

Social Media

Did you know the National Archives can be followed on Twitter? Tools like Twitter, Facebook, YouTube, Flickr, RSS Feeds, and blogs give archives and special collections the ability to engage, interact, and share their collections with a worldwide audience.

Kate Theimer (2011), in discussing Archives 2.0 (the counterpart to Library 2.0) and social media, states archivists in the Digital Age "must be user centered and embrace opportunities to use technology to share connections, interact with users, and improve internal efficiency" (p. 60). The National Archives devotes an entire page to Social Media and Web 2.0, www.archives.gov/social-media/, complete with resources, strategies, and statistics.

Scripto
scripto.org

Scripto is a collaborative transcription tool built on wiki technology that allows patrons to transcribe manuscripts and other cultural and historical documents online. By recruiting the help of volunteers, archives and special collections departments can meet goals and enhance the quality of materials more quickly and cheaply; improve search accuracy; and strengthen their relationship with patrons (Holley, 2010). FromThePage (beta.fromthepage.com) is similar

tool, but is currently only supported by the developer as a side project.

Scripto is currently being used to transcribe the *Papers of the War Department: 1784 to 1800* collection at George Mason University. See Holley's article, "Crowdsourcing: How and Why Should Libraries Do It?" (2010), for an overview of the crowdsourcing in libraries, archives, and special collections including rationale, motivating factors of volunteers, and practical tips for starting crowdsourcing projects.

Bitly.com
bitly.com

Bitly.com is a web service which shortens long URL links so that they are easier to collect, organize and share. It is now the default URL link shortener for Twitter. Their mission is to make it easier to discover, collect, and share web content, and to facilitate the process of archiving content on the internet, primarily through Twitter.

It is a free service, which is supplied through their website, browser extensions, mobile web, and other third-party tools which are integrated with their open public API, or application programming interface. Users (archives) can access real-time traffic and analytics data on all links shared through bitly, and scholars can use bitly to shorten long links. Also, Bitly currently powers more than 10,000 custom-shortened URLs, such as

pep.si and cs.pn. Competitors include tinyurl.com, is.gd, ow.ly, goo.gl, and Dot.TK.

Computing Tablets

In 2010, Apple introduced the world to the iPad and now Amazon, Samsung, and others are releasing tablets of their own. Tablets offer mobility, access to information, and ease of use to both users and archivists alike. Researchers can take notes, scroll the digital photograph collection, search the catalog and online finding aids, and browse the Web for additional resources using a single tablet. Archivists and special collection librarians can create applications showcasing their materials, process collections, and do mobile reference. Think of the potential for audio and video collections, oral history interviews, and working with unprocessed materials. The New York Public Library's App, "Exploring the 1939-1940 World's Fair Collection," is an example of a digital exhibit available freely through iTunes (exhibitions.nypl.org/biblion/worldsfair). While tablets are still in their early stages, authors Megan Lotts and Stephanie Graves (2011) and Christopher Brown-Syed (2010) have recently explored their uses for reference and disaster response, respectively.

jQuery Mobile

jquerymobile.com

As of mid-2010, 82 percent of American adults own a mobile phone (Hanson, 2011) so there's no better time for librarians and archivists to take advantage of the mobile web. Frameworks like jQuery Mobile provide an HTML 5, CSS, and JavaScript template for developing interactive mobile-friendly websites, online exhibits, and tours which when coupled with QR codes in physical exhibits can greatly enhance the experience for patrons. Other frameworks include iWebKit and Sencha; however jQuery Mobile provides a balance of

robust features and ease of use that the others currently do not.

The North Carolina State University special collections department used jQuery Mobile to develop WolfWalk (www.lib.ncsu.edu/wolfwalk/), a historical campus tour featuring selected resources from their collection. For an introduction to mobile websites and applications, see Cody Hanson's overview in the February 2011 issue of *Library Technology Reports*.

HistoryPin

www.historypin.com

HistoryPin.com is a website which collects and shares content from users all over the world, allowing them to pin their content to a specific location on a map. The content may consist of photos, audio recordings, videos, and descriptive or narrative text. Their goal is to become the world's largest user-generated archive of historical photos and content. Their site includes Google Maps and Street View technology, so that users can add their photos to be integrated into a 360 degree street view scene.

Archives can partner with HistoryPin to create exhibits and further expand their audience.The U.S. National Archives has recently announced a partnership with HistoryPin, collaborating on several major exhibits (1.usa.gov/vz3sNh). And in January of 2012, HistoryPin plans to have an embedding tool available for websites, more sophisticated metadata tools, and a Flickr API.

QR Codes

"The kind of information QR codes hold is limited only by your imagination and the needs of your users," Donna Ekart (2011, p. 38). Imagine patrons viewing facility maps, rules and regulations, locker locations, reproduction fees, finding aids, indices, documents, and exhibits through their personal mobile devices. Quick Response codes,

resembling standard bar codes, are encoded with data that is readable by any mobile device equipped with a camera and code reader. QR codes are easy to create and there are numerous web sites, such as QRStuff, Kaywa, and bitly, that allow users to generate codes for free. Archivists and special collections librarians now have another tool to creatively connect patrons to their institution.

DuraCloud
www.duracloud.org

DuraCloud is an open source hosted service from the makers of DSpace and Fedora that helps archives and special collections store and back up digital content on multiple servers; serve up large image files; and stream video from the cloud without needing to manage their own server (DuraSoft Foundation, n.d.). Currently it is the only service of its kind targeted to libraries, archives, museums, institutional repositories, and research centers.

In 2009 the Library of Congress National Digital Information Infrastructure Preservation Program (NDIIPP) launched a pilot project with DuraCloud and the New York Public Library, WGBH media archives, and the Biodiversity Heritage Library (Library of Congress, 2009). Rhodes College also currently uses DuraCloud to preserve and make available high-resolution photos (4,000 DPI) of engravings in the Farnsworth Shakespeare Print Collection for study online.

Omeka.org
omeka.org

Omeka is a free, open source web publishing platform created to display library, museum, archives, and scholarly exhibits and collections. It is designed to be easy to use so that users can concentrate more on content. It is flexible, allowing users to experiment with their content in a "sandbox" before they actually post it to a website. It can be adapted to small, medium, or large-sized collections, and has a strong metadata structure which works well with established standards like Dublin Core or other institution-specific standards. Competitors include CONTENTdm, and PastPerfect, although it is important to note that since Omeka is open source, it is very flexible and can be customized by the user, unlike other existing commercial software.

Examples of its use for small academic libraries and archives can be found at bit.ly/szQWRn, and for historical archives at bit.ly/umnWLS . It was also used to create a directory for the Metropolitan New York Library Council, at bit.ly/spbYTs .

Linked Data and Resource Description Framework (RDF)
www.w3.org/TR/rdf-primer

Make the cultural heritage materials in your collection available to the world through linked data and the Resource Description Framework (RDF), a language for helping machines see relationships between objects. When implemented, RDF not only makes it easier to share information with others outside your institution, but also allows you to enrich your local collection by making related information from outside sources available to your patrons. RDF works with Dublin Core as well as other metadata formats and ontologies. RDFa, a simplified version, can be inserted directly into the existing HTML of your website (Bradley, 2009).

Many national libraries are already making parts of their collections available through RDF. Examples include the Europeana digital library; CultureSampo, a Semantic Web portal for Finnish cultural memory; and the LIBRIS, National Library of Sweden (Bradley, 2009).

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