

Looking to the Future of

Roy Tennant shares top trends in library technology

After attending the program, “Top Trends in Library Systems,” presented by Roy Tennant, user services architect at the California Digital Library, my mind was spinning with acronyms. Despite the prevalence of jargon and technical terms, this program brought home that we, as legal information professionals, cannot afford to become myopic and focus solely on law-related information sources.

I had never attended one of Tennant’s presentations before, so I cannot speak to whether this one was of the norm. Due to the limited amount of time available, he jumped right in and began talking about some of the ways that libraries can provide better service for their users.

One big problem that all libraries face is that other groups take our users from us. This might be slightly less relevant in some libraries, but on the whole it is true. Libraries do not put themselves out into the public eye, which allows companies such as Google to dominate. Users may very well draw on our content and services without even being aware of it. Libraries need to improve their relationships with other organizations to

foster connections and create targeted, compelling services to become a destination instead of an afterthought.

Some of the latest technologies Tennant presented included:

- **Web 2.0** is the update to Web 1.0. The client sends a request, the server sends back the HTML page, the connection is dropped, and then the client

renders the page. Web 2.0 is a set of technologies that enable tapping into a wide variety of information dynamically and presenting it in a highly interactive way, using technologies such as HTTP, HTML, Web Services, and AJAX. An example of this can be seen at <http://chicagocrime.org>.

- **SOAP and REST. Simple Object Access Protocol (SOAP)** is a way to exchange encoded information between applications. **Representational State Transfer (REST)** is a URL (HTTP Get)-based way of sending a SOAP request and receiving an XML-encoded response.

- **AJAX (Asynchronous JavaScript + XML)** incorporates standards-based presentation using XHTML and CSS, dynamic display and interaction using the Document Object Model, data interchange and manipulation using XML and XSLT, asynchronous data retrieval using XMLHttpRequest, and JavaScript. Google Maps is one of the main users.

- **Collaborative Filtering** consists of a community of users sharing links (i.e., <http://del.icio.us> or Unalog) and/or individual reader advisory lists (i.e., Amazon lists, “My Favorites”).

- **Institutional Repositories**, according to SPARC (Scholarly Publishing and Academic Resources Coalition), are “digital collections capturing and preserving the intellectual output of a single or multi-university community.” They are means for libraries to begin capturing scholarly communication before it disappears out into the world of vendors where it would have to be purchased. The University of California eScholarship Repository is one example (<http://repositories.cdlib.org>); MIT’s D Space (<http://dspace.mit.edu>) is another.

- **OAI-PMH (Open Archive Initiative-Protocol for Metadata Harvesting)** is a protocol for “harvesting” metadata from content repositories. It is simple, easily implemented, and easily understood. The California Digital Library is in the process of creating tools to make harvesting metadata easier for librarians. OAIster (University of Michigan digital library at www.oaister.org) is an example of just such a system.

- **MODS (Metadata Object Description Schema)** is a bibliographic standard similar to MARC but expressed in XML.



Library Systems

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photos by Brant Bender

Some would call it the closest thing to a replacement for MARC. The standards are in development at www.loc.gov/standards/mods.

• **METS (Metadata Encoding and Transmission Schema)** is an XML wrapper for various metadata “packages” as well as component files. It is used as an all-purpose metadata package for digital objects. The standards can be found at www.loc.gov/standards/mets.

Tennant’s “Truths”

1. You don’t want to be first or last in any technology.
2. Everything you do should be geared toward the user.
3. Don’t expect users to know what they want until they see it.
4. Never underestimate the power of a prototype.
5. Always make a back up.
6. Buy hardware at the last possible moment.
7. Don’t buy software with a zero at the end of the release number.
8. Never bother with Silo systems (they don’t interact with anything else).
9. If you can’t be with the operating system you love, love the one you’re with.

• **RSS (Really Simple Syndication, Rich Site Summary, or RDF Site Summary)**. It is a simple XML standard for a small set of metadata elements that Web sites can make available to software applications (e.g., readers). It is useful for current awareness purposes, like blog readers or automatic Web site updates.

• **FRBR (Functional Requirements for Bibliographical Records)**, a conceptual framework that is able to bring similar items together at

various levels, whether at the work (*Hamlet: Prince of Denmark*), expression (a Russian translation), manifestation (third printing), or item (copy 2) levels.

• **Metasearching** involves searching two or more separate sources simultaneously. Often it includes merged and deduped search results and the ability to save, e-mail, or download citations. It also can include relevance rankings. The University of Rochester library Web site has a good example.

Tennant also stressed that libraries need to stretch beyond the limitations of their current library systems. We need to provide our users with more data, which can be achieved through value-added content, such as adding useable tables of contents data to bibliographic records, ONIX records from publishers, “authority” reviews (i.e., H-Net), and reader reviews. We need to provide better technology. And we need to provide better user interfaces (i.e., FRBR, faceted browsing). An example of some of these things can be seen at <http://redlightgreen.com>.

Tennant provided guidelines for making good technology decisions. When planning for technology, librarians should balance the present and the future and make sure that they keep in mind the mission and priorities of their institutions. Keep

everything in balance. Sometimes the “big guys” will be the way to go, but sometimes the new kid on the block will have the answer to your problem. Don’t put everything into something you have no control over; “open” is better than “proprietary.” And keep in mind that technology with a market share often overrides better technology.



Roy Tennant, user services architect at the California Digital Library, argues that libraries do not put themselves out into the public eye, which allows companies such as Google to dominate.

Acronyms in Action

Examples of technology put to good use

Web 2.0

<http://chicagocrime.org>

AJAX (Asynchronous JavaScript + XML)

Google Maps (<http://maps.google.com>)

Collaborative Filtering

<http://del.icio.us>

Amazon.com lists

Institutional Repositories

University of California eScholarship Repository (<http://repositories.cdlib.org>)

MIT’s D Space (<http://dspace.mit.edu>)

OAI-PMH (Open Archive Initiative-Protocol for Metadata Harvesting)

University of Michigan digital library (www.oaister.org)

MODS (Metadata Object Description Schema)

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METS (Metadata Encoding and Transmission Schema)

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Although the topic and presentation were very interesting, there was a disappointing aspect to this presentation. Tennant did not provide any examples specifically illustrating how all of this new technology could be used to help our legal community, which has some unique needs separate from libraries in general. On the other hand, this session was a wonderful illustration of how exploring outside of traditional legal venues can benefit all of us.

Tennant’s 2005 AALL Annual Meeting programs are available online at www.cdlib.org/inside/news/presentations/rtennant/2005aall. ■

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