

# On the Dublin Core front

by Norm Medeiros

Associate Librarian of the College  
Haverford College  
Haverford, PA

## The Evolutionary Research Process

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*"By the time you know what to do, you're too old to do it." -- Ted Williams*

### ABSTRACT

This article describes the evolution of key technologies that have improved the research process. The article notes that these advancements have occurred outside of libraries, and that future development, as evidenced by Google's ever-expanding array of innovative tools, will likely continue to be developed with little librarian involvement.

### KEYWORDS

Technological advances in librarianship ; access to electronic resources

**T**he first article I wrote for *OCLC Systems & Services* appeared in the 15:1 (1999) issue, a viewpoint piece that described the effects of digitization on catalogers as I saw it. I recently returned to this essay, happening upon it during a spring cleaning of my file cabinet. Some of the points I made in the article included:

- The online catalog has assumed a diminished role in the world of researchers.
- E-journals have become the medium of choice for disseminating scholarly information.
- The supreme information gateway is the library's web site.
- A cooperative database of e-resource records cataloged by librarians would be "the ultimate search engine experience."

Assessing these statements in light of today's environment yields a mixed bag. Let's evaluate:

*The online catalog has assumed a diminished role in the world of researchers.*

The role of the online catalog has continued to diminish given the many other tools available to information seekers. That said, the emergence of innovative search applications powered by Endeca and MediaLab have not only given promise to rejuvenating the catalog experience, they've spawned development of similar tools within the traditional library system marketplace.

*E-journals have become the medium of choice for disseminating scholarly information.*

E-journals are well entrenched as the format of choice for disseminating journal literature in most disciplines.

*The supreme information gateway is the library's web site.*

The library web site is not as convenient or simple to use as many of us would like to think. Yet libraries insist on developing evermore attractive portals to electronic resources, despite our users' disinterest. There are simply more direct means of accessing e-resources than through a library's web site.

*A cooperative database of e-resource records cataloged by librarians would be "the ultimate search engine experience."*

My referenced database of high-quality e-resource records was OCLC's Cooperative Online Resource Catalog (CORC), which although deserving of praise, was no where near successful enough to be coined "the ultimate search engine experience." This distinction goes to Google, which was far from an empire in 1999. To this day Google continues to evolve in an impressive way, the U2 of the search engine world.

## REFLECTIONS

In reflecting on the environment of the time and how it's progressed over the past eight years, I'm not surprised by anything that's happened. Google's ubiquity is perhaps the exception, though the larger mystery is why search competitors have not been able to imitate Google's success or even beat it to the punch once in a while.

What I think is worthy of note, however, is how in 1999 libraries still controlled the gates to information. Even if by that time publisher web sites had become the more expedient means to scholarly articles, libraries, through web-based catalogs and A-Z e-journal lists, still controlled the roads to these resources. The gateways to information we build and maintain today, however, are less immediate and less attractive than the gateways commercial entities provide. Since 1999, three initiatives have had a profound effect on the way users connect to electronic resources. Google, as noted above, is the most impressive of these. CrossRef and OpenURL link resolvers are two others that have largely removed from libraries the gatekeeper status. We still spend lots of time and money on creating and maintaining gateways - they are a "just in case" tool - but they are not the most immediate route to information. Although libraries ultimately control their users' access to commercial information - libraries, after all, pay the invoices -- outside agents provide the vehicles that transport users to this information. The concept isn't foreign, nor should it be one that necessarily concerns us. Abstracting and indexing services have for decades provided the means through which users locate journal citations. Libraries have been comfortable with this contract, especially given the unrealistic alternatives. In the case of OpenURL applications, libraries have a great deal to do with the success of this transmission protocol. The application is costly to libraries, both in dollars and maintenance, and it requires customization in order to assure users are lead down the most successful paths.

The following example illustrates well the way OpenURL link resolvers and CrossRef have simplified and made more immediate information retrieval:

### Circa 1999

1. A user in need of journal articles accesses an online abstracting and indexing service.
2. She locates a useful citation and searches for the title in her library's online catalog.
3. She finds the bibliographic record for the journal and connects to it via a hotlink in the record.

4. In the bibliography of the journal article she finds what looks like an even better article.
5. She reconnects to her library's online catalog and searches for the journal.
6. She finds the record for the journal and connects to it via a hotlink in the record.

#### Circa 2007

1. A user in need of journal articles accesses an online abstracting and indexing service.
2. She connects directly to the article through an OpenURL embedded in the citation.
3. In the bibliography of the journal article she finds what looks like an even better article.
4. She clicks on the citation and retrieves the full-text via CrossRef.

Both examples presume the library subscribes to the sought after e-journals. If that wasn't the case, the 1999 user would need to continue searching her library's catalog for journals. The 2007 user, however, would be informed through her library's OpenURL link resolver whether the title was available, and if not, how to retrieve it. The example above also presumes the 2007 user didn't go first to Google, a stretch indeed.

#### **LOSING OUR GRIP?**

The future of the online catalog is a hot topic. Much has been written about the catalog's diminished use among undergraduates.<sup>1</sup> In response to this threat and the general perception that academic libraries are losing their place in the research lives of their users, collaborations are underway to rejuvenate the catalog. Products such as Endeca's search application, pioneered at North Carolina State University, help the clunky catalog provide successful experiences. Library management system vendors are also getting into the act. The promise of this technology is great, but so too are the costs. Yet the cost of obsolescence is greater.

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1. See Karen Calhoun's "The Changing Nature of the Catalog and its Integration with Other Discovery Tools" <<http://www.loc.gov/catdir/calhoun-report-final.pdf>> and the University of California's "Rethinking How We Provide Bibliographic Services for the University of California" <<http://libraries.universityofcalifornia.edu/sopag/BSTF/Final.pdf>> as examples of this literary trend.