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ATG Special Report — reSearcher: The Open Source Solution for Managing Electronic Resources

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Abstract

The onerous cost of traditional vendor electronic resource management products have often excluded smaller academic libraries from providing basic services such as OpenURL link resolving, federated searching, etc. At very best, libraries often forsake one service for another, and therefore, are unable to provide the same level of comprehensive research capabilities as larger, well-funded academic libraries. Fortunately for small academic libraries, the zeitgeist of open source software has inspired the Simon Fraser University Library to provide an open source integrated suite of electronic resource management products called reSearcher which has been adopted by a broad spectrum of academic libraries — from research to community college libraries.

This session will focus on demonstrating several components of reSearcher as well as describing its implementation. reSearcher’s efficacy will also be compared to some commercial offerings

Introduction

As many community and two-year colleges experience unbridled enrollment growth, library budgets at many of these institutions either remain stagnant, or even worse, are reduced. Located in the Upstate region of South Carolina, Greenville Technical College’s (GTC) enrollment has grown from 7,000 to 10,000 full-time students in the past several years and boasts the largest number of matriculated students of any technical college in the state. Despite the College’s recent success in attracting students and gaining a statewide reputation for some of its academic programs funding consistently remains earmarked toward developing academic programs and the construction of several branch campuses. Unfortunately, the Greenville Technical College Library’s budget has not been increased in four years. Concomitant to physical campus growth is the expansion of distance education within several academic disciplines. In addition to several existing programs in computer technology, health sciences, business, and liberal arts, GTC began offering an Associate of Science degree via distance education in 2007. This climate could be very challenging for a library with a modest and vulnerable budget to provide effective services that meet the needs of a growing, diverse student body and faculty.

In terms of electronic resources, the library’s online presence needed to move beyond remaining a static portal for database access and become a more inviting environment for resource discovery. It was imperative for our services to fully address the fact that our students and faculty heavily rely on electronic resources, the former primarily concerned with retrieving full-text articles whenever possible. Other two-year institutions, moreover, were providing resource discovery technologies such as an interactive journal database, an Open URL link resolver, federating searching, etc. Out of the sixteen technical colleges in South Carolina, three have an A-Z journal title list service and federated searching. It is not surprising that the second and third largest technical colleges are in that group. None of the technical colleges have an Open URL link resolver, or an Electronic Resource Management System (ERM). This is in stark contrast to most four-year colleges in the state that have most of the aforementioned electronic resource access and management technologies. Even though this digital divide is not surprising, there is now a way for indigent institutions to narrow this gap. This paper illustrates how the Greenville Technical College Library effectively narrowed the digital divide between themselves and four-year institutions in South Carolina by opting for a comprehensive open source solution for managing electronic resources.

Discovery and Implementation

The path leading to open source solution began with many attempts to secure a vendor-based A-Z journal listing service and Open URL link resolver package that was affordable. Initially, in 2004, the library purchased EBSCO A-Z and included print titles in this database. Over time, numerous open access titles were added to EBSCO A-Z, but these resources were not “free” as the overall cost of EBSCO A-Z sharply increased, rendering this product unaffordable. How can a library of modest means continue to provide open access journals when the vendor of the electronic journal listing service increases the subscription rate based on the number of titles added? Instead of tacitly accepting these circumstances, the library sought alternate solutions such as partnering with other institutions. The library approached members of their consortium, the South Carolina Information and Library Services Consortium (SCILS), for a possible group purchase of a vendor-based product. Two member institutions already subscribed to packages from Serials Solutions and had no desire to expand beyond A-Z listing and federated searching. The other nine member institutions were simply not interested during the time this was discussed.

Due to lack of interest from SCILS members, the library had to seek other alternatives. The library investigated other vendor-based products with little success; in some cases, the subscription costs were cheaper than EBSCO, but the library would have to choose both journal listing software and federated searching, in favor of journal listing software and link resolving package. Because an Open URL link resolver was a priority over federated searching, this was not tenable. Even when an Open URL link resolver was bundled with a journal listing service, the subscription rates were still prohibitively expensive for the library. At this point, finding a vendor-based ERM was not a consideration. The library, however, entertained the notion of creating an in-house ERM system with Microsoft Access, but there were not enough personnel to devote time to develop and manage this project. Consequently, the library continued to rely on spreadsheets and emails stored in disparate workstations. Cognizant of open source ILSS such as Evergreen and Koha, the Head of Technical Services, Rachel Erb, searched for open source software that

Figure 1. CUFTS Knowledgebase

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was analogous to commercial products. She stumbled upon reSearcher, emailed a technical contact, Kevin Stranack, and received a response within several hours. Due to the lack of technical support at GTC, it was not possible for the library to become a “software only” site. The library negotiated for hosting and technical support, paying Simon Fraser University $6000.00 for the first year of implementation, and $5000.00 for the second year. Despite these costs, the library still saved several thousand dollars.

reSearcher Modules

CUFTS A-Z

Developed in Canada at the Simon Fraser University for the Council of Prairie and Pacific University Libraries (COPPUL), reSearcher is an open source suite of electronic resource management products. reSearcher comprises several modules: CUFTS A-Z for serials and ERMS; GODOT for Open URL link resolving; dbWiz for federated searching, and Citation Manager for personal bibliographic management. Currently, CUFTS A-Z only allows databases that provide full-text e-journals in its database. This is a bit more restrictive than EBSCO A-Z which permits the inclusion of citation databases in its A-Z serial management tool, but the Library’s patrons are more concerned with full-text articles. It was serendipitous that CUFTS A-Z met the needs of the library’s patrons more than EBSCO A-Z. Furthermore, the fact that the GTC Library could now have an Open URL link resolving feature in its databases overshadows this concern regarding the exclusion of citation databases in the knowledgebase.

The knowledgebase contains information for more than 375 collections from a wide-variety of providers such as Gale, EBSCO, Blackwell, and open access collections such as the Directory of Open Access Journals, PubMedCentral, etc. (Stranack, 2008) (See Figure 1). CUFTS A-Z is frequently updated by the project managers at Simon Fraser University and simultaneously benefits from participants adding titles to the knowledgebase. The library was able to include aggregator, print and electronic publisher titles in the knowledgebase. The library was primarily responsible for maintaining the collection, but occasionally sought the assistance of the SFU Library. Being the first library in the United States to become a part of the reSearcher community, GTC had several unique resources that needed to be added to the knowledgebase by the project managers at the SFU Library.

Statistics may also be generated from CUFTS A-Z to assess usage and compare up to four resource title lists. The latter is useful in discovering overlap between two or more databases.

The user interface also engages users in an interactive, intuitive research experience. The tabbed search feature clearly presents search indexes such as keyword, subject, association, or social tag (see Figure 2). Browsing by alphabetical title is a standard feature identical to analogous commercial products. One of the more interactive features of CUFTS A-Z is the option for users to assign tags to their favorite journals for the purpose of creating custom lists based on subject, course name, etc. The spirit of social book-marking sites such as del.icio.us, LibraryThing, etc., is fully realized in CUFTS A-Z.

The library also has the option to restrict the social tagging feature to library staff, but the public can still browse the tags to access journal titles.

The journal record displays
The inclusion of social tagging is one of several key differences that set CUFTS A-Z apart from other commercial journal listing products. Social tagging is currently not a feature of either EBSCO A-Z or Serials Solutions A-Z journal listing products. Live updating of the knowledgebase is a feature of CUFTS A-Z and is consistently reliable. Even though EBSCO A-Z permits live updating, the Library has found there were frequent extended time intervals (sometimes up to 24 hours) between updating and when these changes were realized in the public A-Z journal interface. Live updating is not a feature of Serials Solutions A-Z and the knowledgebase is consistently updated within 24 hours.

Also, both EBSCO and Serials Solutions offer more database choices. Unique databases, however, can be added to CUFTS A-Z by simply contacting technical support. Despite this, the process is often expedient — updates are made within a few business days.

The A-Z journal listing databases often vary to what extent the public display is customizable. CUFTS A-Z and Serials Solutions A-Z offer more extensive options to brand and customize. For example, headers and footers are customizable to the extent that they can match the headers and footers of the library’s Website. On the other hand, EBSCO A-Z is rather restrictive, allowing the insertion of a logo and a few color changes.

CUFTS2MARC

The CUFTS knowledgebase also facilitates the access of electronic journal titles through the online catalog because it has the capability to generate MARC records which can be uploaded to an integrated library system (ILS) (see Figure 4).

The CUFTS2MARC module is essentially an online form that allows the cataloger to customize MARC records. Essentially, libraries are able to generate locally enhanced records either by the addition of MARC tags or by customizing existing fields. For example, many fields, such as the one pertaining to the URL (MARC 856) can be enhanced to reflect access issues. Specifically, the URL in the 856 field may be prefixed to show an EZProxy login URL. Both commercial vendors, EBSCO and Serials Solutions, provide a subscription service for MARC records, but CUFTS A-Z provides free MARC records.

ERM

The ERM is accessed from the administrative module of CUFTS. At the time of implementation at Greenville Technical College, the ERM was fairly skeletal and did not provide an extensive range of data fields. In 2007, the ERM has been upgraded based on the Functional Requirements of Electronic Resource Management: the Report of the DLF Initiative. The ERM now provides enough data fields to manage cost and renewal details, administrative information such as usernames, password, and trials, and links to license information (see Figure 5). Because of these significant enhancements, the library is finally able to manage their growing collection of electronic resources. Prior to implementing the ERM, the library’s cumbersome way of managing electronic resources consisted of storing usernames and passwords in a Word document.

The ability to manage database usage statistics provided by vendors is also a key feature of most commercial ERMs. In response, the CUFTS ERM can track statistics that are COUNTER compliant. At the time of writing this paper, the research team is investigating how to import Standard Usage Statistics Harvesting Initiative (SUSHI) compliant statistics in preparation for when most vendors will provide statistics that adhere to these standards. The ERM now allows the library to harness the potentiality of administrative, technical, and statistical information from its electronic resources.

GODOT

One of the more significant modules to impact the research experience of the GTC community is the Open URL link.
resolving module of reSearcher, GODOT because they can finally access full-text articles from citation or citation-dominant databases. Depending on the database, GODOT will usually link the citation with a direct link; when a direct link is not available, the software will provide issue or journal level links to the resource (Stranack, 2008). In order to use the full power of GODOT, it was configured to search GTC’s online catalogs (SIRS), Google, and Google Scholar. In the event an item is not found in any of the resources, a link to the library’s interlibrary loan form is included. This has been proven to be an effective way to promote interlibrary loan services. Since the implementation of GODOT at GTC, there has been a marked increase in interlibrary loan requests.

A feature that works in tandem with GODOT is Citation Manager. This product is analogous to other citation management products such as RefWorks, EndNote, etc. Citations can be either culled from GODOT or added manually and can also be organized in folders. Citation lists can be exported in XML, tab delimited format, etc., and are also compatible with Citation Manager’s major commercial reference management analogues.

An advantage that Citation Manager has over commercial citation management products is that access can be maintained after graduation (Stranack, 2008). The library can determine if access is to either cease upon graduation or continue indefinitely for alumni. At the time of implementing reSearcher, the GTC Library did not actively promote Citation Manager and whether or not it will be incorporated into its bibliographic instruction program remains uncertain.

dbWiz

One of the modules currently not implemented at the library was the federated search engine, dbWiz. Implementation was forestalled due to personnel changes. The person primarily responsible for configuring dbWiz resigned to take another position in another state. Because dbWiz employs the CUFTS knowledgebase, configuration of this utility is quite simple. Like most federated search engines, dbWiz searches traditional library resources such as library catalogs, Z39.50 databases, and full-text/citation article databases. Web resources such as Google (even Ebay!) may be included. dbWiz also permits the clustering of databases by subject and course title or number. The ability to rank databases for each federated search cluster makes it possible to manipulate the order of preference in which databases are searched. To circumvent overwhelming students, the retrieval limit can be set to a certain number of hits. The end-user is able to sort the search results by date or by database alphabetically.

dbWiz is not as robust as other commercial federated search products. Serials Solutions’ Central Search, for example, allows more sorting options and has an export feature which dbWiz currently lacks. In essence, dbWiz is an inexpensive way for institutions to delve into federated searching.

CRDB


Future Developments

One of the potential pitfalls of taking the open source route is that there is a risk the software development will be either indefinitely stymied or permanently discontinued. There is clear evidence that this is not the case with reSearcher. In the near future the Greenville Technical College Library will benefit from several initiatives driv-
Conclusions

Implementation at GTC was very successful and the library is very proud to be the first participant from the United States in the reSearcher community. As one who was directly involved in all phases of its implementation, I can attest to not only the quality of this product, but to also the high level of professional service and assistance from the developers at Simon Fraser University. ReSearcher is slowly starting to garner attention from the open source library software community and some academic libraries in the United States are deciding to implement this product. For example, the Baker University Library, in Baldwin City, Kansas is using GODOT and CUFTS A-Z. Lee College in Baytown, Texas is in the process of implementing reSearcher. In late 2007, I presented reSearcher to librarians at the College of St. Mary in Omaha, Nebraska and there are plans for implementation in late 2008. As reSearcher emerges as part of the discussion regarding electronic resource management software, it will be interesting to see its overall impact on the development of subsequent open source library applications and commercial products.

References


