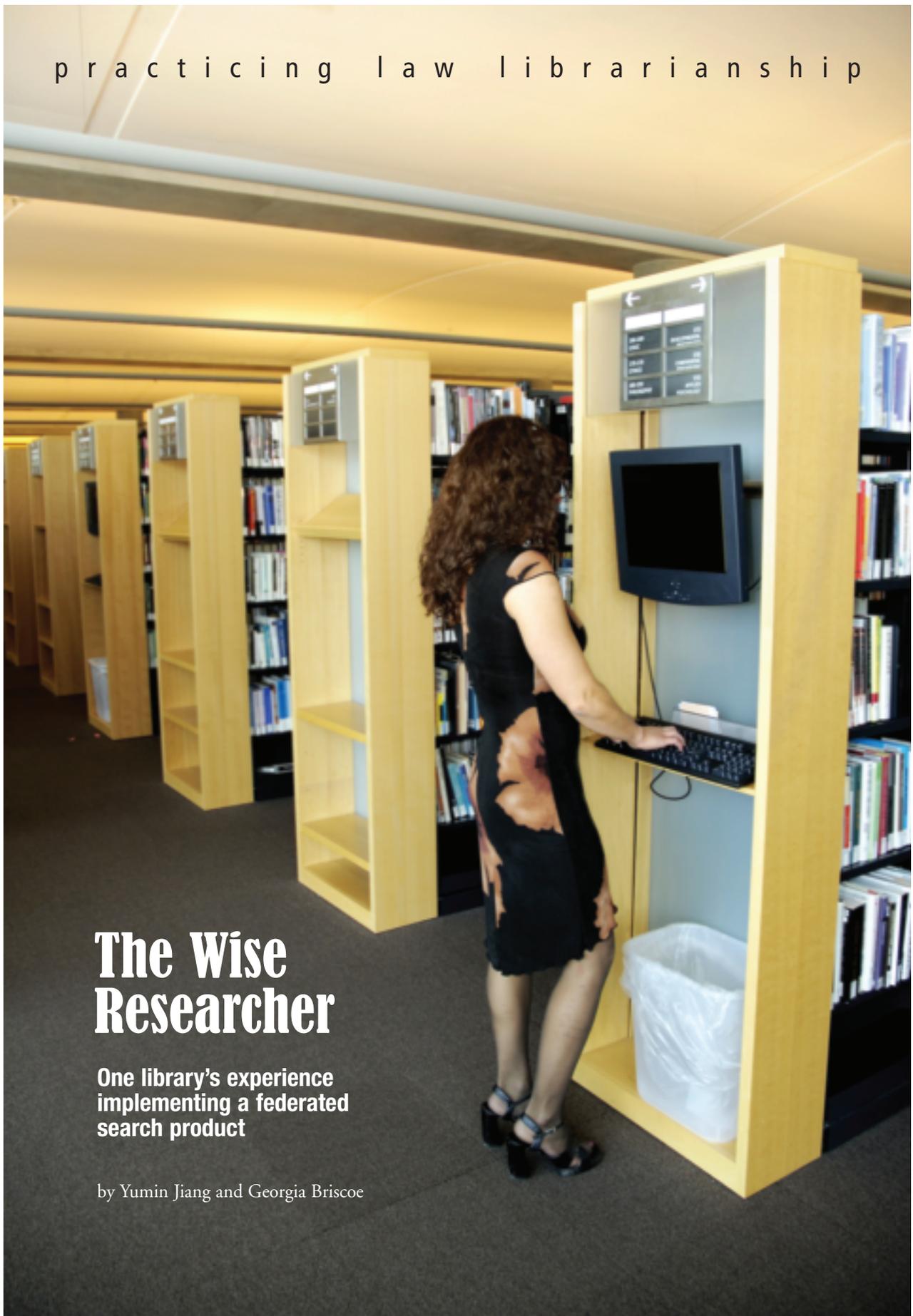


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# The Wise Researcher

One library's experience  
implementing a federated  
search product

by Yumin Jiang and Georgia Briscoe



Librarians face compelling pressure to keep their online services cutting-edge with the latest and greatest search tools. This pressure stems from patrons' desire to "get what they want now" with the least effort.

As users demand the instant gratification of the Google search box or Westlaw or Lexis, they no longer have the patience or time to become efficient users of different electronic resources, like the online catalog. Patrons often feel overwhelmed—or underwhelmed—by the additional tools librarians have to offer. Ultimately, librarians must be able to provide answers to users' questions quickly and easily, whether the user or the librarian performs the search.

Because it is often the specialty databases and electronic resources that ultimately hold the key to the information patrons need, users' lack of interest and motivation to learn about various databases can negatively impact their research. Additionally, libraries have frequently purchased these special electronic resources at considerable expense, and costs must be justified. Hence, the latest shift in access to information is for a new, more satisfying platform that will survey all of the library's electronic resources with one search. This platform has been called cross-database searching, metasearching, or federated searching.

Federated search products are useful to libraries that would like to improve their communities' access to electronic research materials. Providing broad access to detailed information that would otherwise require numerous searches in individual databases, these products allow users to query multiple resources and browse the collected results in a consistent, unified interface.

At the University of Colorado Wise Law Library, we have been following the developments in federated searching for several years, looking at software that searches multiple remote resources and merges the results into one coherent display. As the law school community has access to many useful databases licensed by the main library on campus, a federated search product would be a quick and easy way to search across the full range of available electronic resources. So, in the fall of 2007, with approximately 25 databases, several electronic journal packages, and numerous specialty Web resources, we felt the time was right to prepare a report on the major products available to perform the federated search we had in mind.

Technical Services Librarian Yumin Jiang took the lead, carefully investigating four major federated search products, as well as a few lesser-known options. The four major products were: ResearchPro from Innovative Interfaces Inc.; WebFeat from WebFeat of Old

Brookville, New York; MetaLib from ExLibris; and 360 Search from Serials Solutions Inc. Jiang's report on these products included a detailed comparison of each based on the following considerations: databases included, installation and maintenance, long-term commitment, price, search options, and result sorting and display capabilities.

Given the limitations of current federated search products coupled with our limited technical expertise and staff time, we were looking for a product that required minimal initial set-up time, little ongoing maintenance, and no long-term commitment. Of the options explored, the report recommended purchasing 360 Search, a product of Serials Solutions based in Seattle. The management team at the University of Colorado Law Library agreed with this recommendation.

### Implementation

Negotiating the price and reviewing the license was a straightforward process with Serials Solutions. Next, it was time to make important decisions regarding actual implementation. First, which databases would we include in the search? The more databases included in 360 Search, the higher the cost and the slower the retrieval time would be.

One major caveat: some of the most important legal databases could not be included. Lexis and Westlaw do not allow federated searches on their databases. For others, such as *BNA All*, Serials Solutions has not yet built the connection to allow the search.

Since we did not know exactly which databases would be best for inclusion, Serials Solutions allowed our library to include as many databases as we wanted at a decreased cost for the first year. This would allow us to gather statistical usage information to profile the product for optimal efficiency and cost for following years. Our final list of "connections" included approximately 75 electronic resources, including many databases licensed by the main campus library.

The second step in implementation was to add descriptions and subject captions for each electronic resource included in the federated search. Though not required, this additional information helps patrons better understand the databases, especially non-legal resources they may find unfamiliar. The subject captions allow users to narrow their searches to databases on particular subjects. Some of the subjects assigned included: arts and humanities, business and economics, computing and telecommunications, criminal justice, environmental issues, ethnic studies, law: foreign and international, and law: U.S. administrative. By clicking on a subject, only electronic resources with information on that subject are searched.

## 7 Steps to Implementing Federated Search in Your Library

- 1. Review the major federated search products available.** Consider databases included, installation and maintenance, long-term commitment, price, search options, and result sorting and display capabilities. Negotiate the price and review the license carefully.
- 2. Decide which databases to include in the search.** Take notice that some of the most important legal databases cannot be included. If possible, gather statistical usage information to profile the product for optimal efficiency and cost for following years.
- 3. Add descriptions and subject captions for each electronic resource included in the federated search.** This additional information helps patrons better understand the databases and allows users to narrow their searches to databases on particular subjects.
- 4. Help staff and users learn to use the federated search.** Create custom help screens, search tips, and other tutorials to make learning about the new search as easy as possible. Place these self-help tools prominently next to the search box and on the library's Web site.
- 5. Show off your new federated search whenever possible.** Hit your user base particularly hard with numerous presentations and e-mails about the product.
- 6. Listen to the feedback.** Form focus groups, send out surveys, and gather usage statistics to find out what users think of the new search and how they are using it.
- 7. Stay vigilant.** Be on the lookout for any changes or developments with the databases that could affect your federated search. And keep up with the next technology that can make your search even better for users.

We also requested a customized "Quick Search" category that included our top nine interdisciplinary databases (*Academic Search Premier*, *Business Source Complete*, *Digital Dissertations*, *HeinOnline*, *Index to Legal Periodicals Retrospective*, *JSTOR*, *Legal Periodicals* (continued on page 19)

*Full Text, Legal Trac, and Social Sciences Full Text*) plus our local catalog, *LAWPAC*, and regional union catalog, *Prospector*. Searchers can choose the specific databases they want to search, or they can search all 11 at once.

Birthing our new federated search product took about a month and was fairly painless. We christened our new baby the “Wise Researcher,” as we not only expect our faculty, students, and prose patrons to become wise by using it, but they are also using it in the William A. Wise Law Library, our namesake.

Our staff also created custom help screens, search tips, and a two-minute video tutorial to make learning about Wise Researcher as easy as possible. These self-help tools were placed prominently next to the Wise Researcher search box in the prime real estate section of our library Web site: the upper portion of the wide middle column on our homepage.

## Feedback

Like any new parent, we were anxious to know what our library family thought of our new baby. We showed her off whenever possible and loved to hear words of praise. Jane Thompson, our faculty services librarian, was extra conscientious with her numerous presentations and e-mails to faculty about the product.

Law students were bribed with food to participate in focus groups to evaluate our new Wise Researcher. Many liked the relatively quick and easy way to find relevant answers to their questions. Comments included: “Good way to kick off my research” and “Great for first-round scoop across all databases.” Students especially liked the faceting and clustering features, which allow easy refinement of their searches.

On the other hand, some students were overwhelmed by the number of results retrieved from both familiar databases and unfamiliar ones. Some were impatient waiting for search results, but when these results were on point, they said that the wait was worth their time.

We also recruited faculty members who do multidisciplinary research to try out the new tool. One of them is Kevin Doran, a research fellow at the Center for Energy and Environmental Security at our law school, whose research typically spans a wide range of disciplines such as law, economics, computer science, and sociology. Doran was initially uncertain about using Wise Researcher, as he was not sure it would provide the disciplinary breadth needed or enable him to mentally track the databases he searched. However, Doran was pleasantly surprised by the new tool.

“One of the features I appreciated most about Wise Researcher is that it allows a search to be sorted by journal, authors, date, title, and source,” Doran says. “This was the

kind of dynamic granularity that enabled me to run each search query through the journal and source filters—thus ensuring, to at least my satisfaction, that I wasn’t missing any relevant sources.” Doran also likes the “Clustered Results” feature, which makes drilling down into the search results “very easy and efficient.”

## Numbers

We diligently studied the usage statistics provided by Serials Solutions. Our 360 Search was released to us in late December of 2007. From January to May 2008, the top 10 most searched databases were (in descending order): *CQ Electronic Library*, *LegalTrac*, *Legal Periodicals Full Text (ILP)*, *Index to Legal Periodicals Retrospective (ILP Retro)*, *HeinOnline Law Journal Library*, *Digital Dissertations*, *Social Sciences Full Text*, *Academic Search Premier*, *Business Source Complete*, and *LAWPAC*. Of these databases, four are licensed by the main campus library.

For databases where we can obtain publisher-supplied usage statistics, we have seen dramatic increases in usage numbers during the first five months after the Wise Researcher went live. Comparing the statistics from the same period in 2007, searches in *Index to Legal Periodicals* increased 98.7 percent, and searches in *ILP Retro* surged 129.7 percent.

Unfortunately, we cannot compare the before-and-after usage statistics of databases subscribed by the main library, as we do not have any statistics prior to the implementation. However, during the focus group studies, students commented that they are now more aware of those interdisciplinary resources licensed by the main library and thus more inclined to explore those resources.

As with any family project, it is easy to let go once the delivery is done, infancy has stabilized, and everyone seems happy, but we learned that diligent watchfulness is necessary. Sometimes this vigilance is necessary to catch things we missed during implementation; sometimes it is necessary to catch any changes or developments with the databases. For example, the reason that our online catalog, *LAWPAC*, ranked low on the top-searched databases list is that it was only included in the “Quick Search” group. We want users to always include *LAWPAC* in their searches, but we incorrectly assumed that it would automatically be included in all subject groups; only later did we realize that we needed to add it to all groups.

Another issue is that the 360 Search connections are tied to databases’ native search interfaces. Thus, when database providers change their database interface or search functionalities, it might affect the connections. For example, the connection to *HeinOnline* went down in January 2008 because Hein released a

new search screen. Serials Solutions had to re-develop the connection, and it took them a few weeks to do so. Fortunately, Serials Solutions has an e-mail alert service to which users can subscribe to keep track of changes in connections. So far, our connections have been relatively stable.

## Conclusions

As many librarians have observed, current federated search products are far from perfect. They all use cross-search techniques, which often produce a dumbed-down search and a slow response time. A different approach is to locally index all library content and search only the index instead of all databases at once; this is the approach of Google Scholar.

Two newsworthy items on federated search products should be mentioned. First, the New England Law Library Consortium (NELCO) is working on a two-year grant from the Institute of Museum and Library Services to develop a Universal Search Solution. The project arose after Franklin Pierce Law Center reviewed current federated search products and found that none suited its needs. The NELCO product will be designed on open standards and open source software to create a master index of all library materials. Second, WebFeat was purchased in early 2008 by ProQuest, the parent company of Serials Solutions. WebFeat will be merged with 360 Search in the hope of producing an even better 360 Search product in 2009.

At the University of Colorado’s William A. Wise Law Library, our Wise Researcher federated search software has become one of the primary tools on our Web site to lure in users and give them a positive, successful search experience across the many electronic resources we have licensed. As of this writing, the University of Colorado Law Library has decided to license the AquaBrowser Library to enhance our online catalog.

AquaBrowser is one of the new discovery platforms that make searching even more relevant and snazzier with faceted browsing, word clouds, Web 2.0 features, and a better algorithm for relevancy ranking. AquaBrowser is marketed by Serials Solutions in North America’s academic market, and it will integrate with our Wise Researcher. With these developments, it seems that the holy grail of “one search box for all library resources” is within reach, at least for many of the legal and most of the non-legal databases. ■

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