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Re-inventing Federated Searching

Oliver Pesch

In 1998 WebFeat™ took the simple idea of allowing libraries to search any or all of their databases at the same time through a simple, common user interface and turned this idea into a product. Yet, four areas in the traditional process proved to be major time consumers: installation of the application at the customer site, tailoring the user interface to meet customer needs, identifying and configuring the resources that should be searched, and keeping the site and configuration information up-to-date. The new product is WebFeat Express, a budget friendly way for libraries to implement federated searching. *Serials Review* 2006; 32:183–185.

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Federated searching as we know it today started in 1998 when WebFeat™ took the simple idea of allowing libraries to search any or all of their databases at the same time through a simple, common user interface, and turned this idea into a product. Since then, with an explosion in the amount of information available online and the popularity of Web search engines, such as Google™ and Yahoo!®, the need for these search products continues to grow. And as more libraries have the need, so grows the need for federated searching that is more affordable to license and more efficient to operate.

The idea behind federated searching is simple—provide an end user with a simple search interface that will search a number of different Web sites simultaneously, pull back the results and present them to the user. Like many simple ideas, the technology that makes the process seem simple is actually rather complex. Unlike Google and Yahoo, federated search engines do not actually “index” the Web sites they search; instead, they use special software that performs a search on the actual Web site in real time. This software, known as a translator or connector, is customized for each Web site, and often needs to be customized for each database. Figure 1 provides a high-level view of the federated searching process.

In this figure, our user is searching all available databases for the term “Sports injuries.” The search, which was entered into a single search field, is passed to a series of translators, each knowing how to search a

specific database on a Web site. The translators perform the search and retrieve the most relevant records. The federated search accumulates the records from each of the translators and presents them to the user (Fig. 1).

Implementing a traditional federated search product takes time, energy, and planning. The software often runs on computers at the customer site, and databases need to be integrated. The user interface must be tailored to the customer’s specific needs. Implementation consists of planning, designing, coding, installing, configuring, and training by the staff of the vendor offering the federated search product. It is not uncommon for the timeframe from signing the contract to actual deployment to be many weeks or even months—and then it is not uncommon for only a fraction of a library’s resources to be made active and searchable. The high level of involvement from the vendor’s staff for configuration and training has resulted in the high cost normally associated with licensing and maintaining a federated search product. The high cost has put this tool out of the reach of the masses, and the high level of effort required for implementation has limited the number of new installations one federated search vendor can handle at a time. WebFeat, with considerable experience in installing and customizing these federated search products to meet the particular customer’s needs, recognized that the traditional approach to federated searching would not scale, so they set about to change that with the development of WebFeat Express.

The designers at WebFeat observed how A-to-Z list services and link resolver services offered hosted options with simple, customer-controlled administrative modules that not only kept support costs at a minimum, but

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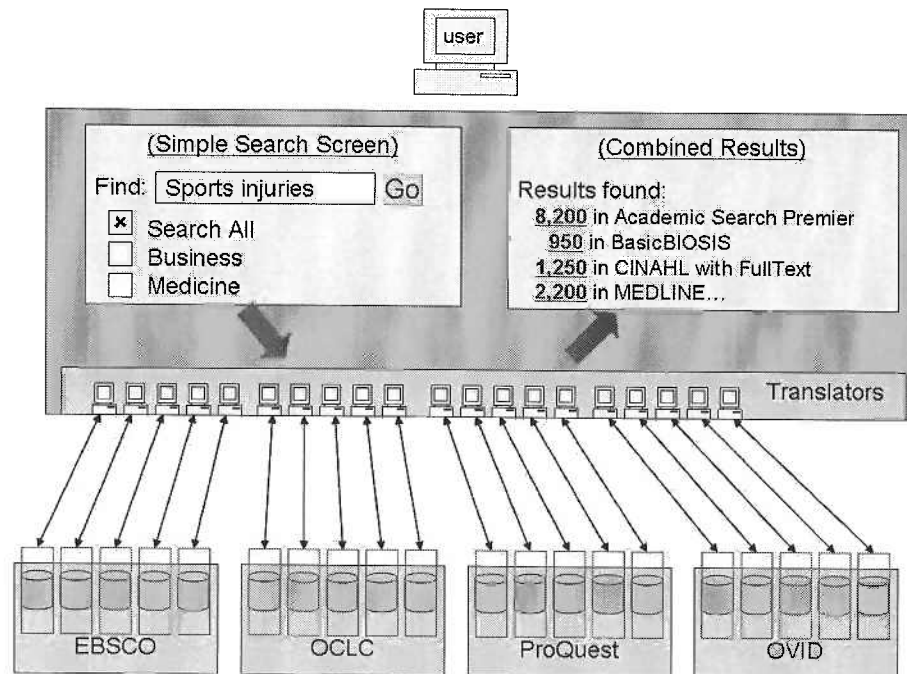


Figure 1. User search for “Sports injuries” with federated searching.

also reduced implementation times (e.g., a customer who licenses EBSCO’s A-to-Z online title listing service and LinkSource® link resolver can be fully functional within a matter of hours). These applications could also be priced much more affordably than traditional library automation tools. Todd Miller, president of WebFeat, asked himself why a federated search product could not follow the same model. Unable to come up with a good reason why not, he set his developers to work on making it so.

By analyzing the traditional implementation process for federated searching, Miller’s team was able to identify the major bottlenecks and proceeded to develop a better approach. They found that four areas in the traditional process proved to be major time consumers:

- installation of the application at the customer site;
- tailoring the user interface to meet the customer’s needs;
- identifying and configuring the resources that should be searched; and
- keeping the site and configuration information up-to-date.

The result of Miller’s team’s development efforts is WebFeat Express—an entirely new way to look at federated searching.

First, WebFeat Express is a hosted solution. Eliminating the need for the customer to acquire or provide hardware not only reduces implementation time by weeks, it also allows WebFeat staff to manage the site on behalf of the customer. A library no longer needs technical personnel on staff to manage their federated search product.

WebFeat Express addresses the user interface customization by allowing the customer to select from one of a number of preset templates to provide the general look and feel. The customer can then tailor the user interface using powerful branding options. All customization and branding can be accomplished in a matter of minutes using the WebFeat Administrative Console (WAC).

The WAC is a major innovation, as it gives tremendous power to the customer. Selecting databases and Web sites to search is as easy as choosing them from the WebFeat knowledge base (currently more than 6,000 translators are supported). The customer is guided through the set-up process and is prompted for usernames, passwords, or additional information as required.

Another key advance is the integration of the WAC with EBSCO’s A-to-Z knowledge base. For mutual customers, the benefits are tremendous, and ongoing maintenance is simple. The WAC automatically detects which databases and packages a customer has in their A-to-Z knowledge base and is able to pre-configure WebFeat Express for them. The WAC will also detect when a customer adds or removes databases from their A-to-Z account. WAC can also tell whether or not the library subscribes to EBSCO’s LinkSource product and will automatically activate the appropriate links in WebFeat if it does.

WebFeat Express was created for the budget-minded library, but do not be fooled by the low price tag. The technology at the heart of the WebFeat Express federated search is the same translator technology that is used on the “classic” version of WebFeat. Results can

be merged, de-duped, and sorted. Libraries can even create their own subject lists.

With WebFeat Express, federated searching has been reinvented. What was previously an application that required a great amount of care and attention to support has been transformed into a solution that is

not only easy for a customer to manage themselves, but also one that takes cues from the customer's other e-resource applications to make the process that much easier. The end result is a fully functional federated search product, priced for the smaller library to be able to manage itself.