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ONLINE DATABASES

Visualizing Search

By Carol Tenopir

EXPECT MORE SEARCH SYSTEMS to incorporate visualization and other sophisticated search and display techniques. They not only give a system a distinctive look, they also help users get deeper into results and stimulate thinking about search strategies. Instruction librarians can use these tools to move students and researchers beyond just plain search and retrieval.

Some traditional systems are now adopting new search tools that go beyond text results. They incorporate clustering and visualization into search display that sidesteps long lists of document titles and the tendency of users to select just from the first ten results and stop there. These new approaches might even help with the thought process that goes into information seeking and use (see "Visualize This," *LJ* 3/1/05, p. 34–37).

EBSCOhost content mapping

EBSCOhost has partnered with Groxis to offer the Grokker Visual Search. After a user conducts a search with either the EBSCOhost basic or advanced search, results are presented in a content map that displays hundreds of search results in clusters of related topics. Clusters are displayed as circles, with their size proportional to the number of results in the cluster and a square for each individual document within a cluster circle. Users can select an entire cluster, a subcluster within a larger cluster, or specific documents within a cluster and filter a search by keywords or publication date.

Many searchers never go beyond the first screen of traditionally displayed search results. EBSCOhost's Visual Search shows hundreds of documents instead of the first ten, organized in a cognitive way that lets users pick the clustered aspect of the search that is of most interest to them, refine their searches, and understand the relationships among documents in their search.

Searchers must have Java, and response time can be slower than with nonvisual searching.

Factiva 2.0 (beta)

Factiva 2.0, with its new "Discovery Technologies," is aimed at business professionals in corporate and academic settings as an alternative to Factiva's regular interface. Searchers enter terms in a simple search box, but Factiva 2.0 displays results in multiple innovative ways. At top is a date bar graph that shows the peaks and valleys of coverage

ated with text mining of the first 100 headlines in a search set. News clusters find repeated ideas and trends in a search to allow users to get deeper into results. According to a Factiva spokesperson, these features were developed to provide users with a "better way to find and understand events, trends, companies, and commentary that impact their decisions, tactics, and strategies." A display that combines visualization and text mining should help users both refine searches and better understand results.

Incorporating clustering and visualization into search displays drives users deeper into results

over time of the search topic. Mousing over the bars reveals the month, day, and year represented by each bar, and clicking on a bar will restrict the search to that date.

Other bar graphs on the Discovery Pane are based on the categories of terms in Factiva's Intelligent Indexing controlled vocabulary. The relative length of the bars shows which companies, industries, subjects, or sources are most common in the search set. Searches can be subsequently limited to any of the terms. The display helps users to see the bigger picture of their results, while making it easier to narrow searches by limiting a search to the clusters.

Relevance feedback and text mining provide additional ways for Factiva 2.0 business users to work with their search results to refine searches. "Did you mean?" connects users' input with Factiva's indexing terms to get better retrieval for a company name, industry, or topic. "More articles like this" uses the words in selected articles as input for a new query and is available in the regular Factiva interface in addition to 2.0. An innovation in 2.0 provides "news clusters," which are cre-

More to come

Factiva 2.0 and EBSCOhost are just the two latest mainstream online systems to enter the visualization arena. Several information companies and libraries are partnering with visualization software companies to incorporate products like Grokker and Touchgraph. Xrefer uses dynamic concept maps to display results and help users refine searches. Late last year CAS (Chemical Abstract Society) STN introduced AnaVist, a visualization tool for its scientific and patent information.

It is being marketed as a tool to analyze the "patent landscape" and for competitive intelligence, business planning, and analysis of research trends. With these purposes in mind, it is not surprising that STN AnaVist makes heavy use of spreadsheet-like displays and bar charts, familiar tools for the business user, in addition to cluster maps. Users have new options for searching with visualization, and seeing is believing.

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