

From Roger Summit to Tom Cruise

TRADITIONAL ONLINE'S ADOPTION OF NEW TECHNOLOGIES

by Mary Ellen Bates

Recently, driving down a two-lane road in Wyoming late at night, I suddenly had a desperate craving for coffee, preferably from a Starbucks. What to do? I pulled over, opened my Droid, downloaded a Starbucks-finder app, and got a map directing me to the nearest store that was still open, all within 30 seconds. In fact, I was miffed that the Starbucks site itself did not offer an app to do this—how better to attract customers than to make it easy for them to find you? All it offers is a static Store Locator page. That doesn't cut it when I don't even know what town I am approaching.

What Starbucks has not yet learned is that static webpages are so last century. Companies tout their Facebook pages, their Twitter handles, their LinkedIn presence, and their YouTube channels as vigorously as their website or, heaven forbid, a toll-free phone number. Customers are encouraged to interact with the company rather than just be informed about the company. Who knew, in 2004 when Burger King rolled out the Subservient Chicken website, that we would have real interactivity online in just a few years.

But wait! I seem to remember something related to the idea of interactivity way back in 1972. Ah, yes ... the

birth of Lockheed Dialog—the granddaddy of interactive online experiences, brought to us by the inestimable Roger Summit, who named it Dialog for a very important reason. Most query tools at that time were run against a database in batches with no user input after the initial query. It was a punch card mentality. Amazingly, Dialog let us run a search, see the result, add something to it, combine those sets with a third concept, tweak that, and then skim the retrieved titles, all interactively. This was revolutionary.

Fast-forward to 2002, and info pros were addressing IAOTWFF (it's all on the web for free). “No, it's not,” we would answer. “Look at the content that you can't get on the web. Look at the great search and output tools. Look at the dashboard we've built you.”

Sure, using the fee-based online services was not for the faint of heart; search syntax was unique to each service, and most were unforgiving of user error. You may recall that 2002 was the year that Tom Cruise used hand gestures to manipulate data in the movie *Minority Report*. I am sure that, like me, every info pro has those scenes memorized



and imagines himself or herself building complex search queries in the air with ease.

Sadly, gesture recognition has not yet made it past high-tech TV remote controls and video games. However, the premium online services have begun to adopt the philosophy and approach of web-based search tools and the collaborative web. While no one will mistake Dialog for Google, there are some promising developments for online researchers.

WHAT'S THE NEW NORMAL?

One of the biggest challenges of any large aggregator is making a user interface that is both simple and powerful. Libby Trudell, vice president of marketing at Dialog, once commented that a good UI should be like Microsoft Excel. Casual or infrequent users of Excel can easily create simple spreadsheets; power users can use the same interface to create complex equations. Likewise, the premium online services want to develop a search experience that is simultaneously intuitive enough for novice searchers and powerful enough for advanced searchers.

Just as customs have developed around website design—include a site map, have navigational links around the perimeter of the page, etc.—we have acquired certain expectations of web-based search tools. These include the following:

- Suggestions of alternate spellings
- Relevance-ranking of results
- Snippets of text, showing the search words in context
- Left-margin navigation/filter panel (think Google's search options)

Add to that what we now expect from the institutional-access and government-sponsored online services. The information aggregators have the challenge of providing power-search tools for info pros as well as intuitive searching for library clients. Look at EBSCOhost Academic Search Premier, OCLC FirstSearch, Gale's General OneFile, ISI's Web of Science, or the U.S. National Library of Medicine's PubMed. They all have a search screen that includes the following:

- Several search boxes, each of which allows the searcher to limit to a specific field through a pull-down menu

- A pull-down option to combine search boxes with AND, OR, and NOT
- Check boxes to limit search (by format, broad subject area, document type, and fields unique to a particular database)
- Truncation, phrase searching, nested logic, and other advanced search syntax



Academic Search Premier advanced search page

Search results screens always include the following:

- A left-margin refinement panel to limit search by various criteria
- Hyperlinked subject terms and other controlled fields
- Ability to save, print, and email individual items and a group of items

WHAT ABOUT THE HIGH-END SERVICES?

For many of the web-based information services, adjusting to the web was fairly straightforward; their functionality was relatively limited, so creating an interface that offered simplicity and ease of use was doable. When you start with a database full of controlled vocabulary and fixed fields, you can build a lot of intelligence into an advanced search screen.

However, how well can the expectations for web-based online services be met when the underlying data is not structured or uniform? Dialog (www.dialog.com) is a classic example of the problem. The records within Dialog include patents, chemical formulas, company financials, full-text articles, government documents, and conference proceedings, among other formats. How can the same interface enable searchers to find prior art for a patent, identify the

leading writers in a field, analyze competitors, and monitor government contracting opportunities?

PROQUEST DIALOG

As Dialog and DataStar become more fully integrated into their parent company, ProQuest, they are preparing to roll out a newly branded product, ProQuest Dialog. It will be rolled out in stages, with the pharmaceutical and biomedical content available by the end of 2010, followed in 2011 by science/technology, intellectual property, and finally business and news.

While the product is still in the testing phase as I write this, the features shown in the previews are generally expected to remain in the final version. Among the features I find particularly useful are these:

- The search results page includes a panel along the left margin with options for filtering the results by source type, title, keyword, subject heading, language, and date. I recognize the similarity with Google's search options panel, Factiva's Discovery Pane, and LexisNexis' Result Groups. Like them, you can use a slider bar to modify the date range to be searched.



ProQuest Dialog search results page (prototype)

- Users can add their own tags to individual Dialog records. What a great way to track down the article you remember seeing a few weeks ago but can't quite recall the title of.
- Abstracts can be translated on-the-fly from one of five source languages into one of 10 target languages. This is machine translation, which lacks a certain finesse, but who cares? Automatic translation of webpages by search engines is a fairly

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new development, which makes its inclusion in ProQuest Dialog even more noteworthy.

- The “Cite this” link generates a list of the citations of your selected documents, in MLA, APA, Chicago, and other citation formats. There is also an “Export citations/abstracts” link in the search results page that allows you to export selected records to a citation manager such as RefWorks.
- There is a box in the search results page with titles of “Other items you might like,” which match some, but not all of your search criteria. This is a great way to ensure that the searcher finds something of interest, even if not an exact match to the query.
- Hovering over a record in the search results page brings up additional information on the page, including citation, abstract, and keywords. I appreciate this feature in Bing.com, and it’s interesting to see it in Dialog. Pricing issues regarding viewing content in a pop-up window have not yet been resolved; the prototypes are for enterprise subscribers.
- A new My Research area serves as a workspace where you can file search strategies, store documents, search your user-defined tags, read RSS feeds, and scan your Alerts. I anticipate using this area frequently as a way to keep my research projects organized and documented.

One other intriguing feature of the new Dialog is an easy way to add and subtract various words and phrases to the original query. As you use the left-margin navigation panel to narrow your search, each of your filters appears in a box above the search results. You can easily add or remove filters and compare the results. This feature ranks high in the “Tom Cruise Factor”; I can flip through various aspects of my search with a single click, and I can imagine that click becoming a mere twist of my finger.

DOW JONES FACTIVA

Dow Jones rolled out its web-friendly interface in 2006, back when it didn’t seem possible to have one interface for both info pros and less experienced users. Its tabbed search page lets users choose between a Simple Search and a Search Builder (which, despite its name, also lets users write their search in traditional Boolean). While this doesn’t match the Excel model, the choice among the search forms is transparent.

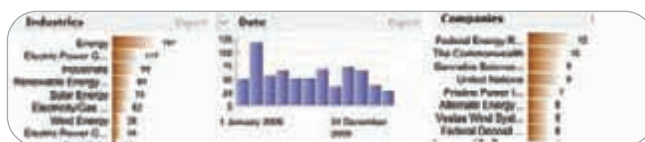
The Simple Search page includes a single search box along with pull-down menus to limit the search by type of publication and by date range. The Search Builder page offers two additional choices. The Search Form, like many advanced-search webpages, has boxes for words to combine with AND, OR, and NOT. Fill them in and they are inserted into the query box. The Free Text Form requires the search be written out in correct syntax; this is a tool for power-searchers only. Numerous options to limit the search by type of publication, broad topic, industry, and so on, exist.

An intriguing feature, currently in beta, is the Concept Explorer in the Free Text Form. Click on any word in your query, and up pops a thesaurus-like list of related terms, any of which can be added to the search with a click.



Factiva Free Text Search screen

The search results page is the same for all users; the usual list of articles with check boxes to select the ones to view, download, or email. The Discovery Pane on the left margin provides some nice data visualization tools to give searchers a sense of the relative importance of particular topics, names, companies, and so on, within the search results.



Factiva Discovery Pane

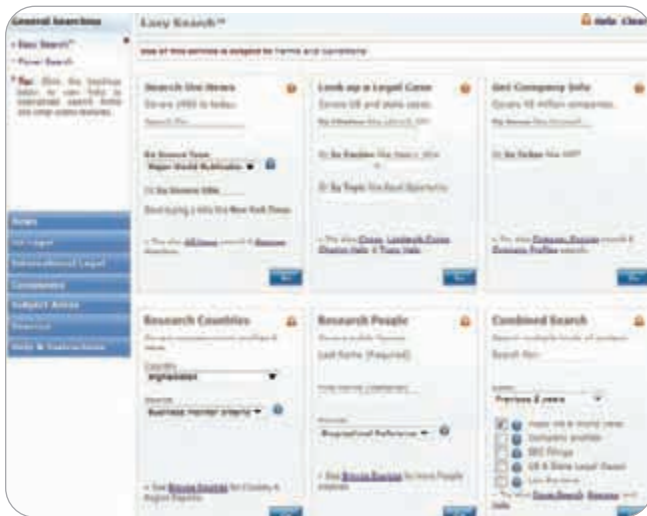
Another great feature, which we will see in ProQuest Dialog as well, is the option for ad hoc machine translation of articles. This option translates a paragraph or two at a time, or you can wait for it to translate the entire document at once. Currently, nine languages can be translated into English, and English-language documents can be translated into those nine.

Transparency and collaboration are vital aspects of the web’s new normal. Look for Factiva’s blue button marked “Dow Jones Idea Share.” Click to find an interactive community where Factiva encourages you to share your thoughts, ideas, complaints, and suggestions for improvement.

NEXIS

Nexis (www.lexisnexis.com) rolled out a newly designed web interface for its Academic product in July 2010. For further explanation, see Marydee Ojala’s NewsBreak (<http://newsbreaks.infotoday.com/NewsBreaks/LexisNexis-Kicks-a-Goal-Towards-a-New-Platform-68222.asp>). Like Factiva, Nexis may not pass the Excel simplicity test, as it has two separate search forms—Easy Search and Power Search. That said, Nexis has made the most of each format. Note that both formats include the left-margin navigation pane with links to broad search categories, making navigation among broad record types intuitive.

The Easy Search is a nice collection of search templates for specific types of common searches, as well as the option for a free-text search. Unfortunately, that last (and possibly most useful) option is buried at the bottom corner of the grid, making it difficult to find. For a “simple” search page, this one feels far more preweb than its competitors.



Nexis Easy Search

Nexis' Power Search offers the option of using natural language or command terms and Boolean connectors—a nice feature when you are having trouble nailing down the topic. Access to in-depth indexing is tucked away within pull-down menus, making this an easy way to access a number of features.



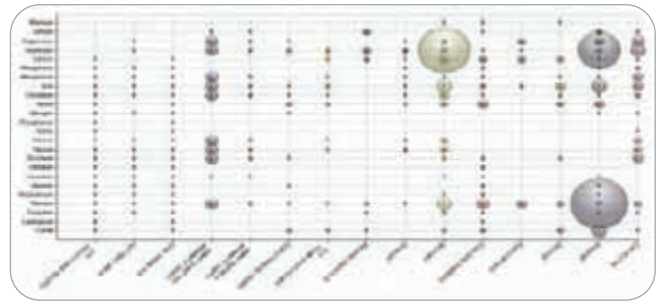
Nexis Power Search

ORBIT.COM

While not usually considered one of the “Big Three” online services, Orbit.com is too cool for this data geek to pass up. Even for those of us who don't specialize in intellectual property, the data visualization offered by Questel's intellectual property (IP) portal is noteworthy.

Since patent records consist of many separate data fields, they lend themselves to data mining. Orbit.com has made this simple by preparing search result output formats that encourage insight. Yes, an online service that anticipates how you might glean intelligence from its services, and facilitates the process! As you look at these examples, imagine how you could use these kinds of tools to mine a collection of articles, a set of statistics, or a database of members of boards of directors.

An interesting output format is a table that looks for correlations between the materials in patented products and the patent assignees. This could be a useful indicator of whether a competitor is moving into a new technology, with the answer in a visually compelling format.



Orbit.com table

One difficult research task is to determine who people collaborate with professionally. Orbit.com can generate a dynamic map showing relationships among inventors based on who was listed as patent co-inventors. Again, here is a fascinating tool that could be applied in a wide number of contexts.



Orbit.com relationship map

While Orbit.com is limited to IP research, we can hope that data mining tools migrate to the Big Three. These kinds of features enable us info pros to come close to using our hands to play with information.

TOM, MEET ROGER

Upon review of all the current web interfaces, however, my ideal is beyond even Orbit.com's Tom Cruise-worthy attempt. My dream of the perfect world includes a mashup of the innovative thinking of Roger Summit (“What? Let users interact with the data? Are you mad?”) and the über-coolness of Tom Cruise interacting with information by hand gestures. In fact, given Roger's skills on the piano, I can see him moving search sets around with a flick of his wrist. My fingers are itching to get at the hidden intelligence within a set of articles or a database of Securities and Exchange Commission filings. Ah, the possibilities ...

Mary Ellen Bates (mbates@batesinfo.com; Batesinfo.com) is already practicing her Boolean hand gestures.

Comments? Email the editor (Marydee@xmission.com).

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