Introduction to Company Research Strategies, Search Techniques, and Data Resources

Company research is a tool for gathering information on a specific company. One might use this tool for a variety of reasons; the target of the research may be a competitor, a customer, a potential partner, or an adversary in a lawsuit. The client who will use the research data may be a coworker or other business associate, your boss, or even you. The research techniques in this volume provide an efficient and straightforward way to gather company information that is readily available from a variety of sources.

Some situations will require techniques beyond the scope of this volume: extremely detailed information, sophisticated analysis, or analysis of a company in a broader context than can be provided by looking only at company data. Other volumes in this series provide guidance for such situations, examining ways to find additional information, identify special-purpose resources, and describe the analysis of data in a particular context.

To determine which tools you will need in a given situation—namely, the sources used, the amount of information gathered, and the method of data analysis—you must first consider the purpose of your research. How will the information be used by your client? Identifying the client's needs allows you to limit the scope of your search, develop more successful research strategies, and more fully understand the results of your research.

DEFINING THE RESEARCH PROBLEM: WHAT IS THE QUESTION?

"What can you tell me about the XYZ Company?" This is a typical request for company research, and it doesn't take one very far. The biggest challenge in researching a company is not finding the information but rather finding out what your client really wants—a process that should take place before you begin your research.

You cannot develop an effective search strategy until you know precisely what the question is. If you do not answer the correct question, your client will not be satisfied no matter how hard you work. An executive who asked for a company's "financials" but really wants only the quarterly revenue figures released yesterday will be unappreciative of the thorough analysis of the company's financial condition you performed. You must somehow transform a general request for information, such as "What can you tell me about the XYZ Company," into something more targeted, such as "We're considering hiring the XYZ company to manage the launch of a new product. Can they handle a project of this size?"

The reference interview is the process of identifying precisely what kind of company research will help your client make a sound decision or solve a problem. This gentle interrogation lets you and your client determine exactly what facts, opinions, or stories are needed. The goal of the reference interview is a detailed restatement of the original request that satisfies both you and the client. This restatement should define the exact information needed, identify time and budgetary constraints, and describe delivery formats.

An experienced researcher will understand that the client's goals may be less than clear and will direct the interview accordingly. Your clients may not be familiar with all the kinds of information you can retrieve and how it can help them. Frequently, your clients will not be able to articulate their questions completely because they have simply not given the matter enough thought. Clients are often reluctant to tell you exactly what they need because they fear that it doesn't exist. They may also be reluctant to reveal their ignorance. You will need to rely on all your communication skills to conduct an effective interview. "Would it help you if I could find X?" is one of the key questions you should ask. The skillful interviewer can help the clients identify the needed information without making them feel like criminal suspects or ignorant schoolchildren.

It's also important to consider the logistics of the interview. It may be tempting to conduct the interview over the telephone or via e-mail, but don't underestimate the value of a face-to-face encounter. Telephone interviews can be effective, but they don't provide the visual cues that can help you direct the interview. For example, let's say that you suggest a particular avenue of research and this produces a puzzled expression but not a verbal question. In a telephone interview you miss this response altogether, and thus miss the opportunity to explain your reasoning more thoroughly. Meeting in person allows you to take advantage of other nonverbal communication, as is often the case with engineers and others who tend to communicate graphically, often sketching out their information needs even if they are not discussing a technical subject.

Conducting interviews via e-mail is difficult if not impossible unless you know your clients well and have worked with them on numerous occasions. You may use terminology that is unfamiliar to your clients, and you may misinterpret terms they use. Unless requests are extremely simple and straightforward, follow-up telephone calls will be essential. At the very least the process will require several exchanges. For these and other reasons, the best way to conduct a reference interview is in person. Tone of voice, facial expression, and body language will all help you in guiding the conversation.

The structure of the interview is also important. Before you meet with your client, you should have a good idea what you will need to know and have a strategy for obtaining this information. The interview should answer several questions, including: Who will use the information and why? What does the client already know about the company in question? and What are the time and budget constraints?

Defining the Depth of the Project: How Will the Information Be Used?

When you know why your client needs the information, you will have a good understanding of the depth of the project and will be able to identify the optimum delivery format. During the reference interview, ask questions such as:

What do you plan on doing with the information?
What decision are you trying to make?

Will you be incorporating the information into a report?
Why is this company interesting to you?

Again, identifying the purpose of the information will help shape your research. For example, if you are asked to compile a corporate profile because your client met the company's president at a Chamber of Commerce dinner, a record from Hoover's Online[1] may be sufficient. But if your client wants a company profile because he or she is interested in a company as an acquisition candidate, extensive and expensive research will be needed. In either instance, your client may not be able to tell you exactly what elements should be in the profile. But if you understand the reasons behind the inquiry, you can suggest items for inclusion. You could, for example, show the client who knows little about the company a sample profile from Hoover's. In the case of the acquisition candidate, you could suggest available data and discuss sources to construct a profile specification.

Finding out how the information will be reported can also be critically important. Let's say your client is a marketing manager who wants to know about the advertising campaign of a competitor. If the manager is writing an analysis on the effectiveness of the competitor's campaign, you will look for articles in advertising trade publications, presentations by the competitor's advertising staff, Wall Street analysts' reports, and press releases. If the manager is developing a PowerPoint presentation illustrated with the competitor's ads, you will need to find downloadable versions of the ads or obtain issues of the publications in which the ads have appeared so they can be scanned.

Identifying the Ultimate Consumer of the Information: Who Wants to Know?

Knowing who will use the information can also help you refine the research problem. An inquiry about a company that comes from a CFO will probably be quite different from an inquiry that comes from a marketing manager. The questions you ask in the reference interview will vary with the identity and job function of your client.

1. Hoover's Online, at *http://www.hoovers.com*, delivers continuously updated intelligence on public and private companies worldwide. Dun & Bradstreet recently acquired Hoover's.

For instance, you might ask the CFO:

Do you need a 10-K? (the annual report filed with the Securities and Exchange Commission [SEC])
Are there specific financial numbers you're looking for?
Do you want to know about ownership?

You might ask the marketing manager:

Do you want a list of the company's products?
Do you need to know who their advertising agency is?
Would information on their share of the market be useful?

If you are dealing with an intermediary, such as an administrative assistant, analyst, or lab technician, you will want to know who the ultimate recipient of the information will be. The information needed by a patent attorney will be different from that needed by a chemist, even if the request relayed to you sounds very much the same. If at all possible, convince the intermediary that you need to talk directly with the client. In most cases, working only with an intermediary will complicate the reference interview process. The exception is an intermediary who has worked with you enough to understand the level of detail you need in a request and can also explain to your client the kind of information available.

Defining the Project Scope: What Does the Client Know Already?

Learning what the client already knows is a critical element of the reference interview, helping you not only to define the project but also to ensure that you satisfy the client. Sometimes it is enough to ask what brought the company to the client's attention. Let's say that your client saw an extensive article on the company in *Fortune Magazine* or saw the CEO on a talk show. You need to know this so that you don't conclude that the article in *Fortune* has all the information the client needs. If your client formerly worked for the company and has heard rumors of management changes, you need to know that, too. Otherwise, you might pack your corporate profile with information that your client is already familiar with. On the other hand, if your client is new to the business, you may need to include industry background that will help put the information in perspective.

To find out what your client already knows about the company, ask questions such as:

Have you been following this company for a while?
Do you need any industry information?
Have you researched the company at all?

In the age of easy access to information on the World Wide Web, there is a good chance your clients have already checked the target company's Web site. They may have used other sources as well. You need to know not only what they checked, but also what they retrieved and how satisfied they were with the information. Just because they checked a corporate Web site, for example, doesn't mean they got what they wanted; the information needed may be there, but your client may not have been able to find it. Or your client may have retrieved a quarterly report from EDGAR[2] and assumed that it was the most recent financial data available, not realizing that a press release provides initial figures for a more recent quarter. Your client's department may subscribe to more sophisticated, subject-specific sources than you do. You want to avoid duplicating your clients' efforts if they were productive, and you want to avoid telling them what they already know.

Constraints: How Does the Availability of Time and Money Affect the Project Scope and Depth?

The time available to perform a research project and the cost of the information can dramatically affect how the project will be conducted and the amount of information that will be retrieved. Since an enormous amount of company information is available online, the instant gratification most clients expect is often possible, depending on the breadth of information needed and the time constraints you are working under. For instance, the client who needs a corporate profile for a meeting in an hour will probably be satisfied with a stock profile from a service such as Hoover's or Factiva.[3] However, in many cases the information needed to satisfy a request must be retrieved from a variety of

2. EDGAR, the Electronic Data Gathering, Analysis, and Retrieval system, at *http://ww.sec.gov/edgar/searchedgar/webusers.htm*, allows retrieval of forms submitted by companies to the SEC.
3. Factiva, a Dow Jones & Reuters Company, provides global content covering nearly eight thousand sources, including Dow Jones and Reuters Newswires and the *Wall Street Journal* at *http://ww.factiva.com*.

sources on several online database services and Web sites. Both the retrieval and the subsequent organization, formatting, and analysis of the information into a report that is readily accessible to the client take time. The parameters of the project should fit the budget, taking into account the costs of the research and its value for your client.

In fact, you may have difficulty gauging the seriousness of a request until you reach the discussion of cost. Predicting costs for a complex project is always difficult. If you pay for the sources you use on a transactional or pay-as-you-go basis, you can allocate costs to the project at hand. Whatever the method, it's important to give your client a cost estimate that is as accurate as possible. You should then find out what value your client places on the information. Once you have reached an agreement with your client on the information to be provided, estimated the cost, and determined the value, you can make any adjustments necessary to bring these three elements in line.

If the value of the research to the client appears low compared to your cost estimate, you can work with the client to reduce the scope of the project or prioritize the elements of the project. If the value of the research appears high compared with your time estimate, you can negotiate a longer schedule to complete the necessary research. You want to avoid spending three-quarters of the project budget, in money or in time, on an element that is of marginal importance. A useful technique is to identify the elements that are essential, as opposed to those that will be useful if time and funds are available.

Answering the Right Question: What If Neither You nor Your Client Is an Expert?

When a client approaches you with a request for information that you don't understand, you should ask your client for clarification. An understanding of technical terminology and industry buzzwords is essential for effective searching. Knowing how a company fits into its industry can also be helpful. If you are looking for companies that manufacture a particular industrial chemical, for instance, you may need to know the generic class of the chemical. Is it considered a "fine" chemical? Are any of the companies known to the client? What is the chemical's primary use? Questions such as these should help get you to the right databases and directories. If your client has asked for a specific financial figure,

you need to know where it is likely to appear in the 10-K. Will it be in the tables or in the footnotes? If you don't know, you should ask. Even if you think you know, you should still seek verification.

What can you do when your client is unable or unwilling to enlighten you? Check specialized online dictionaries and encyclopedias. If you still have questions, look for an expert, starting within your own organization. If the request for information is from an intermediary or a too-busy executive, seek assistance from others in the client's department. If no internal resources can help you, check the Web sites of trade or professional associations. These sites often include documents designed to provide an overview of the industry or profession. Check your local library for books that provide an introduction to the industry or technology. Do an advanced search in Google[4] and limit the retrieval to sites with ".edu" extensions. You may be able to locate professors doing research in the subject area who will be willing to advise you. You can also check the *Directory of Special Libraries and Information Centers,* published by Gale Research and available in most public and university libraries. This directory lists corporate and government librarians; you may be able to locate several who specialize in research on your topic. Most will be quite willing to give you advice on how to approach your project.

Ask your client for permission before consulting an expert. Explain that you need a better understanding of the industry or technology to be certain that you are finding exactly what your client needs. When you seek help from an expert, be sure that you are not compromising your client's confidentiality. Be conscious of the possibility of creating intelligence opportunities for competitors. Even if you need only one specific piece of information, always ask a general question about the industry or process followed by several specific questions. Do not ask only one specific question. If you are researching a new industry in connection with a potential acquisition, consider whether your questions about the industry could tip off others to your organization's intentions. If you talk with someone at a trade association, could your inquiry be relayed to others? You may need to be circumspect even when you consult internal experts. Secrets within and between departments in the same organization are not unusual.

4. Google, at *http://www.google.com*, is a World Wide Web search engine indexing over 2 billion sites.

Deciphering the Question: What Is the Client Really Saying?

Conducting a reference interview will challenge your listening skills. You'll have to pay close attention to your client's responses. For example, when you said, "I can pull the latest 10-K for you," did your client hesitate slightly before giving a lukewarm assent? When you enthusiastically suggested sources, did your client seem reluctant to admit that this information won't be needed? Did your client use lots of qualifiers when asking for biographies of executives—words and phrases such as "short," "any type," or "whatever you can find"? When your client said that you need only research the 10-K and you asked what he or she hoped to find in it, did you get a vague answer?

There might be any number of reasons for this type of response: Your clients may be embarrassed to ask for things they think they should be able to find themselves. They may try to make the research easier for you by giving you a broad request rather than telling you exactly what they need to know. Clients will often ask for a document, book, or other source they are somewhat familiar with, even if they are not sure that it has the information they need.

If you miss the indicators, you may end up doing much more work than is needed. Getting clients to tell you what they need, how they'll use it, when they want it, and how much they are willing to spend is rarely easy. You may have to promise confidentiality, and you may have to patiently explain the resources available to you.

Some individuals will refuse to engage in the reference interview. They ask for corporate profiles or background on a company, and no amount of cajoling can entice them to be more specific. They refuse to tell you why they want to know and seem to have no particular budgetary or time constraints. All the open-ended questions you ask are turned aside. In those cases, you have to resort to questions that can be answered by yes or no. For instance, you might first ask "Do you need a 10-K?" and then follow with "Do you need quarterly financials?" and so on.

The reference interview also gives you an opportunity to manage your clients' expectations. Although you do not want to undersell your abilities, you should prepare your client for disappointment if you suspect the information will be difficult to obtain. A client who wants a detailed biography of a low-profile entrepreneur may have to settle for bits and pieces culled from the society pages and directory listings. Inform your clients of any

probable limitations of the research. Better that they be delighted when you find more information than they expected than disappointed that you couldn't find what they expected.

Depending on the circumstances, your clients may even be relieved when you find little or no information. A public relations agency trying to win a new customer, for example, may want to demonstrate a lack of coverage of the company in the press. A thorough search of newspapers and industry publications that turns up few mentions of the potential customer company will be welcomed.

Similarly, the absence of data may itself provide useful information. A finding that no patents have been awarded to a pharmaceutical company in the last five years may indicate management problems, an inadequate research and development effort, or both.

DEVELOPING RESEARCH STRATEGIES: WHO KNOWS THE ANSWER?

To develop an effective research strategy, you must carefully analyze the research question. You need to determine who would have the information; if, when, and where they would communicate it to the world; and how you can obtain cost-effective access to that communiqué.

Proprietary vs. Public Information

Not all information is publicly available. Trade secrets, such as the recipe for Coke®, are not available. Sales figures for particular products, organization charts, or financial information for divisions of companies will often not be available. Information that companies and individuals are not legally required to disclose may not be available. Even information that is disclosed to government agencies may not be available. Information provided to the Internal Revenue Service, for instance, is protected from disclosure. Some information collected by government agencies is not compiled, so it is not readily available.

Whether or not you will be able to access information on a particular company depends in large part on whether it is a public or a private company. U.S. public companies (those that sell their stock to the public) are required to file detailed financial statements with the SEC on a regular basis, and these

filings are made public. Publicly held corporations also provide journalists and Wall Street analysts with lots of information so they will write favorable articles that will encourage people to purchase the company's stock or buy its products and services. As a result, an enormous amount of information is available for public companies.

Private companies are a different matter. Private companies are not compelled to reveal financial data to anyone, aside from taxing authorities. They may provide estimates of revenues to services such as Dun & Bradstreet (D&B),[5] but they are under no obligation to be accurate. If they plan a public offering of stock in the near future, they may issue press releases containing financial information. If they sell bonds or other debt instruments to the public, some financial information may be available from the SEC. As a general rule, however, financial information is not available for private companies.

When a public company owns all the stock of a subsidiary (a *wholly owned subsidiary*, the subsidiary is a private company and only financial information that the company chooses to release will be available. If all the stock of a public company is purchased from the shareholders by the company or its officers, the company becomes private and financial information for future years will not be available, even though information from previous years continues to be.

Foreign companies present a slightly different challenge to researchers. If foreign companies sell their stock on U.S. stock exchanges, they are required to provide financial data to the SEC. However, the information available on publicly held foreign corporations that do not sell stock in the United States varies from country to country. For instance, public companies in Taiwan file information on a monthly basis, but in Britain financial data is reported only annually.

So, the first question to answer when embarking on company research is, "Is the company public or private?" This should be relatively easy to answer. Most public companies will have a section for investors on their Web sites. You can also search by the company name or a portion of the name in the EDGAR

5. Dun & Bradstreet gathers credit and other information on 75 million companies worldwide and makes the information available in a variety of formats through its Web site and through a number of online database services.

database or on Hoover's. Hoover's generally displays the stock ticker symbol for a public company, for example, "LUV" for Southwest Airlines.

The second question is, "Is the information I need something the company would want the public to know?" If the company is public, you will generally have access to rich information resources. If the company is private, you will need to use more ingenuity and may need to conduct primary research (see below). If the information is something the company would most likely keep secret, you will very likely need to use primary research techniques and may not be able to find the information at all.

Primary vs. Secondary Research

Research techniques and sources fall into one of two categories, primary and secondary. Primary research techniques collect data directly from primary sources. These include actual records—such as SEC filings, annual reports, or customer surveys—and accounts and descriptions given by the people involved—such as telephone interviews, speeches given by executives, or press releases issued by a company. Primary sources have not been interpreted, evaluated, or otherwise massaged.

Secondary research uses secondary sources, in which a person not directly involved interprets or analyzes events or data. These "second-hand" sources might include an editorial about a merger in a popular newsmagazine, a society columnist's description of a CEO's spending spree, and an economist's meta-analysis of earnings statements across an entire industry.

We will be discussing both primary and secondary sources, with a focus on retrieving information from Web sites and online databases.

Identifying Sources: Who Cares about the Question?

Your first primary source for many company research projects will be the company itself. Corporate Web sites contain tremendous amounts of information. Many provide detailed product and service descriptions, including lengthy white papers. Web sites for public companies generally include detailed financial statements and annual reports in Portable Document Format (PDF) that can be opened using the free Adobe Acrobat Reader software. (PDF preserves all the fonts, formatting, graphics, and color of any source document, regardless of the application and

platform used to create or view it.) The investor relations section of a company Web site often includes SEC filings, press releases with quarterly financials, and annual reports. Company Web sites may even include audio and/or video of presentations by executives and links to analysts' reports and to articles about the company. Biographies of executives, company history, and press releases are also common.

Often a company Web site will provide more current information than the online database services. However, statements on a corporate Web site represent only what the company wants the public to believe. For example, many companies would have you believe that each of their products is a world-class solution to a strategic problem faced by every enterprise. In addition, the financial data you will find there is generally unaudited and may include pro forma results, which may be markedly different from those calculated in accordance with generally accepted accounting principles (see Figure 1-1).

Figure 1-1. Sample of Pro Forma Financial Data

SEATTLE-(BUSINESS WIRE)-October 24, 2002

Amazon.com, Inc. (NASD: AMZN), today announced financial results for its third quarter ended September 30, 2002. . . .

Operating loss was $10 million, including restructuring-related and other charges of $37 million, compared with a loss of $70 million a year ago. Pro forma operating profit was $27 million, or 3% of net sales, exceeding the Companyís guidance of between $8 million and $17 million. This compares with a pro forma operating loss of $27 million in the third quarter 2001, an improvement of over $54 million. . . .[6]

Reprinted with the permission of Business Wire, Inc.

To obtain a less-biased viewpoint or a least a different perspective, you must locate other sources of information. You need to answer the question "Who cares about this product or industry or company?" The answer will reveal several additional research sources: Investors care about financial information. Customers care about product safety, reliability, and effectiveness. Advertising agencies care about marketing and advertising campaigns. The general public cares about things that are new, unusual, and sexy. Competitors care about everything. Once you have identified the interested parties, you can seek out publications intended for their consumption.

6. From the AMZN Investor Relations page, at *http://www.amazon.com.*

Online database services simplify the process by collecting databases from a variety of producers and grouping them by industry. For example, if you need to know how ExxonMobil handled the problem of competition between Mobil and Exxon service stations following their merger, you do not need to compile a list of industry publications. You can search the Oil Library on LexisNexis,[7] the Energy Industry News files on Dialog,[8] or the Energy publications on Factiva. Individual database producers gather publications in even narrower categories. The Gale Group Marketing & Advertising Reference Service,[9] PIRA (Packaging, Paper, Printing and Publishing, Imaging and Nonwovens Abstracts),[10] and Foods Adlibra[11] are examples of specialized databases.

Free vs. Paid Services

Newcomers to research often ask, "Why should I pay $2.95 for an article from an online database service when I can download it for free from the publication's Web site?" The primary reason is that doing your own search can be time-consuming, costly, and frustrating.

Will the best analysis of American Airlines's ranking in the industry be found in *Aviation Week & Space Technology,* the *New York Times,* the *Wall Street Journal,* the *Los Angeles Times,* or the *Dallas Morning News*? Unless you know the answer, you will need to search each publication individually. Most publication-specific sites have rudimentary search capabilities, leaving you to sort through dozens of articles that may be of only marginal interest. What's more, the search may not be free at all. Although the current issue of many publications is available for free on the publication's Web site, more and more publishers now charge for access to archival issues.

7. LexisNexis, at *http://www.lexisnexis.com*, provides information about legal and business affairs, news, and public records through a variety of search interfaces.
8. Dialog, a Thomson company, provides online information services in fields such as business, science, and engineering at *http://www.dialog.com*.
9. Gale Group Marketing & Advertising Reference Service includes documents on consumer products and services, advertising campaigns, product introductions, and news on advertising and public relations agencies.
10. PIRA provides comprehensive coverage of the literature of the pulp and paper, packaging, printing, publishing, imaging, and nonwovens industries. It covers both the scientific and business aspects of these industries.
11. Foods Adlibra, produced by General Mills, indexes periodicals and technical journals related to food products, production, marketing, and equipment.

Alternately, you can search them all at once on Factiva. By using an online database service you can search hundreds or even thousands of publications at one time. If you do any amount of regular research, an online service can soon pay for itself in time, convenience, and usability.

One could also ask, "Why should I pay for a subscription to an online database service when I can find thousands of documents by searching Yahoo! or Google?" The answer is because your client needs reliable information on which to base an important decision. Web search engines do not discriminate unless they accept fees for listings and placement in results lists. A Web search may indeed provide you with articles from reputable publications and government documents, but it will also give you documents from special interest groups, student papers, individual opinions, and carefully disguised advertising.

Remember, whereas editors of reputable publications do make an effort to check the accuracy of the works they publish, there are no such editors for much of the material on the Web. You may find a terrific, well-researched article written by someone with impeccable academic credentials, but with no discernable publication date. The article may be so old that the conclusions are no longer valid. You may find conference papers and presentations that include seemingly valuable information, but do not identify the sponsor or the date of the conference. Before you let a client rely on any information you gather, you must be able to tell the client who wrote the article, when they wrote it, and why they wrote it. You do not want an investment decision to be based on the opinions of a biased salesperson whose only goal is to sell a new stock issue.

You may also ask, "Why should I pay for financial data when I can get it free from EDGAR?" The answer depends in part in your time and budgetary constraints. Tables from filings on EDGAR are a perfect example of the data format limitations of many Web sites. With a conventional font such as Times Roman, the balance sheet columns do not line up correctly. Lines wrap where they should not, and column headings are not displayed at the tops of columns. EDGAR does provide details on the font and margin changes required to retrieve an EDGAR document in Microsoft Word and make it readable, and you can spend the time it takes to reformat a 10-K to make it minimally readable. Or you can download the tables in Excel format from a service such as

Mergent Online.[12] If your client does not want to do any detailed analysis of a company's balance sheet and you have the time to do word processing, the EDGAR format may be acceptable.

How does one determine whether to start with a Web search or an online database? Again, it depends on the elements of your research question. A search of the online database services that produces limited results will generally cost correspondingly little, so you may want to search the online databases before resorting to the Web. But there are several situations in which an initial Web search might be better. For instance, when you know a government agency is the collector or producer of the information, you should start with the Web. The more obscure the company or industry, the less likely that searches of the online database services will be fruitful. Similarly, the Web may be useful for searches on a company located in a rural area, since local papers in very small towns are not usually included in online database services. Many business and trade publications now have an online version that carries different articles than the print version. The print version is covered by the online databases; often the online version is not. So in these cases, a Web search might be more efficient. Finally, directories on the Web may be the only source of information for small companies without Web sites. Remember: Be certain to always verify the dates of any information you retrieve. Companies that disappeared years ago can remain alive in Web directories long after their demise.

As we've seen, after identifying exactly what your client wants, developing a strategy for finding it is the most difficult aspect of a research project. You'll need to make sure you have the right company, identify possible sources, select the best places to search, and pick the most cost-effective online database services to use. Most of the time you should start with the target company's Web site, which may answer some of your questions and may enable you to verify the company's name. Your next step will depend on whether information about the company is readily available, who else is interested in the company, what clues this gives you about further potential sources, and the time, cost, and format constraints you're working under. But often, as the next section will illustrate, the first challenge is to verify the company's name.

12. Mergent Online, at *http://www.mergentonline.com*, is a subscription-based service offering information on over ten thousand U.S. public companies and seventeen thousand non-U.S. public companies. Mergent Online is a product of Mergent, Inc., formerly known as Moody's Financial Information Services and FISonline.

DEVELOPING EFFECTIVE SEARCH STATEMENTS: COMMANDING THE WEB AND THE DATABASES

Although most online database services now offer easy-to-use interfaces on the Web, a basic search by company name may still yield hundreds of hits. (Each record that matches a search statement is a hit; many online database services display a hit count—the number of records matching the search statement.) Reviewing the documents thus retrieved can take an enormous amount of time, even if the service supplies a relevancy ranking option. Unlike free Web search engines, most online database services charge for each record that is viewed. The result is that a basic search using only a company name can be extremely costly in terms of both time and money.

Fortunately, one of the advantages of using online database services is the ability to combine the company name with other terms in a sophisticated search statement that produces a limited number of high-quality hits. Developing such a search statement requires an understanding of the online database service search functions and of the ways individual databases treat company names.

Determining the Company Name

The primary ingredient of a search statement is the name of the target company. Knowing what name to use is often not as easy as it might seem. Companies change their names, the names companies use in trade are often not the same as the official company names, punctuation and spelling of names is not always observed by databases, many different companies may use the same name, and clients do not always have the complete or correct company name.

CHANGING NAMES. In 2002, the Minnesota Mining and Manufacturing Company changed its name to 3M. Why would this name change present a problem in research if everyone has referred to the company as 3M for years? Because some databases may not have cross-referenced the new name with the old name. Indeed, the U.S. Patent and Trademark Office Trademark Electronic Search System (TESS) shows 1,687 trademarks owned by Minnesota Mining and Manufacturing, but only 873 owned by 3M. To further complicate things, some companies change their names to something unrelated to their previous names. Andersen

Consulting became Accenture in 2001. Although the Accenture Web site discusses the creation of the new name, it makes no reference to Andersen Consulting. So clearly, to do a thorough search, it will help to know all the names a company has used. Searching by the new name may only retrieve recent material, whereas searching by the old name may retrieve only older material. Further, if you know only one name and the databases actually cross-reference the two names, you may get really confused when you retrieve articles that do not mention the name you used in the search.

Acronyms and Punctuation. Search engines, whether they are free or fee-based, do not recognize capital letters as different from lowercase. Thus, a search for the company AIM would yield all documents including the word "aim." LexisNexis has special commands that force recognition of case, but unless they are used case is ignored.

Punctuation presents a greater challenge. Each search engine has its own syntax for dealing with punctuation. For instance, Factiva recognizes some punctuation, but not all; Dialog generally replaces punctuation with a space. Thus, in Factiva you can search successfully for *at&t,* but in DialogClassic, *at&t* produces zero hits. Your search term has to follow the rules of the search engine: in Dialog you would use *at()t.*

It is also important to know what punctuation is part of the official name. Most publications use a hyphen to represent the funky little star in Wal*Mart. This means that you must leave a space (or use the hyphen) when searching for Wal*Mart in Factiva, and in DialogClassic you must use the spaceholder "()"—the open and then the close parenthesis. Unfortunately, not every publication or database follows the same rules. In Dun's Market Identifiers on Dialog there are 5,321 records including "wal()mart." There are also 181 for "walmart." If you search using only *walmart,* you might see the resulting hits and not realize you have the name wrong.

One of the best ways to locate the correct spelling of a company name is to search a database index. Keep in mind that initial articles, such as "the," can sometimes cause problems in such a search. The Expand command in DialogClassic allows you to select from a database index that lists all the company names that begin with a specified word or phrase. Thus, using the command *e co=providence group* gives you a list of companies beginning with

"providence group" in Dun's Electronic Business Directory. The list includes "Providence Group, Inc The" (see Figure 1-2). This is not the same company as "The Providence Group, Inc." You must enter *e co=the providence group* to retrieve the entire list of company names that begin with "the providence group."

Figure 1-2. Sample Search for "Providence Group" in DialogClassic

```
Welcome to DialogClassic Web™
File 515:Dun's Elec. Bus. Dir.™ 2002/Jul
(Copr. 2002 D&B)
Set Items Description
--- ----- -----------
?e co=providence group
```
(Expand to see a list of company names beginning with "providence group.")

```
Ref Items Index-term
E1   1 CO=PROVIDENCE GROCERY
E2   1 CO=proVIDENCE GROCERY INC
E3   5 *CO=PROVIDENCE GROUP
E4   1 CO=PROVIDENCE GROUP ADVISORY CO
E5   1 CO=PROVIDENCE GROUP CORP
E6   1 CO=PROVIDENCE GROUP CORPORATION
E7   1 CO=PROVIDENCE GROUP FUNDING LLC
E8   2 CO=PROVIDENCE GROUP HOME
E9   1 CO=PROVIDENCE GROUP LIMITED INC
E10  1 CO=PROVIDENCE GROUP LLC THE . . .

?e co=the providence group

Ref Items Index-term
E1   1 CO=THE PROVIDENCE CORPORATION
E2   1 CO=THE PROVIDENCE FINANCIAL GROUP INC
E3   2 *CO=THE PROVIDENCE GROUP
E4   1 CO=THE PROVIDENCE GROUP CORP
E5   3 CO=THE PROVIDENCE GROUP INC
E6   1 CO=THE PROVIDENCE GROUP INVESTMENT ADVISORY COMPA
E7   1 CO=THE PROVIDENCE GROUP LLC
E8   1 CO=THE PROVIDENCE GROUP TN INC
E9   1 CO=THE PROVIDENCE HEALTH FOOD
E10  3 CO=THE PROVIDENCE HOSPITAL . . .

?REPORT S3/CO,PC,ZP,DN/ALL
```
(Generate a report with the company name, primary SIC, zip code and Dun's number.)

```
DIALOG®File 515 :Dun's Elec. Bus. Dir.™

    (Copr. 2002 D&B) All rts. reserv.
Company       Primary Zip   DUNS
Name       SIC  Code  Number
------------------------- ------- ---------- -----------
B&D Partnership     7389  76049  08-099-3921
Meyers Real Estate Information 8742  23462-6760 88-415-
4167
Nicholas Tamburo    3541  07974-1217 01-525-0462
Providence Group    7389  84321-4020 05-885-5441
Providence Group    8711  37931-2060 03-475-6051
Providence Group    8748  94403-3131 01-992-3262
Providence Group Corporation 6411  23236-3684 93-832-7954
Providence Group Llc The  8748  92677-1969 02-194-1682
Providence Group Ltd   7389  46077  08-781-8220
Providence Group Ltd   7515  92626-5155 13-897-5664
Providence Group, Inc The  3444  44094-4636 92-640-2306
Providence Group, Inc.   6531  71671-8200 10-390-0671 . . .
```

You'll notice that some of the companies listed do not have "Providence Group" in their names. These were retrieved because they do business as "Providence Group" or a variation thereof. Dun's Electronic Business Directory lists the official company name, included in the list above, and any other names under which a company does business.

ONE NAME, MANY COMPANIES. As the Providence Group example shows, some names, or variations thereof, are used by many different companies. Unfortunately, in such a situation your client may not know which of these several companies is the target company, or even whether the target company is incorporated, a limited liability company, a partnership, or a sole proprietor. Your client may know only part of the name; in our example, you may not even know for sure whether the name includes the word "Group." Perhaps your client read an article that gave the complete company name in the first paragraph and then referred to it by a single significant word thereafter, and this word is all your client remembers.

Whenever a client asks for information on a company and the company name is not immediately recognizable or ambiguous, you should find out everything the client knows

about the company, in addition to what he or she wants to know. To make sure you research the correct company, ask questions such as:

Where is the company located? If an address is not available, even a state will help.
What does the company do?
Are the names of any of the executives known?
How long has it been in business?
How big is it?

When you have as many answers as possible, ask your client how solid the information is. Even a single error can lead you on a fruitless search. For instance, if your client says the company is located in Omaha "or someplace like that," you might spend a lot of time searching for companies in midsized, Midwestern cities before realizing that it's in Omagh, Ireland. But if you know from the start that your client isn't quite sure about the location, you can consider that as you try to determine which of the dozen companies with the same name is your target.

How can such a seemingly straightforward search be so difficult? Although companies change their names, their organizational structures, and their addresses, many directory databases do not correct the original information; instead, they simply add a record. Other databases fail to update their records in a timely fashion. So, for instance, you may find two records in D&B that appear to be the same company, but one is a partnership and the other is a corporation. A record from Experian Business Credit Profiles[13] may have the same name as the D&B records, but a different mailing address than either. Further, reporters may not bother to include a complete company name in an article, especially if the company is not the primary subject of the article. Is the Bob Jones of Jones Construction who is quoted in an article about regional development really Robert M. Jones III, the president of Jones Brothers Homes? Finally, your client may be positive that some detail or another she has given you is correct, when it is not. Things change. Just as public companies may become private, small corporations may dissolve and reemerge as sole

13. Experian Business Credit Profiles, File 547 on Dialog, contains payment histories, UCC filings, tax liens, judgments, and contact information on over 8 million U.S. companies.

proprietorships. Companies move. Product lines change or diversify. Clearly, the seemingly easy task of verifying the name and address of a company can be a challenge.

If the database you use does not provide company name indexing, you may be able to search by ticker symbol if the company is a U.S. public company. This should ensure that you get all significant records on the target company without retrieving irrelevant material about other companies with similar names. The ticker symbol is available on the corporate Web site, from Hoover's, at Yahoo! Finance (*http://finance.yahoo.com*), at MSN Money (*http://moneycentral.msn.com*), and by searching Google with the company name and the word "ticker" (for example, type in *Southwest Airlines* and *ticker)*.

Of course, the ticker symbol will only work for public companies and in certain online databases. If you must search using the company name, include all possible variations of spelling and omit designations such as "company," "Inc.," or "LLC." If you retrieve thousands of hits, add terms describing the company's line of business, its location, or names of executives.

Under some circumstances, compiling a basic company profile can resemble putting together a jigsaw puzzle. As you work through a research project, do not hesitate to contact your client when something surprises or confuses you. When you find that the XYZ Company manufactures feather dusters and your client told you that it made furniture, you need to discuss what you have found. Verify that all the other information you have is correct, and then check with your client. What was your client's source of information? Do you have the correct XYZ Company? Your client may have simply failed to mention that the company made furniture until two years ago, when it switched to feather dusters.

The Syntax of Searching

There are two ways to construct a search statement: natural language or Boolean logic. Which one you select depends on the nature of your question and on the search engine you will be using. Regardless of how you will be performing the search, your search question will be clearer to both you and your client if it is stated in an unambiguous and concise statement. Develop a full sentence, not just keywords. A sentence indicates the relationship between the keywords, a critical element in developing a search

strategy and in evaluating what you retrieve. If your client gives you keywords, write them down, and then ask the client to describe what he or she needs in complete sentences.

NATURAL LANGUAGE. A natural language search engine should allow you to enter the sentence that defines your search. Search engines for the free Web use sophisticated algorithms to determine what words in a search statement are important, what possible synonyms exist for those words, and which of the thousands of potential documents on the Web contain information related to the search statement. The result of such a Web search is a list of sites ranked by relevance. The sites with the best information, as calculated by the search engine, are listed at the top. If the search engine is operating properly, you should need to review only a page or two of sites, not the thousands that are actually retrieved by a search.

Of course, a natural language search does not exactly work the way people speak. Most search engines ignore prepositions, conjunctions, and other small words such as "how" and "why" that may be key elements in your search statement. You may be able to force the search engine to see a preposition by using a plus sign (+) before each important word, but this sometimes makes the search engine place too much emphasis on these connector words and so can skew the results. As a general rule, your search statement should contain all the significant words from your research question. Word order does have an impact, so place the most important concepts at the beginning of your search statement.

One of the weaknesses of natural language search engines is that they do not allow you to include synonyms in your search statement. These search engines assume that you want documents that contain all of the words in the search statement, and this can limit your search. If, for instance, you are not sure whether one company's combination with another would be described as a "merger" or a "takeover" or an "acquisition," you must still select only one for your search statement. Let's say you are looking for information on the formation of ExxonMobil. You could enter *exxon mobil takeover*. The search engine is supposed to know that "merger" and "takeover" are closely related terms and search for both of them. However, in determining relevancy, greater weight may be assigned to the term you use. If you do not get the results that you expect, you must redo the search using an alternate term.

Let's look at a sample search that shows how different terms and word order affect a search on Google (see Figure 1-3). The client wants to know why the proposed acquisition of software company Intuit by Microsoft was never completed. The client is not sure when the acquisition was first proposed. Search strategy A used the search phrase *Microsoft Intuit takeover*. Search strategy B substituted "acquire" for "takeover" and was more productive. It retrieved an article in the *Washington Post* (see result number six in Figure 1-3) that provided details on the proposed acquisition, on the Justice Department suit against Microsoft, and on the reasons given by Microsoft for abandoning the acquisition. Search strategy B also retrieved another valuable resource, "The Microsoft-Intuit Merger: Part 2," part of a lengthy white paper on the proposed merger (see result number one). Although other sections of the same paper were retrieved by other search strategies, only Part 2 really answers the question. In addition, it provides biographical details on the author and the date the paper was written, so this paper could be very useful to the client.

Search strategy C used the word "acquisition." Strategy D reversed the order of the terms, placing "Intuit" before "Microsoft." Both strategies produced fair results, but neither retrieved the article from the *Washington Post* or Part 2 of the white paper. None of the search strategies were perfect. For instance, many of the items retrieved in all four searches referred to the Justice Department suit filed against Microsoft in 1999, rather than the 1995 action related to Intuit. Adding "1995" to the search term had little effect.

Conducting the same search on two other search engines, Teoma (*http://www.teoma.com*) and AlltheWeb (*http://www.alltheweb.com*), yielded different results. Search strategy B on Teoma retrieved "The Microsoft-Intuit Merger: Part 2" as the top hit, but not the article from the *Washington Post*. None of the strategies retrieved useful information on AlltheWeb.

There are several possible reasons you might fail to find useful material through a Web search engine:

1. You did not use the right combination of search terms.
2. You did not use the search terms in the correct order.
3. You did not use the right search engine.
4. None of the search engines crawled the site with the information you need. (The process the search engines employ to find and index Web sites is called *crawling*; search engines do not all crawl the same sites.)
5. The information is not available on the free Web.

When you have exhausted the resources of the free Web, your alternative is an online database service.

Figure 1-3. Searching Google (Partial Results)

Search strategy A: microsoft intuit takeover

1. MSBC NewsSource
... the US Justice Department's repeated investigations of his company, especially the 1995 block of a $2 billion Intuit takeover. Analysts say that if Microsoft ... www.msboycott.com/news/97_10_06.shtml -14k - Cached - Similar pages

2. I'm also writing a book. I have the page numbers done.
... wrapping paper, Lotus employees are very optimistic about the takeover. ... reason why the Justice Department may have nixed the Microsoft-Intuit deal. ... extlab1.entnem.ufl.edu/IH8PCs/vol2/V2N21.html 21k - Cached - Similar pages

3. Re: Intuit/Quicken Force Users to Internet & MS Internet Explorer ...
LAMLaw.com http://www.lamlaw.com/ (web site reviews Microsoft ...
Re: Intuit/Quicken Force Users to Internet & MS ... bids), Robert Reese (06/15/99). US West takeover ... legalminds.lp.findlaw.com/list/antitrust/msg01748.html - 7k - Cached - Similar pages

4. Business Week Online/Management
... Wendell's résumé includes serving as an adviser to Intuit—the subject of an aborted takeover by Microsoft in 1995, which was scuttled after federal ... www.businessweek.com/smallbiz/news/date/9810/e981026.htm -19k - Cached - Similar pages

5. Consumers win as AOL-Microsoft talks collapse
... He compares the collapse of the talks to Microsoft's thwarted 1995 takeover of Intuit. The result: consumer-friendly competition ... www.usatoday.com/life/cyber/tech/2001-06-18-aol-microsoft-talks-collapse.htm - 31k - Oct. 20, 2002 - Cached - Similar pages

6. c't 7/95, S. 14: Markt - [Translate this page]
... IBM hat rechtliche Schritte eingeleitet, um "Anti-Takeover"-Vorkehrungen des Lotus-Vorstands auszuschalten. ... Microsoft kann Intuit nicht übernehmen. ... www.heise.de/ct/95/07/014/ - 18k - Oct. 20, 2002 - Cached - Similar pages

7. News Briefs, part 1
... In a 14-page complaint filed in US District Court in San Francisco, the Justice Department said a Microsoft takeover of Intuit - whose Quicken program controls ... www-tech.mit.edu/V115/N21/briefs1.21w.html - 6k - Cached - Similar pages

8. Washingtonpost.com: WashTech
... When the government began looking at Microsoft's proposed takeover of Intuit, the on-line companies submitted papers outlining their concerns about the ... www.washingtonpost.com/wp-srv/business/longterm/microsoft/stories/1995/probe060995.htm - Similar pages...

Search strategy B: microsoft intuit acquire

1. ... In 1994, Microsoft made a $1.5 billion offer to acquire Intuit (an amount that would rise to $2 billion) and buy its way into dominance of the personal finance ... www.netaction.org/msoft/finance/part2.html - 10k - Cached - Similar pages

2. 1995 DOJ Antitrust Complaint Against Microsoft / Intuit... 5. Microsoft has agreed to acquire Intuit for what, as of Monday, April 24, 1995 would exceed $2 billion in Microsoft stock, more than twice Intuit's ... www.lectlaw.com/files/ant08.htm - 34k - Cached - Similar pages
3. Corporate Releases
... Software, 01/29/97, Intuit To Acquire Additional Japanese Company, 01/16/97, Intuit, Microsoft And Checkfree Create Open Financial Exchange, ... www.intuit.com/company/investors/corporate_releases/ - 68k - Oct. 20, 2002 - Cached - Similar pages
4. Intuit Press Releases - 1997
... 29, Intuit To Acquire Additional Japanese Company. January 27, Intuit Makes Tax Preparation Software Available Free On The Internet. January 16, Intuit, Microsoft ... www.intuit.com/company/press_releases/1997/ - 51k - Oct. 20, 2002 - Cached - Similar pages
5. Washingtonpost.com: WashTech
... The Department of Justice yesterday filed suit to block software giant Microsoft Corp.'s $2 billion bid to acquire Intuit Inc., the world's leading maker of ... www.washingtonpost.com/wp-srv/business/longterm/microsoft/stories/1995/quicken042895.htm - Similar pages
6. Washingtonpost.com: WashTech
... Microsoft officials said they decided Friday to abandon their plans to pay about $2 billion to acquire Intuit, based in Menlo Park, Calif. ...
www.washingtonpost.com/wp-srv/business/longterm/microsoft/stories/1995/intuit052195.htm - Similar pages . . .

Search strategy C: microsoft intuit acquisition

1. The Microsoft-Intuit Merger: Part 1
... the successes of the Justice Department's previous actions against Microsoft, particularly its 1994–95 intervention against Microsoft's acquisition of Intuit ... www.netaction.org/msoft/finance/part1.html - 8k - Cached - Similar pages
2. The Microsoft-Intuit Merger: Part 4
... controlling such standards, which would regulate much of electronic exchange on the net, was the original goal of Microsoft's proposed acquisition of Intuit, ... www.netaction.org/msoft/finance/part4.html - 7k - Cached - Similar pages
[More results from www.netaction.org]
3. 1995 DOJ Antitrust Complaint Against Microsoft / Intuit
... its Microsoft Money business assets but not enough to allow it to compete anywhere near the level provided by Microsoft before the proposed Intuit acquisition. ... www.lectlaw.com/files/ant08.htm - 34k - Cached - Similar pages
4. Buying Intuit
... The attempted Intuit acquisition can be likened to a child playing a game of chess. Microsoft is playing many games simultaneously, and each game represents a ... www-cse.stanford.edu/classes/cs201/projects-95-96/corporate-monopolies/dangers_quicken.html - 5k - Cached - Similar pages
5. NetBank in Microsoft, Intuit Software Marketing Pacts
... NetBank has been working with both Intuit and ... In May, NetBank signed an agreement with another Microsoft unit ... agreements come following a string of acquisition ... www.internetnews.com/IAR/article.php/1438601 - 54k - Cached-Similar pages ...

Search strategy D: intuit acquisition microsoft

1. The Microsoft-Intuit Merger: Part 1
   ... the successes of the Justice Department's previous actions against Microsoft, particularly its 1994-95 intervention against Microsoft's acquisition of Intuit ... www.netaction.org/msoft/finance/part1.html - 8k - Cached - Similar pages
2. Buying Intuit
   ... The attempted Intuit acquisition can be likened to a child playing a game of chess. Microsoft is playing many games simultaneously, and each game represents a ... www-cse.stanford.edu/classes/cs201/projects-95-96/corporate-monopolies/dangers_quicken.html - 5k - Cached - Similar pages
3. 1995 DOJ Antitrust Complaint Against Microsoft / Intuit
   ... Before the acquisition, Microsoft and Intuit had independent plans to compete in the field of electronic commerce, starting with enhancement of their PF ... www.lectlaw.com/files/ant08.htm - 34k - Cached - Similar pages
4. Novell/WP Plans to Make Money on Money
   Novell/WordPerfect Plans to Make Money on Money. November 1994. Part of the fall out from the Microsoft acquisition of Intuit, was a need for Microsoft to divest ... www.wohl.com/g0042.htm - 7k - Cached - Similar pages
5. #241 Justice Department Files Antitrust Suit Challenge
   ... not be enough to prevent the anticompetitive effects of the Intuit acquisition since Novell could not be as effective a competitor with Money as was Microsoft. ... www.usdoj.gov/opa/pr/Pre_96/April95/241.txt.html - 6k - Cached-Similar pages ...

Reprinted with the permission of Google, Inc.

BOOLEAN LOGIC. The basic commands of Boolean logic, developed by nineteenth-century mathematician George Boole, are AND, OR, and NOT. When two search terms are linked with AND, the records retrieved must contain both terms. When they are linked with OR, the search will retrieve records containing either term. NOT is rarely used because it often eliminates useful items. For example, if you search for "Microsoft AND Intuit NOT Netscape" you will miss articles about the proposed Microsoft purchase of Intuit that mention Netscape in passing.

Many searches will not require the use of Boolean commands. Although some Web search engines such as Altavista (*http://www.altavista.com*) provide an advanced search page that allows you to use them, natural language will often be a better choice. According to Chris Sherman, coauthor of The Invisible Web, "'taking control' of a search using Boolean operators can actually diminish the quality of results [from Web search engines], because using advanced operators often overrides all of the other factors used to calculate relevance."[14]

14. Gary Price, "About Wise Searching from Searchwise's and About.Com's Chris Sherman," *Searcher* 8, no. 7 (July/August 2000): 12–24.

However, Boolean commands do provide precise retrieval when used in online database services. Although most services now provide more user-friendly interfaces, they were designed to be searched with Boolean commands. By using a combination of Boolean commands, you can construct a single search strategy that includes multiple synonyms and complex concepts. For instance, parentheses can be used when a single search statement contains both OR and AND. As shown in the example below, parentheses force the system to search first for the synonyms and then limit the items retrieved to those that also include the other terms. And when AND and OR are combined with wildcards, they provide a succinct and powerful search strategy. Wildcards are special characters, generally an asterisk (*) or a question mark (?), that represent other characters. An asterisk represents any number of other characters, and a question mark represents a single character. Using wildcards (also called truncation) allows you to search for all words that include the characters you specify. Thus the search term *acqui** in the example below will retrieve items including "acquisition," "acquisitions," "acquire," "acquiring," and so on.

microsoft AND intuit AND (acqui OR purchas* OR takeover OR buy) AND (fail* OR drop* OR abandon* OR withdr*)*

Another search tool is the proximity command. When online databases were first developed in the 1970s, records were extremely brief, often containing only an article title, author, publication data, and subject terms. In this environment, AND and OR were adequate search commands. But when technological advances allowed database producers to include the complete text of articles and make the entire text searchable, more sophisticated search commands were needed. Using AND between two search terms ensures that both terms will be found in an article, but it does not ensure that there will be a direct relationship between the terms. Proximity commands allow the searcher to specify the word order and the number of words that can occur between the search terms. Table 1-1 shows the syntax for proximity commands and truncation for several online database services.

Table 1-1. Truncation and Proximity Commands

ONLINE DATABASE SERVICE	TRUNCATION COMMAND	LIMITED TRUNCATION COMMAND	CHARACTER REPLACEMENT COMMAND	PROXIMITY COMMAND	PROXIMITY WITH WORD ORDER COMMAND
Dialog	?	??? (for up to as many characters as there are question marks)	?	(#N)	(#W)
EBSCOhost	Related terms check box	None	None	w#	N#
Factiva	*	$#	?	NEAR#	ADJ# W/#
Gale/ InfoTrac	*	None	?	N#	Put phrase in double quotes
LexisNexis	!	*** (for up to as many characters as there are asterisks)	*	W/#	PRE/#
LIVEDGAR	*	??? (for up to as many characters as there are question marks)	?	W/#	P/#
Research Bank	* ?	None	None	W#None	

stands for a number.

The sample search statement above would thus be modified for use in each of these online database services. The revised search statement below uses the LexisNexis command syntax:

> *microsoft w/15 (acqui! or purchas! or takeover or buy) w/15 intuit w/30 (fail! or drop! or abandon! or withdr!)*

Using Boolean search statements allows the researcher much greater control over the search process than does natural language. But remember that some online database services, like Web search engines, ignore certain words. Most provide lists of their "stop words," those words that cannot be used as search terms. These can include the Boolean commands AND, OR, and NOT, as well as other words that are so common they would significantly slow the search process. Some services, such as

Factiva and LIVEDGAR,[15] allow you to place Boolean commands in quotes to make them searchable (for example, "not for profit"); other databases have no other stop words at all.

Also keep in mind that the strength of your search statement depends in part on your knowledge of the industry. In the previous example, one might think that "declined" would be a useful synonym for "failed." However, including it would likely retrieve articles related to stock prices rather than the failure of the acquisition. Knowing the terms and buzzwords used in the target industry will help you produce the most effective search statement.

The Joy of Indexing: Using the Advanced Search Functions of Online Database Services

No one has time to read through hundreds of articles to find the one that provides the critical details. So online database services have developed mechanisms for dealing with overwhelming amounts of information. Taking advantage of indexing helps zero in on the most relevant documents.

The easiest way to focus your search is to narrow the time frame. Take our Microsoft/Intuit merger example. The acquisition was called off in 1995. To eliminate articles on later dealings between Microsoft and the Justice Department, we can restrict the search to the period between 1990 and 1996. Keep in mind that most Web search engines base dates on when the document was crawled, or indexed, by the search engine, whereas online database services base dates on the actual publication date of the document.

Most online database services also provide company name and subject indexing tools. The database services index, or categorize, all records using a combination of linguistic analysis programs and human analysts. Searching with index terms thus increases both the number of articles retrieved and their relevancy. Using the index term *Mergers & Acquisitions,* for example, ensures that all articles in which merger/acquisition activity is a significant focus are retrieved, regardless of the particular terms used. It also limits the articles retrieved to those

15. LIVEDGAR, produced by Global Securities Information, Inc., *http://www.gsionline.com*, provides access to EDGAR filings; SEC No-Action Letters; Non-EDGAR Paper Submitted Filings; SEC regulatory content, releases, speeches, enforcement actions, and more than twenty-six thousand non-U.S. registered offerings.

that include substantive information on a merger or acquisition. Likewise, using company name indexing also limits the documents retrieved to those that contain more than a passing mention of a company.

Let's compare date limitation to indexing in our Microsoft/Intuit search using LexisNexis. When the years searched are limited to 1990–1996, the first article in the list retrieved discusses how the Internet has changed the way software is sold. The failure of the Microsoft acquisition of Intuit is mentioned, but it is not the focus of the article. When we add the index term *Mergers & Acquisitions* to the existing search statement, that article and several hundred like it are eliminated. And indexing by company name by adding *Microsoft Corp.* and *Intuit, Inc.* eliminates an article on Apple Computer that mentions only in passing Microsoft's attempt to buy Intuit. The final search statement (see Figure 1-4) produces only fifty-three hits. The first item discusses the individuals involved in the Microsoft decision, provides a detailed time line, and suggests why Microsoft may have dropped the acquisition.

Figure 1-4. Searching LexisNexis with Index Terms (Partial Results)

Search strategy: microsoft w/15 (acqui! or purchas! or takeover or buy) w/15 intuit w/30 (fail! or drop! or abandon! or withdr!) and MICROSOFT CORP. and INTUIT, INC. and MERGERS & ACQUISITIONS
Date searched: 1/1/1990–1/1/1996

LexisNexis News Library - List format

1. The New York Times, May 22, 1995, Monday, Late Edition - Final, Bill Gates, Section D; Page 1; Column 2; Business/Financial Desk, 1155 words, Gates, the Pragmatist, Walked Away, By STEVE LOHR
2. The Toronto Star, May 22, 1995, Monday, HOME DELIVERY TWO, BUSINESS; Pg. E2, 515 words, Failed deal likely to hit Intuit Analysts expect price to drop after Microsoft ends takeover bid, (Reuter), SAN FRANCISCO
3. Upside, February 1995, Vol. 7, No. 2 Pg. 52-67; ISSN: 1052-0341; CODEN: TLPNAS, 9001 words, Why Microsoft must be stopped, Reback, Gary L, 00976542
4. THE DALLAS MORNING NEWS, May 21, 1995, Sunday, HOME FINAL EDITION, NEWS; Pg. 4A, 704 words, Microsoft drops Intuit acquisition bid, New York Times News Service, SAN FRANCISCO
5. The Toronto Star, May 22, 1995, Monday, FINAL EDITION, BUSINESS; Pg. E2, 507 words, Failed deal likely to hit Intuit Analysts expect price to drop after Microsoft ends takeover bid, REUTER), SAN FRANCISCO . . .

Incorporating index terms into a search statement is quite simple with most online database services. Generally the advanced search option includes drop-down lists of index terms or allows the user to search for index term suggestions that can be easily added to an existing search statement. Many online database services also let you to sort search results by date or by relevancy. Sorting by date is useful if your client needs the most recent information available (the default date sort puts the most recent article at the top of the list) or if you need to track the development of a story. Relevancy is useful if there are a large number of documents and the story is not one that developed slowly over a long period of time.

Verifying Content

Even the perfect search statement will be ineffective if you are not searching the correct sources. Some databases will simply not have what you are looking for. For example, if you need details on Champlin Petroleum's expansion of their Corpus Christi plant in 1983, you need to know which databases go back that far: Although *Oil and Gas Journal* is included in the Energy publications on Factiva, coverage there did not begin until 1989; LexisNexis, on the other hand, includes the journal's full text from 1978. The 1983 volumes of *Hydrocarbon Processing* are not available in full in any database, although abstracts are available in the Gale Group PROMT[16] database on Dialog. So, your best strategy would be to search LexisNexis first and then go to PROMT for additional information. Making sure that the publications you want to search are included when you select a database or publication category can be a challenge. Some hazards to keep in mind include:

- Some databases include only selected full-text articles from a publication, while others include all articles in full.
- Individual publications and entire databases are frequently removed from online database services. Sometimes the older issues of a publication remain, and in other cases the publication disappears completely.
- Graphics are often not included in online database services. Text with a box around it, such as the mortgage rates listing in the newspaper, may be considered a graphic.

16. Gale Group PROMT is a multiple-industry database that provides broad, international coverage of companies, products, markets, and applied technologies for all industries from 1972 to the present.

- The full text of an article that comprises a list of companies may not be included in a database even though the citation for the article is. The database record for *Fortune Magazine's* Global 500 may include the introductory text but not the list of companies.
- Many newspapers and magazines have removed articles by freelance writers from online database services in response to the Tasini decision.[17]
- Some syndicated columns may not be included in online database services.
- Only material from the most recent three months of the *New York Times* is available on any service other than LexisNexis.
- The time between publication of an article and its availability in an online database service ranges from immediately or better (tomorrow's *Wall Street Journal* is available this afternoon on Factiva) to several months.
- An online database service may include only one edition of a publication. For instance, *Business Week* has an Industrial Edition that includes articles not found in the regular edition. Some publications also offer online versions that differ from their print editions. Databases don't always cover all editions.

If you regularly search specific publications, an invaluable source is *Fulltext Sources Online* (FSO),[18] published by Information Today. It lists both the databases and online database services that include any specific publication, along with the dates of inclusion and update schedule. You can check the online availability of key industry and business publications on which you know your clients rely. That will help you determine which online database services are essential. For instance, if you must have access to the *Wall Street Journal,* you can use FSO to find out that you will need to subscribe to either the *Wall Street Journal Online*[19] or Factiva. Depending on your industry, there may be several online database services that include all the key

17. In *Tasini et al. vs. the* New York Times *et al.*, the courts ruled that it is a violation of copyright for a publisher to put articles written by a freelance writer online without explicit written permission.

18. *Fulltext Sources Online,* at *http://www.fso-online.com,* is a directory of periodicals accessible online in full text through more than twenty-five aggregators. FSO is published twice each year, in January and July, and lists over eighteen thousand newspapers, journals, magazines, newsletters, newswires, and transcripts.

19. Available by subscription at *http://www.wsj.com*, the *Wall Street Journal Online* provides articles from the daily the *Wall Street Journal* as well as searchable archives containing issues from the last fifteen years.

publications you'll need. FSO can help you decide which one to start with by indicating how soon after publication articles are available.

PRIMARY PORTALS: WHICH SERVICES DO YOU REALLY NEED?

Selecting the services you need can be a daunting task. There are a number of special purpose online database services that provide particular types of company information. Research Bank[20] and Multex[21] both supply reports from Wall Street analysts and market research companies. LIVEDGAR provides information from SEC filings. Standard & Poor's NetAdvantage[22] focuses on stocks, bonds, and mutual funds. There are also online database services that offer a wide range of information, incorporating many of the special purpose services. Services such as Dialog, Factiva, and LexisNexis, known as *aggregators,* all provide access to databases produced by D&B and to the data available from Research Bank. In some cases, special-purpose online database services incorporate information from the aggregators. For instance Hoover's, which provides company profiles, includes selected news articles from Factiva. You will need to analyze pricing and interface options as well as take a close look at content in order to select the service or services that will best meet your information needs.

Access Options

There are a number of different options for accessing online database services. Some services are available at no cost at public libraries. You can also set up a pay-as-you-go account with a credit card, or a transactional account where you are charged for each

20. Research Bank Web, at *http://www.investext.com*, is a product of Thomson Financial's Investment Banking/Capital Markets group. It provides access to research from more than 620 investment banks, brokerage houses, and research firms worldwide, as well as offering primary market research and an online collection of trade association research.
21. Multex, at *http://www.multex.com*, provides broker research, estimates, company fundamental data, independent market research, SEC filings, market data, and other third-party information.
22. Standard & Poor's NetAdvantage is a subscription-based service that provides electronic access to twelve S&P products, including *Stock Reports*, *Stock Guide*, *Dividend Record*, *Earnings Guide*, *Bond Guide*, *Corporation Records*, *Mutual Fund Reports*, *Security Dealers of North America*, *Register of Corporations*, *Industry Surveys*, *Investment Review*, and *Outlook*.

use. Or you can buy a subscription. Some services offer several options. Which access option you select will depend on how critical the service is to your information needs, how much the service will be used, and who within your organization will use it.

PUBLIC ACCESS. Many public libraries now offer remote access to online database services. Usually a library card number is required. Check the database service Web site for a list of participating libraries in your area. Some may require that you visit the library and provide proof that you are a resident of the city or other jurisdiction that funds the library. Others may allow you to sign up for a card online. If you are just beginning to do company research, if you are not sure what publications and databases you will need, and if you have no idea how much research you will actually do, using the databases available through the library is an excellent option.

Public libraries generally provide access to three types of online database services that can be used for company research: directory databases, company information databases, and periodical databases. Directory databases are useful for verifying a company's name and generating lists of companies that meet criteria such as location and line of business. *ReferenceUSA*,[23] also known as *American Business Directory*, from InfoUSA, is the directory most commonly available at public libraries. It provides company name, contact information, SIC[24] and/or NAICS[25] codes, number of employees, annual sales, and names of executives. The information in directory databases is also available through aggregators and some focused services such as Hoover's. When used through the public library, the directory databases often allow downloading of company information in a spreadsheet format, which is frequently not an option when using an aggregator. However, they may limit the number of records that can be downloaded in one search to as few as ten.

The company information database most often available through public libraries is the Gale/InfoTrac Business & Company Resource Center, which is also available on a

23. *ReferenceUSA* contains information on nearly 12 million U.S. businesses and 102 million U.S. residents (90 million U.S. households).
24. The Standard Industrial Classification (SIC) is a numeric classification scheme for industries first developed in the 1938. It was replaced in 1997 by NAICS.
25. NAICS, the North American Industry Classification System, was developed jointly by the United States, Canada, and Mexico to provide new comparability in statistics about business activity across North America.

subscription basis from Dialog as Dialog Company Profiles. This database pulls information from a number of sources to provide company and industry overviews, financial data on public companies, company histories, product lists, and articles from trade publications. A few libraries also provide access to Mergent Online and Standard & Poor's NetAdvantage.

The most widely available periodical database services are InfoTrac and EBSCO Host. Some libraries provide access to periodicals through ProQuest,[26] Wilsonline,[27] and FirstSearch.[28] All of these services differ from Dialog, Factiva, and LexisNexis in that they are targeted at public and college libraries. They offer libraries the option to select any of several groups of business and trade publications and they provide simple search interfaces.

Accessing online databases through the public library has two significant advantages: no cost and the absence of contracts. There are also significant disadvantages:

- *Uncertain long-term access.* Libraries constantly evaluate their electronic collections based on usage and budgetary considerations. Portions or all of an online database service may be eliminated without notice.
- *Content variability.* Because vendors provide a number of packages to libraries, you may have difficulty determining what publications are covered by a service at your library.
- *Limited interface options.* Most public libraries provide only the simplest of interfaces. Although these basic interfaces may be suitable for very simple searches, as you become more experienced you may want the flexibility and power of an advanced interface.
- *Technical difficulties.* Public libraries periodically have network problems and unresolved technical issues with vendors. In some cases their contracts may limit the number of concurrent users for a particular online database service. When you are unable to connect to a service through the library, your only option is to try again later.

26. ProQuest, at *http://www.umi.com/proquest*, is a product of UMI and is available primarily in public and university libraries. It provides access to periodicals and newspapers, including the *Wall Street Journal.*

27. Wilsonline provides access to over forty databases from the H.W. Wilson Company, including *Business Periodicals* and the *Reader's Guide to Periodical Literature.*

28. FirstSearch, from OCLC, provides access to over seventy databases. Most provide only article source information and abstracts rather than the full text of articles.

- *Lack of training*. The major online database services provide a variety of training opportunities to customers. This training explains the resources available, teaches advanced search techniques, and describes ways to take advantage of the information available. Unless you have an account with a service, you will not have access to their training.

CREDIT CARD ACCOUNTS. Several of the online database services allow pay-as-you-go research with a credit card. As with access through a public library, credit card access does not entitle you to training, and interface options are limited. Using a credit card is reasonable if you know that an article you need is available on a service for which you do not have an account. In general the credit card option basically allows you to search for free; your card is only charged when you view a record.

You should not attempt a complex search on an unfamiliar service. Charges can mount quickly when an imprecise search strategy yields dozens of potential articles. If you have an unusual request and you believe the information is available through an online database service for which you do not have an account, a good option is to contact the Association of Independent Information Professionals (AIIP).[29] The AIIP Referral Program can provide the name of an experienced researcher who subscribes to the online database service in question and knows how to search it. Although you will pay for the researcher's time, together you will be sure to find the pertinent information.

TRANSACTIONAL ACCOUNTS. If you are the only researcher in your organization, transactional accounts should be your initial choice if they are available from the online database services you need. With the exception of an account set-up fee for some services, you pay only when you use the service. In general, fees are closely related to the amount of information you retrieve. Searches that do not yield results are free or cost very little. Many services allow you to enter a client name or number so that your invoice indicates the cost per project, making it easy to charge the cost of research to the appropriate project or department.

29. Members of the Association of Independent Information Professionals (*http://www.aiip.org*) own firms providing such information-related services as online and manual research, document delivery, database design, library support, consulting, writing, and publishing.

When you have established an account, you will receive regular updates on changes and enhancements to the service, and you will be entitled to group and/or individual training. Many of the online database services have account representatives with research experience who show customers how to search the services effectively. With a transactional account, you usually have access to all the interfaces available from the vendor so that you can migrate to a more advanced and flexible interface as your expertise increases.

SUBSCRIPTIONS. If several individuals in your organization use a particular online database service or if you find that your own usage is substantial, you should consider an annual subscription. Some services are available by subscription only. Subscriptions offer several advantages over transactional accounts:

- *Predictable costs.* With a subscription you can establish a budget for information services; with transactional accounts your expenditures may vary widely from month to month.
- *The freedom to err.* If you have a transactional account, downloading documents in the wrong format or selecting the wrong documents can incur substantial costs. With a subscription, your monthly or annual payments are unaffected by usage. Since there are no connect time or processing time charges with a subscription, you can experiment with your search strategies without worrying about costs.
- *Customization.* Several of the online database services offer sophisticated tools that allow you to customize what users see when they log on to the service, including industry news and predefined searches.

The disadvantage of a subscription is the substantial initial payment, which is wasted if you do not use the service as much as you anticipated.

If there is any uncertainly about which service will satisfy the majority of your information needs, start with a transactional or credit card account if one is available. If a subscription-only service such as Hoover's, Standard & Poor's NetAdvantage, or Mergent Online appears to be the best option, see if you can negotiate a three- to six-month subscription rather than a full year. Once you are ready to purchase a subscription to any service, you should plan on negotiating a contract that fits your

needs. If you are uncomfortable or inexperienced with negotiating with vendors, ask for assistance from someone in your purchasing department.

The first step in successful negotiating is to know exactly what you need. Every service has advantages and disadvantages, and knowing how these conform to your needs will help you avoid redundancy and pick the best options. If your public library introduces access to the Gale/InfoTrac Business & Company Resource Center, for instance, you may decide to cancel your subscription to the Company Dossier from Nexis.com to reduce costs. If other people in your organization will need access to an online database service, you may wish to combine a subscription to one service that is available to individuals in several departments with one or more transactional accounts that only you use. This would enable employees to answer routine questions themselves but would provide you with the resources needed to conduct in-depth research.

Understand the alternatives: Think carefully about how and how much you will use the service before you decide. Compare the options. For example, the base subscription price for up to five users of Factiva is $12,000 per year. For the same amount you could have five transactional accounts with Factiva, and each researcher could download 194 documents per month. Certainly the subscription allows extensive customization, distribution of selected news, and easy tracking of customers and competitors. But if you use Factiva primarily to handle individual research projects and you and your colleagues would not retrieve more than 970 documents each month, the transactional accounts are a better choice.

Focus on what you *must* have: Although each online database service has its own unique features and sources, many of the same capabilities and sources are also available from other services. Many vendors slice their service offerings several ways to accommodate the specific needs of their customers. Encourage the vendor to present options that address your minimum requirements; you can always add features and sources later if you wish. The same goes if you are negotiating a subscription for multiple users. Unless there are already several experienced researchers in your organization, usage will grow slowly, and renegotiating the subscription to increase the number of users later will not be difficult.

Everything is negotiable: Most sales representatives have flexibility in quoting a price. Inquire about introductory pricing, specials, and end-of-the-year or quarterly discounts. Purchasing an online database service subscription is similar to buying a car. Don't be afraid to send your representative back to the sales manager for a better price. Once you have purchased a subscription, take advantage of all the training and other assistance the vendor offers. The more you and your colleagues use the service, the more value you receive from your investment.

Interface Choices

The interface is what you see when you log on to the online database service. It controls the commands you use to search the databases and the format of the information you retrieve. Most Web-based interfaces provide forms to be filled in with your selections and preferences, and source selection is accomplished through pull-down lists or from a series of menus. The search interfaces of the online database services are all quite similar. In evaluating the available interfaces, you should consider the level of expertise of the searchers and the flexibility of output formats.

One thing to consider is how likely you and your colleagues are to take the available training. In many organizations, those who use online database services are reluctant to take the time to attend training sessions. If this is the case at your organization, you must select a service with an extremely intuitive interface or it will not be used. If, however, the best service for you is difficult to use and no one is likely to take the training, you will need to identify key individuals who can be trained as searchers, rather than making access to the service more generally available.

Another factor is frequency of use. If some people will use the service only infrequently, you will want an interface that can produce reasonable results from extremely simple searches. A good example of such an interface is Dialog1. To search for articles on companies in Dialog1, the searcher selects the Business Intelligence Channel, then Company, then Company News. The searcher is then presented with two boxes, one for the company name and another for a keyword, and drop-down lists from which to select a date range. The result is a list of article titles with publication dates and the cost of retrieval of the complete text for those on transactional accounts. No

understanding of Boolean logic is required. The difficult task of selecting the appropriate databases to search is performed through menu selections.

Keep in mind that a simple interface will also have its limitations. There is no way to verify the spelling of a company name. If the name is entered incorrectly, the search may very well be fruitless and the searcher may assume that no articles are available. Also, a simple interface provides few options for limiting your search. If a company is large and in the news frequently, searching with a single keyword may produce unmanageable results (as with a search for *Microsoft* and *lawsuit?* from 2001–2002, which retrieves 1,536 articles). If you select a simple interface for others in your organization, be sure that a more flexible interface is available for your use as your expertise increases. When you establish an account with Dialog you can use any of the available search interfaces. DialogWeb and DialogClassic provide the full power of the command language for sophisticated searching.

Not all interfaces provide access to all databases. With the Dialog interfaces, for one, particular care must be exercised to be certain that the databases you need are included in the group you are searching. For instance, if you use Dialog1 and select Business Intelligence from the menu, then Company, then Company News, you will search four databases. If you use DialogSelect and choose Business, then Business News, then Company News, then By Company Name, you will search eight databases. On DialogWeb you will search eight databases as well, but you will have the ability to select from a list of thirty-seven databases with the Dynamic Search option. So when you've identified a key resource for your work, make sure the interface used by most of the searchers in your organization includes that resource.

Further, although an individual database may be available on several online database services, not all services will provide access to the same amount of data from that database. For instance, the Standard & Poor's database on LexisNexis has twice the number of companies as the Standard & Poor's database on Dialog.[30] Be sure that the online database service you choose provides the full version of documents from your key resources.

30. Marsha L. Fulton, *et al.*, "Company Directories: Past, Present, and Future," *Searcher* 10, no. 8 (September 2002): 39–41.

An understanding of how your clients will use the information you provide can be important in selecting an interface. All online database services provide output in a file format that is easily opened by word-processing software and requires little manipulation. Not all interfaces, however, provide output in spreadsheet format, even for lists of companies. (Of all the Dialog interfaces, only DialogClassic and the Command Search interface for DialogWeb could generate the sample report shown in Figure 1-1.) If your clients want to analyze financial reports using spreadsheet software, you will need the ability to download the reports in a format that can be easily imported into a spreadsheet. Verify that the interface will allow you to specify the fields you want from the records and that it provides an output format that is compatible with the spreadsheet software you use. Mergent Online and Standard & Poor's NetAdvantage include this function; Gale/InfoTrac Business & Company Resource Center and Dialog Company Profiles do not.

Making the Choice

If you have determined that free Web searches and the resources of your public library cannot meet your information needs, taking these few steps will give you the information you need to choose a service provider:

1. Identify the types of information essential to your work (for example, company balance sheets or lists of subsidiaries).
2. Identify essential publications and types of documents.
3. Identify the preferred format for delivery of the information.
4. Identify online database services that provide access to your key information and publications. Use the *Gale Directory of Databases* and *Fulltext Sources Online*. Both are available in the reference sections of many public and university libraries.
5. Determine who will use the database services.
6. Estimate the frequency of searches and volume of information to be retrieved.
7. Estimate how often more than one searcher will need access to a service at the same time.
8. Evaluate available interface choices for potential online database services.
9. Determine which services provide the best output formats.
10. Compare published prices for various access options for selected services.

11. Determine the value of additional features provided by subscriptions.
12. Open transactional accounts or negotiate subscriptions with selected vendors.

Table 1-2 provides an overview of current options and prices for several of the most popular online database services.

Once you've gathered all the essential information about the various database services, only a few more steps are needed to make your final choice. If you find that several online database services may be able to provide access to your key information sources, develop several sample questions that are typical of the information needed by your clients. Ask the sales representative from each service to perform searches on the sample questions and provide you with sample output. Take notes on the search process and compare the output. The ideal service will combine a straightforward search strategy with highly relevant retrieval.

Some vendors supply free demonstration accounts, others offer one- to three-month subscriptions. Take advantage of whatever trial terms are available, even if they are not free. If others in your organization will use the service, be sure that they use it during the test period. If possible, watch them perform searches and evaluate their ability to use the service.

ORGANIZING AND REPORTING RESEARCH RESULTS

When you have completed the research for a complex project, your research results may include articles in a variety of formats, reports in PDF, financial data in spreadsheets, Web pages in HTML, and even pictures. This is your raw data; now you need to put it in a format that your client can use. The report you deliver to your client should include the information needed to answer the research question or solve the problem, it should be in a format that your client can put to use with a minimum of reformatting, and it should look good.

Table 1-2. Online Database Service Account Comparison

ONLINE DATABASE SERVICE COST	TRANSACTIONAL ACCOUNT	CREDIT CARD ACCOUNT	SUBSCRIPTION PARAMETERS	ANNUAL SUBSCRIPTION COST
Dialog: includes Dialog1, DialogSelect, DialogWeb, DialogClassic	$295 to establish account + $84 every 6 months Document charges + up to $13/hour search processing fee based on usage of 1–5 users	$295 to establish account + $84 each 6 months. Document charges + up to $13/hour search processing fee based on usage		Negotiated
Dialog Company Profiles	None	None	1 user	$6,000
DialogPRO	None	None	Available only to companies with sales of $50 million or less; 1 user, 1 channel (database grouping)	$1,200
Factiva	$69 annual fee + $2.95/document from Publications; cost of reports varies	None	1–5 users	$12,000
Mergent Online	None	None	1 user, base cost	$9,500
with Annual Reports	None	None	Additional cost	$5,495
with Company Archives	None	None	Additional cost	$4,995
with Equity Portraits	None	None	Additional cost	$6,995
with Factsheets	None	None	Additional cost	$1,050
with Insider Trading	None	None	Additional cost	$2,100
with Institutional Holdings	None	None	Additional cost	$2,100

Table 1-2. Online Database Service Account Comparison (cont.)

ONLINE DATABASE SERVICE COST	TRANSACTIONAL ACCOUNT	CREDIT CARD ACCOUNT	SUBSCRIPTION PARAMETERS	ANNUAL SUBSCRIPTION COST
Hoover's Pro	None	None	1–5 users	$1,995
LIVEDGAR	$10 per logon, $1.50/minute connected; $0.05/data element exported in spreadsheet format	None	3-month trial, unlimited users for $495	Negotiated
Nexis.com	None	$75–$250/week or $30–$75/day or $3–$12/document, depending on the sources selected	1–2 users, News sources, Company & Financial sources, Company Dossier	$7,200
Research Bank	$9.99–$30.00 per document page	none		Negotiated

Your first step will be to select the data to include in your report. Some of your data may be redundant; your task is to select the items that are most authoritative and that provide unique insight. You might include a company press release on a new product because it provides information on how the company will position the product and a complete list of features. You might also include an article from a business publication that compares the product's features to those of competing products and analyzes the potential size of the market. But you might leave out two other articles that contain no additional information.

To select what to include in your report, you will need to assess your search results carefully. If you have retrieved financial data, for instance, you may find that even basic revenue figures vary from source to source. You will need to determine the reasons for the variation, if possible, and select those figures that are most accurate. If you are unable to account for the variation you may need to include all the figures in your report, including detailed information on the sources so that your client can make the determination.

Once you have selected the documents to include in the report, you will need to organize them in a logical fashion. If your client has asked specific questions, you can group the documents according to the questions they address, putting those documents related to the most important questions at the beginning of the report. If your client requested a detailed corporate profile, you can look at the way company profiles provided by the online database services are organized and follow that format.

Summaries and Analyses

Depending on the nature of the research request, you may either provide an annotated table of contents or you may write a summary. Either one outlines the facts and opinions contained in the documents you retrieved; the summary is generally more detailed. If your client asked specific questions, your summary will present the answers in a nutshell. The summary should contain the key information your research revealed, highlight any discrepancies between sources, and be easy to read quickly. Bullets are preferable to lengthy paragraphs.

Depending on your subject expertise and the client's needs, you may also include analysis in your report. Analysis consists of your conclusions and recommendations based on the information you retrieved, on your familiarity with the sources used, on

your knowledge of the industry, target company, and your own company, and on your understanding of the problem your client wants to solve. In your analysis you may want to include:

- A discussion of the biases of reporters, analysts, and industry experts whose statements are in the report
- A review of any conflicting information and a critique of the sources that provided it and their methods of gathering data
- An evaluation of the quality of the information provided, especially that obtained from free Web sites

If there are any questions you were not able to answer, you should furnish a list of sources checked, an outline of your search strategy, and any conclusions you can draw from the absence of information.

When your analysis includes recommendations, it should also thoroughly discuss the reasons for your suggestions, and the report should contain sufficient data to support your conclusions.

Formatting the Results

How you format your summary and the accompanying documents depends on how your client will use the information. If you provide a detailed summary for an executive, you may decide to cite the documents with footnotes but not to include them in the report. If your client will be conducting further analysis of the information, the full documents will need to accompany the summary, and you should provide a table of contents listing the documents.

The documents you retrieve will very likely be in a variety of formats. Some you can convert to a word-processing format, others will be in PDF or in a spreadsheet format. If your client will need to work further with the documents in a word-processing software such as Microsoft Word, you should incorporate as much of the data as possible into a Word document. Portions of PDF documents can be copied and pasted into Word, as can tables and graphs from a spreadsheet program such as Excel. You should remove any confusing coding and extraneous citation information (such as ISSNs and internal database document numbers) contained in documents downloaded from online database services. Documents from free Web pages may need extensive reformatting, including reinsertion of graphics and elimination of hard returns at the ends of lines. If your client is likely to perform additional analysis on financial data, it should

be provided in spreadsheet format. For the client who will use the information you have gathered in a presentation, you may need to format your summary as PowerPoint slides.

Your goals in formatting your report should be:

- To make the conclusions easy to find and understand
- To provide as much backup documentation as your client needs in an uncluttered and uncomplicated format
- To allow the client to incorporate the information into his or her own reports with minimal effort

The Importance of Packaging

The value and validity of your report will be determined, in part, by how it looks. If the report is difficult to read because the font is too small or too unconventional, if the reader has to flip back and forth through the report to find a particular section, or if the overall design of the report is very different from those your client receives from others in the company, your efforts will not be accorded the importance or recognition they deserve. Paying attention to these key cosmetic considerations can help ensure that the information you present does the job:

- *White space.* Generous margins, frequent paragraph breaks, and adequate space between lines of text make a report more inviting to the reader. An unbroken page of text looks boring and difficult to read, even if it is not.
- *Headings and bullets.* Headings help the reader navigate through a document. You may use an entire page to explain a concept, but the heading lets the reader know where the discussion begins and ends. Bullets tell the reader what information is particularly important.
- *Headers and footers.* For a lengthy report with multiple sections, headers and/or footers that indicate the section name and page numbers are essential. You can also use a header or footer to identify yourself or your department as the report authors.
- *Fonts.* Although word processors have dozens of fonts available, you should use the font most often used for reports within your organization. You can vary the size and use boldface for headings, but you should limit the number of different fonts within a document. You want to make the document easy to read. You do not want your reader to be distracted by the typography.

- *Title pages.* At the very least your title page should contain the title of the report, the date, your client's name, and your name. You may also want to include department names and codes, budgetary information, a list of sources used, and your organization's logo—whatever information is part of the organization's standard. When you deliver a report in PowerPoint, use the organization-standard background. If there is no standard, select a conservative background. Again, you do not want your client, or your client's audience, to be distracted from the content of the report by an unconventional presentation.

Every organization has its own style. Some have specific guidelines for fonts, title pages, and the use of logos. If you are unaware of style standards in your organization, check with an administrative assistant. Even an organization that does not have set guidelines will still have a style that reflects its culture. The reports generated by individuals in an advertising agency will undoubtedly look much different from those prepared in a financial services company, even if the subject matter is similar. The way you format your reports should emulate the organization's style as much as possible. Look at other reports generated at the same organization level and in the same departments as your clients'. These reports will provide important clues to the unstated expectations of your clients. If your reports look the way your clients expect them to, the conclusions they present are more likely to be accepted.