ONLINE DATABASES

BY CAROL TENOPIR

Online Without a Modem

DICK KOLLIN had dedicated his professional life to making database searching easier and more accessible to the average person. Twenty-five years ago he helped start innovative indexing services such as Conference Papers Index and Current Index to Journals in Education (part of ERIC); in the mid-1970s he founded *Magazine Index*, the first general-interest periodical index on microfilm, online, and CD-ROM; in the 1980s, he started EasyNet, the intelligent gateway that provides simplified searching of many online hosts.

Breaking down barriers

All of these products were founded to help break down the barriers of information access and each in turn made retrieval of information easier for the layperson. But as simple as database searching is for anyone with an end user service such as EasyNet, it still requires a terminal or microcomputer and modem. This restricts access, because, even in 1990, few people have microcomputers and even fewer have modems attached to their micros.

This year, Kollin's new company, called Searchcraft, will introduce his latest and easiest-to-use service yet. "Faxtex" is being started for the purpose of "leapfrogging over the primary three limitations in the industry—the need for 1) a computer (or terminal), 2) a modem, and 3) a password." Searchcraft's Faxtex service is a series of new database products that have the potential to become the first truly mass-market, consumer-oriented database products.

Touchtone searching

Faxtex requires only a touchtone phone to search textual databases. The user dials one of a series of 900 telephone numbers to connect to the Faxtex service. A combination of prerecorded and computer-synthesized voices leads the user through the search process. Searches are entered using the telephone keypad like a computer keyboard. Results are read by the computer and, if a user has a facsimile machine, full articles will be FAXed after a search is complete. The charge is automatically added to the user's phone bill.

Imagine using Faxtex to search for magazine articles. After dialing the appropriate 900 number, you hear a human (recorded) voice welcoming you to the Faxtex service. If you are a first-time user you can push a button to hear instructions, such as how to use the telephone buttons as a keyboard. Pressing the ABC key (number 2) once, for example, means the letter A; twice in rapid succession, the letter B; and three times rapidly, the letter C. Letters missing from the phone (Q and Z) are recorded options on the number 1 key, as are parentheses. Faxtex then asks you to enter your FAX number if you have one.

You are now ready to "type" in your search statement. Faxtex supports user-input Boolean operators, including nesting, or will automatically insert the DIALOG (2N) operator (within two words) in place of a blank between words input by the user. Pressing the pound sign (#) twice tells the system you are finished inputting your search.

The system then takes over and runs the search. All you will be aware of is the computer voice telling you reassuring things such as "we are now searching 800,000 articles, it should take about one minute, please wait" as it conducts your search. In reality, Faxtex is connecting to an appropriate database on DIALOG (for magazine articles this will be Magazine ASAP). To get a low recall–high precision search, Faxtex automatically restricts the search to words in titles, or, if too few are retrieved, to words in the descriptor field.

After about a minute the human voice returns with the reassuring message "we have found something on your topic," and tells you the computer will now read the summaries. The computer voice tells you what type of magazine an article comes from (for example, a trade magazine, a computer magazine, a popular magazine, etc.) and reads the title. If you want that article you press one key, if not, another key, or to decide later, a third. Article titles are read in batches of five, for a total of ten articles per phone call. Articles that you have indicated are of interest are then FAXed to you.

The FAXed articles are automatically reformatted with a desktop publisher so, although they don't look like the printed equivalents, they are much more aesthetically pleasing than a straight printout from Magazine ASAP online. Even if a user doesn't have a FAX machine, Faxtex will still work by offering a choice of delivery methods. In addition to regular FAX, it will offer delayed FAX (a codeword and an 800 number will be provided to the user so search results can be transmitted when requested to a commercial FAX service); voice; or overnight mail.

A variety of Faxtex services

The above Faxtex scenario may not be exactly what the final product will be like when it is first available to the public late in 1990 or early 1991. The current system is a prototype, built to interest investors and to test the software and technology. Searchcraft envisions many different products, each with its own 900 number and each marketed separately.

There will probably be, for example, Faxtex services for airline booking, a "bibliography-in-a-hurry" service aimed at college students, movie reviews, credit reports, product reviews, product manufacturing reports, consumer reports, newspaper articles, and others. As Executive Vice President Jim Shea explains it, "we are narrowcasting—targeting each service to a narrow audience."

One product now being tested is a medicinal drug information service. The service taps the Consumer Drug



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Information Full Text database from the American Pharmaceutical Association. This is a consumer-oriented database that provides brief descriptions of medicines without medical jargon. In the Faxtex version, the user puts in the name of a medicine. The system answers with the generic name and will then read or FAX the full descriptive text describing this drug.

An even narrower service is designed more for people in the workplace. The Thomas Register service will allow users to find names and addresses of companies that manufacture a given product. This service is especially important for small businesses that may not be able to buy the print versions of Thomas Register directories.

An airlines service will be targeted to secretaries, businesspeople, and people at home. For each phone call, Faxtex will provide a nicely typeset summary of all of the flights to and from a specified city on specified dates.

Each of the varied Faxtex services will tap one database that is appropriate for the service. Searchcraft already has agreements with Dialog, and several database producers such as Information Access Company, Thomas Register, the American Pharmaceutical Association, and the Official Airlines Guide. It will probably go to another online service for information such as credit reports that are not available via DIALOG.

Faxtex is not meant to compete with existing online services, not even with EasyNet. Kollin explains, "If you have a computer you'd be crazy not to use it. But there is a much larger audience that doesn't have a computer." This is a mass-market product where "one phone number brings in one discrete bit of information. We are going for the impulse buy, to meet the instantaneous need."

The cost will probably be around $4 to $5 per call. In most cases that will get a user up to ten articles or summaries. The college bibliography service will likely provide up to 20 citations formatted in an appropriate bibliographic style ready to put at the end of a student's paper. The drug service will provide a descriptive report of one drug. As an alternative to the 900 number service, corporations will be able to get a Faxtex account that will allow them to access the service over an 800 telephone number. The charges would then be billed to a password instead of to the telephone bill.

Database producers and online vendors will not make as much per search as they do now with the traditional online search. Searchcraft is counting on volume making up the difference. Database producers will have to have faith that there will be enough new users of their products to make the lower royalties a good, long-term idea. The current computer-based database market is a lot smaller than most information professionals think and the end user market is not growing as rapidly as was once predicted. The "person-in-the-street" has no idea of the services, or no capability to access them even if she/he knows they exist.

> Faxtex services might include airline booking, movie reviews, credit reports, consumer reports, newspaper articles

The National Council for the Blind is understandably very interested in Faxtex. Such a voice-based service opens up a world of information retrieval services for the first time to the blind. Searchcraft will probably develop special voice-only services for this audience, perhaps in conjunction with the American Library Association. One possible service might be a voice version of each day's newspaper, with the user able to select articles by the particular newspaper and/or by subject. Another possibility might be a service that provides each day's top ten news stories.

There likely will be slow-down and repeat buttons to help the user listening to a computer voice reading such large amounts of text (although Kollin says the blind audience has also asked for a "speed up" key). Kollin says the telephone keypad offers no trouble to blind users and the capability of recording search results will allow them to keep a copy of their search.

Faxtex technology

Faxtex is a unique combination of technologies. Searchcraft provides a computer with multiple dial-in ports that serves as an intelligent gateway to major online services such as DIALOG. The Searchcraft software interacts with users via prerecorded human voice and menu choices selected by users with the telephone keypad. When the Faxtex system retrieves information from the large online host, results pass through a computerized voice-synthesizer that translates the transmitted ASCII results to voice.

The demonstration version of Faxtex uses an inexpensive voice synthesizer that is unmistakably a computer. Better synthesizers are available for more money—an upgrade that may be made early in Faxtex's life.

Before complete articles are FAXed to users, the downloaded ASCII texts are passed through a desktop publishing program for reformatting and are printed on a laser printer. The laster-printed results are then automatically FAXed to the user.

The key to Faxtex is, of course, the public telephone system. Users connect to Faxtex, Faxtex connects to DIALOG, and the results are FAXed all via the voice-grade telephone system. That keeps the development and hardware costs low for such a service, allowing Searchcraft to concentrate on refining its search software and voice synthesizing.

Imagine the prospects

Imagine the next time you are watching late-night television that instead of a commercial for dial-your-astrological-forecast, you may see dial-a-bibliography or dial-a-newspaper or dial-a-drug. Imagine the commercial that promises, "Just dial 1-900-MAGS (for example) to find magazine articles on any subject." Database searching service will really have hit the big time when parents start to complain about the high phone bills their kids are racking up from 900 number database searching!

For more information about Searchcraft or Faxtex, contact:

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