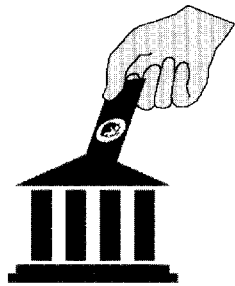


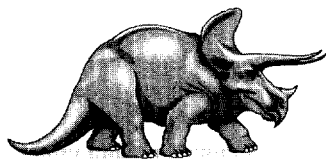
# Tomorrow's Online In Today's CD-ROM:



## Interfaces And Images

by Péter Jacsó

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CD-ROM technology has often been considered the younger sibling of online. If you have an older brother or sister you know what that means, and remember being bullied, belittled and being second-best. CD-ROM users often have that feeling in the company of online users. I practice CD-ROM searching much more than online, and I believe that the two complement each other.

Still, when I showed up at an online users group meeting, I felt like a Catholic priest having a snack in Mecca during Ramadan. One of the round-robin discussion questions was, "When and why do you not use online?"

There were all possible types of answers, except one. I was the last to answer, and said, "I am surprised to be the first to bring this up. I use CD-ROM when it is better or cheaper than online."

My comment was received with such derision as a toddler's challenge to a Sumo wrestler for a round of arm wrestling. I heard the usual litany:

- In online you pay just for what you use.
- Online offers a much wider choice.
- Online is much more current.
- You can have the full text for many databases.

- The online interface is the same no matter what database you use.

The most combative and loudest of the online users, whose "you-just-don't-get-it" preamble was meant to be intimidating, served up the typical example. "I often need the exact title of a vaguely remembered journal



**"...I use CD-ROM when it is better or cheaper than online."**

title, or the publisher of a journal in my work. I can logon to Ulrich's for less than a minute and find it. If I need some data from the *New England Journal of Medicine* about an experimental medicine, it just takes a few minutes to search the full-text version and find even the most passing reference to it. Why would I pay for the CD-ROM version? And listen to me, I do not want to bother to learn a new software for a quick and dirty search."

Of course, you have all heard this, and may even feel convinced. But not so fast with the ax, if I may suggest. "Get outta here," you may say. "How



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do you come to preach CD-ROM on the pages of *ONLINE*?"

I would not have dared think of it had not an e-mail discussion with Nancy Garman prompted her offer of the space (and title) to speak my mind. Let me first address the prejudices, and then discuss some issues. I submit the preposterous idea that in some of today's CD-ROMs you may see the future of online.

### THE PREJUDICES

One of the beauties of CD-ROM is that you may *not* have to pay for it. Your neighborhood public library or university library may have Ulrich's Plus, or EBSCO's Serials Directory, or CDMARC Serials. Neither of the latter two are available online, and CDMARC Serials has the largest number of serials titles (nearly 700,000 as opposed to the others with about 150,000). Sure, serials are not the extent of your reference



**Is online more current than CD-ROM? Not always, I submit.**

needs. But the same applies to dictionaries, encyclopedias, and many other reference works.

Where can you find a directory of CD-ROM databases online? There are three on CD-ROM. Gale has withdrawn its Directory of Databases from DIALOG as I write these lines, and it may be available in the future only in print—and on CD-ROM. What's more, reference librarians will often happily answer your question over the phone, free of charge. They would not likely do the same if it required an online search. You may even drive down to the library and do the searches yourself on CD-ROM.

Is online more current than CD-ROM? Not always, I submit. I have often (well, at least twice) received the bimonthly Ulrich's Plus disc before it was updated on one of the online systems. This currency may even improve since the publisher has promised monthly updates for the CD-ROM version. EBSCO's Serials Directory may be often much

more current than any other source since, as a serials jobber, EBSCO eats cereals (er, serials) for breakfast, and learns early about changes.

Full text is not the exclusive domain of online, either. If you often need to search the *Washington Post*, or the *New York Times*, or the *Boston Globe*, you can get them on CD-ROM from more than one vendor, and at a competitive price. Several regional newspapers not (yet) accessible online are available through the CD-ROM databases of Newsbank. Do you need a few full-text core journals for specialists in internal medicine? Check out Macmillan's Internal Medicine that offers the full text of the five top medical journals in yearly packaging. Do you need a good compilation of full-text magazines for a secondary school library? Magazine Article Summaries/Full Text may be a good choice (and is not available online). The full-text online version of Computer Select, Computer Database, does not have CD-ROM's very essential tables in WK1 and DBF formats or the executable programs.

You do not want to bother to learn a new interface just for a few quick and dirty searches? Point well taken, but what if you need book reviews about an expensive purchase? Book Review Index online just does not cut the mustard with its frugal bibliographic citations. However, if you want to check it out in Book Review Digest, you had better want it badly enough to learn the WILSONLINE software of H.W. Wilson because it is only online there. The same is true for the other online exclusives, such as Burrelle's radio and TV transcripts.

Even if common command language were universally implemented online, it is not the panacea. The indexing modes, the field prefixes and suffixes still vary from system to system. A better solution is an intuitive interface that can be guessed without any prior experience.

CD-ROM databases are not only catching up and moving ahead of online databases quantitatively, but also show qualitative improvements, novel solutions and excellent examples to follow. The two most important areas where CD-ROM is leading online are in intuitive graphical interfaces and graphical information.

In the online arena, only OCLC's GUIDON software and Clinical Trials database offers a model for both the graphical user interface and the imaged form of information.



**...even a less entertaining database, such as MEDLINE can be dressed up with an intuitive graphical interface...**

### GRAPHICAL USER INTERFACES ON CD-ROM

The intuitive graphical interface is probably best represented by the brilliant interface of the Cinemania database from Microsoft. A "remote control" analogy in the interface makes it familiar to anyone who has ever used a TV set. The user just cannot miss the cues. Moreover, half the fun of learning the information is getting to it on this disc.

Of course, you cannot expect this level of intuition and entertainment with every database. But even a less entertaining database, such as MEDLINE can be dressed up with an intuitive graphical interface to help a user navigate and easily identify the options. The Knowledge Finder version of MEDLINE is a prime example.

We all know that a picture is worth a thousand words. But is it worth a thousand bytes? For casual users I would definitely say yes. The enormous success of the Windows version of CompuServe software clearly supports this opinion. When it was first made available for downloading, the lines were jammed from the overwhelming traffic trying to obtain the software.

My experiences with a few hundred students clearly indicate a preference for graphical, mostly Windows-based, user interfaces over character-based ones. This can be easily tested on CD-ROM applications with dual (DOS and Windows) interfaces, such as the very well designed OVID software of CD PLUS Technologies, or Compton's Smartretrieve. While the character-based version of FolioView seems to me to be

very cryptic and unfriendly, the Windows version can be learned very fast and used by someone without a Ph.D. I can only hope that Mead Data Central will offer its CD-ROM databases with the Windows version of FolioView (though those who survived the convoluted online MDC software would find anything easy).

I am quite sure that DIALOG, BRS, Wilson, and other online services will have Windows interfaces in 1994. DIALOG has already introduced DialogLink for Windows. These interfaces will have to be installed on the user's PC, but if the installation programs are done right they will fully automate this process. Local installation is essential because pushing megabytes over an online connection just to paint a graphic screen would slow down the search and increase connect time-based costs significantly. A locally installed interface would need to transfer and receive only bits of information to and from the search engine to paint the screen locally.

Graphical user interfaces require a more powerful PC than those typically

used for searching online systems, but most of the PCs bought today are configured to handle graphical interfaces. For those who cannot upgrade or replace their online search PCs, (or simply do not want to) the current software will be maintained.

#### IMAGES

Another area where CD-ROM databases and software are far ahead of their online counterparts is in image representation of information. CD-ROMs include simple graphics of line art (drawings), black and white and color photographs, and text images.

The online full-text version of the Journal of Pediatrics is exactly that—full text. It is full text, but lacking the charts, figures and color photographs essential to fully understanding an article. In the CD-ROM incarnation published by CMC (Creative Multimedia Corporation), all these graphics are readily available along with the full text.

The image databases of UMI and ADONIS reproduce not only the

graphics in the original, but also an image of the original text. The graphics are sometimes blurred, depending on the hue, contrast, and overall quality of the original, but appearance is as good as a xerox copy. Even better, the graphics and the text images can be enlarged. True, the full text is only viewable, not searchable. However, the abstract, subject headings, and enhanced bibliographic citations provide appropriate accessibility. CD-PLUS provides the best of both worlds in its products, graphics and text images, and the entire, fully-searchable text.

#### WILL AND SHOULD ONLINE SYSTEMS FOLLOW SUIT?

The question is whether online systems will ever follow this approach? There is only one online system with very limited experience: OCLC's award-winning Clinical Trials database. I do not think that other online databases will follow suit within the next few years. Line-art and black and white pictures will show up here and there as in

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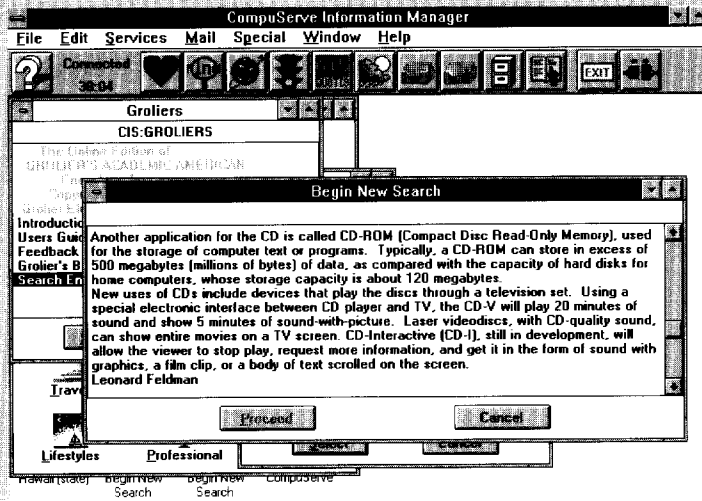
A sister product — EndLink — allows users to import references from online services and CD ROMs. The current version imports journal articles from Medline, AIDSLINE, BIOSIS, CAS, PsychINFO, PsychLIT, Computer Database, Current Contents, EconLit, Embas, ERIC, ISMEC, Soc Abstracts, Toxline and other databases. For more information or a free demo, please call 1-800-554-3049.



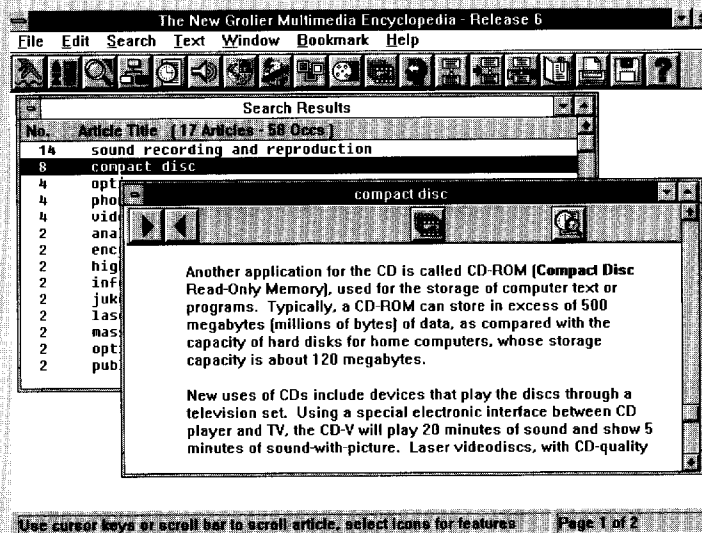
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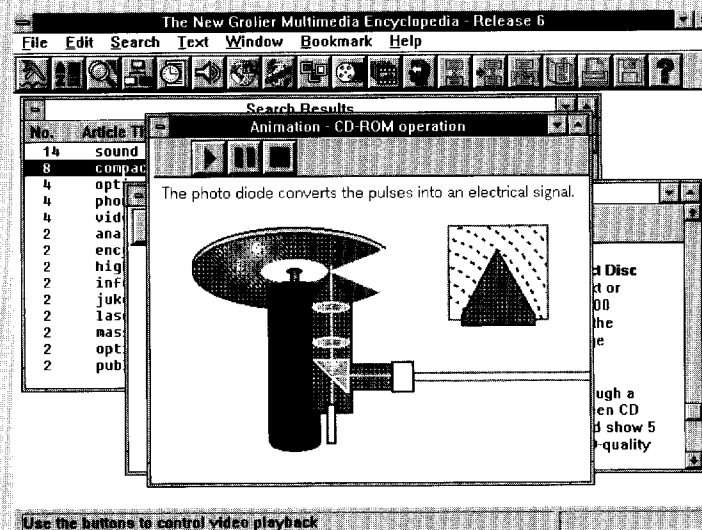
**FIGURE 1**



**FIGURE 2**



**FIGURE 3**



Trademarks can, but they will remain the exception. There are several reasons for this.

Storing graphics requires an enormous amount of space. Depending on the size and resolution, a small picture may require .5MB to 2MB of disk space. Text image has a similarly voracious appetite. The ratio of the image version of a simple typewritten page of 2,000 characters is about 20:1. Yes, there are efficient compression techniques to reduce this bloated storage need, but the images must be decompressed which takes time even with a powerful processor. Online services are reluctant to use that much space on hard disks whose cost per megabyte is many times that of CD-ROM costs.



**Bibliographic online services have been conservative with hopping on the technology bandwagon...**

Users would not be happy either. Transferring images over the current communications facilities, typically at 2400bps or 9600bps, would make searches unacceptably slow and correspondingly expensive. Flat-rate pricing would solve the latter problem from the users' point of view, but the communication costs would still be unacceptable.

The double burden of expensive storage and slow, repetitious transfer will remain a barrier even if and when fiber optic communication lines are in place, and given lower hard disk storage costs. Users would find it very annoying to watch an irrelevant image develop on-screen as slowly as a Polaroid instant photo, while hearing the meter ticking, especially if the process cannot be interrupted.

CompuServe may have gotten a graphic (inter)facelift, but its databases (such as the American Heritage Dictionary and the Grolier Encyclopedia) have remained strictly textual. There are no graphics in the databases themselves, let alone colors or animation as there are in the CD-ROM sources. Though Figures 2 and 3 in



black and white cannot accurately convey the feel of narrated animation, you may be sure that the multimedia elements immensely enrich the CD-ROM versions. On the retrieval side, CompuServe is embarrassingly primitive, offering less flexible access than the printed publications, merely an alphabetical access by the lead term of the article. The paragraph about CD-ROM in Figure 1 could be retrieved only by browsing through the article about Compact Disc.

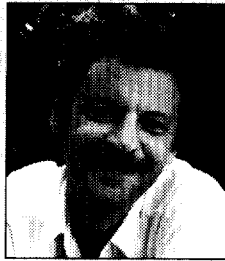
Bibliographic online services have been conservative with hopping on the technology bandwagon just because it is there. Consider how long it took them to offer 9,600bps speeds, and only CompuServe has just begun offering 14,400bps. Don't hold your breath for the complete information superhighway, the copper-based ramps are unlikely to be replaced soon by the fiber optic cable that is needed for the reasonably fast display of still and moving images, and for Hi-Fi sounds. If you still are not convinced of the advantages of CD-ROM, look up the term in your Grolier Encyclopedia online,

then in the CD-ROM version to feel the difference.

### CONCLUSION

Most online services will offer graphical user interfaces before 1995, but I don't think they will widely offer graphics, and text images online before the year 2000. However, they will have to start to prepare for that future. It is quite possible that in the interim users

will be able to subscribe to the image versions of their most frequently used databases on CD-ROM. Then, with a direct local link, they will be able to display the image version of the records from the CD-ROM while searching online. Online and CD-ROM technologies are not on a collision course but rather in a complementary relationship. They just may prove to be good siblings as well.



## THE AUTHOR

**PÉTER JACSÓ** was a visiting associate professor at the School of Library and Information Studies of the University of Hawaii at the time this article was written. He is a frequent contributor to professional magazines. He was the 1993 winner of the UMI Excellence in Writing award for his pair of *DATABASE* articles, "Searching for Skeletons in the Database Cupboard," which appeared in the February and April 1993 issues of *DATABASE*. He is the author of a well-reviewed book, *CD-ROM Software, Dataware and Hardware: Evaluation, Selection, and Installation*. For the 1993/1994 year, he is on the faculty of Rosary College.

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