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BY CAROL TENOPIR

CD-ROM Goes Consumer

NO ONE DOUBTS the success of CD-ROM products in libraries and their enthusiastic reception by most librarians and educators. A much larger market is on the minds of CD-ROM publishers, however, as they seek to make inroads in the consumer marketplace with new interactive multimedia products for the whole family. If demand for this emerging consumer media grows, libraries may consider adding these products to their collections.

I learned about this trend when I recently attended the Sixth International Conference and Exposition on Multimedia and CD-ROM sponsored by Microsoft and held in San Jose, California, March 18-20. With a registration fee of nearly \$1000, Microsoft wasn't trying to attract librarians or educators to the conference.

Most of the 1800 attendees were involved in some way as producers of CD-ROM, as publishers, software engineers, hardware manufacturers, consultants, or the like. Major corporations like IBM, Sony, Philips, Kodak, Commodore, and Apple were there in force, but I also met a lot of small publishers who see multimedia CD-ROM as the future of creative publishing ventures.

These are the people who will try to shape the future directions of CD-ROM. They try to second-guess the needs and desires of the marketplace, and, to a certain extent, drive the desires by designing better hardware and products. The overwhelming message at this conference was increase the markets through more and better (or at least flashier) multimedia products available on cheaper and easier-to-use hardware. The participants did not always agree on the best ways to achieve those goals.



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Market trends

Stanley Frank, president of Britannica Software, described the four markets that will be big in the immediate future. The first market is *corporations*, which need packaged training materials. He explained that this market is already predisposed to technology (corporations spent over \$9.2 billion on packaged training materials last year) and will eagerly purchase multimedia CD-ROM training materials if the price is reasonable.

Education is the second big market, according to Frank. Today, 40 percent of public school districts have CD players; another 37 percent plan to purchase them soon. Schools spend \$2 billion annually on instructional materials, and the purchase of technology-based materials is increasing. He warned publishers, "if you are in print textbook publishing, you should consider multimedia or see your market significantly reduced." Although this market has computers, they may be low-end machines that would require upgrading to run multimedia products.

The third big market identified by Frank is *libraries*. Libraries are one of the few places where "CD-ROM has already proven its worth," says Frank. This market has shown itself willing to purchase new technologies, but is relatively small and often, as we all know, has limited budgets.

The last market is the home market for *consumers*, who could use this technology for entertainment, education, and information. This market is the golden egg that almost all the Microsoft conference attendees seemed intent on cracking.

The consumer market will not be an easy one to penetrate, however. At this early stage, developers must sell not only the individual titles, but the idea of interactive CD-ROM and the hardware needed to play it as well.

All of the major information products now sold to consumers are either free (broadcast TV, radio, mail-order catalogs) or inexpensive (cable TV, newspapers, movies, magazines, and

books). These "defending champions are formidable foes," in the words of Microsoft's Min Yee.

Interactive TV

Different companies propose different strategies for reaching the consumer market. There is a split between the consumer electronic camp (such as Philips, Sony, and Commodore) and the computer industry (like IBM and Intel). Consumer electronics companies hope to make CD-ROM an extension of television, while computer companies naturally want CD-ROM tied to personal computers. Libraries are already familiar with many of the excellent PC-based multimedia products such as Compton's MultiMedia Encyclopedia (see "Multimedia CD-ROM," *Online Databases*, *LJ*, May 1, 1990, p. 64-65), but may not know much about television-based products.

Interactive television probably has the most immediate chance of success in the home market. The realities of this market are that there are over 150 million color TVs in U.S. homes, but only 25 million PCs have been sold, most of which are not in homes and are not able to run multimedia products. Consumers have shown an eagerness to extend their home entertainment systems, as witnessed by the success of VCRs (over 80 million), video games (over 30 million), and CD audio players (over 25 million).

Conflicting technologies

Like VHS and Beta videotape technology, there are two incompatible competing technologies for consumer CD-ROM. Commodore's CDTV ("Commodore's Dynamic Total Vision") has been available since April in selected U.S. cities. Philip's CD-I ("Compact Disc-Interactive") will become available in the United States and Japan this fall and in Europe in 1992.

CDTV and CD-I players each attach to the television set just like a VCR. They will play audio CDs as well as CD-ROM (but they won't play each other's products). The ini-

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tial cost for each is just under \$1000 (\$999). A hand-held infrared remote control device lets you interact with the programs from your easy chair. Keyboards and options appear on the screen as part of the program.

Both companies realize that no one will spend a thousand dollars on a piece of equipment without interesting titles to play on it. They both have contracted with a variety of publishing and entertainment companies to develop a range of products that will appeal to the entire family. One publisher said he aims to develop products that are simple, but that "delight and surprise" and that offer comparative value through "enhanced functionality over a book or a database." Others said interactive TV products are meant to appeal to the senses and be experienced. Many titles are simply entertaining, others offer some educational value in an entertaining way.

Initial individual prices will range from \$20-\$100, with an average price around \$40-\$50. Games will be on the low end of the price range; reference materials on the high end.

CD-I titles

There are plans for having between 50 and 100 CD-I titles for sale when the players are first introduced this fall. According to a spokesperson for American Interactive Media, one of the major developers of CD-I products, "the creativity of choice of material and design and production of titles will be the true litmus test of success for CD-I in the consumer market."

The 50-100 titles attempt to satisfy the whole family's entertainment and information needs. Many will also be of interest to schools and libraries. Starting at preschool level, there will be cartoon products based on *Sesame Street*, Richard Scarry books, Mother Goose, and other characters. Children can choose which direction to take a character in a story, can use a paint box to color cartoons any way they want, or play a song or segment over and over. I was impressed with the quality of these preschool titles—they are simple but entertaining, colorful, and even sometimes a bit educational. They change the TV from a completely passive medium to a more interactive one.

CD-I publishers are very aware of the success of another TV extension—Nintendo. Game titles will be

available at introduction and more will certainly follow. "Escape from Cyber City" was described by its developer as "noisy, violent, and has no redeeming social value—we think it will do well."

A very different type of game is the jigsaw puzzle, where users can select from a variety of pictures and then choose how many and what pattern of pieces they want.

Judging from the crowd around one title on the exhibit floor, the most popular CD-I for adults may be a golf simulation game. Set on a Palm Springs golf course, players are shown and given information about each hole. They then pick a club and position a male golfer who swings. A voice comments on each shot as the user moves along the course. A baseball game is also being developed that will allow players to pitch and hit against major league greats from the past.

Other titles inform, educate, or simply numb. The popular Time-Life Photography books are enhanced on CD-I as you can experiment with different camera settings to see how the changes will alter a shot. This title teaches everything about still hobby photography through an excellent mix of text, sound, motion, stills, and interaction. How-to titles seem a natural for interactive TV in both the home and the library. They add genuine value over other media. Starting next year, Kodak will process your 35mm film onto a CD-I disc as an option alongside prints or slides.

There will also be a fair amount of junk. An oldies music jukebox product reminded me of the K-Tel record ads on television ("not available in any store") and seemed boring after a few minutes. The comments by one producer show an appalling disregard for the intelligence of the consumer. He said, "at first it will be intriguing just to click; they want fun stuff to do. For a couple of years the newness of the technology will be sizzle enough and the content won't be so important. Early consumers won't need lots of content."

CDTV

Commodore's initial title catalog has 50 products, with an additional 40 planned this summer. It hopes to bring the price per title down to be competitive with CD audio, books, videotapes, and videogames. Commodore has licensed 300 title developers worldwide, including many

major reference publishers and entertainment companies such as Grolier, Rand McNally, Guinness, Disney Software, and LucasFilm.

Some products are extensions of popular CD-ROM titles. The New Grolier Electronic Encyclopedia for CD-I will be similar to the CD-ROM product, but with less reliance on text and more on multimedia. The Guinness CDTV Disc of Records will allow interaction with the familiar record-holder information. The American Heritage Encyclopedic Dictionary will be fully illustrated.

Like CD-I, there will be many children's titles, including interactive versions of *Cinderella*, *Peter Rabbit*, and "Snoopy: The Case of the Missing Blanket." Videogames such as Tiger Media's "Airwave Adventure: The Case of the Cautious Condor" with enhanced graphics, sound, and motion will undoubtedly be popular with older children.

The biggest number of titles will be in the hobby areas such as gardening, cooking, and how-to titles. Many of these will be popular in the school and library market as well as the home.

Commodore's initial target audience is clear. Its ideal early adopter is a family with children between six and 12 years old, has a \$50,000 per year income or greater, already owns a VCR and CD audio player, and uses computers at least in the office or school.

CDTV and CD-I players and products will be sold in "upscale" department stores, bookstores, and computer stores. If CDTV and/or CD-I catch on, a title rental business is sure to follow. Libraries as well as video rental stores will need to consider how much to get involved in interactive TV titles. Like so many other decisions, demand will probably drive collection development to some extent. The products are entertaining, if not as serious or educational as many of the new multimedia CD-ROM products for your computer.

Right now, in spite of the success in libraries, the CD-ROM market is small. Only a few titles have sold more than 1000 units. The price per unit, as librarians are well aware, has been high. A widespread, expanded consumer market will benefit us all because it will drive prices of hardware and titles down as CDTV, CD-I, and multimedia CD-ROM compete for customers.

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