

MARKETING CD-ROM INFORMATION PRODUCTS: THE INTERNATIONAL OPPORTUNITIES AND CHALLENGES

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ABSTRACT:

Opportunities exist for publishers of optical-based information products in two arenas: (1) niche marketing of high-density information products in CDROM format, and (2) micro-marketing of tailored information products to a small number of customers. The micro-market publishers will represent a larger industry than the niche market publishers by 1993. Tomorrow's products will be built on a technology which allows individualization, multi-media, and desktop database publishing.

KEYWORDS: *CD-ROM, Optical publishing, Mass markets, International marketing, Market potential*

CD-ROM technology has a promising start. In 1987, the Meckler Corporation published CD-ROMS *in Print* 7987. The directory cataloged more than 220 CD-ROM titles customers could order from publishers.

Disk/Trend, Inc., a consultancy based in Mountain View, California, asserts that 75,000 CD-ROM drives will be sold worldwide by the end of 1988. This will bring the total installed base, according to the company's analysis, to about 125,000 drives.

The growing base of CD-ROM hardware adds credence to *Computer Reseller News's* estimates that optical disk drive shipments will reach 500,000 units by 1990. More significant for this paper, however, is their confidence that shipments of the newer optical technology drives will be strong as well. Their April 27, 1987, estimates are shipments of 400,000 write-once read-many (WORM) drives and 130,000 erasable optical disk drives by 1990.

Niche and micro-marker optical publishing

At the threshold of 1989, one thing seems clear-optical technology offers publishers in any media two distinct options:

- The CD-ROM allows for niche market high-density information products. (I use the term *niche market* in a more narrow

sense than consumer product marketers because a **CD-ROM** information product may sell fewer than 1 ,000 units over a two or three year period and be a success.)

- The newer technologies open what I shall call micro-market optical publishing. (The term *micro-market optical publishing* means in this context the ability for a publisher to create a tailored optical information product which may sell to a handful of customers, possibly as few as a dozen. Micro-market optical publishing is the compact disk form of desktop publishing.)

It appears that many large international publishing organizations will follow the first path. The products from Dialog, Disclosure, Lotus, UMI, Reed Telepublishing, and similar companies look to hundreds or thousands of sales from well-defined market segments. Financial analysts and brokers in the case of Lotus's CD-ROM products or academic and public libraries in the instance of **UMI's**. Some of these companies believed the market for CD-ROMs to be a massive. Sales results suggest that the actual markets are niches and capable of support several hundred or several thousand sales.

What is now starting to be recognized is that micromarket **optical publishing** is likely to be a far larger industry by 1993 than the niche market CD-ROM publishing common today. The size of the micro-market may support from two to **200** unit sales.

Market and technology considerations will create significant electronic publishing opportunities for a many individuals, small companies, and government agencies throughout the world.

Who will be the micro-market optical publishing winners?

Some of the most successful organizations in micro-market optical publishing may well be from countries not now playing a major role in electronic publishing. Let me cite one example to suggest the change micrsmarket optical publishing will cause.

In the U.S., Apple Computer is often held up as an example of an entrepreneurial company which has successfully moved from adolescence to corporate adulthood. The former Pepsi-Cola executive, John **Sculley**, has brought managerial innovation and marketing savvy to a company which was being drubbed by IBM in the corporate and hobbyist marketplaces.

However, in the middle of 1988 Apple Computer with little fanfare announced that it would not deliver its \$10,000 CD-ROM publishing workstation, a product announced at the Third Microsoft **CD-ROM** Conference in March 1988. No reasons have been reported in the U.S. computer press as I write this in mid-July 1988. Does Apple sense that it cannot compete in this arena?

Many U.S. companies do have the know-how to take advantage of **micro-market** optical publishing. Apple, it seems to me, would be one organization properly positioned to feed the new markets made possible with the WORM and erasable technologies. But U.S. companies may lack the ability to engineer the right product for the micro-market. This is similar to the flaw the American automobile industry demonstrated while it continued to manufacture two-ton finned behemoths when the Germans and Japanese were selling small cars.

It is my position that the US. CD-ROM producers seem more comfortable manufacturing products for such a large niche market as corporate libraries, academic libraries, special libraries, financial analysts, market researchers, and other well-defined homogeneous groups that they have previously sold to with products the CD-ROM is supposed to replace.

Their goal is to sell the largest number of CD-ROMs in order to take advantage of the economics of **up-front** fixed costs to produce discs.

The problem was well stated by a U.S. computer newsweekly in July 1988. According to *Macintosh Today*, "Vendors of CD-ROM technology. . . are still trying to find a market for it. By the time they do, they may have competition from newer more flexible optical technologies. Read-only media will likely be surpassed by read-write media in two to three years."

This view was given some support when Craig Clint, *The Seybold Report on Desktop Publishing* editor, observed: "CD-ROM is still a technology for the elite few."

Niche market CD-ROM product challenges

The first challenge is the sales volume for the niche market CD-ROM products.

As you know, obtaining accurate sales information about how many units of a particular CD-ROM product have been sold is difficult.

Over the past six months, I have been listening attentively to off-the-record conversations about unit sales of information-based CD-ROMs. The chart which appears in Table 1 reflects a consensus opinion on how a number of CD-ROM products are doing in the American market. I welcome any corrections and updates to this data, and, of course, I assume full responsibility for them.

What I **find** interesting about this summary, which I reiterate is not based on published sources, is the expectation within the information industry that a CD-ROM product is a winner if it sells **200** to 1,000 units overall. The market for a CD-ROM is quite a bit smaller than the niche market for athletic shoes or even a successful computer book in print,

Table 1: Estimated Unit Sales of CD-ROM Products

COMPANY	PRODUCT	EST 88 SALES	EST TOTAL SALES	MARKET
Bowker (Reed Publishing, U.S.A.)	Books in Print Plus	250-400 units	500-700 units	Book stores Libraries
Information Access Co. (Ziff-Davis Publishing Co.)	InfoTrack	400-700 units	1,000-1,200 units	Public and academic libraries
Datext (Lotus Corp.)	Datext	200-400 units	700-900 units	Special Libraries and corporate planning and marketing departments
Dialog Information Services, Inc. (Knight-Ridder Newspapers, Inc.)	Standard & Poor's Ondisc	60-90 units in three months	100-200 units	Special Libraries end corporate planning and marketing departments
Disclosure, Inc. (VNU)	Disclosure Ondisc (SEC data)	200-400 units	800-1,200 units	Financial service firms
Silver Platter Information, Inc.	ERIC	100-200 units	300-400 units	Libraries

The number of CD-ROMs sold is closer to the sales volume of a high-priced newsletter or specialized industry reports. Some of today's CD-ROM niche market publishers will make money with their **productss**, but it may be difficult for them to recover the investment dollars they have poured into their product to get it to market. Of course, we shall never know the full financial details. It may prove challenging to make the reality of CD-ROM live up to the managers' financial projections.

I conclude from this that CD-ROM information products in their present form serve the needs of a narrow, somewhat specialized group of niche market consumers.

The estimates in Table 1 are, as I mentioned, skewed to the U.S. market. That American market offers CD-ROM publishers a number of advantages:

- Large, easily identified customer base
- Rich resources for technology (personal computers, software, drives, mastering services, and the like)
- Concentration of CD-ROM publishers
- Funds to spend on information
- Machine-readable data

- Established, well-trained service operations (Bell+ Howell, NCR, and other companies sell third-party computer hardware support).

This list could be expanded, but I think the point is obvious: America is a barrel stocked with lots of fish which should be easy to catch.

The surprising fact is that fish interested in nibbling at the CD-ROM bait are few in number.

Is there an international niche market for these products?

The international information market poses a number of challenges to publishers distributing their media in traditional formats like microforms and paper.

Without belaboring the obvious, the difficulties we wrestle with every day range from mail delivery to customs.

When the electronic media are involved, the challenges become a bit more problematic. The issues we have to deal with include:

- Transborder data flow
- Copyright, confidentiality, and ideological issues
- Data security and integrity
- Customs
- Technical standards.

However, the real problems don't surface until we face the customers. The mechanical and procedural problems become child's play when compared with these tasks:

- Documentation in the user's native language
- Training
- Client services
- Individualized service
- The user interface
- Pricing.

Let's look at a few of these issues in Table 2.

This brief review indicates the problems which CD-ROM marketers are faced with helping to create as we sit here today. I am not certain they can be adequately resolved in the U.S., and almost certainly, not in other countries.

The technology's evolution

Both Tandy and Maxtor, U.S. computer companies, have announced erasable optical devices for personal computers. A number of vendors offer read-write optical storage devices. **FileNet**, a California company, is installing a complete read-write optical archiving and imaging system. It is designed to allow banks, hospitals and insurance companies to move from

paper-based **files** to optical filing.

In terms of electronic publishing, the read-write and erasable optical technologies will allow:

- Larger databases to be created by individuals and non-publishing companies. Rumor has it that Sony is likely to allow three gigabytes of data to be placed on a single write-once read-many (WORM) optical disk.
- Storage and access to a range of media, including full-motion video and reproduction quality graphics
- A choice of formats
- Faster drives
- Visual information retrieval systems, not the command oriented approach of today's CD-ROM products
- Economical small scale publishing without the costly and time consuming processes now used to produce today's products.

Consequently, the CD-ROM will be the technology of choice for a niche market product. These new technologies will give rise to the optical publishing industry to which I have been referring as **micro-market** optical publishing business.

Tomorrow's products will be built on a technology which allows individualization, multi-media, and desktop database publishing.

The successful electronic publisher will not manufacture too many niche market products. Instead, the products will be individualized, tailored, and sold as customized services. They will require support, of course, but the next generation of optical information products will sidestep the challenges summarized in Table 2. The next generation of products will be individualized and sold as services. Under these circumstances, customer support is provided as an integral part of the package the customer buys.

The opportunity ahead

Most large, multinational firms will struggle to capture these new **micro-market** opportunities. This may set the stage for several events:

- New, small companies will **fill** the need for micro-market optical publishing products. Entrepreneurial products and services related to optical technology will blossom in many countries.
- New optical technologies will allow rapid production of micro-market products.
- The companies which will drive the new markets will be those which have a **firm** grip on the hardware and software.
- The larger, more niche market Information providers will have an increasingly **difficult** time unless they form strategic alliances with the companies driving the newer technology and with the entrepreneurial companies that are able to match data to local market needs.
- CD-ROM products will become archival, and they will offer images in addition to text.

Table 2: CD-ROM Marketing Issues

ISSUE	THE USER'S NEED	U.S. SUPPORT	NON-U.S. SUPPORT
Documentation	Clear, accurate user materials; regular updating	CD-ROM producers are struggling to match documentation to user needs and keep up with continuous evolution of their CD-ROM products; manuals out-of-date and often inappropriate	Use of materials prepared for U.S. market
Training	Instruction in how to set up the product on a specific machine; hw to use the product: and how to install software upgrades	Some pre-sale instruction; reliance on reference materials; training; marketers assume purchaser has computer support and know-how	Agents handle installation and ship it and forget it
Client Services	Telephone support; user groups; technical newsletters; and product reviews at major conferences	limited telephone support; newsletters; user groups beginning to form; and sales-oriented presentations at trade shows	Telephone support offered in countries where the agent or the marketer has • more than one- or two-person office; few newsletters; no user groups; and some trade show demonstrations
Individualized service	York with each customers on a key account basis	Individualized service only to make the sale	Some at the largest companies or government bureaus; otherwise, none
User interface	Designed with the user's needs and expectations in mind; customizable to some degree	Predetermined by engineers; little customization possible	No customization offered; U.S. interface imposed as the de facto Standard
Pricing	A fair price with flexibility to package a system to met specific situations	Price List but wide fluctuations possible with no rationale for the different fees assessed; price cutting; hardware giveaways; deals to move units	Higher than U.S. prices; same inconsistencies but less flexibility

The outlook for optical publishing

In my opinion, the future for optical technology is bright. A number of U.S. companies will continue to lead in specific segments almost in spite of themselves.

Overall, the future of optical storage rests in the hands of those who are sensitive to the enormous promise of the technology's ability to let anyone create an information base of words, pictures, sound, motion video, and graphics.

It is an exciting time which will create new opportunities for electronic publishing worldwide.

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