Peter Crown, Ph.D
"Videodisc – Application in Art, Science and Daily Life"

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The laser optical videodisc is of importance to different people for different reasons. To some it represents the best video picture quality available at home today. To some it is the information storage technology with the greatest capacity about 40 gigabytes per side. To some people, it is a random access media peripheral for computers. The reason I think the laser videodisc is an important technology (and let's not confuse it with the defunct CED format) is for all these reasons combined. This is truly a new medium because it combines the processing power of computers with the high information content of still and motion pictures, sound, and data.

Today, after about eight years of practical experience, the videodisc is slowly coming on the scene. In 1985 in Japan, the number of movies sold on videodisc was equal to the number of movies sold on videotape. This reflects the earlier introduction of consumer videodisc in Japan than in other countries, and perhaps a discrimination and desire for better picture quality than achieved with VHS and Beta videotape. In the United State, the consumer videodisc market is much smaller than in Japan. The more interesting projects, ones which really exploit the interactive aspects of the medium, are seen mostly in industrial, academic and military settings. Here we see the interactive videodisc used for teaching computer literacy in an insurance company (Travelers), training tellers in banks (Bank America), and demonstrating cosmetics in stores (Biotherm; Merle Norman Cosmetics).

The use of videodisc by artists, and for art-related subjects, is still quite limited. As a distribution medium, there are a few video artists whose work is distributed on disc, many limited to Japan. Among these are Nam June Paik, John Sanborn, Paul Garrin and Kit Fitzgerald. The videodisc as a new medium, e.g., an interactive art form, is evident in very few projects, such as that of Graham Weinbren.

The potential and the cause for excitement about the videodisc is better demonstrated by some prototype projects. The most frequently cited example is the Aspen Movie Map developed at the Massachusetts Institute of Technology (MIT). This system gives the user the experience of driving around the ski resort town of Aspen, Colorado, exploring as you wish. Watching the video screen you see the street before you. Push the joystick to the right and you drive around the next right turn. Touch the restaurant on the screen and you see the dining room inside. Touch the screen again and you see the menu of the day, and so on. This is a lovely way to learn about a place, if you can't be there in person. (The project was funded by DARPA, Defense Advanced Research Projects Administration.)

An unexpected problem developed after the MIT project became widely known. That was that everyone who wanted to do a videodisc project believed they could do something as complex as the Aspen project. Expectations became higher than budgets permitted.

A warm and personal project is near completion by the YIVO Institute in New York City. The purpose of the project is to preserve the Eastern European Yiddish culture which was largely destroyed during World War 11. The YIVO disc contains about 40,000 photos taken from newspapers from before the war. These photos are organized by a computer data base and can be viewed by anyone. If a viewer recognizes a scene, a relative, or something else about a given picture, he or she can add this information to the data base. ("That's my Uncle Karl, he was a baker in Warsaw.") I call this a "living data base" because it grows and changes as

people work with it. The same concept is being tried at Yale University School of Medicine with a disc of 10,000 lung pathology slides.

My company helped produce a prototype in home-entertainment videodiscs – the Criterion CAV editions of "KING KONG" and "CITIZEN KANE". These discs contain the films in excellent quality, but also have a 300 page book of text and photos on the disc, and a narration of the film on the second audio channel. The interactivity of the discs is Level I – under manual control – but at least one college course in film-making is being developed using computer and disc. These were the first movie discs with these added features, and now the idea is being copied by other disc producers, a sign that we are on the right track.

It this medium is so great, then why isn't it more prevalent? (In the USA, there are over 26 million VCR's and about 200,000 videodisc players). I think there are several reasons.

1) Inadequate and inappropriate marketing to consumers.
2) Limited availability of software.
3) Non-standard computer interfaces.
4) Computer phobia.
5) The "DRAGON'S LAIR Syndrome".

To keep things in perspective, we should recall that it wasn't so long ago that there were no home VCRs and no personal computers, let alone computers in the home. I think that the video disc will continue to grow in use and popularity for both consumer and industrial applications.

What will these future applications be? Here are just a few examples:
1) Electronic books – e.g., histology text book with bar codes to access the video disc. This will be published this summer.
2) Picture data banks at home and work.
3) High-Definition discs. This would be an improvement for discs showing paintings, photos, graphics and so on.
4) Pictorial information on demand – for shopping, learning.
5) Interactive games
6) Interactive art discs
7) Simulation for fun, learning.

The future of video disc may be influenced by its cousins, the compact audio disc (CD), CD-ROM, and compact disc – interactive (CDI). The greater acceptance of CD's as compared with videodisc suggests this medium might be the path to widespread use of the medium. No matter what the path, the video disc, in one form or another, is close to having a large effect on the way we interact with pictures, sound, text and data.