

## Canon Optical Card

by Adam C. Engst

Bored by that ho-hum magnetic storage? Yawning at the speed of the optical drives? Frustrated by the reliability of floppies? Well Canon has something for you. They call it the Optical Card, and it is a credit card-sized storage system that can hold about 2 megabytes of information per card. The card uses WORM technology, which disqualifies it from the general purpose uses floppies generally fulfill, but is admirable at storing relatively inert information, such as (we hope) medical records, maintenance records, personal identification, etc. The Optical Card has an inner recording layer sandwiched between two hard plastic layers for protection against physical damage. The recording layer has 2500 parallel tracks, on which data is written by a laser beam several microns in diameter. A lower-powered laser beam coupled with a photo sensor reads the data back from the card.

Because the method of storing information physically puts tiny pits in the recording layer, the cards are not susceptible to either magnetic fields or static electricity. This level of data safety is not true of the popular magnetic strip cards commonly used for ID and credit cards nor of the larger IC cards that combine CPU and memory chips on a card. The price of the Optical Card is also much cheaper than either of the other types in terms of the amount of information stored. The real prices are likely to be between \$4 and \$35 for the cards and \$1500 and \$3000 for the Reader/Writers necessary to access the information on the cards. Those prices have large ranges because Canon doesn't currently know how popular the system will be, and the lower prices require volume production. The initial models will only work with the IBM-AT bus, but SCSI models for the Mac and other platforms should follow shortly.

What will these little things be used for? It's a good question, and one which Canon tries to answer in its propaganda sheets. They offer suggestions such as a storage medium for medical records or vehicle maintenance records, assuming that such information should be relatively stable with additions only. Other suggestions include secure identification cards, because 2 megabytes is plenty of room to store fingerprints, retinal scans, and photographs, and data distribution cards for publications or software that is unwieldy on either paper or floppy disks. Basically, the issue seems to be that applications for the card are those that store a relatively small amount of information that is relatively static.

Needless to say, while 2 megabytes is a good amount of information, we would all like it if they could hold more. On-board compression could effectively double the space without any speed loss. Oh, speaking of speed, they aren't all that fast. Writing speed is 15.3 kilobits per second, reading speed is 100 kilobits per second, and access time ranges from 23 milliseconds to 2.5 seconds with a 1.5 second average. However, considering the paper data the cards might replace, any computerized access time

will be faster than the human access time searching through a file folder of papers.

Because it is unsure of the market for the cards, Canon seems to be looking for people to test the units and evaluate their applicability in various areas. If you are interested in using this technology, contact Bruno Dosso at Canon at the phone number below. As with all of our articles, we ask that you mention where you heard about the product so we can build our reputation in the industry.

Canon -- 516/488-6700

Information from:

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Canon propaganda

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