

Straphangers May One Day Turn Pages With a Button

By **DOREEN CARVAJAL**

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PARIS, April 23 — In the Tom Cruise sci-fi thriller "Minority Report," a subway passenger scans an issue of USA Today that is a plastic video screen, thin, foldable and wireless, with constantly changing text.

The scene is no longer science fiction.

This month, De Tijd, a Belgian financial newspaper, started testing versions of electronic paper, a device with low-power digital screens embedded with digital ink — millions of microscopic capsules the width of a human hair made with organic material that display light or dark images in response to electrical charges.

This is only one test of new e-paper devices competing to become the iPod of the newspaper business. Other e-paper trials are being undertaken by the paper Les Echos, which is based here, by the newspaper trade group IFRA in Germany and, in the United States, by The New York Times.

The International Herald Tribune, which is owned by The New York Times Company, is also in discussions to make subscriptions available later this year for the same e-paper devices used by De Tijd, according to Michael Golden, the International Herald Tribune's publisher.

The devices used by De Tijd, called the iL-iad E-reader, are made by iRex Technologies, a spinoff of Royal Philips Electronics. Sony will introduce its version of an e-reader with the microcapsule technology later this year. The devices, which will be able to download books, newspapers and podcasts, are expected to cost about \$400.

For publishers confronting declining newspaper circulation in most parts of the world, the devices offer the tantalizing promise of reaching more readers while saving on printing and distribution costs. But after some highly publicized e-book machines failed to take off in the late 1990's, those long-held hopes have remained elusive.

The difference this time, developers and supporters say, is that the screens on the new hardware are made to reflect rather than transmit light, making them more like paper. The devices weigh about 13 ounces (light enough to be held in one hand while reading) and can be updated in Wi-Fi hot spots or through Internet connections (although they cannot be used to surf the Web yet). Their touch screens are also capable of doubling as notebooks to jot down information or to download books. Pages are turned with the touch of a button.

De Tijd, with 40,000 readers in Belgium, is essentially fitting its traditional print format to the device's screen, meaning that it



Photographs by Tebaldo

Above, Les Echos, a financial newspaper published in Paris, appears as an e-paper on a Sony reader. At left, the same publication on a flexible e-paper device.



is not changing the style of its newspaper. Twenty-five De Tijd readers received free e-paper devices on April 14, the start of a three-month trial that ultimately will reveal the habits of 200 readers, mostly highly educated men selected to match the demographic profile of its print readers.

"We know that our readers like to have their newspaper before they go to work, and we offer them paper newspapers before 7:30 a.m. But that's not enough," said Kris Laenens, De Tijd's manager of the project, who added that it needed to offer service to readers wherever and whenever they wanted it.

At this point, the e-paper cannot display color, offering just 16 shades of gray, and the screens are rigid. Those weaknesses have soured some newspaper publishers, according to e-paper developers like Plastic Logic in Britain, which said that there were more sophisticated devices in preparation that were bendable and weighed little more than a piece of paper. While the devices may display only in grays, they are interesting enough to attract some advertising agencies to participate in the tests.

"How do we deal with the lack of color?" asked Johan Hermans, a managing director of Agency.com in Brussels. "Can you advertise linked to the profile of the user — for example, if they're interested in the automobile sector?"

One advantage is that advertisements could change with the time of day, he said, letting agencies avoid showing beer ads in

the morning or coffee ads in the evening. "All these types of things we're trying to examine," Mr. Hermans said.

Les Echos, which is owned by Pearson, the London-based parent company of The Financial Times, is taking a different approach. Instead of shifting the print format directly to a device, the company is customizing information with a look different from its traditional newspaper format, much as it would for its Web site version. The newspaper plans to test Sony's e-readers first, but the intention is to make the newspaper readable on a variety of devices. The plan is to offer the device "to our subscribers if they subscribe to Les Echos for a period of years," said Philippe Jannet, director of electronic publishing for Les Echos.

IFRA, based in Darmstadt, Germany, is pursuing an "eNews initiative" with 21 newspapers from 13 countries, including the Times Company, which will be testing electronic devices as part of the project. Toby Usnik, a spokesman for the company, said that the company joined the consortium of newspapers from Japan, Spain, Germany and France last year, and was pleased with the e-paper devices, which he called "impressive."

In May, the group will meet to plot the first phase of e-paper testing, said Jochen Dieckow, who is in charge of business and news media research for the newspaper trade organization. The group's goal is simply to evaluate the new market for e-newspapers.

"Many publishers take it seriously and we see it as a new media channel," Mr. Dieckow said. "Our impression is that there's a momentum now and many publishers want to be there at the start so they can form the market. One of the major issues is whether this will be a niche product or a mass product."