

Today, Shoppers on Internet Get Access to Electronic Cash

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Published: October 23, 1995

A prominent project to create electronic cash that can be zapped over the Internet to buy goods and information is scheduled to start issuing its first real money today.

Digicash, an Amsterdam concern run by the noted cryptography expert David Chaum, said Mark Twain Bankshares of St. Louis would be the first bank to offer customers Digicash's E-Cash.

Amid all the hoopla about the potential for offering goods and information over the Internet, one big stumbling block has been the development of a secure and reliable system to pay for these products.

Mr. Chaum, a former University of California professor, holds some key patents on coding techniques used to make electronic money, and his software has been made available without charge over the Internet for most of the year, with 60,000 people testing it with play money.

Mark Twain, which hopes to attract customers for E-cash from around the world, was chosen as the first to offer an actual account because it is one of the few banks that accepts small deposits in the United States in a wide range of foreign currencies.

At first, only a handful of companies will accept the E-Cash, including Maryland Public Television and Pentagon CD's and Tapes, an on-line music store.

To use the system, a customer establishes an account with Mark Twain and sends an initial deposit, say \$200. Then using software provided by Digicash, some of that money is electronically transferred over the Internet to the customer's computer. The current balance is displayed in a small window on the screen.

While surfing the net the customer comes across something to buy -- say the 1996 stock picks of Louis Rukeyser, which Maryland Public television intends to sell for about \$3 using E-Cash. Then the customer simply pushes a button on the E-Cash software to transfer the money again over the Internet to the television network, which deposits the funds in its own bank. The customer can then read or download the stock picks.

The small amount of Internet commerce that has been done so far uses credit cards, which have the advantage of already being in the wallets of most Internet users. But credit cards have a number of disadvantages for certain types of electronic transactions. Because they offer itemized billing, for example, credit cards are too expensive for very small purchases, like news articles that might cost 10 cents each. And banks only allow established merchants with a credit record to accept credit cards.

E-Cash is intended to get around these problems. Payment is immediate, with no billing statement, so very small payments are economical. Moreover, anyone with an E-Cash account can both send and receive funds electronically, allowing virtually everyone to set up shop on the Internet.

With E-Cash, the banks do not know where the customers spend their money. Nor do the merchants know the identity of their customers, unless the customers voluntarily identify themselves.

Using a complex coding mechanism, all this information is stored in the electronic messages that represent the payments, but it can be unlocked with keys that only the customer keeps.

Using those keys, consumers can obtain from their bank the electronic equivalent of a canceled check to prove a payment was made to a particular merchant in case of a dispute. And they can get a refund for electronic money lost if say, their computer's disk drive fails.

Digicash's system has one major disadvantage compared with credit card plans: Initially, at least, it is more expensive.

As of Friday, the final fees had not been set, but it was expected to cost about \$10 to establish an account and an additional \$2 to \$5 a month to maintain it. Those who deposit or withdraw more than a set amount -- about \$100 -- will pay a 2 to 4 percent fee. Merchants expecting higher volumes will be able to set up accounts with bigger fees and lower percentages.

Other banks say they are interested but cautious.

"The market for small payments on the Internet will grow very slowly, so it hasn't been our highest priority," said Martha C. Campbell, a senior vice president of the Bank of America, who nonetheless complimented the product's design.

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