

Cash On Command

How you get reliable 24-hour service from the computerised cash machine at your bank

Bank customers now have access to cash whenever, and almost wherever, they want it thanks to the microcomputer. All that is needed is a small plastic 'cash card' containing coded information about the customer's account. When funds run low and instant cash is required, all the customer needs to do is go to the nearest branch of the bank that has a cash dispensing machine.

These cash dispensers are really microcomputers in disguise. To obtain money, the customer inserts his card in the slot on the machine. The card contains a black magnetic stripe similar to the magnetic material used on cassette tape. When the card is inserted, a magnetic reader checks the numbers encoded on the stripe. These numbers show that the card is of the right kind (not an imitation) and also tell the microcomputer inside the cash dispenser the customer's secret PIN (Personal Identification Number).

The cash dispenser then asks the customer to identify himself by typing in his PIN. If the number entered is correct, he is given a choice of options, which are displayed on the screen of the cash dispenser. The options usually include a choice of withdrawing cash or making an enquiry about the balance in the account.

If the customer wants cash, he presses the appropriate button and then types in the amount of money needed. At this stage, the details of what goes on inside the system differ. A code on the magnetic stripe tells the cash dispenser if it needs to contact the bank's central computer or if the request for money can be dealt with locally.

If the request can be handled locally, the microcomputer in the cash dispenser checks further information encoded on the magnetic stripe. This tells it what the cash limit for withdrawals is and how much money has been drawn in the last week. If the limit is £100 per week and £60 has already been withdrawn, it will allow up to £40 to be dispensed. A prompt on the screen asks the customer how much he wishes to withdraw, usually with a message like PLEASE ENTER AMOUNT OF MONEY REQUIRED. THE TOTAL MUST BE A MULTIPLE OF £5.

If the customer is making a statement enquiry, or if there is no cash limit on withdrawals, the cash dispenser goes 'on line' to the bank's main computer. This means that a connection is made over special telephone lines so that the dispenser's microcomputer can communicate with the main computer to check the amount of money left in the account.



Assuming enough money is in the account, the main computer will instruct the microcomputer in the dispenser that the money may be dispensed. A note-counting machine in the dispenser counts out the bank-notes and pushes them out through a separate slot. If the dispenser is working 'on line', the central computer is informed of the amount withdrawn and the customer's account is updated accordingly.

The cash dispenser was introduced to provide banking facilities out-of-hours. Day or night the customer can obtain cash, request a new cheque book, check the balance in the account or order a detailed statement. The customer is given a card — like a cheque or credit card — and is allocated a personal number

Yellow Ticket Trouble

Magnetic cards can even be found on the London Underground. A few years ago a comprehensive system was devised to allow passengers in and out of automatic gates by use of a yellow magnetic ticket. Unfortunately the exit machines rejected tickets so often that irate passengers forced the system of exit gates to be abandoned



JULIE ANN CHAMBERS