COMPUTER USAGE

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COMPUTERS AND BANKING

By Robert H. Glaser

By 1980 your pockets might well be empty. You may not be getting your paycheck anymore. And you might even have forgotten the feeling of a handful of crisp new bills.

That doesn't mean you'll be out of a job or broke. It simply means you could be in the same boat as millions of other Americans who, according to many banking experts, will be living in a "checkless" society in 10 years. And after that—a "cashless" society. Such a society will be a direct result of how computer usage is developing in the banking industry.

THE CHECKLESS SOCIETY

This is how it might work: You won't pick up your paycheck anymore because by using computers your salary will be automatically credited to your account each pay period. When you receive bills in the mail, all you will have to do is insert a plastic card in the telephone that will connect you to your bank's computer. A voice will tell you what your balance is to the second, and then you can proceed to pay your bills using whatever store identification card is necessary.

And you won't have to worry about doing even that much on monthly bills like the mortgage, electricity, telephone, insurance, etc. These standard bills won't have to be called in because your bank's computer will know exactly how much to debit your account monthly and when to expect it. Therefore, with preauthorized arrangements for paying the routine bills, there will be no need for any information transfer.

Sound like science fiction? Not according to banking experts like Dale L. Reistad, Director of Automation for the American Bankers Association. As he sees it, it's inevitable. Eighteen billion checks are now written annually. And, at the present rate of growth, it is estimated that in the next decade it could take a good portion of the work force in this country to handle just the paperwork checks produce—if not for computer usage.

Paperwork and checks are breaking the banker's back today, and are the biggest headache of banking operations. According to Mr. Reistad, "The technology and computer hardware necessary to implement a 'checkless' society have already been developed. Our statistics indicate that, with the new computer installations going in right now, over 750 banks in the country could handle a checkless system."

Mr. Reistad believes that a completely checkless system could be established in a community tomorrow, but the consumer isn't ready for it, most bankers aren't ready for it, and the retailer isn't ready for it. Consequently he says, "No one can say exactly when it's going to happen. The best guess right now seems to be that it's going to start around 1970. It could be a national system by 1985."

Mr. Reistad goes even one step farther to the "cashless" society, where people would no longer use money in business — not even to pay for a newspaper or cigarettes. "Money keys" will be used instead. These electronic value counters will be charged up by the bank to debit the holder's bank account.

BANK CREDIT CARDS

Many banks are already using direct-funds-transfer systems (DFT). For example, one pilot project is now underway at the Bank of Delaware in Wilmington. In a shoe store in Wilmington, for example, a clerk can insert a customer's plastic identification card into a card dialer telephone. He pushes a few buttons signifying the amount of purchase and the transaction is completed in seconds. No paper, no delay.

Bringing home your groceries in years to come is also going to be quite different. Instead of paying for the groceries at the checkout counter, you may insert your bank I.D. card in a transfer device located at the counter and transfer your funds to the grocer's account.

If there isn't enough money in the account, the computer could immediately take one of two actions: 1 — automatically grant credit (up to pre-specified limits) to cover the cost 2 — hastily flash a red light on the transfer device If the red light flashes . . . well, that's a problem they haven't solved yet.

The Federal Reserve Board estimates that in recent months over 1,000 banks have issued credit cards. The card doesn't cost the user anything provided he pays his bill within a month. If he's late the bank charges interest.

The Bank of America was one of the first banks in the field with its Bank Americard. To date, it has over 2 million members and bills over $228 million annually. In many cities doctors, dentists, and other professionals readily accept the card.

Robert K. Wilmouth, Vice President of the First National Bank of Chicago, has predicted that credit cards will be adopted by banks of all sizes. According to him, over 200

banks in Illinois have already signed up for one of the plans now being offered.

BANKS MUST "MOVE"

Although many banks have accepted the challenge on a local level, one of the things preventing a nation-wide electronic transfer system is organization and support. In this area the banking industry seems the most logical field for development, and many bankers are concerned with missing the obvious opportunity in becoming active in the new "electronic dollar" society.

The fact that the banking industry is currently concerned with advanced computer technology was obvious in New York a few months ago when over 1800 delegates from the U. S. and 40 foreign countries gathered for the ABA's Fifth National Automation Conference. The theme of the conference was "Stepping-Stones to the Checkless Society."

According to George S. Moore, President of First National City Bank, New York, the industry is at a crossroads. Speaking to bankers who gathered for the conference, Mr. Moore said, ". . . we should profit by yesterday's lessons and take better advantage of tomorrow's opportunities in automation. The answer is involvement, fast."

Addressing the same ABA conference, Robert S. Oleman, Chairman and Chief Executive Officer of the National Cash Register Company, urged banks to begin planning to bridge the growing gap between increasingly affluent consumers and retail stores:

"Where could one find a more likely or logical intermediary between retailer and consumer? We shall see a much closer relationship develop between the average bank and retail store. This is one of the most logical—and inevitable — of all the stepping stones to any electronic monetary system."

Mr. Oleman cited a number of forces that ultimately will contribute to a checkless society, including the increase in purchases by individual consumers — the largest single source of the paperwork in business transactions.

He also called for the eventual establishment of automated central information files. He feels this is necessary to meet future consumer demand for broader services such as financial and life planning, automated bill payment, automatic credit extension and automatic payroll deposit. Under present systems, an individual's checking account is generally filed separately from his savings account, auto loan, Christmas Club, etc., even though all are at the same bank.

In these new information-processing concepts, Mr. Oleman declared that, the computer can become the primary instrument for dealing with questions of bank strategy rather than tactics. As examples, he discussed such bank management problems as branch location, optimizing capital resource investment, managing investment portfolios, analyzing credit risks and restructuring bank procedures and workloads to obtain greater efficiencies.

FOREIGN COUNTRIES

In many countries where the banking systems did not meet the public need for an advanced payment system, other means have been developed. For example, Britain recently developed a new "giro" system, which the Post Office will soon inaugurate to solve Britain's checkwriting problem. Under the system, most British wage earners will have their pay checks automatically deposited with a "giro" account in the post office. When the post office is instructed, it pays the bills. Reportedly many other countries have similar systems.

English banks, however, are not standing still either. Burroughs Corporation recently received a $32 million order for a computer network built around a large-scale B-8500 computer from Barclays Bank Ltd. of Great Britain. The transaction is one of the largest EDP orders ever placed by private enterprise. The B-8500, located in the bank's London headquarters, will be linked to approximately 2,500 terminal computers at Barclays' bank branches throughout the United Kingdom.

A QUESTION OF "WHO'S WHO?"

One of the obvious problems facing the development of an automatic transfer system is: How does the computer know that the person giving it an instruction is, in fact, the owner of the account? To put it simply — How to foil electronic robbery?

Many of the proposed validity checks are interesting solutions. For example, the payor might be required to give the computer his social security number, plus a series of identification numbers known only to him. In addition, research

is now underway to identify an individual by: the oscillatory pattern of his brain waves; voice identification; or a breakdown of his distinctive body odors.

Although no method is now foolproof, it may be that a combination of several techniques can reduce the possibility of fraud to virtually zero. In any case the electronically monitored system of checking can be no worse than the present system of signing checks.

CUSTOMER SERVICES

The "checkless" society with its credit cards, bank cards and picture phones is only one area where computers are important to banking. Increased customer service is the aim of many banks and technology is bringing big changes. Using the lightning speed of the computer, deposit, interest and checking account records can be kept accurate on an up-to-the-second basis. Instant information also cuts down on the time at teller windows. Especially during those busy lunch hours. Result — everyone's happy.

Arizona Bank is one example where this trend toward increased customer service is becoming a reality. The bank has announced plans to install a voice-response system that will be used by its 27 branches in the Phoenix area to relay information to checking account customers. It plans to pilot-test its system this summer, according to Bill Margolf, Vice President and Manager of the Data Processing Department.

The bank will use Touch-Tone dialing pads with the system. Tellers will be able to obtain instant information on some 45,600 checking accounts. After locating an account in its files, the computer will select the requested data and transmit the answer to the teller verbally.

YOU HAVE A FRIENDLY MACHINE AT . . .

The major obstacle to the "checkless" society may be people. People like dealing with people. Much of the banking industry's advertising and promotion is based on this theory — "You have a friend at Chase Manhattan"; "You'll find a welcome at Banker's Trust," etc.

Many banks offer red roses for the ladies, cigars for the men and assorted goodies and playthings for the toddlers. What would be the effect of dehumanization in the banking of the future? Many bankers agree that there may be a problem of adjustment. But many others point out that in the future banks will be dealing with a generation that has been brought up with computers, space shots, moon landings, etc. They will be far less likely to view the computer in the sometimes frightening light that their parents did.

Besides the dehaumanizing factor, but closely linked to it, is another problem—privacy. Recently the question of "invasion of privacy" has been raised in the wake of a proposal for a central data bank. The plan, which would allow the Bureau of the Budget to develop a National Data Center, has received heavy criticism both politically and privately. At the recent Spring Joint Computer Conference, Rep. Cornelius E. Gallagher attacked the idea as dangerous to the American way of life: "The crystallization of one's life and one's mistakes into machine readable form denies man the freedom to forget. This denial flattens his existence to the point of limiting his future possible actions."

This same question of "financial" privacy might block the strides toward the "checkless" society, which of necessity needs centralized credit information or "financial utilities" as they are called. But there are those who believe that as far as credit information is concerned, the "invasion of privacy" began a long time ago with credit bureaus.

Mr. Reistad maintains that the invasion of privacy is here today — it's taking place right now in the manual credit bureau system. In his opinion the computer gives us a chance to automate the credit bureau and puts certain restraints on it.

He says that under the computer system, if you want to buy something (say a motorboat) on your charge account, you simply walk up and present your identification card to the merchant. He inserts it in his terminal device, and if a green light flashes, your credit is good. When you walk away with your motorboat the merchant doesn't know whether you're a happily married man or divorced. He doesn't know if you're making $50,000 or $5,000. All he knows is his credit score applied to your credit record indicated that you're a good enough credit risk for him. And you got the motorboat.

The "checkless" and "cashless" societies are some of the most revolutionary developments of computer usage in banking which — although esoteric — are fast approaching implementation. It was the banking industry, in particular the Bank of America, that broke ground as commercial users of computers over 17 years ago. Computer usage and

banking have actually grown up together. At first banks were mainly concerned with the feasibility of computers. Today, over 3,000 banks of all sizes utilize the computers great speed in handling information. One expert points out, "The banking industry is probably farther along right now than any other industry. What clouds the picture somewhat is the fact that there are so many banks — 14,000 separate institutions."

Some of CUC's work in banking typifies the "bread and butter" of computer usage in this day to day operation of banks today:

- CUC analysts and programmers designed a system to allocate expenses to various cost centers within a New England bank.
- The development of an "off-line" mortgage accounting system was developed by CUC for a New York bank — with several unique features. The CUC system not only provides complete data to process mortgage loans, but it analyzes accounts to develop forecasting information for the bank's money managers.
- Much of CUC's work for banks throughout the United States is concerned with file maintenance, information retrieval, and billing procedures. But banks — as other commercial institutions—face personnel, marketing, and administrative problems unrelated to their main function. Therefore, for one large California bank, CUC designed and programmed a profit-sharing plan — complete with updating procedures, conversions, and production of annual statements to employees.
- CUC is also currently engaged in mutual fund applications for a bank in the Southwest; salary administration for a New England bank; and a retail billing system for a California bank.

PROBLEMS, PROBLEMS, PROBLEMS . . .

There are many problem areas that have accompanied the technological revolution in banking. One of them is a problem that the computer field, in general, has to face — the shortage of qualified software personnel. The people problem has always been acute in banking. One of the ways the ABA is trying to cope with the problem is APT (Automation Planning and Technology Program). Under this new long-range research and planning project, the nation's banks hope to find out precisely what the problems are facing banks in hiring, training, and keeping competent software people. The project will also enable the banks to plan for their future operations and requirements in the face of the rapid advance of computer technology.

Another ABA program called "Abacus" is actually a computer utilization service. Banks which have computer programs available list them with the ABA. In this way no bank goes about researching and developing systems that have already been developed.

One of biggest problems is the small bank. Even today there are banks that are not convinced they have to automate. As Mr. Reistad puts it, "Many small banks still think that the only way larger banks are using computers is for internal bookkeeping. They have no concept about reaching out, getting into the automated services, operations research, checkless systems and credit cards. We still have a big evangelical task to motivate these banks."

No one really knows when the "checkless" and, possibly, "cashless" society will be upon us. But there is no doubt that even with the prodigious problems facing the banking industry a direct-funds-transfer system (DFT) is inevitable. But there is a good deal of hard work and research ahead before such a total system becomes a reality. One thing, however, is certain, banking as we've known it in the past is on the way out — as far out as green eyeshades and wicker, teller cages.

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