

NCR

**NEWS
CHECK**

Under NCR control

The new Gatwick Hilton International is the first UK user of NCR's recently released 2160 bar/restaurant control system. The system gives the hotel complete control over food and beverage sales and stock analysis.

Ten 2160 terminals have been installed in the restaurant, bar, coffee shop and room service, and are online to two NCR 3251 processors.

The terminals incorporate all the latest technological developments including AFNR (automatic form number reader), with the bar code at the top of the guest bill; cashier code entry to give maximum secur-

ity; and preset and open department keys.

Key entry for an order follows a routine of waiter code entry; table number; number of persons; food and drink order through the preset menu item keys; and cooking preference. The order automatically prints out on the kitchen printer, and is held by the terminal.

When that table makes further orders, the terminal picks up the balance and locates the next line for printing. Once the settlement key is pressed no further orders can be added to that bill, and the terminal asks for payment type.

The terminals offer a variety of payments keys including cash, cheques, credit cards, room account, city ledger for account customers, and employee account, and gives separate end of day totals for each key.

Room account bills are automatically printed at the front desk.

The data captured on the 2160 gives detailed end of day stock analysis on all food, beverage and alcohol, and gives written reports for the stock ledgers.

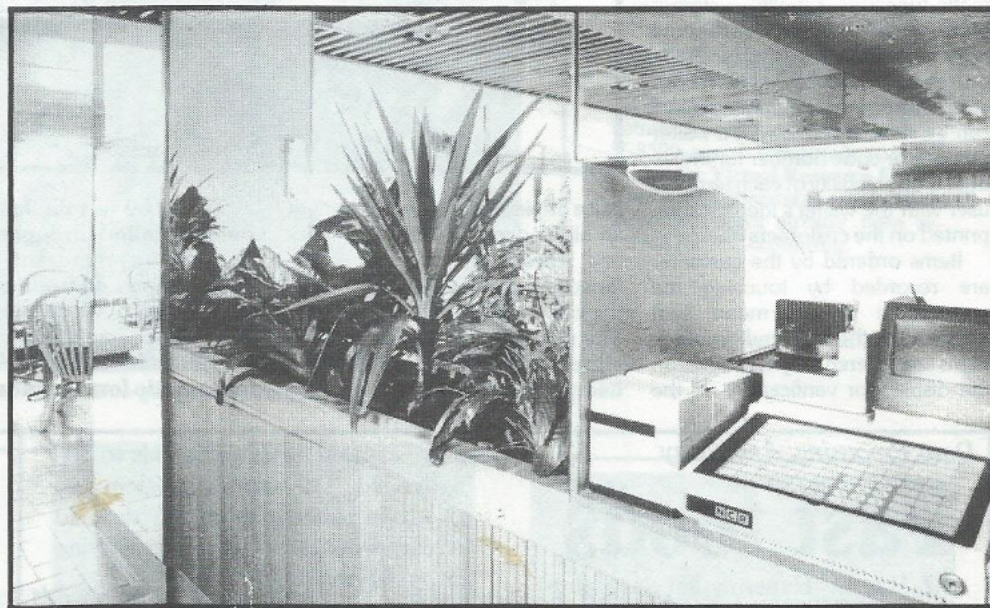
Minicomputer News, June Versatile family

NCR has released a family of multi-purpose microprocessor systems designed to operate in a number of business environments.

These include a personal computer intended as an executive workstation, a small business system for general business control in the smaller company or departmental processing in the larger company, and an intelligent programmable satellite terminal for communication with NCR or non-NCR computers.



There is also a network controller which can control up to 16 NCR financial, retail or general purpose terminals, and a factory terminal controller for controlling NCR data pathing terminals, to be known as the DPS 10.



An NCR 2160 bar/restaurant terminal in Gatwick Hilton's Garden Restaurant.

NCR's scientific workstation is based upon an auxiliary language processor using the programming language, Pascal, and is suited to the university market. The auxiliary language processor is based upon four bit-slice processors and it is designed to handle all pro-

cessing functions with the exception of input/output, which are handled by the existing processor.

The personal computer, NCR factory terminal controller and the scientific workstations will be available later this year.

Marketing, 3 June

Self-service check-in system is just the ticket

A new self-service ticket sales and check-in system, which is expected to go into full production next year, is being developed by the **NCR Corporation**. The NCR 1800 series terminals are designed to help travellers with reservations, ticketing, check-in and boarding at airports, railway stations and ferry ports, etc. The company's prototype system, which is geared to airline operators, deals with passengers' enquiries about flights, and enables travellers to make reservations through an airline's central computers. When this is done, the machine will automatically debit payment for tickets from passengers' credit cards, and print and issue the relevant documents. Its function as a check-in and boarding terminal involves the provision of boarding passes and baggage labels. The system is programmable according to the type of travel concerned.

Infomatics, 25 May

Citibank UK orders NCR COM system

Helping to prove that computer output on microfiche (COM) technology is not dead, Citibank's UK arm has added an NCR 5330 COM system to its existing NCR 643-110 equipment. The new 5330 will be used with an NCR 4207 diazo microfiche duplicator and will run on-line to the Bank's mainframe systems.

Dated **June 1982**

A selection of cuttings from the UK press
Further details from Michael Fenton Webster
NCR Limited 206 Marylebone Road London NW1 6LY
Telephone 01-388 8244

NCR: restaurant remote control

NCR have released the 2160 bar/restaurant point-of-sale system, specially designed for food and beverage control in full service restaurants, steak bars and hotel restaurants.

The 2160 is "easy to operate and will satisfy individual restaurant procedures." It consists of a low-profile terminal with "micromotion" keyboard with preset menu items; a multi-line visual display; and a choice of modular printers including the kitchen and bar order printers. All the components are online to an inhouse processor.

These features, plus many automatic functions, simplify customer bill transactions and reduce the time required to enter food and beverage orders in the kitchen and bar. As an extra security option the terminal can be set to operate with a waiter penlock or code number for individual accountability of each terminal user with the waiter's identification printed on the customers bill.

Items ordered by the customer are recorded by touching the appropriate present menu item keys, and as the food and beverage items are ordered they are shown on the display for verification. All the

items displayed contain the quantity, an alpha description and the price and these are printed simultaneously on the customer's bill and the kitchen food preparation order.

The recently opened Gatwick Hilton International is the first user of the system.

front desk II

Concluding our special study of computer-based control systems for hotels, restaurants and bars. Pictured here, one of the new NCR 2160 terminals in the Garden Restaurant at the Gatwick Hilton. See first story.



Ten 2160 terminals have been installed throughout the hotel in the restaurant, bar, coffee shop and room service, and are online to two NCR 3251 processors. The terminals incorporate AFNR (automatic form number

reader), with the bar code at the top of the guest bill; cashier code entry to give maximum security; and preset and open department keys.

Key entry for an order follows a routine of waiter code entry; table number;

Data Processing, April/May

Fast foods

At Havant Hypermarket in Hampshire there are 30 checkout lanes, all using slot scanning techniques to read prices, collect sales information and handle greater volumes of traffic. According to the store director, using the scanning system should mean that the number of customers previously handled in 36 lanes can now be handled in 30 lanes.

Each cashier will sit facing the customer and the scanner, with the keyboard to the right, the printer to the left, and the drawer underneath the checkout belt. The customer display is at the end of the lane. Each customer receives an itemised receipt listing product by brand and size with the price. Payment can be by cash, cheque or Handycard at the checkout, with other credit cards being catered for at a separate desk.

The system is based on the NCR checkout system, which was originally installed at the Hypermarket at the end of 1980. Said Paul Callaway, store director, "We decided the time is right to go scanning, as by August, 60 to 70

per cent of the volume of goods will be bar coded. The scanning system will give us increased sales information and greater productivity as well as a saving in operation costs."

At present the store, which has 70,000 square feet of sales space, uses guns to price-mark the 40 million items per year that pass through its shelves. The scanning system will be introduced in phases beginning with the grocery, wines, spirits and frozen foods departments. Other departments will continue to be price-marked for about a year until bar coding has been completely implemented.

Checkout, May

TWO NEW NCR REGISTERS INTRODUCED

NCR has released a "low-cost free-standing point-of-sale cash register" - the 2117 which, according to NCR, uses micro-technology to provide "security, information, speed and accuracy when recording retail transactions."

In the first released there are four models with 34- or 59-key keyboards and options for a deep cash drawer. The 34-key model can provide from one to nine

department totals, either open or with a preset prices. The keyboard layout and other features (such as high digit lockout and compulsor validation) can be programmed simply through the keyboard. There are also separate totals for tender types such as cash, cheques and credit cards, as well as paid out, received on account and credit. Many of the keys - like "void" and "percentage" - can be programmed to be used only under supervised control.

The two print stations provide customer receipts and a sales journal and there is a validation print for endorsing cheques etc. The optional extras include a price look up feature for up to 218 prices, also rear, side or postmounted customer display, and the provision for battery operation in the absence of mains power. Wet proof keyboard overlays are also available and would be particularly suitable for pubs and restaurants.

The price of the 34-key model starts at IR£775 while the 59-key version, which can perform the same functions but with extra capacity, costs from IR£965.

More computers from NCR

DOES NCR STAND FOR Not Cash Registers? Hot on the heels of its I-9010 microcomputer family, NCR has now brought out a new range at the other end of the performance spectrum – the V-8500 Group II series of medium and large scale mainframe computers.

With the new range, NCR is emphasising low cost, ease of use and upgradeability. Group II covers the performance range above and below the previous V-8500M and MP systems, and is claimed to offer up to 25 per cent price/performance advantages as well.

Programs, files and most peripherals from 8400 and 8500 systems can be moved on to the new system without the need for conversion.

Prices start at £53,000 for a 1 megabyte model, and go up to £158,000 for a 4 megabyte, dual-purpose machine.

NCR also announced cuts in memory prices, and intends to reduce the price of software for its low-cost 'entry-level' systems.

• NCR, 206 Marylebone Road, London NW1. (01) 388-8244.



NCR's new mainframe system emerges from the computer jungle.

Data collection

NCR has introduced two new source data collection systems, DPS 10 and 20. They are for use wherever data needs to be picked up from source, either in the factory, the warehouse or outdoors. The DPS devices can be used as stand-alone information collection and processing stations, as front end sensors to NCR's existing processors, or they can act as part of a distributed processing network. A notable feature is that the terminals can be located up to 10 000 feet from the processor without need for signal boosters.

NCR range

NCR is developing a range of accounting packages for use with its V-8500 series computers running under the Virtual Resource Executive (VRX) operating system. Over 20 orders have already been received for V-Accounting.

NEW NCR MAINFRAMES

Following the recent release of the NCR I-9010 family of microprocessor systems, NCR Limited has now released a new line of medium and large-scale mainframe computer systems. NCR has also announced reductions in memory prices and special pricing for the basic system software. The new computers, called the V-8500 Group II systems, offer up to 25% price/performance ratio increase over the V-8500M and MP processors, which they replace. The new series consists of six models which extend performance ranges both higher and lower than the current offerings. The systems run under NCR's Virtual Resource Executive (VRX) operating system. The Group II models are the V-8535 II, V-8555 II, V-8565 II, V-8575 II, V-8585 II, and V-8595 II. The smallest of the new models, the V-8535 II, is an entry-level system that offers about 75% of the performance of a V-8555M, NCR's previous V-8500 entry-level system, at about 56% of the previous system's price. The V-8535 II has a purchase price of £25,000. The V-8555 II model has memory sizes ranging from 1 to 4 million bytes, with a million-byte system having a purchase price of £53,000. The V-8555 II is the smallest of the new systems to additionally offer multiprocessor capability. The next model in the series, the V-8565 II, features a 56 nanosecond central processing unit. It offers 2 to 6 million bytes of memory, with 4-way interleaving and features a Virtual Assist Unit that provides improved performance. The V-8565 II can also be upgraded to a multiprocessor. Purchase price with 2 million bytes of storage is £73,000. The high-end Group II systems, the V-8575 II, V-8585 II and V-8595 II are dyadic systems, with dual central processing units. Each processor has a cycle time of 36 nanoseconds, and all three can also be upgraded for multiprocessor configurations. The entry-level dyadic system, the V-8575 II, offers from 2 to 6 million bytes of 4-way interleaved memory. It provides approximately 80% of the performance of NCR's previous dyadic processor, the V-8585M, at about 65% of the price. Purchase price is £102,000. The second of the dyadic systems, the V-8585 II, offers comparable performance to the previous V-8585M at 80% of the earlier system's price. Purchase price with 2 million bytes of storage is £129,000. The largest of the dyadic systems is the V-8595 II, which offers over 20% more processing power than the V-8585 II system. Memory sizes begin at 4 million bytes and range to an 8-megabyte maximum. Purchase price for the processor and a 4 million-byte memory is £158,000. Production of the new Group II systems has begun, with volume deliveries later this year. NCR also announced reduced memory prices for current systems. The new purchase price for 1 million bytes of storage, for example, has been lowered to £12,500.

Cashing in with NCR

NCR claim that their 2117 point of sale register uses the latest micro-technology to provide security, information, speed and accuracy when recording retail transactions.

The four models in the range have a 34 or 59-key keyboard, validation and options for a deep cash drawer. The 34-key variety provides nine department totals; the 59-key model has 36. Features such as the keyboard layout, high digit lockout and compulsory validation can be programmed via the keyboard. Some keys can be programmed to be used only under supervision.

The 2117 offers separate totals for different forms of payment and two print stations provide customer receipts and a sales journal. The optional extras available include a price look up feature for 218 items; rear, side or post mounted customer display and battery operation.

Price of the 34-key model starts at £645, whereas the 36-key machine costs from £805.

Fashion Weekly, 28 May

NCR Sessions

The multiple advantages of buying a computer system geared to the clothing industry were outlined at a four-day open house at NCR Ltd London's office last week.

The sessions were aimed at wholesalers, distributors and manufacturers in the industry.

One of the numerous facets of the micro-chip industry included a computer called **SYSTEMWEAR**, designed to deal with the every day headaches of order processing, stock control and cloth and trim stock control.

Representatives from **Amber Day**, **Hamlet Shirts** and **Hardware Clothing** were shown how to use the system to obtain the maximum control over stock and finance.

Computer Weekly, 27 May

Gatwick terminals

NCR's first UK customer for its 2160 bar and restaurant control system is the new Gatwick Hilton International Hotel. The hotel has installed 10 terminals in its restaurant, bar, coffee shop and room service department, linking them to two NCR 3251 processors and to a printer in the kitchen.

Point of Sale

IT IS difficult to know whether the introduction in the seventies of the large retail outlets such as hypermarkets, cash and carry warehouses and superstores is the result of the electronic point of sale revolution, or if it is the other way around. Certainly the mass retailer could not exist without electronics.

The rapid expansion and new merchandising trends in the mass retailing industry have brought into sharp focus a continuing need for more effective and responsive management information systems, and leading EPOS manufacturers are meeting the need. The smaller retailer can also benefit from electronics with systems at prices appropriate to his turnover. In fact the retailer's problem is not in finding the right system, but in knowing what type of system is right for his particular outlet.

Point of sale systems with data collection capabilities fall into six categories, beginning with the low cost electronic cash register, or ecr, which uses department totals; and advancing to intelligent free standing point of sale registers; free standing point of sale terminals with data collection capabilities, such as cassettes; interactive systems in which the point of sale terminals are in two way communication with a local processor; management information systems using distributed processors; and mainframe systems.

The terminal hardware is flexible and can be modular; specific application or software packages can be used, or software can be tailored to user requirements. The retailer should seek expert advice before selecting a system, and should ensure that his system can be upgraded to match his business growth, where necessary it should be compatible with any existing data processing systems, it should use the latest micro technology, and it should be flexible enough to meet his detailed requirements.

Point of sale data capture is a powerful new tool for the retail and distribution industries. It has completely revolutionised stock inventory, stock taking and shelf filling methods, and the information generated needs to be fully utilised to maximise its contribution to greater efficiency which is, after all, the key to prosperity in an increasingly competitive world. Once a data collection system has been installed, the retailer then has the initiative to make use of the many methods of automatically collecting sales data from item coding, giving himself and his customers the fastest and the most accurate service possible.

Unfortunately, once the financial investment into epos has been made, it is often not used to advantage. I get very distressed

The Epos

By Norma Robertson

Norma Robertson is a freelance journalist.

when talking to retailers about their sophisticated systems to find they are using them as glorified cash registers, merely keying in a department code and price.

Before any retailer can get the best out of his system, he has to start at the beginning, which is matching his end of day takings with the deletion from stock items. Epos is only a part of a complete system, and should start with an open to buy plan, which is dynamic and which can react to comparison of actual with planned sales. In this way adjustments can be made to original buying plans to optimise and take full advantage of what is really happening on the shop floor.

invented in Dayton, Ohio, and Britain has adopted many of America's new merchandising trends, particularly in super-markets, department stores and the catering industry. For instance, the Universal Product Code (UPC) was introduced in America for use in supermarkets, and represents a major development in the management of stock movement. A light beam, incorporated in the checkout belt automatically reads the code, and relays the price back to the terminal. The system is known as slot scanning and is an extension of price look up, where the assistant keys in a code only, and the price is relayed back.

Slot scanning has been slower in coming to Britain as, although Europe has introduced its own code, that of European Article Numbering (EAN), manufacturers have been reluctant to incorporate it into their packaging. However, they are now responding to demand and customers are becoming very familiar with the EAN code, a series of light and dark lines with numbers, which are appearing on even the smallest packaging. If a supermarket has chosen his terminals and processor wisely, he has the means to incorporate a slot scanner interface without replacing or adding to his system.

Slot scanning is an alternative means of data entry. The bar codes are automatically read by the light beam, substantially speeding sales recording and increasing accuracy at the point of sale, therefore saving cashier labour, and reducing the number of checkout units required, as well as increasing the floor area available for merchandise. Because goods are coded at manufacture level, price ticketing is eliminated, and retailers with their own label merchandise can specify bar code printing on the label.

The largest slot scanning installation in Britain will go live later this year at the Havant Hypermarket, in Hampshire, which is part of the Portsea Island Mutual Co-operative Society. Paul Callaway, the store's director, says: "We decided the time is now right to go scanning, as, by August, 60 to 70 per cent of the volume of goods will be bar coded. The scanning system will give us increased sales information and greater productivity as well as

The key to prosperity

A system based on sales figures captured at point of sale and deliveries captured at delivery points gives actual figures which are available day to day. If these figures are applied to less frequent but carefully audited starting stock, then the following equation is used: starting stock plus deliveries minus sales equals current stock. In this way a perpetual inventory is available which, apart from anything else, is a powerful deterrent to internal shrinkage.

Compare this to manual methods of stock taking with the following equation: starting stock plus deliveries minus current stock equals sales. This is labour intensive and therefore expensive. The stock and deliveries figures are not real but reported, so the sales figure is derived from three doubtful figures. When actual figures are used, management has accurate stock control, and the basis of a complete pos system.

America has always been the leader in the use of the latest checkout equipment, maybe because the first cash register was

revolution

a saving in operation costs." The Hypermarket will have 30 scanning lanes, with NCR modular 1255 terminals linked to an NCR T-8250 processor which were installed when the store opened in 1980. The customer will receive a fully itemised receipt listing the product by brand and size with the price.

America has also tried to make a universal code for department store use, called Universal Vendor Marking. Unfortunately standardisation of the code reference caused many problems, and it has not been adopted. Source marking of general merchandise is not satisfactory, as the end of day analysis needs to include the department, and, particularly in clothing, not only an item description but the size, colour and style, with eye legible price. So department stores have tended to standardise their own forms of coding. Mothercare, for instance, prints their price tags with code and issue them to their suppliers.

Army and Navy Stores are installing one of the largest retailing communications networks in the United Kingdom, which will enable the group to centrally dissect and analyse sales of merchandise throughout their stores. Their own codes are keyed into the NCR 2152 terminals, and passed to the NCR T-8270 department store computer for end of day sales analysis by department, store and group.

Solutions to EAN codes

General merchandisers have not missed out on automatic code reading. A light pen, attached to the terminal, eliminates key entry and relays the sales data and price to the central processor. The pen is being widely used in radio and electrical shops, department stores, and do it yourself centres. Superstores, however, are faced with the problem of dealing with EAN coded merchandise as well as general merchandise. Various solutions are available, but dual scanning systems at the same checkout seem to have been rejected by superstore operators as

impracticable. The most acceptable solution will probably be to key in the code on general merchandise, which forms a sufficiently small proportion of the average purchase, and scan the EAN coded items.

Big new retail developments can be expected to take place during this decade involving far greater use of plastic cards. By the mid 1980's most major retailers will be using either off-line or on-line electronic payments systems for their own credit cards and to provide daily claims files for the credit card companies. This will eliminate the existing paper vouchers. They will also hold updated 'hot-lists' of lost and stolen cards on computer, which will reduce fraud.

This system is known as electronic funds transfer and can be used for store accounts and credit cards, and, by the end of the 80's, many retailers will be operating an electronic funds transfer system with the major clearing banks, eliminating the need for cheques.

Bentalls of Kingston is leading the way in the plastic card revolution. Since April last year, Access and Visa card sales have been captured through the store's point of sale terminals, eliminating the credit card voucher. This has given a faster customer service, provided a clearer bill, and reduced errors. At the end of the day, data for the credit card companies, compiled from the individual transactions keyed into the NCR 2151 retail terminals, is written onto a magnetic tape on the 8250 in-store controller. The tape is processed on the NCR 8450 mainframe, which sorts the collected data and produces a magnetic tape for each credit card company.

Access and Barclaycard also benefit from the new system by receiving daily magnetic tapes from Bentalls which can be put straight into their computer systems without additional data preparation. This method of handling credit card sales has proved so satisfactory to customers, the store and the credit card companies that Bentalls is extending it throughout the Group.

Terry Driscoll, Bentalls' data processing controller, says: "Behind the move to eliminate the credit card company voucher, which we made with the assistance of the companies concerned, was a need to meet the massive problem of handling vouchers, balancing them, and making them up into controlled batches. Balancing errors have been eliminated, as have most of the other problems normally associ-

ated with credit card transactions. We hope to extend this system to the other credit card companies which should be a mutually beneficial move."

Many other systems are at various stages of development throughout Europe to eliminate all forms of paper work in payments, including cheques. Using magnetic card readers and personal identification number pads, which, with an adaptor, can be simply added to the retailers existing pos terminals, will provide an electronic payments system.

The traditional strengths in the development and manufacture of more powerful and sophisticated epos equipment and banking systems are now merging to form a variety of credit and debit systems. These are for use within the immensely varying types of retail stores. This is a natural development since the introduction of electronics into both industries, and NCR, which has several electronic funds transfer systems operating in European supermarkets using a new bank card for direct debit from the checkout to the customer's bank account, predicts a much greater interaction between the two industries, which will involve very dramatic cost and time savings.

mcn

Hotel control computers

Four major new hotel control computers have been introduced recently by NCR: the Modular Lodging System (MLS), two hotel guest accounting systems and a bar/restaurant control system.

The MLS automates reservations, guest registration, room management and guest account activity while optional features allow for direct posting of telephone charges to guest accounts and entry of housekeeping information through guest room telephones. Initially designed for hotels with 150-500 bedrooms, the systems cost about £50,000 depending on requirements.

The two hotel guest accounting systems are the model 2950 for hotels with 100-250 bedrooms and the model 2251 for 50-200 bedrooms. The transaction features of the 2950 include automatic room balance pick-up, room status control and enquiry for rooms management, currency conversion and group check-in and check-out. The model 2251 is a less powerful Terminal. Prices are approximately £7,000 and £4,000 respectively.

The NCR 2160 bar/restaurant point of sale control system is designed for food and beverage control in full service restaurants, steak bars and hotel restaurants. Each terminal features multiple preset price keys and can be connected to a choice of printers including the kitchen and bar order printers. An installation with four terminals costs about £12,000.

Bank clerks could be managers thanks to NCR

Bank clerks will be installing and maintaining their own branch computer systems if NCR has its way.

The company's new 5000 branch terminal system has a simple local area network in each branch and screens and printers are merely plugged in wherever needed.

Diagnostic routines mean staff can test the kit for faults and, again, plug in replacements. And NCR expects the low cost — branch controllers start at under £600 — to entice banks and building societies into keeping stocks of spare modules for their branches.

NCR says the 5000 series introduces total branch automation, with word processing, high-level programming languages like Cobol and Pascal, plus the easy installation at local branch level.

And a journal browsing facility enables staff to search the journal

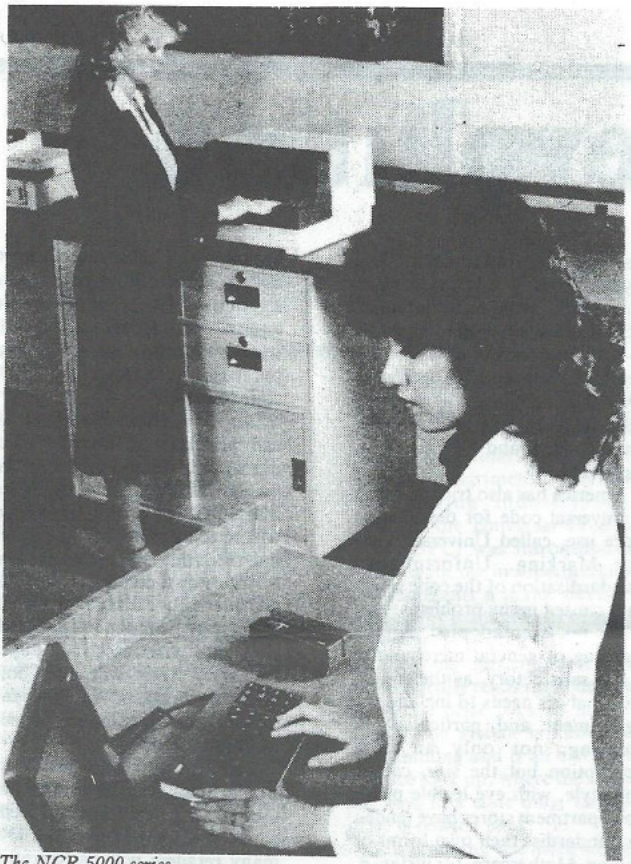
for trends, monitor the progress of new cashiers and find individual transactions.

These facilities could affect the way banks and building societies are organised, says the company. For example, details of building society investment schemes could be stored locally and personal investment plans could be calculated for members on the system, removing the need for permanent investment specialists at each branch.

The 5000 series consists of a variety of screens, keyboards, printers and controllers. The biggest controller can serve 32 terminals and have a two-megabyte memory and 80 megabytes of disk storage. Other devices such as magnetic stripe readers and NCR cash dispensers can be linked.

The first customer is the Chelsea Building Society.

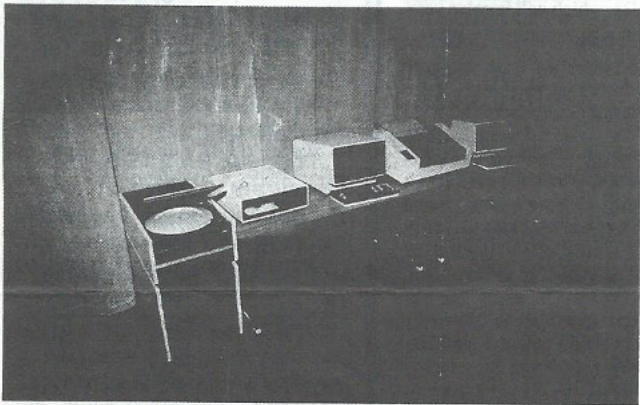
Computer Talk, 4 June



The NCR 5000 series

Which Computer, June

MULTI-FUNCTION MICRO FROM NCR LAUNCHED



The NCR micro

A DRAWBACK to being a major computer manufacturer, is that the introduction of any new machine must retain some degree of compatibility with the existing range of machines. This is especially true of micros which, for most established suppliers, come well below their existing threshold of marketing experience.

Now NCR has stepped into the fray, with an 8-bit micro—the 9010. This effectively replaces the NCR 8140 and 8150 machines, with a package, that according to Rex Fleet, NCR's UK managing director, "Offers considerable

enhancements". The most significant of these is that the basic machine can be used for several progressive functions, ranging from a personal computer to a small business system. The next stage up from this is to make the unit act as an intelligent terminal to either NCR machines or other systems. An alternative is to let the NCR 9010 act as network controller.

As things stand, the NCR 9010 sits just below the existing 9020 mini. Harking back to that question of compatibility, Rex Fleet noted that the 9010 "certainly fits in to

Europa Report, 14 June

NCR is developing a range of accounting packages for use with V-8500 series computers under the Virtual Resource Executive VRX operating system. To be known as V-Accounting, the packages will utilise TOTAL database and NCR TRAN-PRO transaction processing monitor design concepts, and will be sales and purchase ledger systems integrated with nominal and management accounting systems. System design is modular in concept for flexibility. Over twenty orders are in various stages of implementation on the Continent.

NCR's stated strategy in the way that it relates to the 9020—applications software of the 9020 should run on this product". The only proviso being that you need to run the programs through a simple conversion utility.

Using an 8-bit CPU begs the question of CP/M and here the answer is yes—although NCR has chosen to implement a 'CP/M 2.2 compatible operating system', called SB80.

But NCR's main emphasis is on DPS 1.0, which is intended to serve the 9010 in its small business system mode. This is a multi-user, multi-tasking system, that will support both COBOL and BASIC applications software.

For those of you who will be using the NCR 9010 as a stand alone, single-user system, there is IDPS—designed for use with the twin floppy disc-based configuration.

Apart from the existing NCR applications software

that will be down-loaded onto the new machine, NCR has also come up with a word processing package, called Work-saver.

As far as prices go, the personal computer option of the 9010 is not yet available, although the possible price was mentioned as being in the region of £2,300. In its small business system role—which seems to comprise the main thrust of NCR's marketing strategy—a typical 9010 configuration with 10MB of storage, printer and 128KB of memory, will cost £8,400.

Compared with some of the other manufacturers' offerings that have arrived over the last month or so, the NCR 9010 package is certainly impressive for what it is—an 8-bit machine. Worth considering as an alternative to IBM's System/23, the ICL DRS 20 model 40, and even at the low end—Apple III.

Shared-resource systems

NCR has entered the office automation market with a range of multifunction shared-resource systems.

The Worksaver systems were designed as word processing systems that can operate individually or in clusters by sharing printing and information storage resources. Communications capabilities and data processing software packages have also been announced for the range, along with communications interfaces that allow the systems to be linked with computer networks.

Two series of workstation models have been launched. The WS-100 series will provide word processing facilities for stand-alone or small cluster systems. The WS-200 line provides a master workstation that can control larger clusters of WS-100 devices. Three information storage units are available, providing up to 40 000 pages of text storage.

Software available for the systems includes two word process-

ing packages, compilers for BASIC, COBOL, PASCAL A and FORTRAN and packages for 3270, 2780/3780 and asynchronous communications protocols.

Middle East Week, 9 June

Riyad banks on NCR

A SOPHISTICATED NCR computer network which will be the most modern and complete on-line banking system in Saudi Arabia is to be installed at the Riyadh Bank.

Worth over £1½ million, the order is for two computers, 50 financial teller terminals, 50 visual display terminals and 25 matrix printers.

The computer will be installed at Dammam and the terminals will form a network to the bank's branches in the Dammam area. Two other centres, in Jeddah and Riyadh, are also to be set up.

COM solves filing problem for construction company

Higgs and Hill PLC, a leading construction company, used to print many thousands of reports every month relating to the cost control of contracts. This resulted in a time-consuming search when queries were received.

'Someone would have to go to the safe, find the right binder, and then wade through it to find the relevant items, explained data processing manager Colin Darch.

Now the company's computer system produces tapes which go to the NCR COM (computer output microfilm) bureau in the City of London, which produces 6in by 4in microfiche, each recording 270 pages.

'The staff now have all the reports in A4 folders on their desks... it is much easier to scan over a microfiche, using a viewer... all our archived ledgers, VAT returns and plant hire records are on microfiche now. Our biggest ledger consists of 19 microfiche.'

The Journal,

Glasgow Chamber of Commerce, May

● Coats Paton have chosen NCR computers for handling their financial, stock control and order processing systems around the world.

Super Marketing, 28 May

NCR 1800 family increases options

A NEW family of self-service sales and check-in terminals from NCR, designated the 1800 series, will start to be installed in airports next year giving credit card customers the option of an automatic airline reservation and check-in system which includes the dispensing of tickets and boarding passes on the spot.

Customer operations have purposely been made similar to NCR's widely used 1700 series of automatic bank teller terminals with a menu system and a prompting VDU with some keys placed at the side of the screen. London-based design and marketing consultants Douglas Kelley Associates are responsible for the external design of the system.

According to NCR's European sales chief for the new series, Gabriello Weisskopf, discussions are currently under way with a view to achieving a phased introduction of the system with several European and American airlines.

Much of the development work over the past three years has already been carried out in consultation with the airlines, says Weisskopf, including the data services

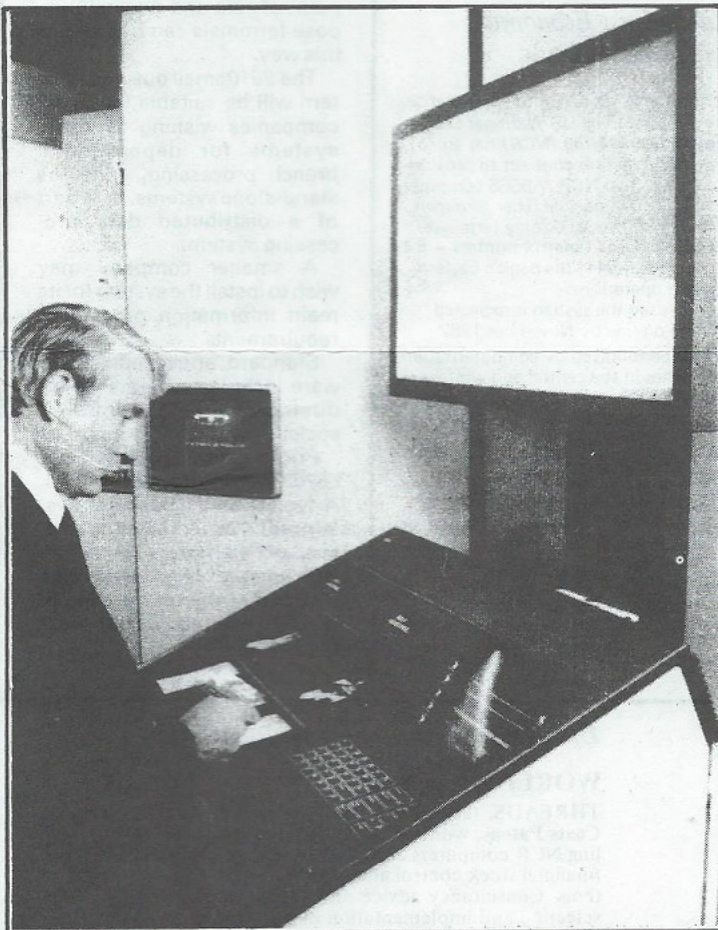
committee of the European Airlines Association which has accepted the system. Although a production site for the terminals has not yet been fixed, first installations may be in Europe rather than the US.

The longer-term market encompassing railways, travel agents, hotels and ferry operators has already been canvassed in 13 countries during the research and development stage, says NCR.

Electronics Weekly, 2 June

Computerised

WALKERS Crisps is moving to an on line sales order processing and distribution system with the installation of an NCR V-8555 computer costing £150,000.



NCR's new reservation, check-in and ticketing system which will go into production in 1983. A ticket and boarding pass can be seen being issued on the left of the terminal's fascia (see story right).

Sponsorship with a future

Everyone is jumping on the sponsorship bandwagon these days with popular sports and 'safe' cultural activities top of the list. So it is pleasant to report on an imaginative scheme that tackles real problems in a practical way.

NCR Ltd are sponsoring three community projects which are, themselves, the outcome of a competition organised by British Junior Chamber. Some forty Chambers throughout England, Wales and Northern Ireland submitted local projects.

Cheques for £1,000 from NCR go to the three winning Chambers.

Lichfield JC will provide a video camera and ancillary equipment, plus a management consultancy service to local secondary schools to record mock jobs interviews.

Ipswich JC are to be helped to carry out a really radical piece of market research. This was triggered by a radio interview in which a prominent minister describing government plans for British youth, remarked that the CBI, trade unions, and educationalists had been consulted. What about the kids

themselves, said Ipswich JC. A survey will be mounted of the opinions of 5000 youngsters in Ipswich, on such topics as unemployment, education cutbacks, and the results analysed by computer.



Rex Fleet, centre, with left to right Phil Tomeny, Ipswich JC; Barry Orris, Lichfield JC and Paul Rowbotham, Northampton JC.

Northampton's project has attracted some national publicity; a campaign to alert the public and dental and other professionals to the long term damage caused to children's teeth by sugar in medicines.

Presenting the cheques, NCR's managing director Rex Fleet commented that his company believed that the future success of the UK lies with the type of young people who belong to Junior Chambers and originate such projects.

COMMUNITY PROJECTS

Computer manufacturer NCR is sponsoring three community projects as a result of a national competition organised by British Junior Chamber. There were 40 entries, and NCR's chairman and managing director Rex Fleet handed over a cheque for £1,000 to each of the three winning Chambers, from Northampton, Lichfield and Ipswich.

He commented: "NCR is pleased to be able to help young managers to make valuable contributions to their communities and at the same time help them to be better managers."

Northampton's project aims to make parents, the general public and dentists, doctors, pharmacists and other interested parties aware that most liquid medicines contain sugar and will damage teeth. Lichfield's scheme is to provide video camera and ancillary equipment plus a management consultancy service to local secondary schools to record mock job interviews, while the Ipswich Junior Chamber is to conduct a survey of 5,000 youngsters' views on education, unemployment, leisure and authority.

A versatile family of six

A whole family of multipurpose microprocessor systems consisting of a personal computer, a small business system, a satellite terminal, network controller, factory terminal controller and scientific workstation has been announced by NCR Ltd.

Called the 9010 family, they all share the same operating system, but have different software applications.

Of these, the personal computer, factory terminal controller and the scientific workstation are to be released later on this year.

The 9010 satellite terminal to NCR IMOS/IRX systems offers the user the ability to perform local data validation or undertake independent processing tasks, both off-line and on-line.

The system will run under the NCR DPS operating system. In addition, a CP/M compatible operating system may be used for local independent processing making many commercial applications available on the 9010.

As a network controller, the 9010 with DLC in-house primary communication can support, depending upon application, up to 16 DLC in-house secondary terminals.

Many NCR financial, retail point-of-sale and general purpose terminals can be used in this way.

The 9010 small business system will be suitable for larger companies wishing to install systems for departmental branch processing, either as stand-alone systems, or as part of a distributed data processing system.

A smaller company may wish to install the system for its main information processing requirements.

Standard applications software includes systems for industry, banking, building societies and retail stores.

Prices range upwards from £5700 for the satellite terminal. A typical small business system with 128-thousand characters of memory, 10 million characters of fixed removable disk and a 70 lines per minute matrix printer would cost £10,200.

Middle East Economic Digest, 11 June

① National Bank of Sharjah (NBS) will install a NCR Corporation V-8455 computer in a Dh 4 million (\$1.1 million) contract, which was signed with the US firm at the end of May. The system will computerise accounting procedures and link the six NBS branches to the Boorj Avenue head office. There will also be facilities for automatic 24-hour teller machines. NBS plans to open branches at Dibba and Kalba on the east coast, plus its first overseas branch in India or Pakistan.

Middle East Economic Digest, 28 May

Riyad Bank has begun to computerise its operations. The US' National Cash Register Corporation (NCR) has an initial \$2.7 million contract to provide hardware — two NCR V-8565 computers, 50 NCR 2270 financial teller terminals, 50 NCR 7900 visual display terminals and 25 NCR 6441 matrix printers — for computerisation of the bank's Eastern Province operations.

Sources say the system is expected to come on-line by November 1982 and will be followed by computerisation of branches in the central and western regions. The three regions will be inter-linked to serve the bank's 100-odd branch network. Eventually most of the bank's operations will be computerised.

The special features of the system — said to be the most up-to-date and complete in the kingdom — are bilingual printers and facilities to produce annual statements for three types of calendar years: Gregorian (365 days), International trading (360) and Hijra (355).

Infomatics, 22 June

NCR wins banking deals in US and Saudi

Although NCR's presence in the UK banking sector is shrinking, it has strengthened its US position with a lucrative tie-up with the State Street Bank and Trust Company of Boston for a system to link its automated teller machines, ATMs, into an electronic funds transfer, EFT, network in New England. The first phase involves a \$10m order from State Street for 250 of NCR's 1780 through the wall ATMs and 1770 lobby model devices, along with a host of transaction processing software. The machines will use the new Visa debit cards and will be called Visa Banking Centres. Out in the Middle East NCR has also won a deal with the Riyadh Bank worth \$1.5m. The initial phase involves two V-8565 machines, 50 2270 financial teller terminals, 50 7900 video terminals and 25 6441 matrix printers. These are destined for the Damman centre and orders to cover Jeddah and Riyadh are expected to follow.

Business & Finance in Scotland, May

WORLDWIDE SYSTEMS

THREADS, fabrics and fashions manufacturer Coats Patons, with a £700m turnover are installing NCR computers around the world to handle financial stock control and order processing systems. Consultancy advice and guidance on the selection and implementation of both computer equipment and progress on worldwide basis is provided by a central group management services department in Glasgow. Since 1979 this department has been involved in the installation of 8 NCR systems.