NCR

CIRCUIT NEWS

Field Engineering Division

CONFIDENTIAL MATERIAL FOR THE EXCLUSIVE USE OF NCR
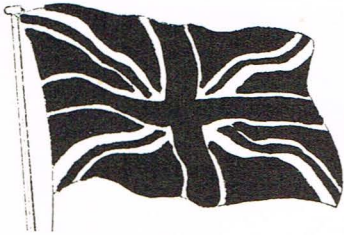
EURO TERMINOLOGY EXCHANGE
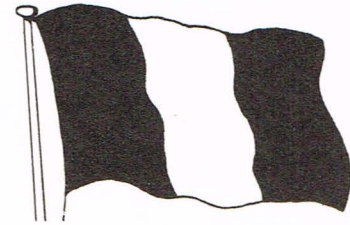
You will recall in our earlier editions we published articles concerning Technical Jargon. These were ably written by Gerry Parsons S F E, Head Office. Their purpose, of course, was to enable all F E D personnel to understand the new language of the Electronic era.

Circuit News distribution extends to our F E D colleagues in Europe and Mr L Costard, Manager, F E D, N C R France became very impressed with our approach to this subject. Whilst our explanations were kept brief Mr Costard arranged for the Terminology to be written in greater detail for his own Organisation.

By courtesy of our Common Market friends we are pleased to present the first of a number of articles.

JARGON NO 1

Not too long ago it was relatively easy to keep abreast of the then current jargon, but nowadays with a veritable plethora of names, titles,phrases and abbreviations it is becoming increasingly difficult for the "layman" to begin to understand what "it" is all about.

The "it" in this case is DATA PROCESSING and we hope that with this, and other bulletins to come fears and doubts about present day jargon will be dispelled.

MEET DATA PROCESSING

In a very simple way the art of DATA PROCESSING may be considered as being the study of the methods of handling data with the aid of appropriate machines.
These machines are made up of not only physical and material parts (as in mechanical and electrical assemblies, electronic circuits etc) called HARDWARE, but also a component which is more "intelligent" (made to suit the customer) which serves as a guide for the machine in its work, indicating to it step by step what must be done. This component is called SOFTWARE. This set of instructions given to the machine is assembled to constitute a PROGRAM.

The Software is specific to a machine and its use. The same machine from the point of view of the hardware, will not for example have the same application following installation in a restaurant, hospital or a bank. For the good functioning of a machine the Software and Hardware must work together in close harmony. A machine without Software is rather like a body without a spirit.

WHAT ARE THESE MACHINES CALLED. Well, we will start with the COMPUTER which is capable of controlling and processing an enormous amount of data.

Associated with the computer there are complimentary units situated in close proximity to the computer which are called PERIPHERALS. A peripheral is a unit which may receive from or give information to (sometimes both) the computer. Usually peripherals can not work autonomously but rely solely on instructions from the computer. Some examples of peripheral units are: CARD READERS, HIGH SPEED PRINTERS, MAGNETIC TAPE UNITS, MAGNETIC DISC UNITS ETC.

Another series of units, gaining increasing importance these days which are connected to the computer by means of communications networks (usually telephone lines) are called TERMINALS. BUT WHAT IS A TERMINAL?
A Terminal is a unit, simple or complex, usually situated remote from the computer which is capable of receiving information from or transmitting information to the computer or another terminal. It is possible for some terminals, because of their in-built "intelligence" to work autonomously without any control from their parent computer. This mode of operation of a terminal is called OFF-LINE. They may also work under the control of the computer, of course, where dialogues can take place to ensure the transfer of information. This mode of operation is called ON-LINE.

The principles involved in the interchange of data between units in a network will be presented in a future bulletin to be called "Teleprocessing".

The organisation formed by a computer, the peripherals, communications lines and terminals for operations at a local level is called a DATA PROCESSING SYSTEM. When the exchanges of data are made between a "central" computer and a number of remotely connected terminals the system assumes a little more importance and is called a NETWORK. However in common parlance one speaks of CENTRAL for the data processing system, REMOTE for distant terminals and ON-LINE SYSTEM for the whole network.
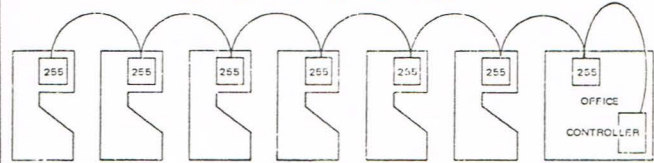
MAINTENANCE RECORDS DEPARTMENTS INTEGRATE

With effect from July Maintenance Records Departments CRD & A/AMD will be integrated and the new formation is as follows:

A-K	USER REFERENCE		L-Z
L S SPARREY	MANAGER		A C FROUD
E PAGE	SECTION HEADS		G T FLYNN
	SECTIONAL SPLIT		
ABC	E WICKHAM	LMN	G HAZELL
DEFG	H QUELCH	OPQRS	B DOVER
HIJK	A SNEDDEN	T-Z	K NEWMAN
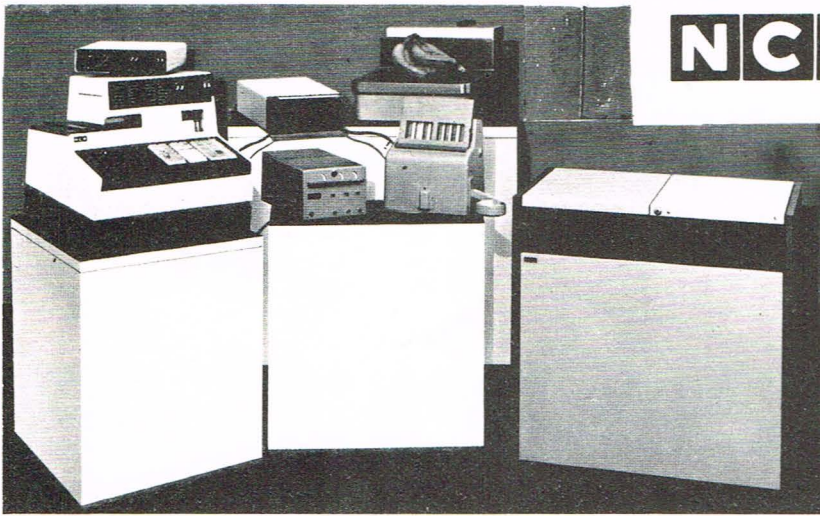
The new NCR 255 interactive terminal system is designed around a powerful NCR Mini-Processor. This, in conjunction with the system application programme, provides an efficient retail terminal system.

The C255/726 is an in-store system that provides for all checkout functions and brings new control and security to the store office. It is designed to incorporate features required for tomorrow without major hardware changes.

The C255 System consists of C255 Retail terminals operating under the control of a C726 Controller. The controller provides central control for the functions of each terminal and provides non-volatile core memory for storage of all system totals and programme instructions. An uniquely designed high speed in-store communications system connects the controller to each of the terminals and optional peripheral equipment of the system.

The system is interactive in that each terminal and peripheral device interacts with and is dependent upon the application software in the controller. The execution and function of the operations such as sequencing, displaying, printing, itemising, and totalizing is a function of the application software. The terminal communicates with the controller in a Manchester coded digital form at a 1.25 Mhz rate using full duplex 4 wire system.

The terminal operates in either of two on-line modes, the normal Cashier mode or the Supervisor mode. Normal checkout operations are performed while in the normal mode. Operating, closing, monitoring, and diagnostics are performed in the supervisor mode.

Should the communication link be lost the terminal has limited off-line capabilities. In the on-line mode all the terminal totals and operational control are provided by the C726. Off-line the terminal can function as a single total itemizer with change computation and will retain an off-line total which can be transmitted to the C726 as soon as communications are established. The off-line total is maintained when the unit is powered down by a small battery which keeps the off-line hard total logic alive.

The terminal hardware consists of the following modules:

C255

CONTROL LOCKS - Two control locks are provided, a) On/Off, b) Cashier/Supervisor mode. Both the Cashier and the Supervisor are given operating codes known only to themselves which supplies maximum security and integrity of management information.

KEYBOARD (M01) - The C255 Keyboard module is the primary input device for the system. In the on-line mode it has 42 Function keys and an 0-9 numeric keypad, but when in the off-line mode only 7 Function keys are operational with the ten numeric keys.

DISPLAY (M90) - module consists of two sections, numeric, and status. The numeric section displays amounts indexed into the keyboard, and the Status section provides visual machine status and limited operator lead through by one or more of the sixteen L.E.D.'s.

SPECIAL LOGIC UNIT (21) - The logic contains an MOS Micro processor to perform off-line functions and hold the off-line total.

COMMUNICATION PRINT LOGIC (M23) The module contains the logic to handle input/output message decoding and printer controls.

PRINTER (M43) - The printer is basically the same as that used in the C280/250 series but has the option of a two or three station printer. The main difference being the omission of the receipt electro mechanism as the User's name etc is programmed into memory and is printed by means of the type wheels.

RECEIPT

CLASS 726 CONTROLLER

The C726 Controller provides the control for the NCR interactive terminal system. It consists of four basic functional elements housed in a single cabinet.

PROCESSOR (M05) - Memory and Central Processing is identical to that used on the C399, 725 SLC system, and Century 8200 series. Its memory size is determined by the customer's programme and the number of terminals to a maximum of 32K. The installation of a C255 compatible communications adapter provides the logic to handle sixteen terminals and the controller is capable of housing three adapters which can provide a maximum of 48 terminals.

MAGNETIC TAPE AND TRANSPORT (M63)
Provides the means to load the customer's programme and diagnostic tapes but has no data capture facility.

The C255 system opens up new areas of control and information both at the point of sale and in the Cash Office for management purposes. A brief selection of typical features and controls are as follows:

* Item Price Look-up Ability.
* Cheque Authorisation.
* Auto Tax Computation.
* Auto Price and Quantity Extension.
* Billion £ Accumulating Capacity.
* Auto Computing of Trading Stamps.
* Time Transaction took place.
* Programmable alpha description on Receipt.
* Accountability of In-store Cash flow.
* Sales Analysis Report.
* Auto Balancing of Cashiers Reports.
* Movement of Cashiers Totals from one terminal to another.
* Net Department Totals
* Augmented Internal Security Measures.

All the financial reports mentioned above, and many more, can be produced in the Store Cash Office by the Master terminal. This terminal can also monitor a specific terminal without the check-out flow being interrupted. Another interesting feature is the ability of the Engineer to sign in at a terminal using a secret code which permits him to carry out all system functions without alteration of the Customers totals etc.

Looking to the future it will be possible to add features to the C255 system, i.e., Electronic Scale interface, Remote Display, Coin and Stamp Dispensing, and Slot Scanning linked to a fast access drum memory with very little alteration to the Hardware.

Sales have already been made in the United Kingdom at:-
Selda Superstore, Failsworth, Manchester. '

Warrington and Wigan Co-operative Society Ltd.

E & S Dunn Cash & Carry, Birmingham.

Star Cash & Carry, Stirling.

Engineers have or are at present undergoing training necessary to cover these installations, and the Special Field Support SFE is Bunny Labbett. Training is at present undertaken at the Central Technical Education Centre in Dayton, and the basic duration of the course is 6 weeks. Pre-requisites are a pass mark on the C399 seminar together with either Terminal or EDP background.

Further Regional Teams Announced

During 1974 F E D introduced a revised policy to strengthen Field Management structure and control. The initial phase commenced in the Scottish Region, headed up by Mike Clancy and his Supervisory team of Jim Mclaren and Ron Broadway.

Following on from its success, FED now introduce further realignments which encompass Ireland, Northern, and Midland/West Regions. The integration of the Southern Region is delayed until the other Regions have been proved.

The Regional Managers have total responsibility for all products within their region, which become increasingly necessary as the release of new equipment brings the EDP and Conventional Engineers closer together in their job environment. The Managers are supported by two Area Supervisors whose responsibilities are the control and administration of Centres, and a Supervisor who is responsible for all aspects of technical support. By introducing the new structure it facilitates an improved career path for F E D Personnel, with the opportunity to pursue whichever course they feel their capabilities would best be suited.

For your information we list below the new regions together with the Management responsible:-

SCOTLAND/IRELAND REGION

Manager	Mike Clancy
Area Supervisors	Ron Broadway
(Centre Control)	John Murphy
Area Supervisor	Jim McLaren
(Engineering Support)	

Field Engineering Centres:

RB
Aberdeen	Dundee
Edinburgh	Glasgow

JM
Belfast	Cork
Dublin	

NORTHERN REGION

Manager	Stan Kennedy
Area Supervisors	Joe Dodds
(Centre Control)	Les Morris
Area Supervisor	Ron Lyle
(Engineering Support)	

Field Engineering Centres:

JD
Burnley	Grimsby
Hull	Leeds
Middlesbrough	Newcastle
Sheffield	

LM
Carlisle	Chester
Liverpool	Manchester
Preston	

MIDLAND/WEST REGION

Manager	Sid Anderson
Area Supervisors	Chris Martin
(Centre Control)	Norman Cole
Area Supervisor	Dave Teasdale
(Engineering Support)	

Field Engineering Centres:

CM
Birmingham	Derby
Leicester	Stoke

NC
Bristol	Cardiff
Exeter	Jersey
Plymouth	Southampton

As previously mentioned the Southern Region which includes the Greater London area will not be integrated at this time and will continue under the existing structure. The Managers are:-
REGIONAL MANAGER BM JOHN LIMN
REGIONAL MANAGER EDP BOB GREGORY

CENTRE RE-ALIGNMENTS

NORTH/WEST LONDON F E C
At the beginning of May Greenford FEC closed down and the operation transferred into Brent F E C under the Managership of Norman Bowen.

With the amalgamation, Brent F E C has been renamed North/West London F E C and the new area will cover both territories within the G L C boundaries. The remaining area outside the G L C boundary has been transferred to Luton in the north and Oxford in the west. The Centre's telephone number remains the same - 01 452 8207.

SITTINGBOURNE F E C
Both Canterbury and Maidstone F E Centres closed in mid May to form the new Sittingbourne FEC and will be managed by Gordon Sillett, previously Manager at Canterbury. George Newman, previously Manager at Maidstone will assist Gordon and assumes the title of D F E.

The new single storey premises is sited on a Trading Estate at Sittingbourne and has a 5000 sq ft area. F E D's area has plenty of natural light and facilitates good conditions for engineers working on any of the six benches in the spacious workshop. Telephone number is 0795 77175.

OXFORD F E C
Reading FEC closed at the end of May. Their operation transferred to Oxford F E C under Manager Jim Garley. Apart from the Centre Area incorporating the two territories it will also include part of the Greenford territory mentioned previously. Alf Debacker, Manager Reading FEC retired after 43 years service with F E D. The Centre's telephone number remains the same: 0865 41221.

F E D MAN BECOMES DEPUTY MAYOR

Congratulations to Ralph Roe, District Field Engineer, Field Engineering Centre Norwich, who was recently appointed Deputy Mayor of Norwich.

Ralph has for many years been interested in improving Education, and the Social Services provided for the elderly together with those who are unable to fend for themselves. He felt the best way he could effect his interests was to enter into Local Government where he could put some of his ideas into practice.

During his thirteen years as a Councillor the first four were spent co-opted to the Education Committee, and the ensuing nine years as an elected member of the Education and Welfare Committee. The last two years have been served in the newly re-organised Norfolk County Council and Norwich District Council but Ralph says he much prefers the old system of the smaller all purpose Boroughs.

At the height of the Decimalisation period Ralph managed to squeeze in a number of talks on the pros and cons of the new currency to schools and local organisations and proved very helpful to the community, especially the Senior Citizens who were very worried at the time about the change-over.

Obviously being a Councillor is not all bees and honey for the appointment takes up a considerable amount of your spare time but as Ralph says he is fortunate in having an understanding wife who also gives him considerable support in his duties. Ralph's devotion has undoubtedly been reflected in his appointment as the position of Mayor and Deputy are decided by ballot from their fellow Councillors who base their voting on the merits of the person and not on the length of time served on the Council.

I am sure everyone in F E D will wish to join me in extending our best wishes to Ralph in his appointment which must surely prove to be a very interesting year for him.

F E D Appointments

MR G SIDOLI Appointed Supervisor A/AM Banks and Commercial - Guido or Sid as he is known joined NCR in 1944 as a CR Mechanic in "C" Dept. In 1963 he transferred to Head Office as a member of a Decimalisation team of Technical Personnel who investigated the alteration requirements of our products to cope with the new currency. He was promoted to Assistant Supervisor in 1964 and further promotion to Supervisor, Decimalisation, in 1969. Later positions included Special Projects and Business Machine Support. In his new appointment he will continue to be assistant to Freddie Fowler.

MR J E BURCHFIELD Appointed Cost Supervisor, based at Head Office. John joined NCR in 1962 as a Clerk in the Costing Dept and progressed to Asst Manager in 1964. In 1966 he was promoted to Office Manager of the London Service Centre, a position he successfully administered until his present appointment. His duties encompass all forms of financial analysis and he will be directly responsible to Mr Albert Barden, Management Accountant.

MR F ROBINSON Appointed Manager, Brighton FEC. Frank commenced with Field Engineering as a Trainee 3000 Engineer in 1951. Following progressive training in the A/AM range he was promoted to Assistant Manager at Brighton in 1963. A further promotion to Centre Manager, Guildford, took place in 1967. Frank's new appointment is effective 1 July.

MR P MORGAN Appointed Manager, FEC Guildford.
Peter commenced at NCR in 1956 at the London Service Centre covering the CRD and ADD range. In 1962 he transferred to outside service and worked at both London & Canterbury FEC's. He was promoted to Centre Manager Swansea in 1974 a position he held until the Centre was re-aligned with Cardiff.

MR D MCFADYEN Appointed District Field Engineer, Inverness. Don commenced with NCR in 1952 as a Trainee CR Engineer. He Progressively undertook further training on a wide range of equipment to fully line trained standard, so necessary to provide economic coverage of the Inverness territory. His new appointment was made upon the retirement of Sid Eden, and his immense wealth of knowledge and experience of the area will be a considerable asset to the Centre.

We offer our congratulations to them in their new appointments.

Where Are They Now ?

Just about everyone in Field Engineering knew Freddie Weston. After teaching basic and high grade retail at the London school for 23 years Fred retired in 1970. He now lives in a smart modern bungalow in the quiet market town of Spalding, Lincs.

Far from being inactive he pursues his hobbies of woodwork by choice, and gardening by necessity, sprinkled with a little cycling, walking, and occasional bingo.

When Fred first retired he did a lot of volunteer ambulance work, using his own car. In this part of the country, hospitals, and people, are rather thinly spread. This work went on for three years and consisted of taking disabled people to out-patients departments, collecting pensions for old people and also some emergency cases when the ambulance service could not cope. On one occasion he took a blind man for a suit fitting and after several trips they became firm friends. Fred still visits him and they argue hotly about politics. In the summer of last year Fred became a passenger in his own ambulance service, when appendicitis was diagnosed. As it turned out Fred could give perfect directions to his "crew". When he awoke after his operation he found he had had a colostomy. As he said the diagnosis seemed right but they had to change a different part!

Fred wishes to be remembered to all his friends and says that a welcoming cup of coffee awaits any callers.

Editor's Note: Let us hear about the ex F E D Senior Citizens in your area.

GEORGE BLACKMAN - HEAD OFFICE

You will now be aware of the sudden death of George Blackman on 12 May 1975. During his 38 years with the Company George worked in many provincial offices apart from his long association with the Banks as Supervisor, Head Office, and was respected by all for his willingness to help and ever cheerful personality. His sudden passing has been a shock to us all including those very close friends he made amongst so many of our customers.

Mrs Blackman has especially asked us to convey to everyone her appreciation for the floral tributes from all F E D Regions and the kindness shown to her.