PRESS CUTTINGS

SEPTEMBER/OCTOBER 1981

EXTRACT FROM
COMPUTING
SEPTEMBER 13 1981

Doing the shopping in front of a tv screen

By Mike Aldrich

I hate shopping. My wife hates shopping. Everyone I know hates the once or twice weekly trips to the local supermarket to buy staples. Not the wire kind, but cornflakes, tins of beans, jam and onions.

Every week it's the same. It's all on a list and you navigate that trolley, with its perennially bent left wheel, up and down familiar, crowded aisles. At the end of the whole, miserable process, you stand in a queue, unload and pack the goods yourself, pay the cashier, hump the stuff miles to the car park and drive home physically and mentally drained.

Is all this human torture necessary? The straight answer is no. As I was saying, it's all on a list that basically doesn't alter week-in, week-out. If there was a cheap way of communicating that list to a grocery distributor you could go back to the old days and get the week's shopping delivered to your doorstep. If, in addition, there was some method of paying at the point of order, that would fund the delivery service and you could get it free.

If only something like that existed! But then it does. It's called viewdata and it links the friendly tv in your lounge directly into computers.

Viewdata in this context threatens to change the nature of shopping and the very existence of supermarkets. Nobody really needs prime space in High Streets up and down the country to sell packets of soapflakes when you could link everyone's telly, at little cost, to a distribution depot on the edge of town.

All the housewife would need to do would be to operate a simple handset to set up her shopping list on the tv screen and transmit it to the distribution centre's computer. In fact, she could send the same list to rival distribution centres and compare costs.

Logical shopping is just one dramatic example of the way viewdata is likely to change much of the accepted superstructure of business. That superstructure in very many other instances is no longer needed for the purpose of supporting the business, though there are, of course, social implications. Apart from getting a haircut, where clearly you have to be present in person, there are precious few other things that you couldn't get at the end of a telephone line through viewdata.

The banks are paperwork and, therefore, logical institutions. Some banking services using viewdata are already appearing. And now that the High Street branch is no longer a *sine qua non*, the banks could find themselves in competition with other organisations.

As telecommunications become even cheaper and conventional transport more expensive the whole concept of buying goods and services is changing dramatically.

The old ways of doing business and the old businesses themselves are under attack and the new ways of doing business will in many cases spawn totally new businesses.

So the next time you sit down in front of the telly, don't take it for granted. It may not be quite so innocent, or so friendly, as you might at first think.

Extract from
Computer Product News, Netherlands

VISUAL DISPLAY TERMINAL
to European standards

An intelligent visual display computer terminal with 30.5 or 38.1cm screen, the Euro-Terminal complies with Swedish and German ergonomic, human factors and engineering standards and with UK Health and Safety legislation. It uses a P31 green phosphor display, with bonded faceplate and a 60Hz refresh rate, and has display tilt and swivel, convection cooling, individual con-

trols for brightness and volume, and a 2,000 character display. The choice of detachable keyboards includes QWERTY, 029 and Word Processing. The terminal uses a Z80 microprocessor to control screen, keyboard, optional printer and computer interface. Both RS-232 and RS-422 interfaces are supported. **Rediffusion Computers Ltd, Kelvin Way, Crawley, Sussex, RH10 2LY, England.**

CPN 3432 Enter this number on your Reader Service Card for free detailed information

Extract from
Computing, London

Programme of events

The 1981/82 Programme of Events organised by the Word Processing and Office Automation specialist group is one of the most wide-ranging yet undertaken. During the course of the programme, the group will have users and/or managers talking on no less than 12 different pieces of equipment. Many principals of major manufacturers involved in the field will be speaking.

The programme for September to December 1981 is as follows: **September 15** — first time users clinic. Brief case studies from three users of their first-time experiences, followed by a discussion with a panel of consultants: Eric Norman-Wilson, *Which Computer*; Philip Rothwell, *Commercial Office Systems*; and Roger Whitehead, *Office Futures*.

October 20 — Interactive Viewdata and WP by Mike Aldrich, managing director of Rediffusion Computers Ltd.

November 17—David Butler, chairman of Butler Cox & Partners, talking about Planning and WP Strategy.

December 15 — Half-day seminar on 'Communications for Office Automation'. Speakers will include Dr Pat Coen of Logica VTS Ltd, Les Wright of British Gas and Colin Harthorn of British Telecom.

Plans for the group for 1982 cover such topics as information retrieval, briefcase WP, and WP on microprocessors.

The group approaches its fifth year in existence. Its affiliation to The British Computer Society continues and the group looks forward to a successful year.

For further information contact Margaret Stevenson, the public relation's officer, on 01-435 9831 (O). 01-341 1406 (H).

Extract from
Systems and Software News
Issue No. 10 1981

Viewdata - The new dimension

Emerging, however, is a new dimension that may ultimately force many to re-evaluate their philosophies and to search for a new definition of distributed data processing. That new factor is viewdata or similar products which link television screens to data bases via telephone lines. The pace for this exciting development is being set in Europe. Companies like Rediffusion in the U.K. are basing their entire DDP product philosophy very much on viewdata.

Extract from
The Accountant, London

COMPUTERS

- 3 SEP 1981

Viewdata — Great Expectations

Until recently, cynics were calling viewdata 'the logical next step in communications that nobody seems interested in taking'. Millions of pounds had been spent, not least by the Post Office, in marketing the concept, but although there were suppliers enough, buyers were hard to come by.

The general public had proved to be markedly less enthusiastic in its response to Prestel than the PO had optimistically forecast, and businesses seemed indifferent to the promised advantages of a private viewdata service of their own.

But according to the suppliers, there are signs that the long awaited boom in private, business orientated viewdata systems, is beginning to materialise. *The Accountant* spoke to several suppliers and users about the possible applications of this new communications vehicle.

Rediffusion Computers claim to be the largest supplier of private viewdata systems on the market at the moment, with 30 or more systems sold to UK organisations and 20 more sold overseas — several to the USSR.

According to Mr Mike Aldrich, the man in charge of Rediffusion's Viewdata Plus system, viewdata is 'the first new communications system since the telephone — and one that will make as big an impact on the way we do business'.

In March 1980, he explained, about the time that the Post Office decided that businesses would make a more profitable user base than the general public, there was general agreement in the computer industry that viewdata was highly speculative — 'now it's definitely a multi-million pound industry,' he said.

'The way to think about viewdata — or videotex, as the rest of the world calls it — is to see it as a participatory communications system that allows users to interact with a computer controlled system in a way that the user himself finds interesting,' Mr Aldrich explained.

Viewdata Plus is sold as part of an integrated office system and Rediffusion has just launched a new version of this which makes extensive use of Viewdata Plus' ability to provide real time transaction processing and file updating.

The key to this ability is that unlike Prestel and Prestel look-alike systems, Rediffusion's data storage system is arranged in a similar format to database connected terminal systems. Given the necessary links to other computer systems, there is no reason why a private company Viewdata Plus system should not be able to display train or aircraft departure times on request, give the executive the chance to book a seat, confirm the booking with the travel company concerned, and charge the travel costs to the executive's expense account all in the space of a few seconds of screen time.

Equally, of course, the instant update facility makes it possible for an organisation's sales department to call up on the screen the latest stock position in various lines, including deliveries just accepted by a warehouse which might be miles away.

According to Mr Aldrich, there are three generic uses for viewdata systems; accessing, retrieving and displaying information; transactional services, where the customer uses the system much like a catalogue, and orders his goods directly through the keyboard; and education and training, when the system's graphics capability becomes a very useful attention getting device.

Viewdata Plus runs on the Rediffusion 1800 series of computers and costs from around £33,000.

Thorn EMI were one of three or four TV manufacturers who responded to the Post Office's need for modified TV sets for its Prestel service. And the Thorn division most closely associated with this was Thorn Television Rentals, now based at Swindon. Mr Michael O'Brien, the division's financial director spoke to us about the way Thorn's own private viewdata system, Thorntel, grew out of this involvement.

'The computer industry was totally sceptical about the whole idea of viewdata a few years back. Most of them hadn't even heard of Prestel or known about its development until the PO began its big publicity drive,' he told us. But Mr O'Brien and several of the data processing experts at the rental division had been intrigued by the possibilities of the concept.

By July of 1979 the division had several modified TV sets linked to an ICL mainframe computer and development of viewdata software was well under way. By April the following year, Mr O'Brien told us, the system was operational and began supplying user departments with fully fledged viewdata service called Thorntel.

'We now have around 80 terminals in the group with around 6,000 frames of information on store and three major information providers,' he said.

Because the rental division has a long history of co-operation with ICL and developed its system using ICL 900 and more recently 290 mainframes. it was natural that ICL should take an interest in Thorntel.

A pilot scheme developed, Mr O'Brien said, whereby Thorn supplied its viewdata software to a number of ICL mainframe users. As we see later in this article, this pilot scheme formed the nucleus of ICL's own, recently launched Bulletin viewdata service.

The Thorntel system as operated by the rental division works — like most viewdata systems — off a hand held keypad with some 20 keys, including the numerals 0 to 9, asterisk and hash key, and four memory keys. These latter allow the user to 'hold' up to four separate screens of information for later reference by the user.

According to Mr O'Brien, one of the major advantages of viewdata is that it provides a way of eliminating the mountains of computer print outs that companies without viewdata periodically demand from their systems. 'Traditionally, what happens if the user has a query is that he waits for the periodic print out and then wades through masses of irrelevant information to find the bit he needs — specifying what will be included in computer print outs is one of the most time consuming and costly elements of any new computer system a business installs. Why not do away with the paper production altogether and give the user the ability to access information as and when he needs it,' he commented.

The biggest problem with the system, he told us, is getting senior managmeent used to the idea that the TV screen has replaced the old familiar flow of paper across their desks. 'It is a difficult problem and the more senior the management, the more nervous they tend to be of using the system.

The only solution really to this is to do away with the paper flow, he believes, and force staff to go to the TV screen and call up the information they want. 'This will become even easier shortly since we are working on remote control key-pads to operate Thorntel. And here of course, we score over other VDU terminals because most of the stock we rent out is remote control colour TV.'

In Thorn, he added, there is a very complex system of staff communications. There are a number of committee meetings, staff consultation meetings and so on. Mr O'Brien himself chairs one of these, and again, the company viewdata system plays a large role. 'I've told the people on this committee that there will be no minutes of the meeting handed out, no agendas sent out; instead all the information will be put on the screen.'

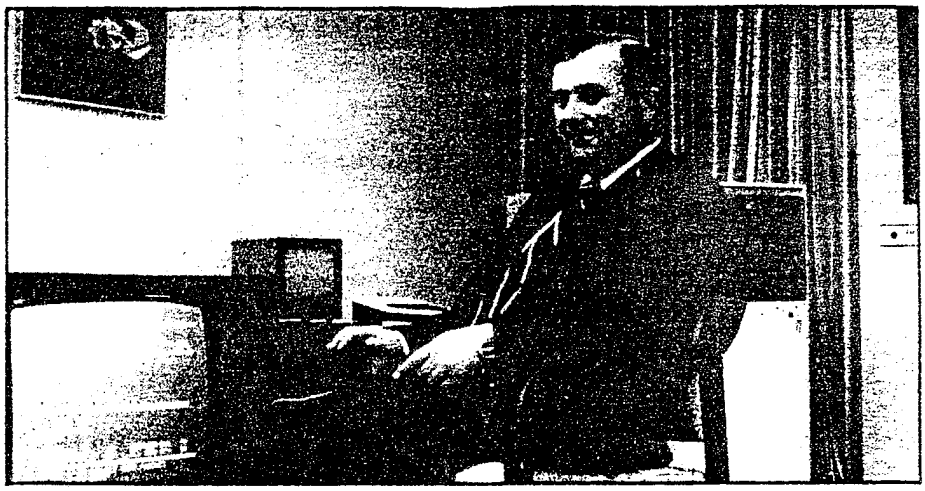
We have one of these machines at the top of our staircase leading to the canteen. There is a standard, first level, security code number which everyone is entitled to use and which gives access to a range of general information screens. Interestingly, it also has a facility whereby you can tape onto ordinary audio cassettes and replay the same display or information screens in a sort of closed loop as often as you please. We use this to display our fire regulations on this and other publicly available screens.

The point, Mr O'Brien explained, is that although people might walk by the screen 99 times out of 100 without giving it a glance, it makes them so familiar with terminal screens that they will have no difficulty with the idea of going to terminals for information, rather than to pieces of paper.

The whole essence of the viewdata system is getting useful information onto the screen. Changing information on the screen — which often means no more than updating a few figures in a screen full of information, is the work of a few seconds.

One girl could support a current file of information, say 5,000 screens worth, which would far surpass any file system she could maintain that wasn't viewdata based.

The other thing we are working on experimentally at the moment, is to get the various group companies to put information onto the screen files which may be of use to other companies in the group. The idea finally is to be able to go anywhere in the group's computer files from the same television set.



Mike Aldrich, managing director of Rediffusion Computers Ltd.

The logical next step for us was to ask ICL how much they considered their recently launched Bulletin viewdata system owed to Thorn's initiative. Mr Mike Edmiston, ICL marketing manager for viewdata, told us: 'We'd been looking at Thorntel for some time and a year ago we used many of the ideas in Thorn's system — which itself takes a lot from Prestel — to run a pilot scheme in nine major UK companies.' ICL also developed hardware to act as the 'protocol converter' to allow the system to be driven by a standard mini computer.

The test scheme proved successful and Bulletin is now being installed in several companies, according to Mr Edmiston. Costs are roughly about £8,500 rental per annum for the software and the hardware to link the TV sets to the computer. Customers are expected to rent or buy their own viewdata terminals or modified TV sets.

The advantages, Mr Edmiston told us, are that users are given the ability to go directly into their data processing files.

'Basically, you allocate a viewdata page number to a facility and it takes you directly into the information you need. There are two basic principles we've worked on,' he explained. 'First, every screen in the organisation should be able to access every bit of stored information (subject to security checks) in the business.'

The second, he said, was that a business should never have to duplicate its input of information. 'There is no reason why information shouldn't flow freely between different parts of the system.'

He pointed out that though Prestel and many stand alone viewdata systems had a 'response page' facility, which allowed customers and clients to indicate their interest in particular items of information — air bookings being one obvious example — these pages simply provide a list of the people who have responded.

The response page in such systems doesn't itself take the matter any further. With Bulletin, on the other hand, he said, the information entered on a response page is automatically picked up and processed.

Finally, Mr Edmiston added that Bulletin is available on a bureau basis — 'for those who want to experiment with viewdata before committing themselves' — from Baric. 'There is a very minimal charge for, say, 500 pages of information.

Pilkington, the St Helens glass manufacturer, has had a small pilot viewdata system in operation since 1980. Peter Rogers is the company's computer technical support manager and was an early convert to the possibilities of viewdata.

On the basis of his reports Pilkington set up a technical sub-committee to look into viewdata and the costs and benefits of installing a test scheme. 'My impression then was that the main use of the system would be as a sort of "card index" with user departments establishing files of information that would be useful to them,' Mr Rogers told us.

Cost was the major factor in considering what equipment to buy for the test scheme, and eventually the company opted for software and equipment from the Aylesbury based supplier, Telemachus, which already had a number of broking firms using its private viewdata system.

In all, including the costs of software

Continued from page 290

and four terminals, plus the effort put in by Mr Rogers and his colleagues, Pilkington laid out around £15,000 on the pilot scheme. 'We already had a number of PDP 11/03 DEC computers so we were able to use one of these to run the system,' he explained. 'The £15,000 breaks down fairly evenly into three lots of £5,000 — with the software from Telemachus costing us £5,000, four terminals for £5,000 and our effort about £5,000. If we had had to buy the computer this also would have cost about £5,000.'

The test system was rather limited since the PDP 11/03 uses floppy disks, which have a restricted storage capacity. Because of this, the viewdata system will store no more than 700 'pages' of information and won't allow more than four users to access the system simultaneously.

'What we have learned from this test scheme is that demonstration pages on a scheme like this should be high value information — by which we mean high either in terms of value to the user departments concerned or in terms of the cost of gathering that information,' Mr Rogers said. 'Initially we have concentrated on a few business areas to maximise use of the information.'

The most successful use is for records of the rollers which produce patterned glass; the works management services department have set up 300 pages of production and engineering data about the rollers and use the system 24 hours a day, seven days a week.

Another promising use was that provided to the engineering department: Mr Rogers prepared screens on design problems in engineering which were of direct relevance to the user department concerned and, once gathered and stored in the system, this information was available to all the engineers at a touch of the button. These pages are also on trial on Prestel International.

'The advantages of viewdata come directly from the ease with which it can be used by everyone,' Mr Rogers said — a theme which was repeated by everyone we spoke to in this study.

Mr Rogers reckons that the test scheme proved itself quite some time ago; the move to a large scale viewdata installation designed to serve the needs of other users in the company rather than a few test departments is under active consideration.

Incomplete Records Packages

There are still accountancy practices — including some reasonably large ones — who believe they have a perfectly satisfactory way of preparing final accounts for clients by hand from incomplete records. But they are a dwindling minority, for incomplete records and accounts production is one area where the small stand-alone micro computer has come into its own.

One of the major reasons for this and for the growing popularity of such systems, Mr David Blechner, managing director of Star Computer Group told *The Accountant,* is that the suppliers of such systems are now adding to the power of word processing to their incomplete records software to provide complete accounts production systems.

Mr Blechner explained that the Star Auditor system includes a client data base which can store up to 240 fields of information for each client, such as company name, registered office address, chairman's and directors' names and shareholdings and so on.

Linked to the data base and the nominal ledger are practice files holding 'typing' information. This, the word processing part of the system, stores standard narrative for the notes to the accounts, directors' reports etc, all of which can be edited on the screen by the operator if the partner producing a particular client's accounts wants to vary from the standard text data.

Star's incomplete records system is based on standard double entry bookkeeping principles and will accept postings from any source, including prime documents, bank statements, trial balance and draft accounts, Mr Blechner told us. The system has been designed so that the operator can enter typed narrative to describe each posting if necessary, or alternatively, he or she can recall standard descriptions from a text file stored in the system, which can hold up to 50 standard descriptive entries for each client.

Mr Blechner said that particular attention has been paid to audit trails and security during the posting process. The user has the option of agreeing to a closing balance, when posting from bank statements, or agreeing to a pre-listed total (for day books).

During the posting routine, the nominal ledger account to which the amount is being posted is shown on the VDU screen as a check against entries being made to incorrect accounts — and the system also prevents postings to non-existent accounts.

When the accounts needs to be produced, the auditor dips into all the relevant files and assembles the information extracted into a full set of accounts ready for presentation to the client. The real advantage here is that it puts an end to the errors that often creep in when accounts have to be 'called over'. It also cuts down the time taken at the expensive final stages of accounts preparation when senior managers and partners are involved in reviewing the accounts.

The final accounts can be displayed on the VDU screen for last minute checks and adjustments and can then be printed directly to finished copy standards. Complete statutory accounts including directors' reports, auditors' report, the profit and loss account, source and application of funds statement, notes and so on, are all produced on the system.

Star has offices in Manchester, Birmingham, Liverpool and London and has a reputation for its commitment to customer support. Each user is given an acoustic coupler which enables him to dial into Star's technical support team who can resolve the user's problem in the majority of cases via the telephone lines but without both sides getting into tangled long-distance telephone explanations.

The group also has a number of qualified and part-qualified accountants who act as user advisors, the most recent of whom, Alison Morgan, a fully qualified chartered accountant, joined Star from Arthur Young McClelland Moores at the end of July this year.

Haines Watts, a Slough-based

accountancy practice with 25 partners and 10 offices, have had one of the largest of the Star Auditor accounts production systems since September 1980. Nick Taylor, one of the partners who oversaw the installation and operation of the system, told us why the practice had opted for a computerised system.

'We'd been reviewing computer systems for a number of years and an in-depth feasibility study we carried out during the summer of 1980 convinced us that the cost effectiveness of systems then on the market made computerisation viable,' Mr Taylor explained.

The firm employed independent consultants to draw up a short list of suppliers and invitations of tender were sent to eight software houses.

The criteria of selection the firm used included an examination of the price/capacity ratio of the various machines; the capabilities of the software and the quality of the customer support service. It decided in the end on Star's system, Mr Taylor told us, because 'the price/capacity ratio was better than the other systems we looked at and the company itself was much more geared towards the needs of professional accountants'.

After the system was installed, according to Mr Taylor, it coped adequately with incomplete records but the practice gave considerable thought to the system's coding plan and formatting of final accounts and were able to achieve a larger measure of standardisation than was present in the original system as supplied by Star.

The system cost Haines Watts £40,000 and it has 96 megabytes of hard disk storage and five VDU screens.

Alton Computer Systems, the Leeds based business systems house is another example of a supplier who has chosen to concentrate on the needs of the accountancy profession. According to Alton managing director Mr Harry Hurst, FCA, the company has had an incomplete records package on offer on a stand alone system for the last three to four years.

'The basic machine, including five megabytes of disk storage and a printers, plus the software, costs around £11,000 — but the real cost variable in these systems is always the printer,' Mr Hurst told us.

The company started about five years ago as a service bureau but changed direction when it began to receive repeated requests from accountants for assistance with accounts production and incomplete records. 'After we lost a few clients to Olivetti and other stand alone incomplete records systems suppliers we decided to meet this need ourselves,' he commented.

One Alton user is the 24 partner accountancy firm Fryer Whitehill. 'One of our main criteria in choosing this system was that we wanted a supplier who could provide hardware of various sizes to meet the needs of our four practising offices, which themselves differ in size,' Fryer Whitehill partner Allen Pawlyn told us. An important consideration was that the software diskettes and the client file diskettes should be able to fit on the hardware in all the offices so that partners travelling from one office to another would be assured of standardised procedures.

'The complete system for all four offices came to £20,000, which includes two screens in the main Cheltenham office and 10 megabytes of hard disk storage,' he said.

According to Mr Pawlyn, the installation of the system has benefited the practice both by the speed and accuracy of its accounts production work, and by ensuring the standardised treatment of accounts production in the practice. 'It is now very much easier to define the way you intend to draw up accounts and to establish the routines that will standardise this,' he told us.

Like many of these stand alone systems, the machine is a multi programming system and Fryer Whitehill's Cheltenham office is able to run its time ledger on one VDU screen and a client's accounts on the other without any interference.

Peter Mart, a director of the Birmingham based software house, Computer Services Midlands, told us that over the last 20 months CSM have sold over 340 incomplete records systems based on both the small screen Pet micro computer and the larger Pet Superbrain micro system to a wide variety of accountancy practices.

According to Mr Mart, CSM had had no difficulty selling systems based on the small screen Commodore Pet micro computer, which has 170,000 characters of memory and a 40 character wide VDU screen. Admittedly, this system has around 90 per cent of the effectiveness of competitor systems, such as those sold by Olivetti and Hartley, but at £3,200 including a good quality printer it was around 30 per cent of the cost of those systems,' he explained.

CSM's incomplete records package on this particualr model lost a little ground to the more expensive systems when it came to giving the accountant the ability to format his own screens. Because of its restricted storage capacity the information on the screen had to be input in a fairly fixed order and position, and this led to rather rigid report designs.

Despite this slight drawback, 247 of these small systems have been taken by accountants to date. And at the end of March this year Commodore brought out the Super Pet, with an 80 character, standard VDU screen and one million characters of store on floppy disks. It also has a higher quality daisy wheel printer.

CSM rewrote substantial sections of its incomplete records package to take advantage of the increased capacity and Mr Mart now believes his firm's system can compete on an equal footing with the established systems. 'We have now given the accountant the flexible screen formatting offered by competitor systems and to judge by our sales this seems to have been appreciated.' Over 120 of these Super Pet based systems have been sold by CSM, mostly through a network of 70 Pet dealers, ~~at £6,000 per~~ system.

'One of the advantages of going for

a reasonably low priced micro based system,' Mr Mart told us, 'is that maintenance charges which are usually based on a percentage of the total systems costs in all computer deals, work out better the cheaper the initial outlay.' CSM claims that it only works through the highest quality Commodore dealers with established reputations for good customer support. But it admits that it doesn't itself provide support for its own system outside the Birmingham area.

Alex Harrison, FCCA, has designed his own incomplete records and accounts production system using a Wang LVP with three terminals, a printer, a 4 megabyte Winchester disk and a one megabyte floppy disk, which he now markets to other accountancy practices.

One innovation Harrison has brought to the accounts production field is the use of small hand held terminals, made by MSI, which are about the size of the old style pocket-calculator and can be detached from the main computer and taken out to the client's office.

The point of this, he explains, is that 'the chief bottleneck in preparing accounts by computer is in the actual keying in of the basic information, cash payments, bank receipts, creditors and so on — the hand held terminal allows information to be keyed in on site, stored, and transferred to the main computer at a later date.'

Mr Harrison believes that this system or something like it, will in all likelihood be the account book of the future for the small businessman.

Continued from page 283

The machine will allow him to proceed to the next stage but will 'remember' the gap, (or gaps) and replay for the operator on request the missing bits. A warning will appear on any set of accounts produced if they contain a string of three question marks.

Part way through the development of the system it was realised that departments other than those involved in accounts production also had requirements that could be met by a word processing system capable of being used by the casual operator.

As Dearden Farrow were about to order a number of extra word processors, it was decided instead to redesign the software involved in the present system so that it would work as a stand alone system in these departments, saving the firm great extra expense.

Most sets of accounts produced by the firm are based on draft management accounts produced by the client, and in such cases the draft accounts will be enterd as an initial journal entry. However, the system is equally suitable for conventional book-keeping or incomplete records.

A second stage to the system is now being designed which will bring in a full investment ledger, to assist with trust accounts, personal tax work and dividend listing.

The system is being developed on Dearden Farrow's Prime 400 computer which currently has half a megabyte of core and two 300 megabyte disks. It has been deliberately written in Cobol, to make it machine transferable and for smaller practices it can be run on Systel's time sharing bureau.

Completion date for the system is December of this year, but specific sections, Mr Evelegh told us, are now available for demonstration.

Extract from
Sussex Business Times, Shoreham

8 - SEP 1981

THE Department of Industry has invited ROGER NEWMAN, technology director of Rediffusion Computers Ltd to become a member of the Computing and Data Communications Committee, which forms part of the Electronics and Avionics Requirements Board. The aim of this committee is to help the department determine the objectives and priorities of R & D expenditure for government establishments.

Mr Newman has spent 20 years in the computer industry and has a wealth of experience having worked on many aspects of computing from mainframes to minicomputers.

Meanwhile, recognising the potential problems of marrying the emerging electronic office equipment and techniques – such as 'viewdata' and 'word processing' – with established data processing operations, Rediffusion Computers has established a central consultancy service group to offer its customers 'top line' advise and assistance at competitive consultancy rates.

PETER DODDS has been appointed to head the group as manager, consultancy services. In the first instance, Mr Dodds expects his group to be concentrating on viewdata-based projects – those that link 'intelligent' TVs to minicomputers in the pattern of British Telecom's Prestel service – since this is an area where Rediffusion has established a position as market leader.

Mr Dodds has over 20 years experience in the computer business from both the user and manufacturer viewpoints.

Two of the six front line consultants who will staff the group have just been appointed. They are: George Bulmer, who has joined as a senior consultant from Aregon, the NEB office systems subsidiary; and Alan Westwood, who joins as a project manager. He came to Rediffusion from ICL where he was a systems consultant in the Baric subsidiary's private viewdata systems group.

Roger Newman

Peter Dodds

Extract from
West Sussex County Times, Horsham

Committee aids department

4526

THE Department of Industry has invited Roger Newman, technology director of Crawley based Rediffusion Computers Ltd., to become a member of the Computing and Data Communications Committee, which forms part of the Electronics and Avionics Requirements Board.

The aim of the committee is to help the department determine the objectives and priorities of R & D expenditure for government establishments.

Mr. Newman has spent 20 years in the computer industry and has a wealth of experience having worked on many aspects of computing from mainframes to minicomputers.

Specific projects in which he was been involved include the ballistic missile early warning systems, the application of digital simulation techniques, the introduction of the company's own minicomputer-based data entry system in 1972 and the design of integrated electronic

Extract from
Sussex Business Times, Shoreham

-- SEP 1981

MICHAEL ALDRICH, managing director of **Rediffusion Computers Ltd, Crawley** and **Peacehaven**, Sussex, has been appointed to the Information Technology Advisory Panel to advise the Government on Information Technology issues.

4526

Mike Aldrich is the author of over 40 published papers and articles on Information Technology. He graduated from university in 1962 and has spent his entire career in the computer industry. During that career he has been responsible for every facet of computing from design to marketing.

He is 39 years old, married with four children and he lives in Colgate near Horsham, Sussex.

Extract from
Crawley Observer
29.10.81.

REDIFFUSION Computers Ltd, of Kelvin Way, Crawley, have announced the appointment of three new executives.

They are Mr Alan Smith a chartered engineer who holds a BSc honours degree in electronic engineering who has been appointed quality assurance manager. Previously he worked for Mullard Ltd as principal quality assurance engineer.

Mr Rob Wilson has joined the company as personnel officer. He was with ICL for three years and previously was employed by the Civil Service in their personnel payroll administration

● **Rob Wilson . . . new personnel officer.**

Extract from
East Grinstead Observer, Sussex

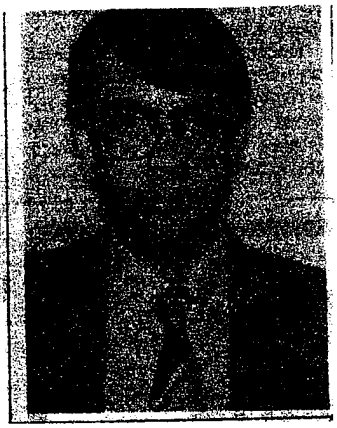
22 OCT 1981

Smith for a quality job

4526

ALAN SMITH of Waggs Close, East Grinstead has joined Rediffusion Computers Ltd at Crawley, as quality assurance manager.

He was previously with Mullard Ltd as principal quality assurance engineer. Earlier he was employed by Hellermann Deutsch as chief engineer on fibre optics. Alan is married with two children.



UK Mainframer Predicts

Automated Office to Ease Data Entry Drudgery

By Jeffry Beeler
CW West Coast Bureau

LAS VEGAS — Automated office systems will relieve business of many of its current data entry and other clerical burdens and greatly expand the extent to which customers can serve themselves, according to the managing director of a UK based mainframe vendor.

Speaking at last week's fifth annual Data Entry Management Association (Dema) Conference here, Michael Aldrich of Redifon Computers Ltd. portrayed a future in which companies will transfer to their customers many of the order entry and processing tasks that have traditionally been done by the firms' employees.

Supermarket Comparison

This expected movement toward customer self service is analogous to recent changes in the way shoppers are served in supermarkets, Aldrich said.

In the past, grocery store patrons could expect to be waited on hand and foot by clerks who selected each item, packed the goods and then took the customers' money. Today, the old fashioned ideal of personalized customer service has fallen victim to high volume supermarkets where shoppers pick all their own groceries, cart them to the checkout counter and sometimes even do their own bagging.

With the advent of electronic office systems, the supermarket principle of customer service can now be extended to many other types of businesses as well. In fact, in a few companies at the technological forefront, the do-it-yourself service concept is already in a relatively advanced stage of implementation.

"In the banking industry, for example, cash dispensers are now doing the jobs that used to be done by tellers and the terminal operators are the depositors themselves," Aldrich said.

The notion of allowing customers to do increasing amounts of their own work has also found expression in Europe, where the emergence of videotex- and Viewdata-like systems has allowed technologically unsophisticated subscribers to dial a company's central mainframe, gain remote access to the firm's data base and enter as well as process orders through their home TV sets.

In addition to serving as an electronic shopping aid for consumers, videotex like technology can be used to implement electronic mail and information retrieval systems and can form a kind of gateway between two or more cooperating processors.

Videotex will revolutionize office organizational structures," Aldrich predicted, "and because it is based around television, it will be found in both the home and office."

Environment to Change

Another major impact of future automated office systems will be to dramatically transform the environment in which managers and their support staff do their work.

Conventional office systems forced white collar personnel to come together under the same roof to do their jobs and thus contributed to the rise of today's large centralized business workplaces. Future generations of automated office systems, by contrast, will allow the same employees to do much of their work at home, where they will be able to interact with their companies' remote mainframes through their own personal computers or terminals, Aldrich said.

Rapidly rising transportation, energy and rental costs will hasten the day when "it will be cheaper to take the work to the worker rather than vice versa," he added.

The transition from centralized to distributed working environments is already beginning to manifest itself in many cottage industries and the advent of the so called "cottage of

CW At Dema

fice" will soon become an accomplished fact. "Flex-place is no more difficult to comprehend than flex-time, and it need be no more difficult to implement," Aldrich said.

To realize its full potential, however, the next generation of automated office systems will require sound design, effective operator training, sensible operating disciplines and careful performance monitoring, he warned.

Such systems will also raise serious cost justification concerns — a development that will tend to slow the technology's public acceptance.

"The pattern of [automated office systems] use will probably be to install an integrated system for one function — distributed processing, word processing or even data entry — and then gradually expand it by adding other capabilities," Aldrich said. "It will be a stage-by-stage, learn-as-you-go process, with cost justification occurring at every step."

Many firms are waiting until viewdata is integrated into other office facilities, reports Chris Barnard

Innocuous, easy to use and simple

Mike Aldrich, md of Rediffusion Computers: 'Viewdata is going to change work patterns'

It has long been the dream of many a management services controlier to find a system of sophisticated control which is acceptable to its users.

A means of harnessing computer technology in the ever more relentless drive to cut costs and improve efficiency. To impose corporate standards over far-flung organisations.

In viewdata, they may be finding just the weapon they need. One of the main advantages of viewdata is that it is simple, easy to use, and apparently innocuous. Rediffusion Computers, one of the major suppliers, stresses its 'non-threatening, socially acceptable connotations'.

This quality derives mainly from its use of the nice 'friendly' tv set, a piece of apparatus far more familiar and reassuring than the average computer terminal.

And yet, in spite of its apparent 'harmlessness' — indeed, *because* of it — viewdata may prove to be a medium of communications which has a serious and important impact on the lives and job satisfaction of all those who work in large organisations.

Even the word 'viewdata' implies a passivity which is really deceptive. Its alternative term, 'videotex' is just opaque. In reality, viewdata is a means of achieving a hitherto impossible degree of management control, a fact which Mike Aldrich, md of Rediffusion Computers, has admitted: 'The glittering prize in improved internal communications is the potential increase in managerial span of control.

'Reporting structures and ratios can be changed and managerial productivity can be radically improved.'

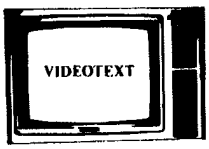
Aldrich points out how managers need to be assured that the actions they set in motion are successfully and punctually carried out by their subordinates, but conventionally their span of controls has often been restricted.

With viewdata, 'action items' can be entered into the system through word processors, distributed to the electronic in-tray of the recipients. 'At any time the senior can see the status of an action point and the externally generated workload on the subordinate.'

While improving communications, a point which Aldrich stresses, the use of viewdata in this way is clearly going to change the work patterns of subordinate managers. Aldrich does not say that this will deny them their previous freedom and scope for initiative, but the possibility is there for all to judge.

But he recognises that the use of viewdata has become a sensitive issue, a point which Radio Rentals — another major supplier — has confirmed. Says Aldrich: 'The use of viewdata technology in business in the UK is clouded by mystery of confidentiality agreements. Much is going on behind closed doors.'

One of the reasons for these 'confidentiality agreements' he says, is that 'internal systems are at the formative stage with impact on staffing and procedures still to be resolved'.



Clearly, this could be seen as a polite way of saying that companies are keen to disguise the full impact which viewdata may have on their staff.

There are three main kinds of viewdata for internal use. Companies can form a Closed User Group within the Prestel service, the public viewdata service offered by British Telecom. By means of passcodes, certain pages on the Prestel database can be accessed only by the closed user group which has bought them.

At the same time, the company also has access to the pages which are for general use. The closed pages may be used for disseminating sales results, production figures, stock positions, and all kinds of memoranda. Its disadvantage for the large company is that it cannot, as yet, be used to access the database of the company's own computer — a common requirement of viewdata.

This position will change with the advent of 'Gateway' at the beginning of next year. Prestel spokesman Richard Hope Smith talks of an impending 'revolution' in the closed user group concept, whereby access will be possible to all kinds of databases via Prestel.

The number of pages available will jump from a maximum of 50 to 'any number of thousands'. And the price will come down 'at least ten-fold' to £250. At the moment, there are 14 companies using internal closed user groups. These include BP, ICI and Sony.

The second possibility for companies is a Prestel look-alike system, or 'Plak'. These are smaller, private systems, exactly like Prestel, but provided by independent suppliers. Depending on their requirements, this can work out as a cheaper, more practical alternative to Prestel.

Thirdly, a company may choose to have its own, tailor-made viewdata system, based on its own communications facilities, and possibly integrated with other functions such as word processing and transaction processing. Aldrich of Rediffusion dubs this 'super viewdata'. It can be as complex, and as costly, as the company likes.

Clearly, it is this kind of integrated system which appeals to the ambitious management services boss who wants to use all the possibilities of technology for the purposes of control and increased efficiency. 'It is the only system which has a direct impact on the trading position of a company,' claims Aldrich. Barclays Bank is using such a system provided by Rediffusion.

Functions can include interactive training as well as more conventional information dissemination roles. Above all, it is an active medium; other people's diaries can be accessed, for example. Instead of relying on users to go through the system looking for messages, urgent instructions can be given priority, they won't 'go away' until they are dealt with.

Radio Rentals Contracts (RRC) provides a similar system, called Thorntel. It is already in use within some areas of Thorn-EMI, the parent company of Radio Rentals. The impact on reducing paper work alone has been reported as dramatic within this company.

Externally, Thorntel has also been sold, but RRC is mainly in the business of selling terminals. Since Thorntel is based on ICL mainframes, it does not suit all its customers. RRC claims to act as a consultancy. 'We only recommend Thorntel if we think it suits our customer's needs,' says a spokesman.

ICL has its own viewdata system, called Bulletin. The major mainframe suppliers are not far behind. Another, smaller supplier is Incotel.

Above all, it is the integration of viewdata with other facilities that the far-sighted planners are waiting for and working towards. Whether this is embodied in one work station, as many of them would like, or whether they are physically separate, is a matter of cost and convenience.

But the real point is that viewdata, combined with word processing, teleprocessing, electronic mail and all other electronic facilities will enclose complete organisations with one unified system, a subtle technological web controlling and standardising all operations.

Tom Smith, chairman of the group management services technology committee at Rowntree Mackintosh, is fully aware of the savings in costs and the increases in efficiency which the 'office of the future' will bring. He has formulated ideas for his company which are as advanced as any and viewdata has a major role.

Over the next five years he envisages 'gradual development of the multi-purpose work station encompassing word processing, data processing, viewdata and communications'. He sees the public information services such as Prestel incorporated into the network.

As yet, however, implementation of viewdata is limited. 'We're using Prestel to give us up to date information about the sugar commodity market, although we've been told that we can get this cheaper on Ceefax.'

But as far as internal use is concerned, progress is hampered by cost.

Among Smith's plans for viewdata are providing a technical library and a property register — documenting all the property which the company owns. 'We've got this on our word processing system at the moment, but we think it might be better on viewdata.'

Another possible function will be office accommodation, providing the planners with information about desks and chairs and so on in diagrammatic form. These internal functions Smith hopes to combine with external information such as railway timetables, hotel and flight booking systems.

Smith also believes that viewdata could be the solution to archiving large amounts of information. 'We think this very "shallow" type of filing may be what we need instead of a very complex hierarchical system, it would have a simple paging structure.' But this idea cannot reach fruition until Rowntree Mackintosh has established its network based on work stations.

Smith's belief that viewdata will be valuable is 'more intuitive than proven'. But he is certainly not alone in his far-sighted plans. Indeed, many other companies have already taken up viewdata on a larger scale.

But he is waiting, like many other managers in his position, until viewdata becomes an economical proposition. Above all, he is waiting for the day when it can be integrated into all the other office automation functions.

When that day comes, viewdata will realise its full potential as a powerful tool of management.

Chris Barnard is a freelance journalist.

INTERNATIONAL PRESS-CUTTING BUREAU
Lancaster House,
70 Newington Causeway, London, S.E.1

Extract from
Minicomputer News, London

- - OCT 1981

The future is already here

By Michael Aldrich

Michael Aldrich is managing director of Rediffusion Computers Ltd.

...cus-
...ans,
..., the office of the future has arrived. It is novel but it is also simple.

An office is an organisation of people who provide a service of communication and record keeping and who control assets of various kind. In this respect the office of a century ago and the office of today are the same. During the last century, however, there have been many technological developments in communication and record-keeping — telephone, television, computing — and the control of assets has often become more complex and more tedious, often because business and regulations have become more complicated.

A century ago it was found that a typewriter could produce more letters per hour than copperplate handwriting. It was found similarly that the telephone could deliver messages and receive responses faster than a messenger. As new technology entered the office, it brought with it new methods and new opportunities. Each new technology generated interest and was soon accepted and forgotten.

The integrated electronic office has long been a cornucopia of wonderful new wizardry and a sub-culture of esoteric jargon, providing a thick smoke that has obscured the real simplicity of the new office systems.

The purpose of this article is to dispel the smoke, and highlight the features of the office system of today and the next few years. Rather than conjoining a festival of new abstractions, let us look at the new systems from the viewpoint of the people who will care most about them — the people who will use them.

The nature of work that people undertake in an office is dependent upon the particular job specifications that they are given and that they agree. Most jobs can be described. Some jobs are procedural; some are repetitious; such jobs usually provide the worker with limited authority, particularly in managing that most important element — the worker's time. Jobs that fall into this area include many clerical office jobs. In the classification 'clerical' one would include typing, data processing in the sense of full-time terminal operation for procedural working — applications such as data entry, sales order processing and inventory control — handwriting/handprinting of documents, coding sheets and the like. There are other general jobs around the office such as filing or copying.

Decision making authority

Moving from the procedurally-oriented office job to the job where the worker has wide discretionary authority over decision making, time allocation and priority scheduling, takes us from clerical worker to occupational worker. An occupational worker is a supervisor, manager, an engineer, a financial controller and also a secretary. The classifications cannot be definitive — in some circumstances a secretary might be classified as a clerical worker. On the other hand, a secretary handling senior management would probably be an occupational worker. The office system has to be capable of supporting people in the work they actually do rather than putting people in pigeon-holes to support the system.

Having identified some of the people of the office it is then possible to analyse their work and devise appropriate tools to support them. The tools must be appropriate for the task, ergonomically attractive and non-threatening in the behavioural sense. These tools are called workstations, and they can either be desk-top devices for the individual or they can be shared self-service devices for groups of people — like for example today's photocopiers. The sharing of the more expensive devices is important not only for economic reasons but also for social reasons. Regardless of the degree of electronic sophistication, the office must be designed for human beings not the other way round. The workstations are the tools that enable the office worker to improve efficiency, accuracy, productivity and provide information for better decision-making.

The other important workstations are for external users of the office system. The office provides a service of communication and record-keeping not only for those who work within the office but also for those who work within the organisation and, even more important, for those people who communicate with the organisation — customers, vendors, suppliers, distributors, agents, and clients. These people have a genuine interest in benefitting from the improved communications and record-keeping that the office system provides.

The outstanding feature of the office system is, therefore, the wide range of people, from different orientations who will use it. Add that to the broad range of media that people utilise to communicate — pictures, words, numbers, sounds — and the office system can easily be conceptualised.

It has to be a multi-user system, offering different kinds of dialogue station to different users. To ensure good communication — everybody on the same wavelength is a typical colloquial phrase — the dialogue stations need to be locally interconnected by cable within the office and by terrestrial or satellite links outside the office. The within office cabling is referred to as Local Area Networks.

Implementations of the electronic office system vary. Companies with a telephony background stress the importance of voice. Word processing companies stress the dominance of text. Users will choose systems that are appropriate for their specific requirements. The fundamental issue will be cost justification of the new system. The difficulties in this area are legion and it is highly likely that users will take a pragmatic approach to cost-justify a minimum system on a specific application and thereafter grow the system as needs arise and economics are seen to be favourable. By so positioning themselves, users will be able to acquire working experience with new technology as well as provide assimilation of new technology within their organisations — so that people can become comfortable with new methods.

Improved communication systems

The comfort issue is critical. Electronic office systems will gather completely new types of users requiring a broad spectrum of services. The only way the new tools will be accepted is if they offer perceptible benefits to the people who use them — that is why electric typewriters, photocopiers and electric pencil sharpeners were so successful.

The people who used them could see the benefits. Also the products were very easy to use.

Perhaps the most intriguing aspect of the new office systems is the impact they will have on the cost structures of business, particularly on overhead costs. This impact will not be merely, for example, the improvement in typing productivity through using word processors, which is an obvious benefit but hardly world-stopping in overall financial terms. Rather it will be the impact of moving work out of the office. This will be achieved in two ways. Firstly, improved communication systems will make it optional whether the worker comes to the office or whether the office work is transported via telecommunications to the home. As the cost of physical transportation increases, as office heating, lighting and rental costs are driven continuously higher, there will come a time when it is cheaper to take the work to the worker rather than vice versa.

This is already happening in many cottage industries. The cottage office will be here soon. Flexi-place is no more difficult to comprehend than flexi-time, and it need be no more difficult to implement.

Customer *operates* terminal

A second type of out-working will also become more prominent. In the past, the nature of many businesses has been changed by externalising work from an organisation to its customers — making the customers do the work. The grocery industry is a good example. At one time, you went into a food store and received personal service from a clerk who selected goods, packed them and handled the cash. The process was slow and tedious. The self-service supermarket, where the customer selected the goods, transported them to the check-out and often packed them, changed the nature of the grocery business.

Infinite mix of applications

It seems hard to think how the customer can be made to do the office work. But, strangely enough, it is already happening. In the banks, the cash dispensers are doing the jobs that the tellers used to hate — and the terminal operator is the customer.

In Europe the development of videotex or viewdata — colour televisions with keyboards and peripherals operating as computer terminals using a totally standard human operating interface no matter what the application is — has enabled customers to dial-in to companies and talk directly to the companies' data bases. Thus the customers can enter and process their own orders — simply, economically and faster than before.

But videotex is not single purpose technology — it can handle electronic mail, information retrieval and can gateway from one computer to another seeking the information and data that it requires. It is a technology that will revolutionise office organisational structures. And, because it is a technology based around televisions, it will be found in both the home and the office.

When the history of this generation of office systems comes to be written, it may well be that the historians discern that one of the main antecedents of these new systems was the data entry computer. For more than a decade, companies have been installing multiple terminal minicomputer systems in offices. These systems were not intended for use by highly qualified computer specialists. They were designed for people who work in offices. The human interface on these systems was simple and friendly. Menu processing was invented by the data entry industry. The operating software on these systems was highly sophisticated but the user remained unaware of it. Even when these data entry systems were connected by telecommunications networks to other computers, they remained easy to use.

The data entry systems highlighted an aspect of computer usage that will remain important even with the new office systems.

However simple to use, these new systems will require sound systems design, good operator training, sensible operating disciplines and careful performance monitoring.

In many ways, the new office system will be more difficult to manage than the old data entry systems. Many new types of workstation will be involved. Communications and data management will require new knowledge and keeping the users happy will be more challenging because of the almost infinite mix of applications.

Because of the broad potential of these new integrated systems and the business problem of cost-justifying them, it is likely that their general implementation will be slow. The pattern of use will probably be installation of an integrated system for mono-function usage — distributed processing or word processing or, even, data entry — and then growth of the system towards full integration. It will be stage-by-stage. Learn as you go. And cost/justify every step.

The smoke of confusion with integrated electronic office systems will drift slowly away. It is the simple systems that will still be working and the attractive perfume of success may well be reminiscent of the early days of data entry, when radically new technology was brought into the office, made to work quickly and was soon accepted as a better way forward.

Michael Aldrich is managing director of Rediffusion Computers. This article is based on a presentation made by him this month at the Data Equipment Manufacturers Association Convention in Las Vegas.

mcn

For further information circle 44