

Redifon Computers' Office Revolution

Extract from: *COMPUTING*
Thursday, March 27 1980

Redifon steals surprise march in race for electronic office

By Alan Cane

Redifon Computers this week made a surprise move into the 'electronic office' market with a host of new hardware and software.

While companies like Philips, Plessey and GEC have announced plans for the office of the future, Redifon seems to have stolen a march with a system which involves a new fast

processor, intelligent television sets and data entry devices that will accept handwriting.

Redifon, with a turnover of £38 million, reckons to be the UK's second largest British-owned computer manufacturer. It has been working on the system since 1977 at research and development costs in excess of £3 million.

The system is called R1800

range: the first product is the R1800/50. Heart of the system is a 16-bit, 400 nanosecond cycle, bit slice processor, the R5000 which will support up to 64 intelligent tv ports (viewdata ports).

Starting prices for R1800/50 systems are around £50,000. Redifon claims three firm sales. First shipments of the R1800/50 will be first quarter 1981.

Redifon goes for office killing with humble tv

By Alan Cane

Theoretical strategies for the electronic office of the future are more abundant than real hardware at present. So the first vendors in the market-place — assuming they have something close to the right approach — stand to make a killing.

What are Redifon's chances with its R1800 Series launched this week?

After all, only two weeks ago, Jay Stoffer of Delphi, which is supplying the very powerful processors at the heart of the yet-to-be-revealed Nexos office architecture, warned that today's designs would not pass muster: 'The requirements of the so-called automated office cannot be satisfied by a random collection of intelligent black boxes with an ability to communicate with each other' (*Computing*, March 13).

And here is Redifon with basically that: a new and very fast processor based on bit slice technology, a humble domestic television with substantial intelligence bolted on the back and a micro-processor-based hand written input device (it may have a Redifon label on the front but the device is easily recognised as the Quest Micropad).

Each of the manufacturers in the field seems to have started from its own position of strength — Nexos with the Delphi processor, Xerox with the intelligent copier, IBM with the 8100 distributed processing hardware.

So with Redifon, but its strength, through its membership of the Redifusion group, is in the manufacture at reasonable unit-cost of colour televisions. Redifon's office of the future is therefore television- or more correctly viewdata-based.

Michael Aldrich, newly promoted to managing director of Redifon Computers, believes this is a crucial ingredient.

A tough and aggressive marketing man, Aldrich now talks behavioural psychology with the best: 'We started out from the view that the human interface was critical. We needed "non-threatening" devices that managers could use — and the most non-threatening device we could envisage was the domestic colour television.'

'It can be operated by a four year old — in fact we get little kids to work the system as part of the test procedures.'

Aldrich also believes Redifon has taken a different line in addressing the problem of communication *within* a company between employees, and *outside* between the

company and its clients.

It means the development of the 'information service broker' as Redifon puts it: 'The broker will install a Redifon viewdata plus system with intelligent colour televisions located in his client's premises. He will provide a directory of information and action services, take orders, arrange delivery, even collect money. He would make a profit on the value of transactions handled, paid by the suppliers of goods.'

The Redifon approach is some way off the more extravagant ideas of the electronic office that have been promoted.

For example, most future scenarios include the multi-function workstation, a total replacement for the existing desk. It would have to include typing facilities, telephone facilities, archiving and so on.

There is none of that in the Redifon model. It uses three forms of workstation: the intelligent viewdata televisions with their simple keypad entry devices, orthodox visual display units (vdus), and the Micropad hand written entry devices. All are by now quite familiar and well-tested methods of communicating with computers.

The Redifon announcements consist of the office system itself — the R1800/50 — and its associated products such as Writaway (Redifon's name for Micropad) and viewdata plus, together with the R800/70 advanced distributed processing system and the R300/70 and R400/70 advanced data entry systems.

Aldrich saw the R800 as the essential bridge between what Redifon used to do in data entry and distributed processing and its new stance in the electronic office, just as he sees the R1800 as a link to the fully integrated electronic office.

The whole project was developed in great secrecy — the individual modules were code-named after the small villages surrounding Redifon's Crawley headquarters which led to a certain confusion among the staff. And when all the software on the R800 machines was quietly upgraded earlier this year to R1800 compatibility — what Redifon calls Virtual Machine 2 — it led to considerable confusion among users and some criticism in the computer press.

There is no doubt that the quality of the Redifon television image is good, but hardly up to the standard of the best vdu. Aldrich dismisses this criticism, arguing that the tvs are chiefly

for management which needs specific information at specific times — standard vdus would be used for any continuous period of input or interrogation.

The Redifon system certainly offers simple, cheap entry into the electronic office, and it is available now. But equally there is no doubt that it is unsophisticated technology.

Redifon is already thinking ahead according to Aldrich. Facsimile transmission and reproduction is on its list of future developments, as is voice input. Aldrich, however, is sceptical about the value of voice store and forward: 'It is a very expensive technology and people are reluctant to trigger action on voice alone. They prefer a written record.'

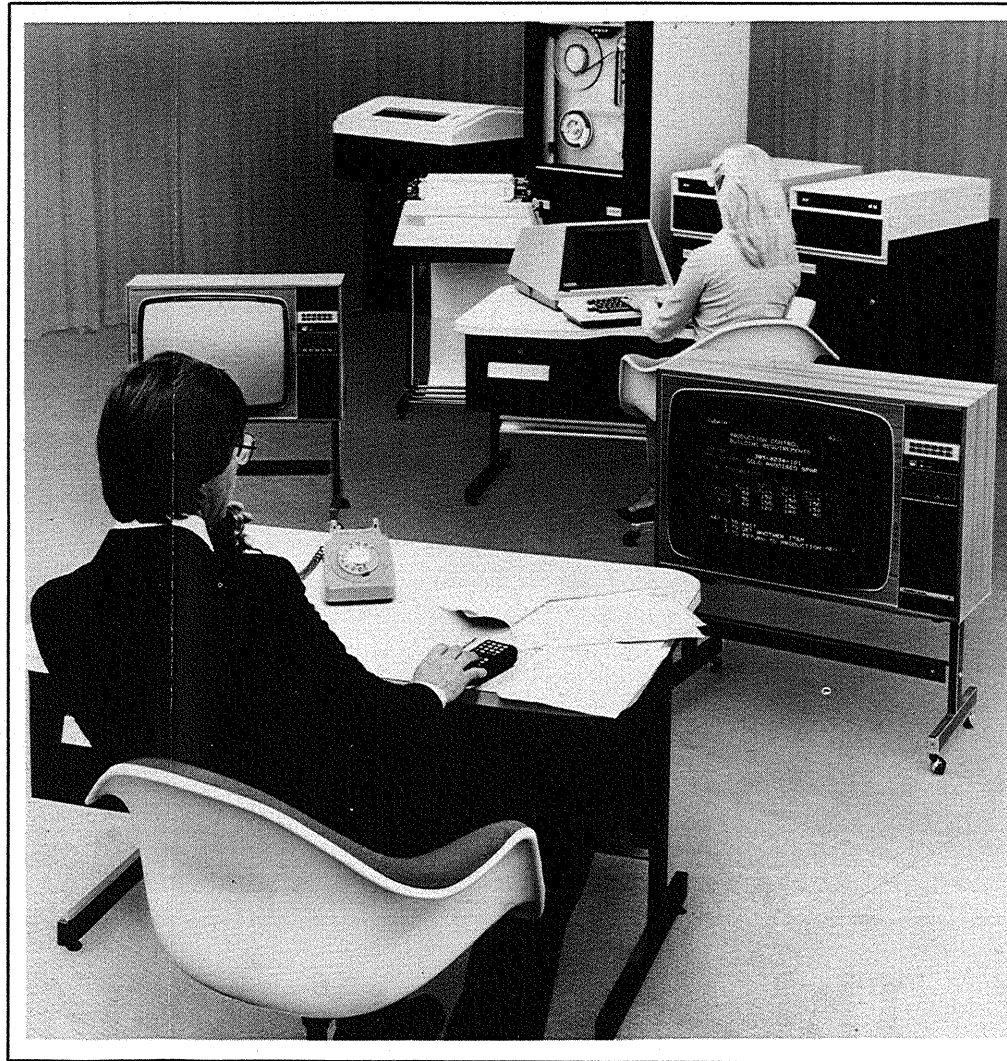
Aldrich has just finished telling all his sales staff what the new systems are all about — the 'Damasus' presentation as he puts it.

Now it remains to be seen if the Redifon tactic — of basing office systems around hardware as familiar as the tv set — will be successful against the sophisticated plans of other manufacturers. What of IBM with its office products division and massive research and design budgets? Aldrich says: 'When it sees this, IBM will be making domestic tv sets inside a year.'

TV receivers in a fresh role

Redifon Computers, the second largest British-owned computer company and part of the big Redifusion television group, has taken a somewhat different approach to the "office revolution" by proposing to employ big screen colour receivers with on-board viewdata chips as the data terminal rather than the conventional black and white visual display unit (VDU).

The company says it has uncovered a major cost advantage in using this approach. It suggests that, to the cost of the conventional monochrome VDU (say £2,500) has to be added £500/annum for a modem plus another £150/annum for an autodialler, amounting to £5,750 over five years. A viewdata set on the other hand has the modem (phone line transmitter) built in on the chips together with dialling facilities operated from a hand-held key pad that is also used to command the system.



Redifon ready for the office revolution

Redifon Computers, which claims to be the second largest British owned computer manufacturer, has entered the market for integrated office systems.

The Sussex based maker of data entry equipment launched the R1800/50 system earlier this week under the banner: "The Office Revolution."

Apart from supporting conventional data base storage, archiving, visual display units and word processing the R1800/50 can handle up to 64 ports for viewdata type terminals and 32 handprinting recognition terminals.

The R1800 Series software, which ties the diverse devices together, is compatible with that written for the R800 Series announced last Christmas. The R1800/50 is a midrange

machine and further machines in this series will be launched at three month intervals.

The viewdata terminals are designed to simplify communications in the office and with customers. Like the handprinting data entry terminals they can be located both locally and at a distance.

The R1800 is not intended to replace existing mainframes, instead the software can be tailored to match most IBM, ICL, Burroughs and Univac communication protocols.

Mike Aldrich, Redifon's managing director, said: "We sat down three years ago to devise a product to fuel the company's growth through the 1980s. Both the viewdata television set and the reader for handprinting are 'user friendly' devices which will revolutionise

the process of data entry and display."

The viewdata sets, which are compatible with the Post Office's public Prestel service, will be made by Redifon's parent company, Redifusion, in its Bishop Auckland plant in County Durham. The handprinting terminals are the Micropad devices made in Dorset by Quest.

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Unlike Prestel the Redifon 'Viewdata Plus' system enables a user to update files and process information via a hand held alphanumeric keyboard.

"We realised that there was no long term future in conventional data entry," said technical director Roger Newman. "The key British elements of the R1800 approach

give us a head start in what could be the fastest growing market of the 1980s."

Some R1800 systems have already been shipped to selected customers for trial, but the systems will be unveiled publicly at a three day exhibition at Eppingham Park in Sussex. First deliveries of the R1800/50 are expected early next year.

orders, arrange deliveries and even collect money.

The directory business could change: Redifon asks "what point is there in say, 'Yellow Pages' if one could go into a computer using alphabetical search mode to find a phone number and then automatically dial it?"

Users of the colour terminal would not be restricted to any particular data-base: they could dial up anyone's, including the Post Office's.

The first of these systems, designated R1800/50 makes use of the company's R5000 computer and can support up to 64 viewdata ports, up to 32 alpha-numeric VDUs, up to 32 handprint terminals and makes available a maximum of 600 megabytes of information storage. For storage of a more archival nature four magnetic tape drives, and two diskettes can be employed and over 30 printers can also be connected. Later on both larger and smaller systems are to be introduced.

First shipments of R1800/50 models are planned to start in the first quarter of next year. Redifon Computers is at Kelvin Way, Crawley, Sussex (0293 31211).

Extract from: *COMPUTER*
WEEKLY, Thursday, March 27 1980

Redifon bid for office market

Redifon has introduced its first products for the office market with a network system that combines word processing, viewdata, data entry and communications. Called the R1800, the series includes special user interface features such as hand printing input and ABC keyboards instead of the usual QWERTY type.

The model now being launched, the R1800/50, is at the middle of the range. Larger and smaller models will appear within the next year.

At the centre of the network is a "system manager" running on a new 16-bit processor, the R5000, which is claimed to be three times faster than Redifon's existing R3000A. Printers and up to 600 megabytes of disc storage are also centralised. Up to 32 video terminals and 64 Prestel-compatible viewdata units can be used.

The viewdata terminals are intended to provide management information around an office, with a way of broadcasting memos and sending messages without paper. Access is also possible over the public telephone network. Real time processing and data management can be carried out from the viewdata terminal.

New distributed processing and data entry systems have also been launched. The R800/70 provides increased throughput compared to existing R800 products and the two new data entry systems, the R300/70 and R400/70, similarly give improved performance.

Differeces

Unlike Prestel the Redifon 'Viewdata Plus' system enables a user to update files and process information via a hand held alphanumeric keyboard.

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March 28, 1980

computer and database all the users, within and outside the company, will not only be able to extract data but enter it as well for overall updating of the stored information.

Redifon is placing great emphasis on what it calls "non-threatening" terminals, which is why it is soft-peddalling the conventional VDU with its "complicated keyboard," although these can be supplied if required.

Apart from the "friendly television" the company is also offering the Writaway pressure writing tablet in which hand-printed characters are turned into data signals and also appear on a one line display across the top of the tablet. The device is interactive: not only can data be entered into the system with a pen, it can also be extracted and seen on the line display.

Both the colour terminal and the writing pad can be used remotely over phone lines and Redifon believes they will open

Geoffrey Charlish

Microprocessor

Telephone number memory

Embedded modem

Auto-dial unit

TV receiver

Optional alpha-numeric message keyboard



Inter-active private viewdata

Colour display

Basic graphics

CEEFAX, ORACLE

PRESTEL*

Broadcast TV

Distributed data-processing

Terminal-to-terminal communications

This is Viewdata-Plus, the world's first full-colour, cheap computer terminal. Or, if you like, a phenomenally intelligent TV. And it's available now!

It's also the most spectacular feature of the remarkable new Integrated Office System from Redifon – the *first* system to combine advanced television technology with established computer and telecomms techniques, and so to provide everything conventional terminals can (distributed data processing, data entry, data processing, word processing) *plus* viewdata facilities (including private viewdata) *plus* advanced data communications.

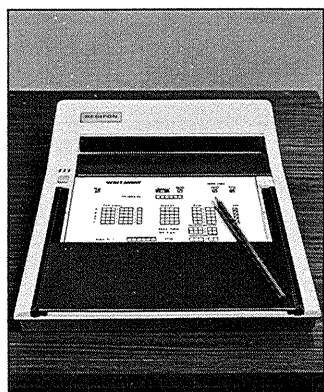
Sounds impressive? Look at the rest of the system!

As well as Viewdata-Plus intelligent TV computer terminals, the system also includes the following equipment.



Infrared remote control

Enables non-computer staff to select public and private viewdata.



Writaway hand-print terminal

All characters (alpha, numeric, symbols) are *written* onto a writing pad, with pen or pencil. Writaway converts these characters into ASCII code for interface into the information-handling system. The handwritten copy provides a record of all information entered.

Writaway also has one line of display. Where this is insufficient, the command 'Look at your TV' may, of course, be used.

Printers, word processors, other peripherals

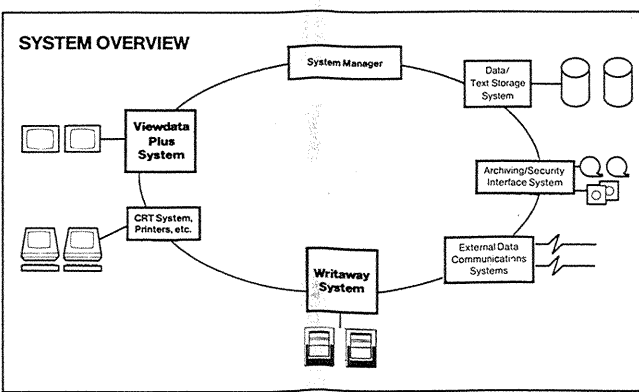
Configurations are possible using all equipment commonly available, as part of the CRT system.

Unique software

Based on the 'sole user' principle, the software allows each terminal to act as if it were the sole user of the total system resources. *This allows private viewdata to be completely interactive.*

System manager

The heart of the system, combining central processor, central storage unit and magnetic tape unit in a single upright unit.



Does everything terminals can, plus many things terminals can't!

The Redifon Integrated Office System has five distinctive advantages over most terminal networks:

- 1. Low cost.** Including installation, the system costs up to 70% less than a network of monochrome CRTs.
- 2. Viewdata plus.** The system's unique software allows *fully interactive private viewdata*.
- 3. Viewdata.** The intelligent TV terminal receives ORACLE, CEEFAX, and other broadcast text. As a telecomms-interfaced device, it also receives PRESTEL*. But that's not all...
- 4. Full colour and basic graphics.** At a fraction of the £5,000 to £6,000 these facilities cost you elsewhere!
- 5. Automatic dialling.** Each intelligent TV terminal has a telephone number memory, an auto-dial unit and an embedded modem for fast, simple, secure communications.

Mix and match to suit every level of your organisation

Choose your hardware

A system may incorporate Writaway terminals, Viewdata-Plus TVs, and CRTs. Each Viewdata-Plus terminal may have a full keyboard, or simply an infrared control – so you can tailor each station to suit your requirements.

A Viewdata-Plus terminal and a control, for instance, give tamper-proof access to viewdata, with or without real-time, interactive numeric update.

Writaway on its own allows the holder to up-date and enquire upon the data-bank.

Viewdata-Plus TVs with alpha-numeric keyboards allow full alpha-numeric interactive update, electronic memos, etc., for senior staff without computer skills.

And so on.

Choose your software

The system does not have a conventional 'operating system'. Data management, data communications, data processing, physical and logical device handling are controlled by management software. For security, the system easily accommodates restriction of access to confidential data.

A new level of convenience in information-handling

A network of low-cost, full-colour, all-function computer terminals had to come – and here it is. Such a network makes sound commercial sense – particularly when the equipment is user-friendly and easy to learn on. In-house computer training and communications; external networks of dealers, agents, customers... the range of valuable applications is open-ended.

Why hasn't anyone done it before?

No other company is Redifon! Redifon make Britain's leading range of data-entry and distributed-data-processing equipment. But Redifon is also part of the Redifusion Group

– which means first-hand knowledge of viewdata technology and in-house TV manufacture. Put them together, and the outcome is unique capability to produce a unique system.

Find out more about Redifon Viewdata-Plus

Viewdata-Plus is *here* – not a pie-in-the-sky future prospect. Working systems are already installed – and pilot systems for new users can be installed in about 60 days!

As public education in public viewdata gathers momentum, *now* is the time to investigate Redifon Viewdata-Plus.

If you can wait a couple of days, use the coupon.

If you can't – phone 0293 31211 and ask for HOTLINE, for immediate information.

REDIFON COMPUTERS LIMITED

Redifon Computers Limited, Kelvin Way, Crawley, West Sussex, RH10 2LY. Telephone: 0293 31211. Telex: 877369.

A Member Company of the Redifusion Organisation.

*PRESTEL is a Post Office registered trademark.

To: Product Marketing, Redifon Computers Limited, Kelvin Way, Crawley, West Sussex, RH10 2LY.

- Please contact me to arrange a demonstration.
 Please send me further details of the system.

Name _____
 Position _____
 Organisation _____
 Address _____
 Telephone _____