

PRESS CUTTINGS

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TELEPUTERS

## News from

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**R-range**

P R E S S   C U T T I N G S

January 1981

# Keeping one step ahead in the computer game

Guy de Jonquieres on one of the first companies to exploit viewdata's potential

"FIVE YEARS ago, this company was little more than a bench and a couple of desks over there," says Michael Aldrich, leaning back in his chair and gesturing out of his office window towards an adjacent building. Today, it employs 600 people and has an annual turnover of £14.5m.

Aldrich is managing director of Redifon Computers, a subsidiary of the Rediffusion group, which also has interests in broadcasting, television manufacture and rental, and in-flight simulation equipment. Somewhat grandly, Redifon styles itself as "the second largest British-owned computer manufacturer" after ICL (1980 turnover £715.8m).

That is a claim which might be contested by some of its competitors such as Ferranti and the General Electric Company (GEC). Moreover, Redifon's rapid growth has been based until recently on its specialisation in a fairly narrow section of the computer market, mainly the design and manufacture of so-called "key-to-disc" systems used to enter instructions and other information into computers.

The company is generally estimated to be the largest independent supplier of these devices in the UK, with between 600 and 800 systems installed. The business flourished as computer users turned to the systems in place of older and slower punched card machines, whose basic design had been outdated by electronic technology.

But being mainly a replacement market, its growth potential was limited. When Aldrich was hired away from Burroughs, the big U.S.-owned computer manufacturer, in early 1977, to become managing director of Redifon, it was clear that sales of the company's traditional product were already close to peaking out and that it must strike out into new markets.

Redifon's development until then had owed a good deal to a sequence of fortunate accidents. The company got its start in the late 1960s after Rediffusion's flight simulation equipment subsidiary had developed its first digital computer and was struck by the idea that it could be used in other applications.



Michael Aldrich: "We painted a picture of what we wanted the company to be. It was real blue sky stuff"

"Someone said: Why not go into commercial data-processing? But the Board wasn't too keen on the idea," Aldrich recalls. "It was about that time that a number of big companies like General Electric in the U.S. were getting out of the general purpose computer business because they had been unable to make a go of it."

What helped change the Board's mind was a Government tender for terminals for the planned Driver and Vehicle Licensing Centre in Swansea. Redifon won an order to supply a huge 400-terminal system. Aldrich insists that, unlike other parts of the much-criticised Swansea complex, Redifon's equipment functioned smoothly from the outset.

It soon became clear that there was a much bigger market for smaller data-entry machines. To develop the right product, Redifon teamed up with a small American company, Entrex. The result was "Seecheck," developed in the early 1970s, whose sales have provided the basis for much of the company's subsequent growth.

Soon after Aldrich took the reins at Redifon, he set about defining a fresh business strategy that would guide its development until well into the 1980s. "In March 1977 we sat down and painted a picture of what we wanted the company to be. It was real blue-sky stuff, and we weren't at all sure at the time that what we wanted to do was right."

What emerged from the brainstorming was a decision to enter the office information and communications systems business, then starting to be recognised as a major growth market of the future. It was a bold move, for several reasons.

## Barrier

Redifon had only limited experience of the office automation business and lacked the skilled technical staff needed to develop a new product range. It was also entering a highly competitive field in which it would have to battle for survival against a regiment of giants, led by International Business Machines (IBM).

But Aldrich reasoned that the company could build on the expertise and the customer base which it had acquired as a supplier of specialised computer terminals. "We thought, what if we added other functions to our machines, like word processing, data processing and communications, and designed them so that they could be used by ordinary people without special training?"

Looking around at the types of terminals then available from other manufacturers, Aldrich

concluded that they were all too complicated to be used by unskilled staff. "They really presented more of a barrier to use than an encouragement." So, after recruiting a number of young computer engineers, the company set about designing an easy-to-use system.

In 1978, it made a sale which suggested that it was moving in the right direction—a £3m order from British Rail for a pilot system to automate payrolls and accounting. One of its features was an electronic scanner able to "read" printed figures and transfer them directly to a computer memory.

But meanwhile, technology took an unexpected turn in the shape of viewdata, pioneered by the Post Office and the basis of its Prestel public information service. "At first we were puzzled by it," says Aldrich, because he doubted whether Prestel would appeal to a big market. "It took some time for the penny to drop. Then we realised that viewdata need have nothing to do with Prestel. It was a communications medium in its own right."

Though the computer industry is still split over its commercial application, viewdata offers a number of potential advantages. One is that it is exceptionally easy to use. By following step-by-step instructions spelt out in plain English on a display screen, even a child can feed in and retrieve information stored in a central computer.

It is versatile and can be used to send messages between terminals as well as to perform computations. It is also relatively inexpensive. A modified television receiver equipped with a keyboard can serve as a terminal and can transmit across ordinary telephone lines instead of requiring costly leased circuits used for conven-

P.T.O.

In 1979, Redifon launched a crash programme to develop its own viewdata-based information system. A few months later it was ready to test a prototype. Still not certain about

public reaction, it chose a site as far away as possible—an exhibition in New Orleans.

The Americans were surprised, but impressed, and Redifon decided to take the plunge into full production. In the past year it has launched three business information systems costing from £30,000 to £100,000. As well as being among the first on the market to embody viewdata, they offer a number of other novel features. One is a facility for entering data into the computer by ticking spaces on a printed form clamped to a pressure-sensitive pad.

The initial response has been encouraging. Aldrich says that orders so far total more than £3m. A number are for pilot schemes which, if they prove satisfactory, could generate substantial further sales.

The Thomson travel organisation has ordered a system to link agencies in ten towns to a large IBM computer.

For various reasons, notably sensitivity about employees and competitors, many of Redifon's customers wish to remain anonymous. One, a British bank, is experimenting with viewdata in staff training. Instead of housing staff in training colleges at considerable expense, it plans to install viewdata terminals in branches so that employees can take programmed learning courses while on the job.

A retailing firm is examining the possibility of setting up high street viewdata centres, from which shoppers can send orders to a central warehouse. And a large electronics company, which has been struggling un-

successfully to develop its own viewdata business system, has decided to order one from Redifon for its headquarters.

Redifon owes a good part of its success to being one of the first companies to perceive and exploit the commercial applications of viewdata. But competition is now starting to heat up, with more than half-a-dozen major companies including GEC, ICL and Honeywell offering rival systems in Britain.

Aldrich is confident that Redifon can continue to innovate fast enough to hold its own. Many of its computer engineers are still in their twenties and, he says, "Almost every week they generate two or three new ideas that are really marketable."

The company clearly enjoys the confidence and support of the Rediffusion group. Though Aldrich says that Redifon, whose financial results are not published separately, has always operated at a profit, it has received a good deal of backing from its parent. This includes investments of almost £8m over the past decade.

Rediffusion also recently acquired CMC Europe, a distributor of electronics equipment with a 1980 turnover of about £24m, which will significantly expand Redifon's marketing and service network on the Continent. The group is also believed to be considering further, similar acquisitions in the U.S.

Aldrich expects Redifon's activities to complement increasingly those of its parent in the years ahead. Rediffusion is involved in designing and developing terminals for the business viewdata systems, and its substantial interests in video, including cable television, as well as set manufacture and rentals, seem to offer a good deal of scope for further collaboration. "But it is still too early to say exactly where the lines will converge," says Aldrich.

He is wary about giving any forecasts for Redifon's own growth in the next few years. But with characteristic ebullience he adds: "Right now, we are the same size that Racal was in 1971. Just look what happened to them."

15 JAN 1981

# 820 operators battle for top keyboard title

LEILA Evans of Greenfield & Dixon Computer Services Ltd of Manchester won the first Redifon Computers Limited's UK Data Entry Competition with a score of 28,356 net accurate characters per hour keyed into a Redifon data entry computer.

The score was computed after deducting 100 characters for every error. The net accurate character rate was over seven per second, reading mixed alpha and numeric data from a document and keying the data into the system. There were only 406 characters per hour speed difference between the winner and joint third finalists.

More than 180 companies entered 820 operators for the competition from across the UK and from a wide range of businesses. Entrants included one man and a girl who is deaf and dumb.

The first stage of the Competition was held at the customers' sites in October. Some 16 operators went through to the semi-final in November.

extract from

Computerworld UK 28.1.81

## UK Data Entry competition first



Leila Evans of Greenfield and Dixon Computer Services of Manchester won the first Redifon Computers UK Data Entry competition with a score of 28,356 net accurate characters per hour keyed into a Redifon data entry computer.

Over 180 companies entered 820 operators for the competition.

Pictured here, after the presentation, are the second and joint third winners (Sandra McKenna of Hambro Life Assurance, Anita Wolstencroft of ISA Computer Services and Mary McLeod of John Lane Computer Services) with Leila

# Super-quick Mary keys to success

A Whitehill woman employed by a Petersfield computer company has won a gold necklace in second prize in a national competition.

Mrs. Mary McLeod, of Hogmoor Road, Whitehill (pictured above), an employee of John Lane Computer Services, of Petersfield, was one of four finalists selected from an original entry of 820 who were typing for awards in a computer inputting speed competition.

The competition was organized by Redifon Computers Ltd., who staged the final at their Crawley headquarters.

Mrs. McLeod, who has been using a Visual Display Unit in her work for about four-and-a-half years, said she was surprised at her success.

In the final, all four women operators — only one man entered the competition — had to type for 35 minutes inputting names, addresses, and account numbers with a penalty of 100 characters for every error.

Mrs. McLeod achieved a rate of 28,356 characters an hour, just 82 fewer than the net total of the winner from Manchester — and she made just four errors.

extract from BET Newsletter 16.1.81

### Computer competition winners

Over 180 companies entered 820 Redifon data entry computer operators in the first Redifon Computers Limited U.K. Data Entry Competition.

Competitors had to read mixed alpha and numeric data from a document and key the data into the system. The score was computed after deducting 100 characters for every error. Sixteen operators went through to the Semi-Final in November and four top operators attended the Final held at the Redifon Computers headquarters in Crawley. The winner was Leila Evans of Greenfield & Dixon Computer Services in Manchester, who scored 28,356 net accurate characters per hour. She was presented with a cheque for £250. The three runners-up—one in second place and the others joint third—each received a 9ct. gold necklace. The girls were presented with their prizes by Managing Director Michael Aldrich after a champagne lunch. In the evening they were entertained to dinner.

Pictured from left to right are; Sandra McKenna and Anita Wolstencroft (joint third place), Leila Evans and Mary McLeod



# The trend to integration

The theory behind the concept of the electronic office is that all types of communication can be carried electronically from one desk terminal to the next, stored, forwarded or distributed throughout departments, or branches (including international branches) until its ultimate arrival at a terminal where it can be produced visually, on a screen, or in a print-out 'hard copy' form. It is no longer strictly accurate to describe such a process as the office of the future, though the majority of Britain's office workers will have to wait a while before such high technology linkage gives them its hoped-for benefits of both improved productivity, and, for management, better decision-making—better because it will be based on the availability of more up-to-date and thus more accurate information. But the technology is here, much of the necessary hardware is on the market, and the major suppliers are already jostling each other in their anxiety to cut themselves a slab of the rich cake which is the world market for information technology products: about £50,000m. a year at present, and rising by some 10 per cent per annum.

Early last year the National Enterprise Board set up an investment programme to exploit this market, fearing that the UK might otherwise get left fatally behind in a field already dominated by the Americans and the Japanese. The result was Nexos Office Systems, formed as a marketing and development company with a strong management team whose first step was to seek supplier arrangements with British companies for key elements of the electronic office: Logica VTS supplies word processors to Nexos and Muirhead provides document facsimile products. In the autumn of 1979 Nexos concluded a licensing agreement with the

Delphi Corporation to manufacture and sell in Europe the Delta Communications System, under an exclusive 10-year contract. One of the particular strengths of this powerful system (which incidentally combines mainframe and electronic switching technology) is its proven ability to cope with substantial volumes of voice traffic—converting it into digital form, storing it and reconstituting it. On the basis of current forecasts it seems overwhelmingly likely that the integration of voice processing with that of data and image (fax) transmission will become increasingly important, and it is here that Nexos are confident that they have backed a winner. Delta 2 is scheduled for delivery to the company in 1981 and will initially be sold in Britain as a sophisticated in-house telephone answering service before further development integrates it into the Nexos communications network—later it will also be manufactured over here.

Sales of Nexos equipment have already topped the £5m. mark; and, realising that the development of the new office technology must be backed up by an intensive programme of education and training, the company has set up a joint venture with management consultants Urwick Orr; it's called Urwick Nexos, and aims at helping users of the new equipment to tailor the system to their own specific requirements.

While the ultimate 'networking' aspects of the Nexos system are not yet available, one manufacturer who has actually got an integrated office on the market is Ventek Ltd. 'It's working today and you can have it today', says John Wells, sales executive of Ventek, who last February announced the addition of word processing and electronic message systems to their established Datapoint range of computer equipment.

The key to the Ventek integrated electronic office is the Attached Computer Resource, or ACR, to which an extension of its coaxial cable linking processors called Lightlink was introduced at the same time as the word processors and EMS last year. Lightlink uses infra-red light to transmit data through space for a distance of up to two miles.

A particular feature of the Ventek system is that virtually all its items of equipment can do all the main functions, according to the software which is chosen—in other words you do not need a lot of specialised hardware, so that the 3800 word processor, for example, can be used in a wide range of applications including data processing, electronic message taking, data communication, sorting, indexing and so on. Ventek's Associative Index Method, an advanced feature which allows users to find material present in any

matching system' installed recently by Knight Computer Services, a computer personnel recruitment agency, one firm that has taken the plunge towards installing a fully integrated electronic office incorporating both word processing and electronic mail features.

The way in which microprocessor technology can open up fresh possibilities when married up with telecommunications, is shown by Transtel's range of teleprinters. They come in various forms and the most elaborate, with screen and memory, can be operated in much the same way as word processors; texts can be edited, revised and stored before transmission. Currently, because of the prevailing regulation, the teleprinters cannot officially be used for telex, but the Post Office does not allow them to be used as terminals on a private network. Also, they can be used as consoles with some of the latest PABX exchanges.

From Wang, the giant American computer corporation, comes a family of word processing and office information systems based on its VS computer, ranging from relatively low-cost stand-alone items to large and complex systems that support a host of workstations, printers and other devices simultaneously: procedures on all equipment are identical, and documents created on one can be used on any other. Redifon, the second-largest British computer

manufacturer, produces an integrated office system designed to handle data, text, image and graphics from three different types of multi-function workstations: intelligent television (that is TV capable of receiving teletext with a 'talk-back' facility) hand-print terminals and conventional vdu's.

Its recent Compact Office System, based on a new Redifon computer, the R4000, is known as the RI800/30. Managing director Michael Aldrich claims that it can handle data processing, data entry, text processing, network interface and information dissemination at a highly competitive cost—a basic installation would be around £30,000.

Others involved in the manufacture of such systems include Philips, IBM, Xerox and Qyx, the Exxon subsidiary, which makes an intelligent communicating typewriter. Xerox' Ethernet, highly sophisticated in technology but relatively simple in concept is based on the linkage of office equipment with coaxial cable, or 'electronic string' along which information passes at high speed. Ethernet is being developed jointly by Xerox, Digital Equipment Corporation and Intel Corporation. Its reliance on coaxial cable means that it has no switching logic and is not controlled by a central computer—it simply accepts transmission from system elements attached to it. IBM has so far made no specific commitment to any one system, other than an undertaking to link its various electronic office products together: its 6670 information distributor can already be used in conjunction with the 8100 distributed processing system.

Philips Industries has integrated four of its component operating companies into one group, Philips Business Systems, aimed at supplying the total needs of the electronic office. Their own version is based on telecommunications, with intelligent, personal terminal units. Philips's assessment of the development of the market envisages that by the 1990s complete inter-communication will be achieved amongst terminals handling word and data processing, audio and message transmission, data and text storage and a wide range of 'personal computing' functions. Elizabeth Hennessy, business journalist.

26 DEC 1980



## NORMAN'S FAREWELL

IT WAS a combination of happiness and sadness when Norman Sykes, Senior Mechanical Buyer for Redifon computers, said farewell to his many friends when he retired after 10 years service with the Company. Over the years Norman had made numerous friends

by his cheerful disposition and ever helpful manner.

The directors of the company gave him a silver tray and a Doulton bone china breakfast cup and saucer set and these were presented to him by Norman Watling, manufacturing director, who thanked him for his loyal service and wished him a well earned retirement. His colleagues in the purchasing department had bought him a set of Constellation luggage for his trip to Australia this year.

### Hobbies

Norman's hobbies include greyhound racing and he owns a dog called Glin Honey which races at Brighton. He also enjoys golf and has a handicap of 14. Perhaps his greatest pleasure in retirement will be the opportunity of spending more time with his wife, Shirley.

extract from BET Newsletter  
16.1.81

### Redifon buyer retires

Norman Sykes, Senior Mechanical Buyer for Redifon Computers Limited, said farewell to his many friends when he retired after ten years service with the company.

The Directors of the company gave him a silver tray and a Doulton bone china breakfast cup and saucer set. These were presented to him by Manufacturing Director, Norman Watling. His colleagues in the Purchasing Department had presented him with a set of luggage for an Australian trip he hopes to make this year.

Norman is pictured below with Managing Director Michael Aldrich (left) and Manufacturing Director Norman Watling (right).



Extract from  
Crawley & District Observer, Sussex

26 DEC 1980

MR JOHN McGregor-Temple of Lytton Drive, Pound Hill, Crawley, has been promoted at Redifon Computers Ltd as manager of the Field Software Engineering Operations. He has been with Redifon since 1974.

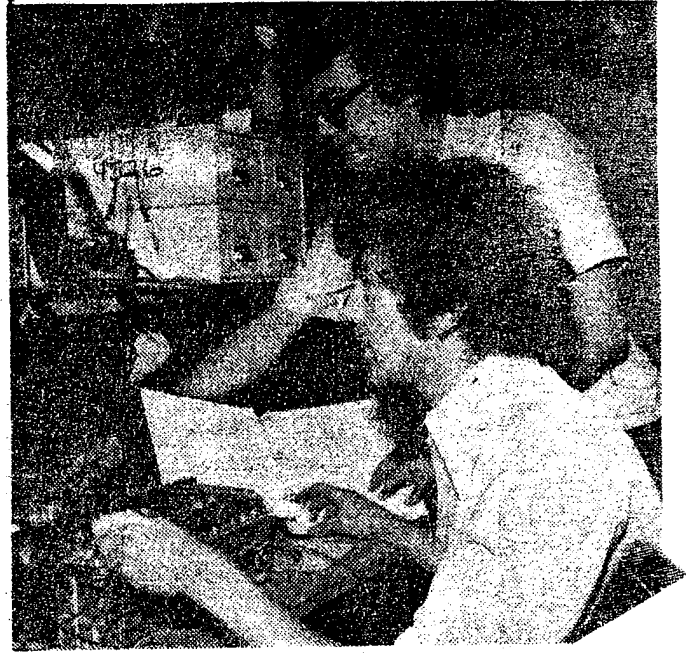
MR E. T. Bennell is appointed rectifier consultant for Brentford Electric Ltd.

extract from Crawley and District  
Courier 14.1.81

## Software manager

JOHN McGregor-Temple has been appointed by Redifon Computers Ltd as manager, field software engineering operations (FSEO). John will be charged with providing a software engineering service to UK and International users, providing reliability and maintainability input to all future product development and managing the software Product Support Group.

John, who lives in Pound Hill, joined the Company in 1974 as a systems consultant.



PRIZE-giving for the students in electrical engineering at Crawley Technical College was an all-Redifon affair.

The top two prizes, sponsored by Redifon Computers, were presented by Redifon's technical director, Mr Roger Newman to two Redifon employees, Andy Stevens and Dave Trossell — (pictured above).

Andy and Dave gained first and second places respectively in the fourth year of their day release course at the college. They are repair engineers in the customer engineering department. Andy lives in Betchworth, Surrey and Dave in Johnson Walk, Tilgate.

Extract from  
Computer Weekly, London

JAN 1981

John McGregor-Temple has been promoted by Redifon Computers to manager, field software engineering operations. He joined the company in 1973 and served most recently as national support manager for the UK.

Extract from  
Sussex Business Times, Shoreham

JAN 1981



Pat Muir

PAT MUIR has been appointed by Redifon Computers Ltd, as Manager, Systems and Communications.

Pat joined the Company in 1975 as a Systems Analyst, she became a Senior Systems Analyst in 1976 for the then Central Government Branch, in late 1977 was promoted to Branch Systems Manager for the Southern Branch and was promoted in 1978 to Systems Support Training Manager.

Prior to joining Redifon, Pat held various engineering and managerial positions in companies associated with high technology.



Extract from  
Crawley Advertiser, West Sussex

NORMAN SYKES says goodbye to his colleagues.

## DIRECTORS SAY FAREWELL TO REDIFON BUYER

extract from Crawley  
and District Courier  
14.1.81



## Norman says farewell

ALL THE top brass came out to say "thank you" when Norman Sykes retired from his job at Redifon Computers.

Norman was saying goodbye after ten years with the company, where he ended up with the rank of senior mechanical buyer.

There to see him off were manufacturing director Norman Watlin, technical director Roger Newman and managing director Michael Aldrich.

They spoke of the many friends he had made while with the firm, and complimented him on his cheerful disposition and helpful manner.

And to prove all this was more than idle speech, Mr Sykes was showered with gifts to help him enjoy his retire-

ment. The directors gave him a silver tray, and Doulton bone china breakfast cup and saucer set.

Workmates from the purchasing department had also had a whirl round, and they gave him a luggage set, for a trip to Australia he plans later in the year.

Apart from this across the world trip, Mr Sykes also plans to spend his retirement time engaged in his two favourite sports.

He is a keen golfer, and with a handicap of 14. And as a keen greyhound racer he will be watching the development of his dog Glin Honey, who races at Brighton.

He will also be able to see more of his wife, Shirley, with his life of labour behind him.

It was a combination of happiness and sadness when Norman Sykes, senior mechanical buyer for Redifon Computers, said farewell to his many friends when he retired after ten years service with the Company. Over the years Norman had made numerous friends by his cheerful disposition and ever helpful manner.

The directors of the company gave him a silver tray and a Doulton bone china breakfast cup and saucer set and these were presented to him by Norman Watling, manu-

facturing director, who thanked him for his loyal service and wished him a well earned retirement. His colleagues in the purchasing department bought him a set of Constellation luggage for his trip to Australia this year.

Norman's hobbies include Greyhound racing and he owns a magnificent dog called Glin Honey which races at Brighton. He also enjoys golf and has a handicap of 14. Perhaps his greatest pleasure in retirement will be the opportunity of spending more time with his wife, Shirley.