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H e w l e t t - P a c k a r d L i m i t e d



*Hewlett-Packard Ltd 1984 results point towards a
Commitment to Britain through customer satisfaction,
investment, export growth, and community involve-
ment.*

R e p o r t A n d A c c o u n t s 1 9 8 4



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Year ends in record achievements for Hewlett-Packard Limited. Turnover climbs 44 per cent to £293 million. Capital Expenditure increases to £21 million – a 46 per cent rise. Exports reach £62 million – a gain of 104 per cent.



R e v i e w O f T h e Y e a r


The Financial Year 1984 was another successful year for Hewlett-Packard operations in the United Kingdom. The company's continuing commitment to Britain is illustrated in five areas which deserve

comment; turnover, profits, exports, employees and capital investment.

Our turnover was up more than 40 per cent to £293 million which was almost three times the 1980 performance. This was solid evidence of the growing acceptance of Hewlett-Packard products and services by our customers. We thank them for their support, appreciate their confidence in our capabilities, and can assure them of our continued efforts towards providing the right solutions to their business and productivity challenges. The reorganisation of our Company structure, and a realignment of our UK sales organisation, were put into effect in 1984. The resulting emphasis on marketing and the provision of effective business solutions will ensure that HP continues to grow in our chosen market areas. **P**rofits increased by 41 per cent to £17.6 million pre-tax and once again our after-tax profits have been reinvested in full in our continuing expansion programme. **E**xports from the UK doubled over the previous year to a record £62 million. This reflects the growing worldwide focus of operations in the UK. Export business is, of course, vital for Britain and we are pleased to be contributing. Well over 80 per cent of total shipments

from HP's British factories is to export markets. In 1984 we saw the continued expansion of HP's first UK manufacturing Division, QTD in South Queensferry, together with the establishment of a new Queensferry Microwave Operation on the same site. The Office Productivity Division at Pinewood continued to grow, developing new office automation software products for worldwide markets. OPD Pinewood is a tribute to the quality of British software engineering, rightly renowned as the best in the world. **C**omputer Peripherals Division showed excellent growth in exports to European markets and moved into its new facility at Wallscourt Farm, Bristol. At the same time HP Labs (the company's first major research centre outside the USA) started operations at Wallscourt Farm. **B**y year-end 1984 Hewlett-Packard Ltd was employing 3,089 people – an increase of 653 over the year-end figure for 1983. We continued to improve our productivity per employee due to the innovative ideas contributed by all of our employees, and to our ability to attract and keep talented people. We thank all of them for their considerable efforts. **D**uring the year HP was actively involved in the national debate on the potential shortfall in skilled personnel required to maintain the growth of the information technology industries. A number of significant donations were made to educational establishments and many of our people were working to foster closer relationships between

our industry, academia and government. Our capital investment in the UK during 1984 amounted to £21 million and included the developments at Wallscourt Farm, Bristol; Building Three at South Queensferry and the commencement of building at our new Northern Headquarters at Heathside Park, Stockport. These continuing investments illustrate the growth of Hewlett-Packard Ltd into a balanced operation here in the UK. We are creating a company that has the right balance of Sales and Marketing; the right balance of Research and Development and the right balance of Manufacturing and Local Procurement. Our future objectives are clear: to continue to provide and support quality products and systems at competitive prices to meet the real needs of our customers; and to continue to offer the opportunity of growth and development for all our people who help build the UK Company. We must also ensure we play a full role in our society both locally and nationally. Society is clearly changing positively, as a result of the impact of the technologies of which we are a part. Involvement by HP is not an option; the choice is the extent of participation and we intend to participate as fully as practicable. We look forward with confidence to 1985 and beyond.



Franco Mariotti Chairman

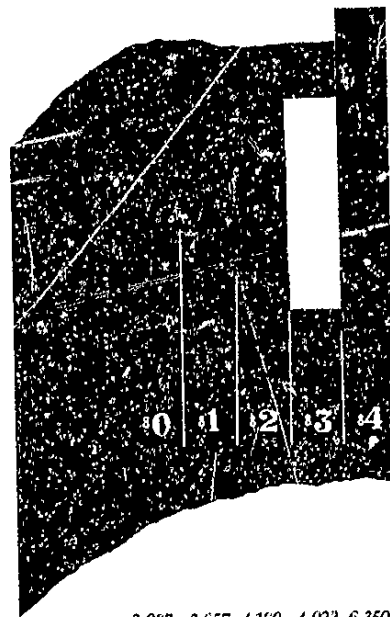


David Baldwin Managing Director



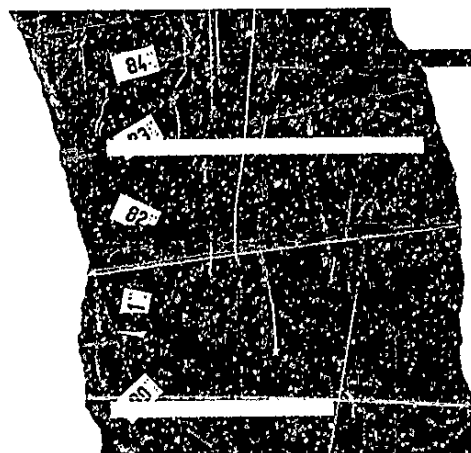
Financial Highlights Worldwide

Hewlett-Packard's growth relies heavily on the constant development of new and improved products. Three quarters of the products sold by HP in 1984 were introduced after 1980. Orders for products introduced before 1981 are represented in black. Orders for products introduced in 1981 and after are represented in colour.



3,087 3,657 4,180 4,922 6,350 Total orders (\$m)

Hewlett-Packard now is the 75th largest company on the Fortune magazine list of 500 leading US industrials. Worldwide sales in 1984 were \$6.0 billion. The company provides computers and computer systems, test and measurement instruments, hand-held calculators, electronic components, medical electronic equipment, and instrumentation for chemical analysis. There are 82,000 employees worldwide. The company's primary business objective is satisfying its customers. These customers want more than a piece of equipment; they require solutions to business problems. Hewlett-Packard's commitment includes providing value in hardware,



860
728
676
567
513
(\$m)

Pre-tax profits worldwide climbed to a record \$860 million in 1984, compared to \$728 million in 1983. In the last five years, pre-tax profits have increased 67 per cent, while \$2.1 billion has been invested in that period on research and development.

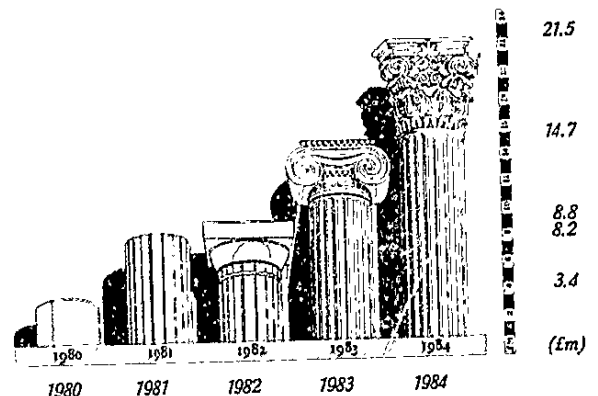


592
493
424
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(\$m)

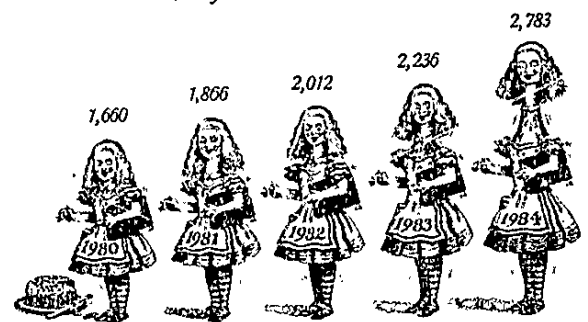
To maintain the impressive record of growth through innovation, Hewlett-Packard invests extensively in research and development. In 1984, this investment was \$592 million, or 10 percent of sales revenues.

Financial Highlights U k

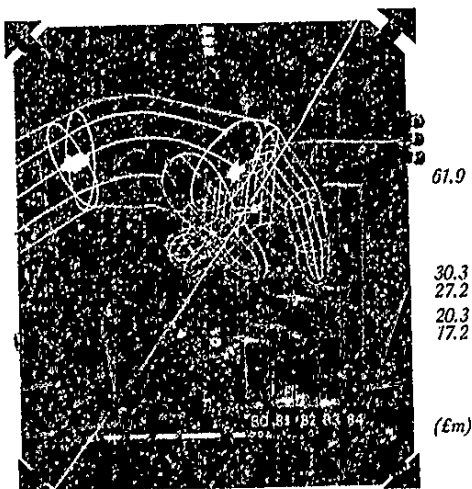
software, customer training and support, and consulting – to create an ongoing partnership between customers and HP. In the UK this partnership has resulted in the best year the company has experienced here since establishing operations in 1961. Turn-over and exports showed excellent gains. Capital expenditure increased to pave the way for an even better future. By year-end the employee total in Britain numbered 3,089, as the company continued to invest in quality people to meet customer needs. Commitment to Britain and investment in the country are emphasised in the Report on Operations which follows.



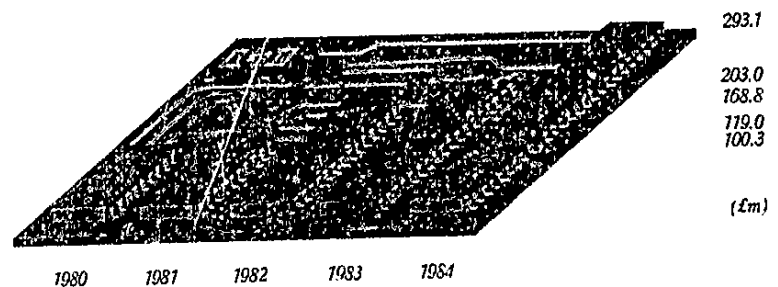
Capital investment in Britain in 1984 increased to £21.5 million illustrating commitment to future growth. This figure was 46 per cent more than the previous year.



The average number of employees in the UK during 1984 was 2,783. This was an increase of 547 people over 1983, or a 24 per cent growth, to continue to expand opportunities for business improvement. At the end of the year, the employee total was 3,089.



Exports from UK manufacturing facilities increased 104 per cent to £62 million in 1984



At £293 million for the year, the 1984 turnover in the UK was 44 per cent higher than turnover in 1983 and almost three times higher than 1980. This is solid evidence of the growing acceptance of HP products and support services by UK customers.

C o m m i t m e n t T o C u s t o m e r s

Hewlett-Packard is committed to supplying computational and measurement solutions for its customers, and a level of support which provides complete customer satisfaction; whether in the office, factory, hospital or laboratory. In 1984, this commitment included a Company restructuring and a re-organisation of the UK Sales Region. These modifications will strengthen HP's growing marketing orientation . . . while preserving the company's emphasis on technical excellence and dedication to quality.

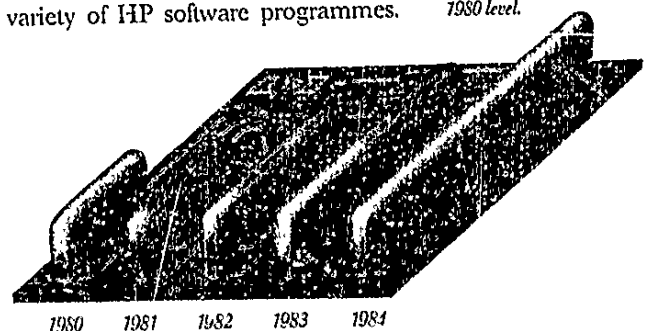
The packaging produced by Metal Box PLC is not necessarily made of metal. Packaging from a range of materials comes out of the company's food and beverage packaging divisions. This kind of diversity is vital in today's fast-moving, fast-changing packaging business, and Metal Box is good at it. But it brings its own type of challenges. Production of different materials must be accurately timed to meet or lead market requirements. Inventories cannot be allowed to build up and must be mixed and matched correctly. Supplier deliveries must be coordinated well. Information requirements become critical in making the complex system fit. The answer for Metal Box is a custom-tailored solution from Hewlett-Packard. Following a two-year study of systems requirements and business objectives, a network of eleven HP

3000 mini-computers is being installed by the food and beverage packaging divisions. There also will be a number of HP 150 personal computers, together with materials management and financial accounting software. The system will run in parallel with the first phase of an integrated Hewlett-Packard office automation and electronic mail network.

de Zoete & Bevan, one of the UK's leading stockbrokers, was formed in 1798 and is believed to be the oldest true family firm in The City of London. Presently, the seventh generation of direct descendants of the founder is represented in the firm.

To stay ahead in an increasingly competitive environment, de Zoete & Bevan has been a pioneer over the years in The City in the use of computer technology. A recently updated solution to the company's needs for fast, accurate information is an expanded computerised system linking Hewlett-Packard hardware with a variety of HP software programmes.

Computer Systems order growth (1980-100). 1984 orders were more than three times the 1980 level.



The system's brain is an HP 3000 mini-computer with 1200 megabytes of peripheral memory. A further 40 terminals are being added to the 60 already in use. These additions are a mixture of 'dumb' vdu's and HP 150 personal computers. de Zoete & Bevan systems manager John Hughes says the system handles the need for front office economic modelling of analytical data on gilt sales, equity sales, investment trusts, corporate finance, private portfolios, and other income-generating areas. It also takes care of the research requirements for producing recommendations to clients via HP laser printers. Back office information is being extracted from external bureau systems and loaded onto the 3000 computer for analytical and management reporting. "The software includes office automation products such as HPDraw, Slate, and DeskManager," Mr Hughes points out, "and we have financial modelling packages and word processing software." He adds, "Hewlett-Packard's breadth of product range and systems software ideas were easily fitted with what we wanted to do. We also had good previous experience with their equipment." The HP 150 gets a special nod from Mr Hughes. "The touchscreen is outstanding for those of our people who don't like to have to type on a keyboard. Touch the screen and you've got it. Very nice."



John Hughes, de Zoete & Bevan. The firm has been a pioneer in The City in the use of computer technology.

The migraine headache of coaxial cable manufacturers is in the test department. The cable (up to 500 metres at a time) must be completed before any test work can be done.

Without both inner and outer electrical conductors in place – and the dielectric which separates them – there is no electrical signal to test. The headache comes from the time taken to carry out the testing. The longer it takes, the longer it is before test results can be fed to the manufacturing department. By that time, several miles of cable with the same production fault might have been made. And it all goes to the scrapheap.

Graeme Hudsmith, head of the test department at Delta Enfield Cable's coaxial cable factory, has found something better than aspirin, though. His answer is a computerised solution from Hewlett-Packard.

A customised system includes an HP 9836 computer, a plotter, an LCZ meter for measuring capacitance, an

HP 8507 network analyser system, a data acquisition control unit, and a printer. The system is saving considerable time in the test labs. As an example, Mr Hudsmith points to a new cable to be manufactured for British Telecom. It consists of 30 separate coaxial cables bundled into a common sheath. Each of the 30 cable ends has to be stripped every 500 metres and connected up for testing.

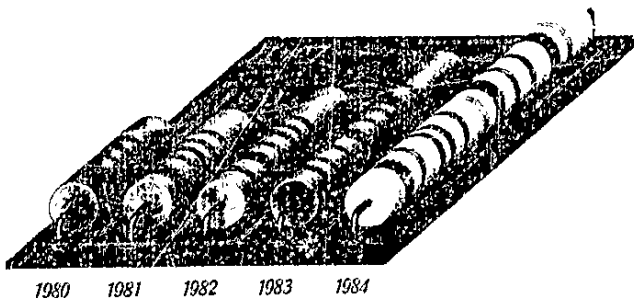
"With the previous equipment, we took three-and-a-half hours to test, plus the time for cable-end preparation," Mr Hudsmith says.

"With the Hewlett-Packard system we've still got to prepare the cable ends, of course, but we've got the actual test time down to 30 minutes."

He adds that the HP solution is a lot easier to use, too, than the previous one. "There was considerable skill necessary from an experienced operator," he notes. "Now that man can handle a far bigger volume of test activity." Finally, the Hewlett-Packard system is more accurate. It incorporates software which calibrates out of the test results any of the normal frequency losses or other degradations from the test system hookups and couplings.

Mr Hudsmith personally worked with HP software engineers to create the system. "I think, between us, we've come up with a good answer," he says.

Measurement Systems order growth (1980–100). There have been consistent increases over the last five years.





*"We've got the actual
test time down to 30
minutes," says Graeme
Hudsmith from Delta
Enfield Cable.*

C o m m i t m e n t T o C u s t o m e r s



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Gyroscope testing was ideally suited to automation, reports John Wellburn, Ferranti.

Ferranti inertial navigation systems allow aircraft to be free from ground-based navigation aids. A major component of such a system is a miniature Ferranti-built gyroscope. The gyroscope is tested using a largely automated new measurement and control facility based on an array of Hewlett-Packard instruments. The very nature of gyroscope testing involves a lot of time-consuming measurements and as such it was ideally suited to automation, reports Ferranti Senior Project Leader John Wellburn. Gyroscope performance is monitored over a range of temperatures and in various positions relative to the earth's axis. In order to achieve this the test system includes a versatile environmental chamber and automatic multi-position table. Measurements are performed using an HP 3456A systems voltmeter and HP 6924A multiprogrammer. These instruments are controlled by an HP 9826 computer which processes the data and outputs

the results in both tabular and graphical form using an HP plotter and printer. These and the other components in the system are interconnected using the HP IB interface bus which Ferranti have found is ideal for use in such a complex operating environment.

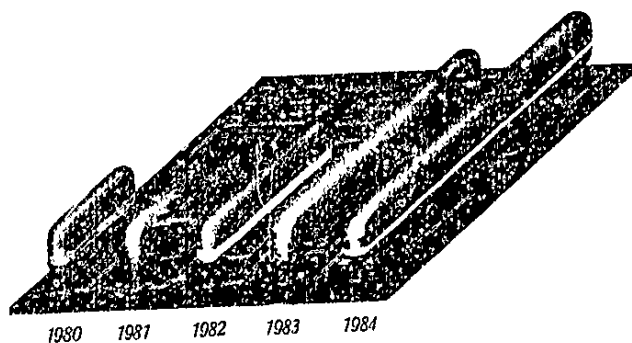
Mr Wellburn is enthusiastic about the results. "The previous system was largely under manual control," he says "and this often involved a lot of extra-duty shifts and weekend work in order to meet production schedules. Our engineers are now more able to have weekends off."

The Hewlett-Packard medical, analytical, and components businesses offer quite special solutions to some sharply focused customer needs.

Heart defibrillators and ultra-sound equipment are among the HP tools used by the medical profession. Analytical instrumentation aids engineers in the chemical, pharmaceutical, petroleum, and other industries. Components from Hewlett-Packard are found in most areas of the electronics business. To a biochemist like John Allen at Southmead General Hospital, Bristol, the focus is clear. He uses HP gas chromatography and mass selective detector products in a system which helps doctors make a diagnosis in a dangerously ill child. Untreated symptoms in some childhood illnesses could lead to mental retardation ... even death. Mr Allen's task is to give the paediatrician fast and

accurate data, so the doctor can better determine the illness and course of treatment. A sample of body fluid (usually urine) must be collected from the sick child and subjected to chemical study. The gas chromatograph reveals almost everything to the biochemist ... but not quite. Substances in the sample are shown as a series of peaks on a chart. But this equipment is not designed to specifically identify each substance. Thus peaks may be a normal constituent, or drugs, or abnormal substances associated with a disease state. The experienced biochemist often can judge which is which from an appraisal of the chart. But, as Mr Allen notes, running the 'peak' substances through the mass selective detector provides a positive identification. He says, "This eliminates the possibility of any confusion or error." Sometimes, the equipment is used in some pre-natal situations where the family history warrants it. Here a sample of the amniotic fluid is drawn from the mother's womb and tested for certain metabolites which might indicate an enzyme defect.

"The need is to be sure the first time," Mr Allen says. "This equipment helps me to achieve this."



Medical, Analytical and Components order growth (1980=100). Combined orders for these specialist product groups have grown more than threefold in the last five years.



To a biochemist like John Allen at Southmead General Hospital, Bristol, the focus is clear.

C o m m i t m e n t T o C u s t o m e r s

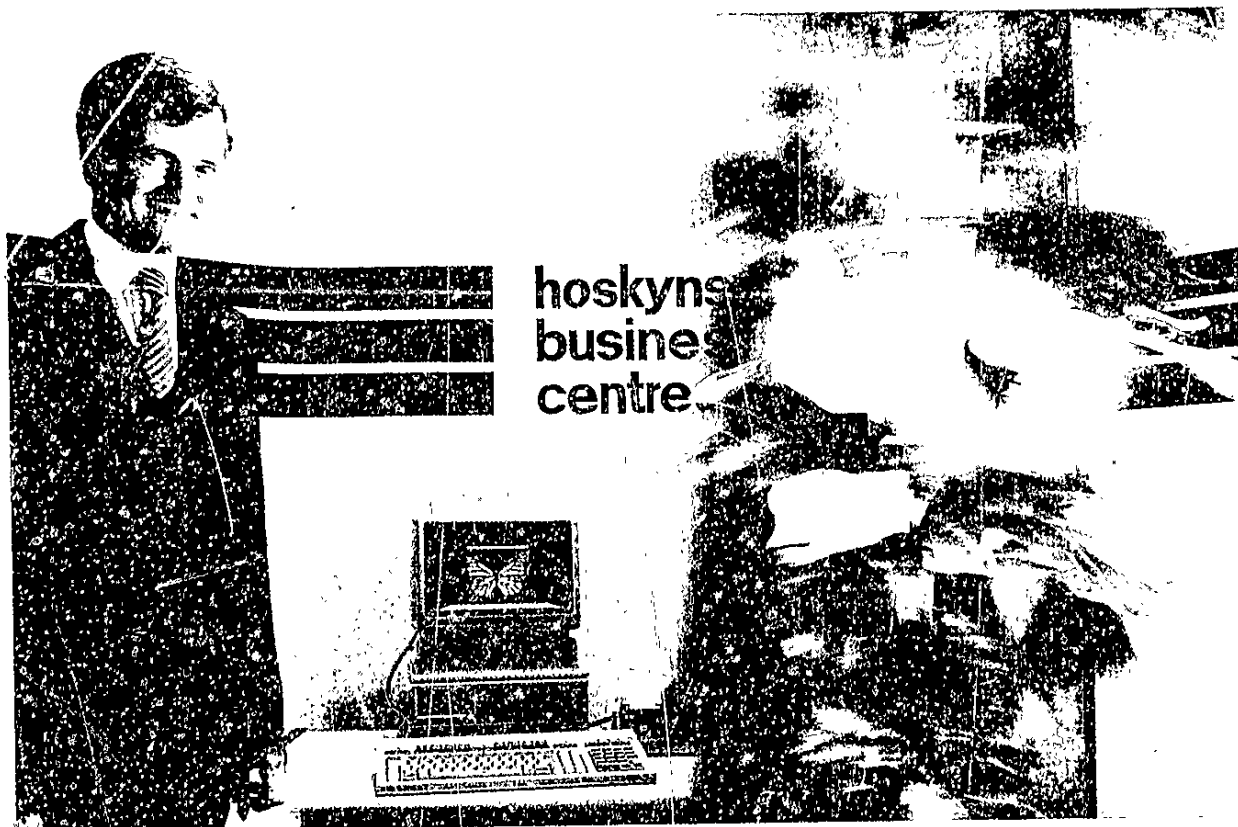
Felixstowe is the largest container port in the UK. Six companies handle about 80 percent of the container freight volume at Felixstowe and one of them is Fred Olsen Limited.

At the company's Forwarding & Agency Division there, freight is moved into and out of the UK for a number of non-UK-based companies. The Division's location is serene in a former hotel of Victorian vintage overlooking the ocean. But the pace is frantic. What cannot go wrong is the computer equipment which operates the sales accounts and purchase accounts system, plus the job costing network and a telex operation. Making sure it stays on the job is Hewlett-Packard service engineer Dale Paulin. His present responsibilities include an HP 3000 computer with two megabyte main memory, another 404 megabyte disk drive, a tape drive, three printers, 17 remote terminals, and two HP 150 personal computers. Fred Olsen system manager Patrick Lillis describes Dale Paulin. "He is the best service engineer I have ever met," he says. "His attitude and capabilities are outstanding." Mr Lillis adds, "When we moved to our present location in May, 1984, we had to have our equipment de-commissioned at the old site in Felixstowe and set up at the new one. I booked Dale for all day, but he had the job done in four hours, including the time taken to move the 3000 computer on the furniture lorry."

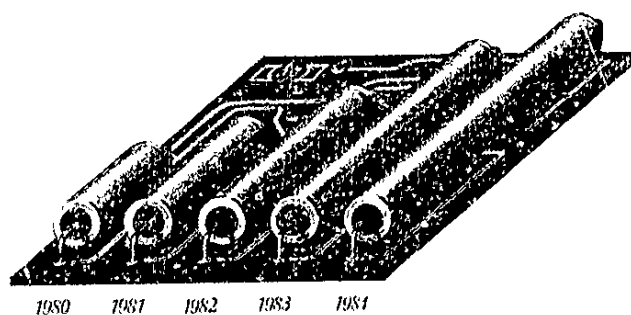
Hoskyns Business Centres are a recent addition to the traditional systems house services of the 20-year-old Hoskyns Group Limited. Formed in June, 1983, with an initial location in London, the Business Centre programme has successfully expanded Hoskyns services into the personal business computer marketplace. According to Mike Palmer, Divisional Director and head of the company's Manchester Business Centre (opened in February, 1984), "We are not a high street operation. We cater to the serious business user interested in buying one or a number of personal computing machines, often as the start of a computing system which will grow as time goes on." The Hewlett-Packard 150 personal computer is part of the inventory in the showroom. Is HP competitive in the often brutal world of personal computing? "Reception has been very good for the 150," Mr Palmer says. "It is especially so if people have had experience with Hewlett-Packard previously. Then they know already about the company's professional attitude and that HP is interested in long-term solutions, not short-term expediency." He adds that there is good compatibility of equipment across the Hewlett-Packard line — not just in personal computers — for protection of the customer's software investment. "I think the 150 deserves a look from any serious business user," he says. "It's a sensible product."

Mike Palmer, Hoskyns
 - "... Hewlett-Packard
 is interested in long-
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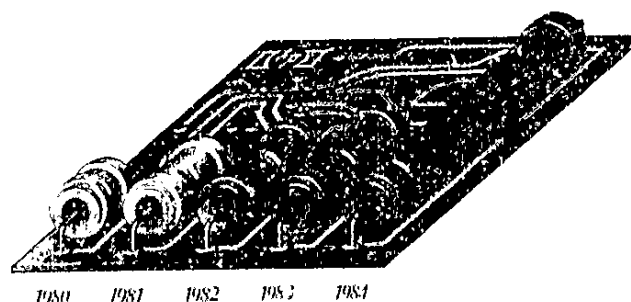
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Support Services order
 growth (1980=100).

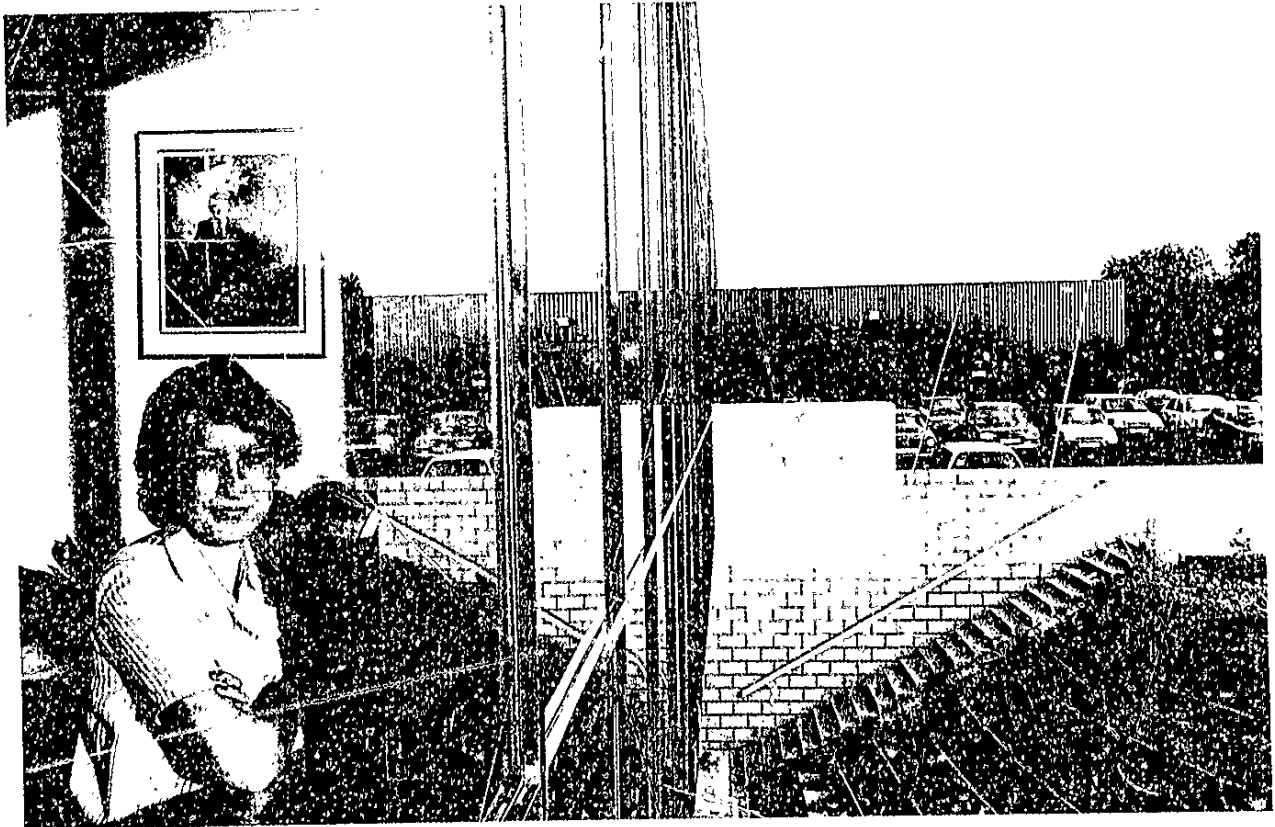


Personal Computing
 Products order growth
 (1980=100).



C o m m i t m e n t T o I n v e s t m e n t

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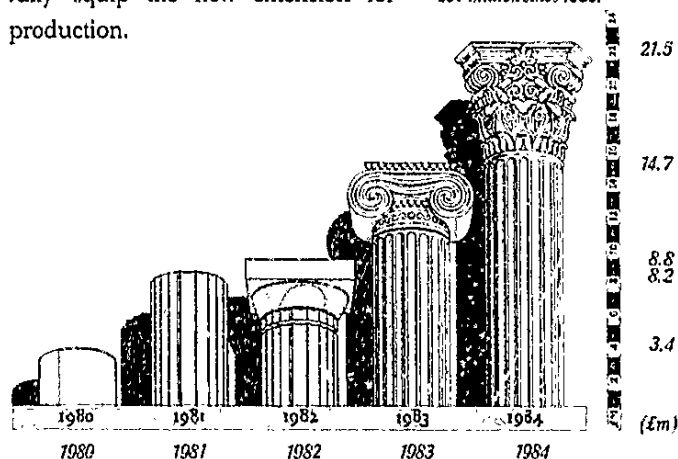
Cathy Denny, Receptionist, in the recently opened South Queensferry extension.

Continuing financial investment in the UK is the leading edge of Hewlett-Packard's commitment to a growing presence in Britain. This largely self-funded investment programme has put the Company in a strong position for growth into 1985 and beyond, emphasising continued commitment to customers and employees.

Hewlett-Packard's South Queensferry operation sits close to the south end of the imposing Forth Bridge. And just as its neighbour opened up the road to the Highlands, so is Hewlett-Packard helping to open up another road in Scotland – the road to an economic future based on electronic technology. Hewlett-Packard is a major part of what Scotland proudly points to as Silicon Glen, a scattered complex of high technology industries, where research and development departments combine brains with silicon to produce economic growth. The HP South Queensferry operations began in 1966 and now employ more than 1,000 people. Work goes on in four main areas. The Telecommunications Division designs, develops, and manufactures telecommunications test and measurement systems for the world-wide market. The entire product line is, in fact, locally designed and engineered. The newly formed Queensferry Microwave Operation will concentrate on developing and manufacturing test and measurement products for new markets in Europe. These products are aimed at the

manufacturers and operators of cellular radio and mobile communications, and include equipment for radio frequency components testing. A European Marketing Centre at South Queensferry is responsible for factory marketing of Microwave and Communications products throughout Europe. Fourthly, a sales and service operation handles the sale and support of Hewlett-Packard's total product range within Scotland. The company's commitment to its Scottish facility was emphasised in October, 1984, when the Rt Hon Norman Tebbit, MP, Secretary of State for Trade and Industry, opened a 100,000 square-foot extension there. This enlargement of the plant was marked by the announcement from Hewlett-Packard President John Young that HP will be making a £12 million further investment at South Queensferry in the very near future. This additional investment will increase the size of the plant by 30 per cent and fully equip the new extension for production.

Capital Investment has amounted to a total of £57 million since 1980.



Commitment To Investment

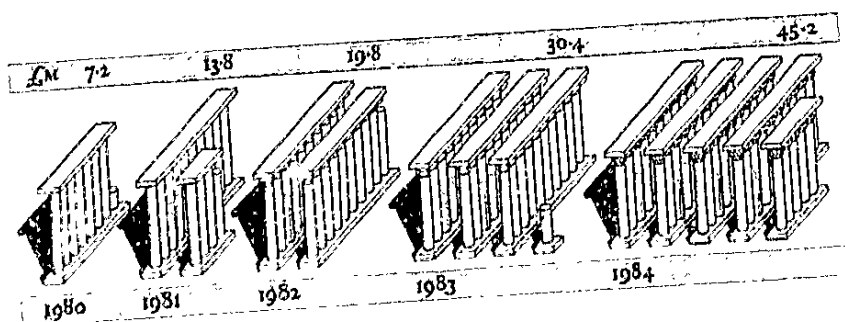
After less than two years in a temporary production and research facility in Bristol, the Hewlett-Packard operation there moved in September, 1984, to a purpose-built facility on a site known locally as Wallscourt Farm.

Hewlett-Packard has purchased 50 of the available 165 acres there and holds an option on the remainder. The first building is 125,000 square feet. Outline planning permission has been gained for another 500,000 square feet of under-roof space. If the option is exercised on the remainder of the acreage, zoning permits already exist for its development. Currently, Hewlett-Packard has invested £10 million on purchase of 50 acres and construction of the first building. The division which operates there is Computer Peripherals Bristol (CPB). CPB is one of three Hewlett-Packard divisions in the world dedicated to mass storage products. CPB manufactures a range of mass storage peripherals for shipment to customers throughout Europe. It also holds a worldwide

charter for research and development of certain types of mass storage products. These will be manufactured in Bristol and possibly in other HP locations. Thirdly, CPB has marketing responsibility in Europe for any mass storage products manufactured anywhere by any HP division. This includes product marketing, technical support, order processing, and other marketing elements. Part of the Bristol investment includes equipping the facility with Hewlett-Packard's own products to make the manufacturing plant more efficient. The HP Manufacturing Productivity Network (MPN) installed also enables the company to readily demonstrate equipment to prospective customers. Both a Japanese company locating a new plant in South Wales, and an old-established chain of British department stores, placed large orders for Hewlett-Packard equipment after seeing the MPN systems in action at CPB in Bristol. The CPB organisation also helps to equip its community. In 1983 an HP Logic Development System was donated to Bristol Polytechnic. In 1984 a similar system was donated to Bristol University.

Hewlett-Packard has made a further major commitment to the UK and to Europe in launching HP Laboratories in Bristol. Until recently, all the central research and development was conducted at HP Laboratories in Palo Alto, California.

With the recent decision to place the first extension of that activity in Bristol, the company is making a commitment to building an even stronger bridge between academic research and Hewlett-Packard's product development activity. The focus is on research and development in areas of distributed computing systems and data bases, computer networks, artificial intelligence, expert systems, data compaction, encryption and error correction, as well as ergonomics and the man machine interface. Placing the centre in Bristol will help develop new technologies and products which can assist the UK divisions in further strengthening products developed, manufactured and marketed in Britain.



Our investment in Property & Equipment has increased sixfold in the last five years.



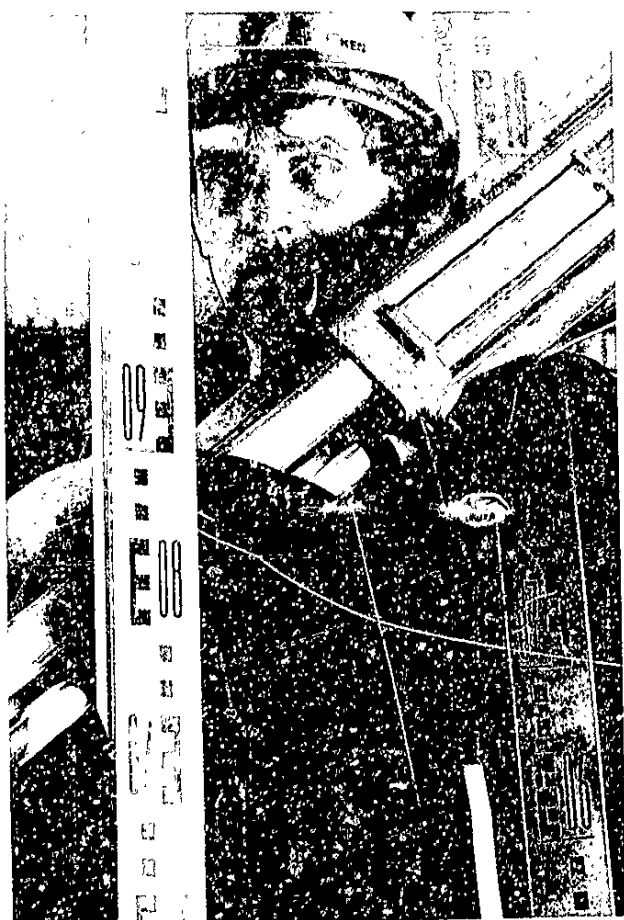
Don Hammond, Director of Bristol Research Centre, and John Taylor, Director of Information Systems Laboratory, discuss strategic plans for the research programme at Bristol.

C o m m i t m e n t T o I n v e s t m e n t

A £7 million complex in Pinewood, Wokingham, was opened in May 1982, as a world centre of the Hewlett-Packard Office Productivity Division (OPD). It is the first dedicated software development facility for HP outside the USA.

The Centre is a recognition of the excellence of Computer Science graduates and software engineers from British universities. Engineers and marketers at OPD are creating Hewlett-Packard's contribution to the office of the future. The programme is to integrate the strengths of office systems products, data processing systems, personal computers, and communications networks. The solution is called the HP Personal Productivity Centre. Products which have already been developed by OPD to this end include such world leaders in office automation software as HPDesk Manager, HPWord, HPSpell, HPMessage, and HPSlate. Developments are based on the fact that office tasks revolve around decision-making and communications. The goal is to provide personal computing capability to every office workstation, to allow the user to run stand-alone applications; and also to have available a link into a company-wide computer network. The software compatible HP 3000 family of business com-

puters has already let both office and data processing staff share the same resources. Now the HP 150 Touchscreen personal computer can be linked. In its own right, as the centre-piece of the office solution, it offers many stand-alone applications using the industry-standard MS/DOS* operating system. But it also easily becomes a computer work station to the HP 3000. Investment at the Pinewood facility also now includes Customer Support Pinewood (CSP) – the kernel element of HP's implementation of Response Centres in Europe. As the networking of terminals, PC's and computer systems grows during the coming years, the ability to support these products – and HP customers using them – from a remote facility becomes a distinct marketing advantage. Resources, expertise and information can be centralised to provide more efficient customer support. This approach, on a European scale, calls for a central location where resources are concentrated. This is CSP. Interface to CSP is provided for all HP European customers via satellite operations in each country at Country/Region Response Centres. Once a customer problem is logged in one of the European Country Response Centres it is automatically entered into CSP data bases. The appropriate expertise and resources then can be applied at CSP to answer the challenge and return the solution to the



Ken Briggs, Project Engineer of Bovis Construction, is helping to build the new HP Northern Headquarters.

customer or his machine – often by direct system access. Engineers at Pinewood use the latest state-of-the-art facilities to access information, communicate with customers and divisions, and to duplicate 'problem situations.' Already using sophisticated information data bases to research these situations, CSP will be one of the first operations in HP to use AI (Artificial Intelligence) techniques in a 'production' environment.

Off a spur road to the M63, just ten minutes drive from Manchester International Airport, a new 91,000 square-foot building will open for business in November 1985. It will be the new Northern Headquarters for Hewlett-Packard in the UK.

As well as housing Northern Headquarters management, the facility will accommodate sales and marketing staff, system design engineers, and local service engineers, as well as the storage of spares. Sales and service activities throughout the North will be administered from here. There also will be a Customer Centre for the north of the UK, similar to the concept of the existing centre in Winnersh, Berkshire, which will then concentrate on customers in the South of England. The building is concrete evidence of HP's commitment to making the kind of investment its customers require.

C o m m i t m e n t T o E x p o r t G r o w t h

As investment in the Bristol, Wokingham, and South Queensferry manufacturing centres increases, the opportunity for export achievement also grows. All three centres are outward-looking in their focus, established to maximise the use of British skills in products and systems which can be successfully marketed outside the UK.

When the Computer Peripherals Bristol (CPB) Division moved into its new building in Wallscourt Farm, Bristol, in September, 1984, members of its Research & Development Group had two reasons to celebrate. Apart from the more comfortable surroundings, they had just released their first home-grown product for production. It is a combination disk drive and tape drive unit. The product is expected to do its share in maintaining Bristol's high rate of export achievement. Currently 89 per cent of production is shipped outside the UK, with the focus on the computer markets of Europe. Another recent product from Bristol is a half-inch reel-to-reel tape drive based on a drive mechanism designed and developed in Britain by Thorn EMI. The rapid start up of the CPB Division in a temporary facility in the Bristol suburb of Yate was not slowed down by the move to the new permanent HQ at Wallscourt Farm. The Sep-

tember, 1984, move was made over a weekend so that customers waiting for shipments would not be disappointed. Production was back on line on Monday and the first export shipments were made the following day.



HP's Linda Russell, Computer Peripherals Bristol, working to assemble printed circuit boards for health products.

The office automation market is truly international. Much of it is software, which, on tape or disk, crosses international boundaries with ease. But even in this world of simplistic travel, the performance of the Office Productivity Division based in Wokingham is worth noting. Fully 88 per cent of its integrated office software tools is exported out of the UK.

Sixty per cent of production goes to the toughest and most advanced market in the world, the United States. OPD European sales increased by 130 per cent in 1984 over 1983. Expansion has been made possible by the translation of almost the entire software product range of the Office Productivity Division so that it can run in most European languages. As a result, there are success stories such as that for the HPDeskManager system, now one of the largest selling electronic mail systems in the world. Two stories from Australia are good examples of Office Productivity Division exported products in action. In one of them an integrated electronic mail, word processing, diary/filing and efficiency



Office Systems order growth (1980-1990). Worldwide demand for office automation software products from OPD has shown outstanding growth since 1980.

appraisal system from Hewlett-Packard is keeping major clothing manufacturer Fletcher Jones in tune with operational growth. The system has greatly improved communications between the company's national marketing division in Melbourne and the head office and manufacturing plant in Warrnambool, nearly 200 miles away. In the other example, pharmaceutical company Glaxo (Australia) has put an HP interactive office system to work quickly and smoothly.

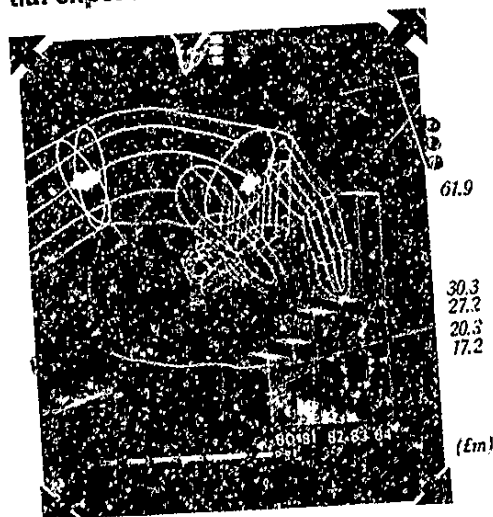
Commitment To Export Growth

Exports have always dominated the South Queensferry Telecommunications business, and they now account for 80 per cent of sales.

The division's customers are telephone equipment manufacturers and telephone administrations and network providers throughout the world. The United States is a major market and accounts in its own right for a significant proportion of South Queensferry exports. An early key to the South Queensferry success story was its fast recognition of the move from analog to digital technology in the telecommunications business. The division's market research then was quick to uncover the trend from a purely stand-alone telecomms test business to a systems orientation using remote computer control. Capitalising on this knowledge has involved the creation and marketing of productive, solutions-orientated equipment which has gained solid customer acceptance in world markets. A prime example from the South Queensferry engineering group is a remote access and test system which allows centralised

trouble-shooting of private data and voice circuits. All the other products and systems from the Telecommunications Division are also locally designed and engineered. The newly created Queensferry Microwave operation (QMO) will play its role, too, in developing export business. Microwave products in the RF frequency range will be manufactured for the general European market.

A rapid start-up of QMO in 1984 has already resulted in substantial export achievements.



Exports from the UK doubled in 1984 to £62 million.



*Locally designed and
engineered products
leaving South Queens-
ferry in a van driven by
HP's Jim Stirling.*

C o m m i t m e n t T o T h e C o m m u n i t y



Professor Brian Shackel – one of Europe's leading experts in Human Factors Engineering

Business companies and business people must accept their share of social responsibility. Hewlett-Packard's commitment to this belief encourages both company support and the involvement of individual employees in serving the community.

Human Factors Engineering involves taking into account the people who have to operate machines and live with them. In the high technology arena this means not only hardware but also software, because just as hardware can be poorly designed for people to use so can software programmes. Hewlett-Packard's own research labs work on challenges associated with Human Factors Engineering. The company also supports special research. Europe's largest centre for Human Factors Engineering study is the Human Sciences and Advanced Technology Research Centre (HUSAT) at Loughborough University of Technology, where HP computer equipment was donated in 1984. Founder and head of HUSAT is Professor Brian Shackel himself one of Europe's leading experts in Human Factors Engineering for high technology applications. "Interest in Human Factors Engineering has never been

higher," he notes. "The challenge now is to put into a usable form for equipment and systems designers all the many separate pieces of knowledge about the human factors, so that computer products can be better designed for people to use more easily. There is much knowledge, but we need to tie it together in centres of excellence in the world which also are aware of the progress of technology itself. These centres will be able to look ahead at the way technology is going and interpret its impact on the human factors." HUSAT intends to be one of those centres of excellence. Its executive director, David Davies, credits the HP computer system with "making it a lot easier to get there." He adds, "There is also no doubt that this help from Hewlett-Packard is of major assistance in letting us advance the cause of Human Factors Engineering in general throughout industry in the UK and Europe. It enables us to push forward the frontiers of knowledge more rapidly and easily, and is a splendid example of cooperation between industry and the research community."

C o m m i t m e n t T o T h e C o m m u n i t y

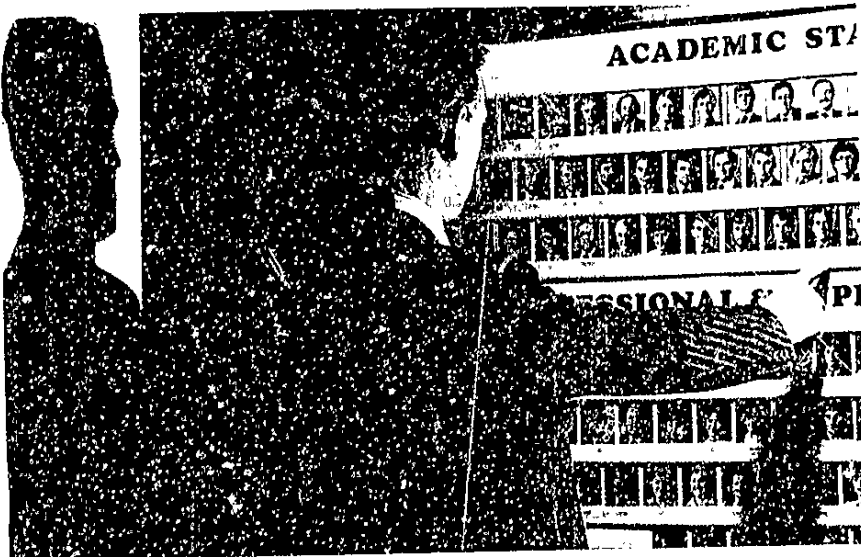
In a modest, one storey brick building in Wokingham, remarkable contests take place each day. Yet there is no physical confrontation to disturb the quiet, residential neighbourhood. The building houses the Wokingham Adult Training Centre where the battleground is the human mind. Currently 93 community residents struggle here with the fact that they are people with mental handicaps. Manager of the Centre, on behalf of the Social Services Department of Berkshire County Council, is Jim Stevens. His team includes an instruction and teaching staff of 12, and as much help as he can get from volunteer community groups and individuals. One individual who is helping is Alister Judd, manufacturing manager of Hewlett-Packard's Office Productivity Division in nearby Pinewood. On a visit to the USA, he saw for himself what the company was doing to assist community groups or institutions working with people who have handicaps of one kind or another. Returning home, he initiated a plan in Wokingham. Now, those members of the Adult Training Centre who are capable of what is termed 'work

experience' are operating a packaging line for Hewlett-Packard's personal computer software kits. These kits consist of operational manuals and a floppy disk. Kits must be assembled, inserted in library boxes, and wrapped with shrink-film. HP has supplied the film-wrapping machine. Alister Judd says the cost of having this work done at the Centre is no more than it would cost elsewhere, and that Centre members do a good job.

Jim Stevens says, "We are all handicapped to one degree or another. Some of us are handicapped sufficiently that we need extra help to get along in life. Alister Judd and Hewlett-Packard are providing some of that extra help."

Cranfield School of Management is one of the component schools of Cranfield Institute of Technology, itself the UK's largest centre of applied research and development in industrial technology. Now, students at the School of Management find it a little easier to apply theory to practice. Helping them are 30 personal computers from

*Lecturer in Statistics
Brian Toyn is a faculty
member at Cranfield
School of Manage-
ment using HP-contrib-
uted equipment.*



Hewlett-Packard. The intent of this support is that business people and other students attending Cranfield management courses could learn for themselves through hands-on experience about exactly how microcomputer technology can improve business performance. Chris Edwards, Professor of Management Information Systems at Cranfield, notes that this HP equipment emphasises the school's reputation as having "the best computing facility of any business school in the country." He states, "New training programmes have already been developed to take advantage of the new equipment. The idea is not to tell people how computers work. It is, rather, to educate them about how computers can be used to improve performance." Professor Edwards also notes,

"If business people will view the computer as another business tool, and not as something which is frightening and different, then we can start to improve business performance."

R e p o r t o f T h e D i r e c t o r s

The directors have pleasure in submitting their annual report together with the audited accounts for the year ended 31 October 1984.

Results for the year

The consolidated results for the year are shown on page 32. The directors recommend that no dividend be paid and that the profit for the year be carried forward in retained earnings.

Review of the business

The group's activities during the year were the sales, service and leasing of computers and computer systems, electronic calculators and computer/calculator peripheral products, test and measuring instrumentation and solid-state components, medical electronic equipment and instrumentation for chemical analysis. In addition the group is engaged in the research, development and production of communications test equipment, computer peripheral equipment and office automation software.

1984 was another extremely successful year with a growth in turnover in excess of 40%. A major new facility was opened at Bristol to house both our fast growing computer peripheral manufacturing operations and our new European centre for research and development. In addition a £12m investment programme was announced to house and equip the new manufacturing opera-

tion for microwave products which has already commenced production on our Queensferry site.

This further broadening of our manufacturing base has put the group in a strong position at the end of the year to take full advantage of opportunities for growth in both home and export markets.

Employee involvement

From Hewlett-Packard's earliest days employee involvement has been a major part of its successful philosophy. Employees are informed of the company's performance and plans and of other matters of concern to them as employees through regular local "coffee break" meetings to which all employees are invited and at which questions may be raised. There are also regular company magazines and newsletters as well as an annual financial report to employees.

All employees who have completed short minimum periods of service share in profits and are eligible to join share purchase schemes.

Employment of disabled persons

The company considers fully all applications from disabled persons and endeavours to provide employment where their qualifications, aptitudes and abilities merit their selection. Should an employee become disabled, it is company practice to continue the current employment where

possible, or to offer suitable alternatives where available or feasible, giving retraining as necessary.

All employees, including the disabled, where their abilities permit, are equally eligible for training, promotion and career development.

Donations

Donations to UK charities and education establishments amounted to £169,000 (1983: £84,000). No political contributions were made during the year.

Directors

The directors of the company are detailed on page 42. Mr H E Edmondson retired from the board on 8 December 1983 and Mr R W Anderson was appointed on the same date. Mr P Carmichael, Prof K Lumsden, Mr R C Alberding and Mr K C Sinclair retire and offer themselves for re-election.

Income and Corporation Taxes Act 1970

The company is not a close company within the meaning of this Act.

Auditors

The auditors, Price Waterhouse, have indicated their willingness to be re-appointed.

By Order of the Board
Richard D Thompson
Secretary
11 December 1984

R e p o r t O f T h e A u d i t o r s

We have audited the accounts on pages 32 to 41 in accordance with approved Auditing Standards.

In our opinion the accounts, which have been prepared under the historical cost convention, give, under that convention, a true and fair view of the state of affairs of the company and the group at 31 October 1984 and of the profit and the source and application of funds of the group for the year then ended and comply with the Companies Acts, 1948 to 1981.

Price Waterhouse
Chartered Accountants
London
11 December 1984

Price Waterhouse

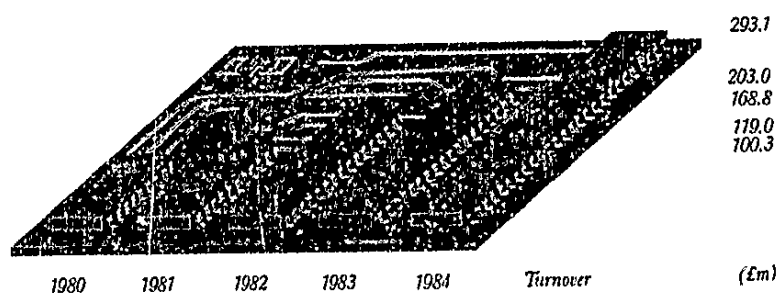
The Portable HP 110 is the latest in HP's line of personal productivity computer products; as Andrew Bissex, Market Development Manager OPD, demonstrates.



C o n s o l i d a t e d P r o f i t A n d L o s s A c c o u n t

For the year ended 31 October 1984

	Note	1984 £000	1983 £000
Turnover	2	293,107	203,049
Cost of Sales		(215,718)	(146,963)
		<u>77,389</u>	<u>56,086</u>
Gross profit		(46,331)	(34,678)
Distribution costs		(11,647)	(7,709)
Administrative expenses			
	3	19,411	13,699
Operating profit		474	741
Interest receivable	6	(2,247)	(1,974)
Interest payable			
		17,638	12,466
Profit on ordinary activities before taxation	7	(6,114)	390
Tax on profit on ordinary activities			
		11,524	12,856
Profit on ordinary activities after taxation			
		46,176	33,320
Retained profits at 1 November 1983	7	(11,880)	—
Extraordinary charge: deferred taxation			
		34,296	33,320
Profit for the year on ordinary activities after taxation		11,524	12,856
Retained profits at 31 October 1984		45,820	46,176

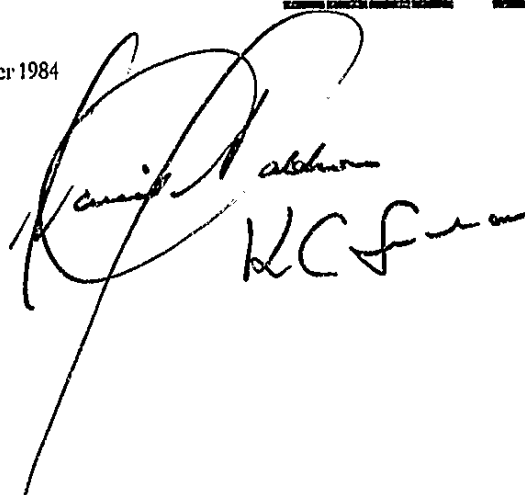


B a l a n c e S h e e t s

At 31 October 1984	Note	Group		Company	
		1984 £000	1983 £000	1984 £000	1983 £000
Fixed assets					
Tangible assets	9	45,239	30,510	45,164	30,385
Investments	10	—	—	200	100
Current assets					
Stocks	11	31,300	20,498	31,300	20,498
Debtors	12	73,040	52,247	55,042	37,887
Cash at bank and in hand		19,043	4,357	18,912	3,707
		123,383	77,102	105,254	61,492
Creditors (amounts falling due within one year)	13	96,757	52,961	90,436	49,400
Net current assets		26,626	24,141	14,818	12,092
Total assets less current liabilities		71,865	54,657	60,182	42,577
Creditors (amounts falling due after more than one year)	14	10,071	7,458	3,295	142
Provisions for liabilities and charges	16	14,957	—	11,143	—
		46,837	47,193	45,744	42,435
Capital and reserves					
Called up share capital	17	1,000	1,000	1,000	1,000
Profit and loss account	18	45,837	46,193	44,744	41,435
		46,837	47,193	45,744	42,435

Approved by the Board on 11 December 1984
 DA Baldwin
 KC Sinclair

Directors



Source And Application Of Funds

For the year ended 31 October 1984	1984 £000	1983 £000
Source of funds		
Profit on ordinary activities before taxation	17,638	12,466
Add depreciation	6,659	4,144
	<hr/> 24,297	<hr/> 16,610
Generated from operations	1,200	5,000
Bank loans	<hr/> 25,497	<hr/> 21,610
Application of funds		
Taxation paid	2,276	2,474
Capital expenditure	21,322	14,538
Finance leases	1,575	2,155
Bank loan	2,500	3,000
	<hr/> 27,673	<hr/> 22,167
	<hr/> (2,176)	<hr/> (557)
Movements in working capital		
Stocks	10,802	3,416
Debtors	17,266	10,135
Creditors	(35,117)	(9,886)
	<hr/> (7,049)	<hr/> 3,665
Movement in net liquid funds	<hr/> 4,873	<hr/> (4,222)



Nick McVernon, Senior Application Engineer, works with the fully developed Cellular Radio System application software on a system at the Applications Centre in Warwick

Notes To The Accounts

1 Accounting policies

Consolidation principles

The group accounts include the results of the company and its subsidiaries as set out in note 10. The results of those companies whose financial years are not co-terminous with that of the company are included on the basis of accounts made up to 31 October.

Turnover

Turnover consists of sales of equipment, parts and repair services at the amount invoiced less returns and discounts, together with income from leased equipment.

Tangible fixed assets and depreciation

Tangible fixed assets are stated at cost after deduction of government grants. Depreciation is calculated on the above defined cost of tangible fixed assets in accordance with the methods and estimated useful lives set out below:

Freehold buildings – declining balance – over approximately 40 years.

Leasehold property – straight line – over the period of the lease.

Machinery and equipment – sum of the digits – three to ten years.

Operating leases – sum of the digits – three to five years.

All items under £750 are written off in the year of acquisition.

No depreciation is provided on freehold land or property under construction.

2 Turnover

Turnover includes sales to the ultimate holding company and fellow subsidiaries of £61,896,000 (1983: £30,375,000)

The principal markets in which the group's turnover arose were as follows:

United Kingdom
Other

Stocks

Stocks and work in progress are valued at the lower of cost and net realisable value. Cost includes appropriate overheads.

Goods sold under warranty

Provision is made in the accounts for costs anticipated to arise during the unexpired warranty periods on goods sold.

Finance leases

Amounts receivable and payable in respect of finance leases to customers are stated after deduction of the interest element of the income or expense relating to the unexpired portion of the lease. The interest element of the income and expense from such leases is taken to profit and loss account over the term of the lease using the actuarial method before tax.

Deferred taxation

Deferred taxation is provided using the liability method in respect of all timing differences expected to reverse.

Foreign currencies

Assets and liabilities in foreign currency are converted to sterling at the rate of exchange ruling at the balance sheet date. Trading transactions are converted at the rate of exchange ruling at the date of the relevant transaction.

Research and development

Expenditure on research and development is written off to revenue as incurred.

	1984	1983
	£000	£000
United Kingdom	231,211	172,734
Other	61,896	30,315
	<hr/> 293,107	<hr/> 203,049

3 Operating profit

Operating profit is stated after charging:

	1984 £000	1983 £000
Depreciation	6,659	4,144
Hire of machinery & equipment	4,409	2,402
Directors' emoluments (Note 4)	90	83
Auditors' remuneration	46	35
Wages and salaries	34,715	25,558
Social security costs	2,265	1,697
Other pension costs	3,359	2,634

4 Directors' emoluments

Fees	24	27
Management remuneration	66	62
	90	83

The Chairman received no emoluments in the year (1983: £1) and the emoluments of the highest paid director were £59,478 (1983: £56,078). The number of other directors whose emoluments fell within the bands shown was as follows:

Up to £5,000	3	3
£5,001 to £10,000	4	4

5 Employees' emoluments

The number of employees whose emoluments fell within the bands shown was as follows:

£30,001 to £35,000	38	17
£35,001 to £40,000	8	2
£40,001 to £45,000	2	—
£45,001 to £50,000	1	—

6 Interest payable

Interest payable comprises interest on bank loans and overdrafts and other loans repayable within 5 years.

7 Tax on profit on ordinary activities

Corporation tax at 47.1% based on profit of the year

Prior year adjustments	3,295	142
Deferred tax	(258)	(532)
	3,077	—
	6,114	(390)

The 1984 tax charge has been reduced primarily by deferred tax being provided at expected future rates (1983: primarily by deferred tax not provided).

The extraordinary charge relates to full provision for deferred taxation for prior years at 1 November 1983 (Note 16).

8 Hewlett-Packard Limited profit and loss account

In accordance with Section 149 (5) of the Companies Act 1948, Hewlett-Packard Limited has not presented its own profit and loss account.

9 Tangible assets

	Property £000	Property under Construction £000	Equipment £000	Total Company £000	Operating Leases £000	Total Group £000
Cost						
As at 31 October 1983	21,466	2,456	16,668	40,590	1,526	42,116
Additions	2,910	5,838	12,779	21,527	80	21,607
Reclassifications	8,122	(8,258)	136	—	—	—
Disposals	(25)	—	(418)	(443)	(1,171)	(1,614)
As at 31 October 1984	32,473	36	29,165	61,674	435	62,109
Depreciation						
As at 31 October 1983	2,322	—	7,883	10,205	1,401	11,606
Provision for year	1,157	—	5,386	6,543	116	6,659
On additions	—	—	76	76	14	90
On disposals	(9)	—	(305)	(314)	(1,171)	(1,485)
As at 31 October 1984	3,470	—	13,040	16,510	360	16,870
Net Book Amount						
As at 31 October 1984	29,003	36	16,125	45,164	75	45,239
As at 31 October 1983	19,144	2,456	8,785	30,385	125	30,510
Analysis of property			1984 Cost £000	1984 Depreciation £000	1984 Net £000	1983 Net £000
Freehold land			1,419	—	1,419	1,419
Freehold buildings			17,802	1,953	15,849	6,795
Long leaseholds			7,451	962	6,489	6,666
Short leaseholds			5,801	555	5,246	4,864
			32,473	3,470	29,003	19,144

10 Investments: shares in group companies
Ordinary shares at cost

1984 1983
£000 £000

200 100

The group companies listed below are wholly owned subsidiaries which are engaged in the provision of financial services to users of Hewlett-Packard products. The accounting dates of those subsidiaries whose financial years are not co-terminous with that of the holding company are also shown below. It is necessary for these subsidiaries to have non-coterminous year ends in order that they may provide financial services at competitive rates.

Hewlett-Packard Product Leasing Limited
Accounting Date 31 January

Hewlett-Packard Equipment Leasing Limited
Accounting Date 30 April

Hewlett-Packard Leasing Limited
Accounting Date 31 July

Hewlett-Packard Finance Limited

Hewlett-Packard Product Leasing Limited and Hewlett-Packard Equipment Leasing Limited were incorporated during the year with issued share capitals of £50,000 each.

11 Stocks

Raw materials and consumables

11,940 7,830

Work in progress

4,318 2,636

Finished goods and goods for resale

15,042 10,032

31,300 20,498

12 Debtors

Trade debtors

Group		Company	
1984	1983	1984	1983
£000	£000	£000	£000
40,073	30,003	39,502	29,653
16,959	13,599	—	—
11,369	5,191	11,355	5,135
3,023	2,230	2,900	2,094
1,616	1,224	1,285	1,005
73,040	52,247	55,042	37,887

Investment in finance leases

Amounts owed by group companies

Other debtors

Prepayments and accrued income

Investment in finance leases includes
£11,921,000 (1983: £9,733,000) due after one year.

13 Creditors (amounts falling due within one year)

Bank loans and overdrafts (Note 15)

Trade creditors

Amounts owed to subsidiary

Amounts owed to other group companies

Other creditors

Corporation tax

Other taxation and social security

Obligations under finance leases

Accruals and deferred income

Group		Company	
1984	1983	1984	1983
£000	£000	£000	£000
23,170	12,857	19,851	10,749
5,059	3,606	4,945	3,567
—	—	19	1,452
40,692	13,973	40,680	13,973
1,472	988	1,472	933
—	2,254	—	2,254
9,054	6,816	8,771	6,610
1,478	887	—	—
15,832	11,580	14,698	10,462
96,757	52,961	90,436	49,400

14 Creditors (amounts falling due after more than one year)

Bank loan (Note 15)

Corporation tax, payable January 1986

Obligations under finance leases

3,200	5,000	—	—
3,295	142	3,295	142
3,576	2,316	—	—
10,071	7,458	3,295	142

15 Bank loans and overdrafts

Certain bank loans and overdrafts are guaranteed by the ultimate holding company.

16 Provisions for liabilities and charges

Deferred taxation

14,957	—	11,143	—
--------	---	--------	---

Following the changes in legislation contained in the Finance Act 1984 full provision has been made for deferred taxation which is attributable primarily to accelerated capital allowances.

17 Called up share capital

Ordinary shares of £1 each:

Authorised

1984	1983
£000	£000

1,000	1,000
-------	-------

Allotted and fully paid

1,000	1,000
-------	-------

18 Profit and loss account

Profit and loss account

Share premium account

Group		Company	
1984	1983	1984	1983
£000	£000	£000	£000
45,820	46,176	44,727	41,418
17	17	17	17
45,837	46,193	44,744	41,435

19 Capital commitments

Committed but not provided for

Authorised but not committed

1984	1983
£000	£000
6,707	7,444
624	363

20 Pension commitments

Group pension schemes covering the majority of employees are financed through independent trustee administered funds. Contributions to these funds, which are charged against profit, are based upon actuarial advice following the most recent valuation of these funds.

21 Directors' interests

According to the register required to be kept under Section 29 of the Companies Act 1967, none of the directors had any beneficial interest in the shares of the company at the beginning or end of the financial year.

22 Employees

The average number of persons employed by the group during the year was:

Sales and service

Manufacturing and research and development

1984	1983
1,571	1,325
1,212	911
2,783	2,236

23 Current cost accounts

Following the publication of ED35 it has been decided not to include current cost accounts this year.

24 Ultimate holding company

The ultimate holding company is Hewlett-Packard Company which is incorporated in the United States of America.



D i r e c t o r s A n d O f f i c e s

Directors

F Mariotti (Chairman)
D A Baldwin (Managing Director)
R C Alberding (USA)
R W Anderson (USA)
P Carmichael CBE
R D Gill
Professor K G Lumsden
K C Sinclair CBE

Secretary

R D Thompson

Auditors

Price Waterhouse
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32 London Bridge Street
London SE1 9SY

For further information regarding Hewlett-Packard products and services or for additional copies of this report contact:

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Telex 848805

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Telex 799910

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Hewlett-Packard Limited
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