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DESCRIPTION

① Service Update - please add sentence
 as marked + 'U.S.' in the title on p.5
 & then go to print.

② Thanks for your voicemail message - I
 didn't get the fax of the order form -
 please resend.

FROM: CAROL NICEDATE: 19 March 1990

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Route:

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A Publication from INPUT's Customer Service Programme—Europe

March 1990

**IN
THIS
ISSUE:**

- 1Hitachi Data Systems—Integrated Services Division
- 4Hitachi Data Systems—Independent Maintenance Operations in the United States
- 4Unisys Maintenance Activities
- 5News from the USA
- 7Snippets

Hitachi Data Systems

Integrated Services Division—A Provider Of Customer-Led Service

The integrated services division of Hitachi Data Systems seems to be in a position today where many other services companies would like to be. The company considers that it has responded to the changes in the services industry and met clients' demands for total service from a single supplier.

Background

Hitachi Data Systems (HDS) markets and services mainframe computers and peripherals and employs 2,200 people in 32 countries. It was formed in

1979, when National Semiconductor, which was then selling mainframes through Intel Corporation with Hitachi, purchased Intel's computer operations. The organisation was then called National Advanced Systems (NAS). In April 1989, Hitachi Ltd. and Electronic Data Systems Corporation (EDS) jointly acquired NAS and the company was relaunched as Hitachi Data Systems. Hitachi believed that the acquisition of NAS strengthened its position in the plug-compatible equipment market. HDS considers that the combination of Hitachi's

expertise in hardware with EDS' software development capabilities will better equip the company to respond to the needs of its customers.

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This new name was designed to reflect the 80% ownership by Hitachi with EDS holding the remaining 20%.

Continued on next page

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is crucial for the company's financial health and for providing reliable information to stakeholders.

2. The second part of the document outlines the specific procedures for recording transactions. It details the steps from initial entry to final review, ensuring that all entries are properly categorized and supported by appropriate documentation.

3. The third part of the document addresses the role of the accounting department in ensuring the integrity of the financial records. It highlights the need for regular audits and the implementation of internal controls to prevent errors and fraud.

4. The fourth part of the document discusses the impact of accurate financial records on the company's overall performance. It notes that reliable data is essential for strategic decision-making and for identifying areas for improvement.

5. The fifth part of the document provides a summary of the key points discussed and offers recommendations for further action. It encourages the company to continue to refine its financial reporting processes to ensure the highest level of accuracy and transparency.

6. The final part of the document concludes with a statement of commitment to the highest standards of financial reporting. It expresses the company's dedication to providing clear, concise, and accurate information to all interested parties.

U.S.

Unisys Maintenance Activities

Unisys has been active in the TPM market for five years. Its president is Mr. Cazerwitz and in 1988 Unisys derived revenues of \$35 million from TPM.

It is a large operation, with a total of 9,000 employees involved in service. 7,200 of these are field engineers. Unisys has 339 service locations, including 64 repair depots and one parts depot. The company offers its services throughout the United States, including non-continental US.

Support is provided for mainframes, minis, micros,

peripherals, telecommunications equipment and local area networks. A wide range of brands is supported, including:

- Epson
- DEC
- Compaq
- Fujitsu
- Toshiba
- Wyse
- Mannesmann
- NEC
- Panasonic
- QMS
- Genicom
- Hewlett-Packard

Unisys provides a range of services:

- Manufacturer warranty work
- Software maintenance

- Training
- Refurbishment
- Installation/relocation
- Preventive maintenance
- Remedial maintenance
- Consultancy
- ECO/FCO (change orders)
- Conversions/upgrade

Most of their business (90%) is contract based with the remaining 10% being hourly per-call. Unisys is targeting various vertical markets, including transportation, distribution, services, medical, banking and finance. ■



News from the U.S.A.

from DEC, Apple, IBM, and Hewlett-Packard in the US December 1989 newsletter. The programs are recapped below, along with those from Unisys and Wang.

The following are two questions posed to INPUT by clients in the United States. The first is indicative of the increased interest in the training and education sector.

Question: What maintenance and support programs are available from the major hardware manufacturers for higher education institutions?

Answer: INPUT addressed the education programs available

Apple—Apple offers four levels of purchase discounts: Educator Buy (teachers receive discount on individual purchases), Student Buy (students finance purchases through the Federal Student Loan Program), Institutional Buy (bulk purchases by the institution), and Contractual Agreement (campus bookstore acts as a reseller to students, faculty, and staff). Under the Contractual Agreement purchase, Apple trains the university staff to

maintain and repair the equipment and helps the university establish an on-site repair depot.

DEC—DEC provides the Campus-Wide Educational Service Program to assist the university or institute to become self sufficient. Under the program, DEC will train the institute's staff in maintenance and repair, provide a 50% discount on parts, and assist in establishing an on-site repair depot to be staffed by the university or institute's employees.

HP—Hewlett-Packard does not offer any special service discounts directed to

Continued on next page

Relative Humidity and Temperature

Time	Temperature (°C)	Relative Humidity (%)
08:00	15.0	75.0
09:00	16.0	72.0
10:00	17.0	68.0
11:00	18.0	65.0
12:00	19.0	62.0
13:00	20.0	60.0
14:00	21.0	58.0
15:00	22.0	56.0
16:00	23.0	55.0
17:00	22.0	56.0
18:00	21.0	58.0
19:00	20.0	60.0
20:00	19.0	62.0
21:00	18.0	65.0
22:00	17.0	68.0
23:00	16.0	72.0
00:00	15.0	75.0

Temperature and Humidity Profile

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15:00	22.0	56.0
16:00	23.0	55.0
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19:00	20.0	60.0
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DESCRIPTION

CASR - sorry... there are some changes -
I'd got it all approved by HDS & then
they made more changes today.
The typed version is so you can see what
it should be like - I've tried to highlight
the places where it has changed.
Also in the typed bit there is an extra
piece on the top. Try & space out a bit
more. If there's time I'd like to see the

HDS people again. Thanks.

FROM: CARDL NICE
DATE: 16 March
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Project Charge Code: _____



IN THIS ISSUE:

- 1 Hitachi Data Systems - Integrated Services Division
Hitachi Data Systems - Independent Maintenance
Operations in the United States
News from the USA
Snippet

HITACHI DATA SYSTEMS

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HDS benefits from the strength of its corporate backing. Hitachi is one of the largest industrial concerns in the world, with total revenues approaching 50 billion dollars, as shown in Exhibit A. Hitachi places great emphasis on R&D. The amount spent on R&D last year was up 13% and represented 5.8% of total sales. Special attention was focussed on electronics, semiconductors and computers, to satisfy the demand for increased processing power. HDS is included in the Information and Communication Systems and Electronic Devices Division, in which sales increased by 19% in 1989, with the



computer sector experiencing particularly high growth. The financial performance of the division is also shown in Exhibit A. In response to the spread of distributed systems, Hitachi introduced a new series of small machines, the M-620 series, with a newly developed operating system, VOS K.

A The corporate direction of HDS is based on a strategic plan which incorporates the Integrated Services division as an important element. In the U.K., the organisation is run jointly by the operations Manager, Jeff Holton and the Sales and Marketing Manager, Peter Duff.

HDS Integrated Services was first set up in the U.K. and has grown to the point where it now accounts for 25% of HDS' customer services revenues. 1990 will see this grow to around 33%.

Its customers include: Castrol (UK) Ltd, Cornhill Insurance and AST Transact (formally Royal Bank of Canada Systems).

Conception

About 3 years ago, Customer Service and Support within HDS re-evaluated its strategies. In view of the trend towards more reliable machines and customer demand for more than just piecemeal hardware and software service solutions, HDS decided that the way forward was to offer the client a total service package: all mainframe computer hardware maintenance would be undertaken by HDS, regardless of vendor. Integrated Services, a specialist division within Customer Service and Support, began to develop strategies to enter this market. The support offered involves placing an HDS engineer on the customer site to manage totally the servicing requirements of all the clients' computer equipment. The HDS engineers are able to service IBM and Hitachi equipment themselves and the servicing of other equipment is subcontracted, usually to the original vendor, although in some cases the subcontract is awarded to a third party organisation. HDS has agreements with over 50 vendors which allows the HDS engineer to liaise, on behalf of the client, with these other vendors. HDS claims that it has more vendor liaison experience than any other company in the U.K.

HDS claims that this method of providing service relieves the client of the huge burden of calling out engineers from different vendors and dealing with the contractual aspects of each. The on-site HDS representative takes on the ownership of all necessary tasks to ensure that the equipment is returned to full operational status with minimum disruption to the users' activities. One person taking on the management of all equipment service reduces



the operating overheads that multi-vendor sites typically bring. In some cases, the HDS engineer carries out remote diagnostics and remedial action for the other vendors. Very often, HDS claims that the expertise and experience of the engineer can save unnecessary call-outs and he can often pinpoint the problem very quickly. HDS claims that the on-site engineer is able to fix 80-90% of problems himself and is qualified to provide additional skills besides hardware fault resolution. The on-site engineer is often viewed as a member of the client team and has even appeared on a clients' own organisational chart.

Current Strategy

HDS is working within a well defined niche market, and while admitting to not being the most inexpensive provider of service, does claim to be the most comprehensive. Their customers tend to be the larger IBM sites based in London and the south of England. Exhibit B illustrates HDS' service positioning. HDS does not intend targetting the price sensitive sector of the market, but is aiming at local users who prefer service from vendors. HDS' policy of subcontracting back single source services to the equipment vendor allows them to satisfy their clients' needs. The value of a typical contract is around \$500 thousand. They do have some smaller contracts, but do not actively seek them. Very often, HDS claims, business is generated by recommendation. It also appears that HDS can afford to pick and choose its clients: work has been turned away if HDS believes that it is not suited to the job.

HDS's recruitment policy is "to find the best", and the job is presented to recruits as "the job for the engineer of the future", a new career path. The role of the engineer is changing - the engineer is now seen more and more as a consultant and a key requirement is skill in customer liaison and account management.

Future Strategy

HDS claims to have identified a niche market, but there is further work to be done before a totally integrated solution can be offered. Exhibit C shows where HDS views its current position.

HDS sees a need to increase its expertise in software. A certain amount of systems software support is already offered in some cases, but HDS hopes to make it a formal offering by the start of 1991. Then leading on from this, HDS plans to tackle applications software with the objective of adding this to their portfolio by 1992. There are other enhancements to be considered, such as networks and office systems. These have been handled in a growing number of cases where the transition has naturally occurred on an

informal customer by customer basis. However, a country-wide structure has recently been put into place which can now support distributed equipments, as long as they are serviced by a large central mainframe site. HDS' portfolio has potential for further growth with the provision of environmental services. HDS has had experience, for example, of managing the move of a customer's computer room.

That the market for services such as those offered by HDS exists is supported by INPUT user research, which indicates that in 1989 almost 80% of users had a preference for single service. Many other service companies are formulating plans now to put into place similar 'total service' mechanisms, a factor also supported by INPUT research data. HDS' geographical coverage is limited, however, by the size of its operation. HDS is, however, formulating plans for growth and discussions are now taking place on a nationwide basis with large mainframe users. HDS is also planning for its future growth into Europe. Currently, HDS has two contracts in France and has won a contract for a major site in Holland within the last four months. These contracts are being handled by the local Customer Service and Support organisation in each country. Expansion plans into Europe are being actively pursued. The ultimate aim is to provide a truly Total Service Solution service.

Hitachi Data Systems - Independent Maintenance Operations in the United States

HDS' U.S. operation in Santa Clara, California has been active in the independent maintenance market for five years. In 1988, it reported \$15 million of revenues from independent maintenance and this figure is expected to grow by about 15 % in 1989. Gary Moore is president of the organisation.

The company has 75 service locations covering the whole of America. It has some 450 employees, of which 347 are field engineers, 60 are in field support and 30 in service management.

The company maintains a wide range of machines, including mainframes, minis, superminis and micros. It also supports peripherals, telecommunications and front end processors. Brands supported include IBM, Hitachi, STC, Magnuson and Telex.

In addition to hardware and software maintenance, HDS undertakes manufacturer warranty work, preventive maintenance and refurbishment. Recognising the need to be able to provide additional services, HDS also offers training and consultancy services.

All HDS' business is contract based and the support is always delivered on the customer site. HDS operates in a number of vertical markets, including manufacturing, utilities, insurance, federal and local government and banking and finance. HDS believes that its competitors are other manufacturers.

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Unisys provides a range of services:

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refurbishment	ECO/FCO (change orders)
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Route:

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Continued on next page

was

2

Hitachi... from page 1

ing particularly high growth. The financial performance of the division is also shown in Exhibit A. In response to the spread of distributed systems, Hitachi introduced a new series of small machines, the M-62U series, with a newly developed operating system, VOS K.

Dallas-based computer services company EDS, now owned by General Motors and managed by an executive team, operates in 26 countries. In 1989, EDS reported revenues of \$4.8 billion, specialising in providing technology-based solutions for the management and movement of data, image and voice information around the world.

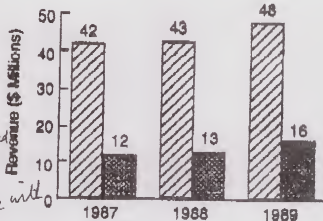
This last year (1989) was seen by HDS as difficult for its customers, so the company is operating a five-year plan to consolidate its position in the market, rather than aggressively attempting to increase market share. It is against this background that the Integrated Services Division has been operating. It is a small organisation employing 25 engineers, and is run by the operations Manager, Jeff Holton, and the Sales and Marketing Manager, Peter Duff.

HDS Integrated Services Division accounted for 25% of HDS' customer service revenues in 1989 and plans to increase this to around 25% in 1990. Its customers include: Castrol (U.K.) Ltd, Cornhill Insurance and Royal Bank of Canada.

AST Transact (formerly Royal Bank of Canada systems).

Exhibit A

Hitachi Ltd. Revenue Growth, 1987-1989



- Hitachi, Total Revenue
- Information and Communication Systems and Electronic Devices Revenue

Replace with
A

Conception

About 18 months ago, the Customer Service and Support division of HDS re-evaluated its strategies. In view of the trend towards more reliable machines and customer demand for more than just piecemeal hardware and software service solutions, HDS decided that the way forward was to offer the client a total service package: all main-frame computer hardware maintenance would be undertaken by HDS, regardless of vendor. Integrated Services, a specialist division within Customer Service and Support, began to develop strategies to enter this market. The support offered involves placing an HDS engineer on the customer site to totally manage the servicing requirements of all the clients' computer equipment. The HDS

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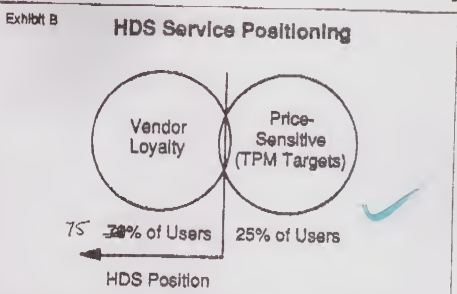
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Current Strategy

HDS is working within a well-defined niche market, and though admitting to not being the most inexpensive provider of service, does claim to be the most comprehensive. Its customers tend to be the larger IBM sites based in London, or within a 30-mile radius. Exhibit B illustrates HDS' service positioning. HDS does not intend targeting the price-sensitive sector of the market, but is aiming at local users who prefer service from vendors. HDS' policy of subcontracting back single-source service to the equipment vendor allows it to satisfy clients' needs. The value of a typical contract is around \$500 thousand. HDS does have some smaller contracts, but does not actively seek them. Very

London and the south of England



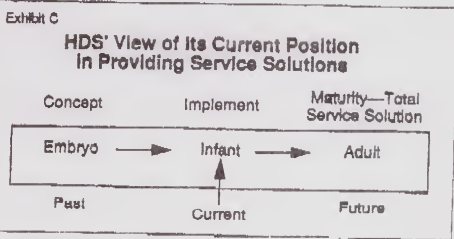
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customer-by-customer

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Hitachi... from page 3

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© 1990 by INPUT. Reproduction prohibited. Expansion plans into Europe are being actively pursued. March 1990

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About 18 months ago, Customer Service and Support within HDS re-evaluated its strategies. In view of the trend towards more reliable machines and customer demand for more than just piecemeal hardware and software service solutions, HDS decided that the way forward was to offer the client a total service package: all mainframe computer hardware maintenance would be undertaken by HDS, regardless of vendor. Integrated Services, a specialist division within Customer Service and Support, began to develop strategies to enter this market. The support offered involves placing an HDS engineer on the customer site to manage totally the servicing requirements of all the clients' computer equipment. The HDS engineers are able to service IBM and Hitachi equipment themselves and the servicing of other equipment is subcontracted, usually to the original vendor, although in some cases the subcontract is awarded to a third party organisation. HDS has agreements with over 50 vendors which allows the HDS engineer to liaise, on behalf of the client, with these other vendors. HDS claims that it has more vendor liaison experience than any other company in the U.K.

HDS claims that this method of providing service relieves the client of the huge burden of calling out engineers from different vendors and dealing with the contractual aspects of each. The on-site HDS representative takes on the



ownership of all necessary tasks to ensure that the equipment is returned to full operational status with minimum disruption to the users' activities. One person taking on the management of all equipment service reduces the operating overheads that multi-vendor sites typically bring. In some cases, the HDS engineer carries out remote diagnostics and remedial action for the other vendors. Very often, HDS claims that the expertise and experience of the engineer can save unnecessary call-outs and he can often pinpoint the problem very quickly. HDS claims that the on-site engineer is able to fix 80-90% of problems himself and is qualified to provide additional skills besides hardware fault resolution. The on-site engineer is often viewed as a member of the client team and has even appeared on a clients' own organisational chart.

Current Strategy

HDS is working within a well defined niche market, and while admitting to not being the most inexpensive provider of service, does claim to be the most comprehensive. Their customers tend to be the larger IBM sites based in London, or within a 30 mile radius. Exhibit B illustrates HDS' service positioning. HDS does not intend targetting the price sensitive sector of the market, but is aiming at local users who prefer service from vendors. HDS' policy of subcontracting back single source service to the equipment vendor allows them to satisfy their clients' needs. The value of a typical contract is around \$500 thousand. They do have some smaller contracts, but do not actively seek them. Very often, HDS claims, business is generated by recommendation. It also appears that HDS can afford to pick and choose its clients: work has been turned away if HDS believes that it is not suited to the job. HDS hopes that one by-product of a successful service contract will be increased equipment sales, when the time comes for the customer to update his system.

HDS's recruitment policy is "to find the best", and the job is presented to recruits as "the job for the engineer of the future", a new career path. The role of the engineer is changing - the engineer is now seen more and more as a consultant and a key requirement is skill in customer liaison and account management.

Future Strategy

HDS claims to have identified a lucrative niche market, but there is further work to be done before a totally integrated solution can be offered. Exhibit C shows where HDS views its current position.

HDS sees a need to increase its expertise in software. A certain amount of systems software support is already



offered in some cases, but HDS hopes to make it a formal offering by the start of 1991. Then leading on from this, HDS plans to tackle applications software with the objective of adding this to their portfolio by 1992. There are numerous other enhancements to be considered, such as networks, office equipment such as photocopiers and fax machines. Items such as this are handled in one or two cases where the transition has naturally occurred on an informal basis, but in general, support for these is not offered as standard. HDS' portfolio has potential for further growth with the provision of environmental services. HDS has had experience, for example, of managing the move of a customer's computer room.

That the market for services such as those offered by HDS exists is supported by INPUT user research, which indicates that in 1989 almost 80% of users had a preference for single service. Many other service companies are formulating plans now to put into place similar 'total service' mechanisms, a factor also supported by INPUT research data. HDS' geographical coverage is limited, however, by the size of its operation. At present, their market is local, not even national. HDS is formulating plans for its future strategy, which could include expansion into Europe. The ultimate aim is to provide a truly Total Service Solution service.

Hitachi Data Systems - Independent Maintenance Operations in the United States

HDS' U.S. operation in Santa Clara, California has been active in the independent maintenance market for five years. In 1988, it reported \$15 million of revenues from independent maintenance and this figure is expected to grow by about 15 % in 1989. Gary Moore is president of the organisation.

The company has 75 service locations covering the whole of America. It has some 450 employees, of which 347 are field engineers, 60 are in field support and 30 in service management.

The company maintains a wide range of machines, including mainframes, minis, superminis and micros. It also supports peripherals, telecommunications and front end processors. Brands supported include IBM, Hitachi, STC. Magnuson and Telex.



In addition to hardware and software maintenance, HDS undertakes manufacturer warranty work, preventive maintenance and refurbishment. Recognising the need to be able to provide additional services, HDS also offers training and consultancy services.

All HDS' business is contract based and the support is always delivered on the customer site. HDS operates in a number of vertical markets, including manufacturing, utilities, insurance, federal and local government and banking and finance. HDS believes that its competitors are other manufacturers.

News From The U.S.A.

The following are two questions posed to INPUT by clients in the United States. The first is indicative of the increased interest in the training and education sector.

Question: What maintenance and support programs are available from the major hardware manufacturers for higher education institutions?

Answer: INPUT addressed the education programs available from DEC, Apple, IBM, and Hewlett Packard in the U.S. December 1989 newsletter. The programs are recapped below, along with those from Unisys and Wang.

Apple - Apple offers four levels of purchase discounts: Educator Buy (teachers receive discount on individual purchases), Student Buy (students finance purchases through the Federal Student Loan Program), Institutional Buy (bulk purchases by the institution), and Contractual Agreement (campus bookstore acts as a reseller to students, faculty, and staff). Under the Contractual Agreement purchase, Apple trains the university staff to maintain and repair the equipment and helps the university establish an on-site repair depot.

DEC - DEC provides the Campus-Wide Educational Service Program to assist the university or institute to become self sufficient. Under the program, DEC will train the institute's staff in maintenance and repair, provide a 50% discount on parts, and assist in establishing an on-site repair depot to be staffed by the university or institute's employees.

HP - Hewlett Packard does not offer any special service discounts directed to universities or educational institutions. HP considers each institutional purchase to be an opportunity for a custom purchase agreement.



IBM - IBM's Educational Allowances program offers discounts on all hardware and software purchases, while the national educational prices apply to microcomputers and related software. To be eligible for these discounts, the institution or university must be an accredited, non-profit institution of higher education and the equipment must be for their own use, and installed for at least two years before selling. There are no special pricing schedules or discount programs for service, regular service schedules apply.

Unisys - Unisys does not offer any special standard discounts for higher education maintenance and support procurements. However, there is usually a custom negotiation for maintenance on a case-by-case basis, depending on the particular requirements of the institution. Unisys will train the university's people in maintenance on-site or at a Unisys training centre under the standard cost schedules.

Wang - Wang does not offer any special discounts for hardware maintenance to educational institutions. Exceptions to this include cases when hardware donations are made to higher education institutions, service is then provided free or at a substantial discount.

Question: Regarding DEC's VMS software upgrades, does the customer have to be under a software maintenance agreement to receive upgrades? Are the upgrades available at a discount or must a whole new package of software be purchased?

Answer: Software upgrades are available from DEC, independent of a software maintenance contract. Upgrades are available in the following manner.

1. As part of a software maintenance contract, the upgrades are automatic when the company subscribes to the Media Documentation and Distribution.
2. "A la Carte" upgrades are available where only the upgrade and the documentation are purchased.

It may be more cost-effective under the software maintenance agreement if the system is to be upgraded regularly. Purchasing the individual upgrades is preferable if only an occasional upgrade is required.



INPUT Examines the Service Offerings of the Leading Third Party Maintainers.

The updated versions of Service Vendor Analysis - Third-Party Maintenance Volumes I & II (U.S.) are due to be released by the end of the first quarter.

Volume I of the **Service Vendor Analysis - Third Party Maintenance**, profiles the service organizations of the top ten TPM service providers in the United States, including revenues from service and service coverage. Each profile begins with a brief discussion of the organization and its significant actions over the past year. Following the profiles, the report provides summary tables of key service information on the profiled companies to allow quick comparisons. Volume II of the report presents a comprehensive snap-shot of the leading 100 service vendors in the third-party and fourth-party support market, outlining demographic, operational, and strategic information on the vendors in this arena.

These reports will be available in Europe from INPUT at a cost of £1495.00 each.

SNIPPETS

* IPL systems Inc, who sell IBM compatible tape drive subsystems and add-on memory for IBM machines, now has a technical support office in Zaventem, Belgium, which will be responsible for supporting IPL's European clients.

* Granada has released impressive turnover figures for 1989: £201m (\$330m), an increase of around 66%. The only additional figures currently available are that Granada France achieved 1989 revenues of £17.2m (\$28m). INPUT estimates that 75-80% of revenues can be attributed to independent maintenance. The remaining revenue is derived from disaster recovery services and DPCE products. DPCE grew by 15% last year.

* Dixons' maintenance and installation business in the U.K. has been bought by National Technical Services Ltd, part of Bricom plc. Dixons is retaining its Mastercare after sales service business

* Harwell research has experimented on the effectiveness of smoke detectors in computer rooms. Research has found that as computer rooms are air-conditioned and many pieces of equipment contain cooling fans it is likely that insufficient smoke reaching the alarm causes a malfunction in the smoke and fire precaution systems.



* Digital could see losses for the first quarter to 31 March as a result of the cost of a major programme of voluntary retirement. This is being implemented to attempt to cut employee numbers by as many as 8,000 in response to the sluggish U.S. computer market.

* A new entrant to the UK disaster recovery market is General Automation Ltd., based in Birmingham. The company is offering disaster recovery services to PICK users and claims that a replacement system can be installed within two hours.

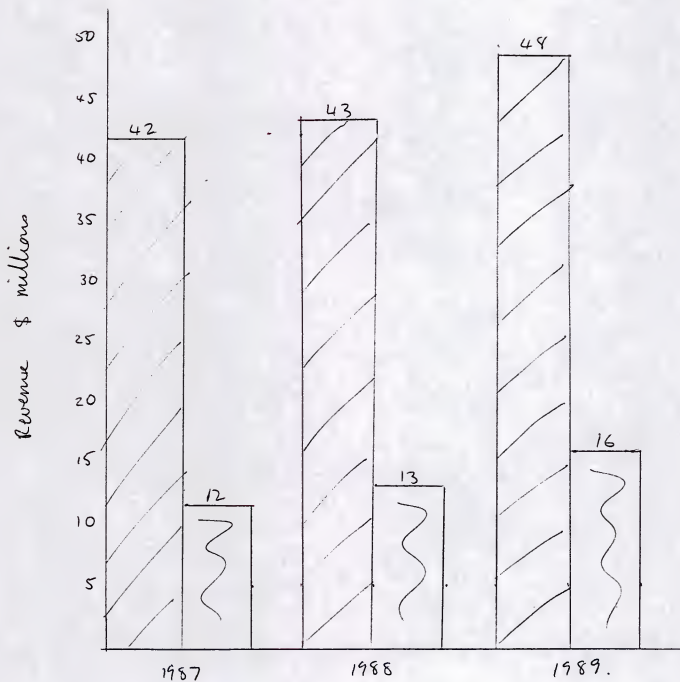
* Nexus Payment Systems of Welwyn Garden City, U.K., and Cap-RS of Walton-on-Thames, U.K., are the first to launch disaster recovery systems for Stratus and Stratus compatible systems. The companies offer their clients immediate access to equipment which can either be manned by Stratus or the client.

* Otis, one of the world's largest lift manufacturers, has signed a world-wide training contact with Macmillan Intek. Based in the U.K., Macmillan Intek has agreed that Otis can reproduce 15 titles from its range of training packages. These packages are part of an 'Open Learning' system, based on books, video and audio tapes. The package for Otis' maintenance staff includes a special lift simulator kit to help train the staff in the latest microprocessor controlled lifts. This addresses the problem of the knowledge gaps that mechanics experience as a result of their mechanical, rather than electronic, engineering backgrounds.



Exhibit A.

LTD
HITACHI REVENUE GROWTH
1987-1989.



Hitachi, total revenue



Information and Communication Systems
and Electronic Devices, revenue



Exhibit 8

HDS SERVICE POSITIONING.

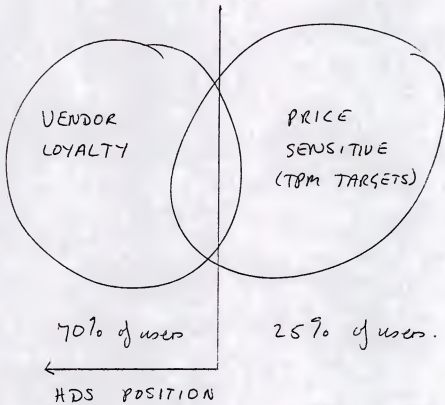
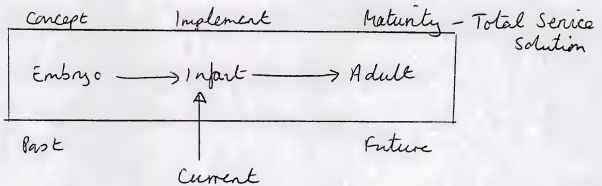




Exhibit C.

HDS' VIEW OF ITS CURRENT POSITION IN PROVIDING SERVICE SOLUTIONS.





**IN
THIS
ISSUE:**

- 1Hitachi Data Systems—Integrated Services Division
- 4Hitachi Data Systems—Independent Maintenance Operations in the United States
- 4Unisys U.S. Maintenance Activities
- 5News from the USA
- 7Snippets

Hitachi Data Systems

Integrated Services Division—A Provider Of Customer-Led Service

The integrated services division of Hitachi Data Systems seems to be in a position today where many other services companies would like to be. The company considers that it has responded to the changes in the services industry and met clients' demands for total service from a single supplier.

Background

Hitachi Data Systems (HDS) markets and services mainframe computers and peripherals and employs 2,200 people in 32 countries. It was formed in 1979, when National

Semiconductor, which was then selling mainframes through ITEL Corporation with Hitachi, purchased ITEL's computer operations. The organisation was then called National Advanced Systems (NAS). In April 1989, Hitachi Ltd. and Electronic Data Systems Corporation (EDS) jointly acquired NAS and the company was relaunched as Hitachi Data Systems. This new name was designed to reflect the 80% ownership by Hitachi with EDS holding the remaining 20%. Hitachi believed that the acquisition of NAS strengthened its position in the plug-compatible equipment market. HDS considers that the

combination of Hitachi's expertise in hardware with EDS' software development capabilities will better equip the company to respond to the needs of its customers.

HDS benefits from the strength of its corporate backing. Hitachi is one of the largest industrial concerns in the world, with total revenues approaching \$50 billion, as shown in Exhibit A.

Hitachi places great emphasis on R&D. The amount spent on R&D last year was up 13% and represented 5.8% of total sales. Special attention was focussed on electronics, semiconductors

Continued on next page

the 1990s, the number of people with a mental health problem has increased in the UK, and the number of people with a mental health problem who are in contact with mental health services has also increased (Mental Health Act Commission 2000).

There is a growing awareness of the need to improve the lives of people with mental health problems, and a growing emphasis on the need to improve the quality of care for people with mental health problems. This has led to a number of initiatives, including the development of the National Institute for Mental Health (NIMH) in the UK, and the development of the National Institute of Mental Health (NIMH) in the USA.

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Hitachi...from page 1

and computers, to satisfy the demand for increased processing power. HDS is included in the Information and Communication Systems and Electronic Devices Division, in which sales increased by 19% in 1989, with the computer sector experiencing particularly high growth. The financial performance of the division is also shown in Exhibit A. In response to the spread of distributed systems, Hitachi introduced a new series of small machines, the M-620 series, with a newly developed operating system, VOS K.

The corporate direction of HDS is based on a strategic plan which incorporates the Integrated Services division as an important element. In the U.K., the organisation is run jointly by the operations manager, Jeff Holton and the sales and marketing manager, Peter Duff.

HDS Integrated Services was first set up in the U.K. and has grown to the point where it now accounts for 25% of HDS' customer services revenues. 1990 will see this grow to around 33%

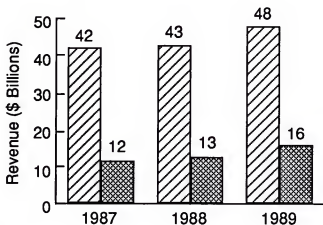
Its customers include: Castrol (U.K.) Ltd, Cornhill Insurance and AST Transact (formally Royal Bank of Canada Systems).

Conception

About 3 years ago, the Customer Service and Support division of HDS re-evaluated its strategies. In view of the trend

Exhibit A

Hitachi Ltd. Revenue Growth, 1987-1989



- ▨ Hitachi, Total Revenue
- ▤ Information and Communication Systems and Electronic Devices Revenue

towards more reliable machines and customer demand for more than just piecemeal hardware and software service solutions, HDS decided that the way forward was to offer the client a total service package: all mainframe computer hardware maintenance would be undertaken by HDS, regardless of vendor. Integrated Services, a specialist division within Customer Service and Support, began to develop strategies to enter this market. The support offered involves placing an HDS engineer on the customer site to totally manage the servicing requirements of all the clients' computer equipment. The HDS engineers are able to service IBM and Hitachi equipment themselves, and the servicing of other equipment is

subcontracted—usually to the original vendor, although in some cases the subcontract is awarded to a third-party organisation. HDS has agreements with over 50 vendors that allow the HDS engineer to liaise, on behalf of the client, with these other vendors. HDS claims that it has more vendor liaison experience than any other company in the U.K.

HDS claims that this method of providing service relieves the client of the huge burden of calling out engineers from different vendors and dealing with the contractual aspects of each. The on-site HDS representative takes on all necessary tasks to ensure that the equipment is returned to full

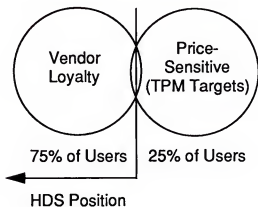
operational status with minimum disruption to the users' activities. One person taking on the management of all equipment service reduces the operating overheads of most multivendor sites. In some cases, the HDS engineer carries out remote diagnostics and remedial action for the other vendors. Very often, HDS claims that the expertise and experience of the engineer can save unnecessary call-outs and he can often pinpoint the problem very quickly. HDS claims that the on-site engineer is able to fix 80-90% of problems himself and is qualified to provide additional skills besides hardware fault resolution. The on-site engineer is often viewed as a member of the client team and has even appeared on a client's own organisational chart.

Current Strategy

HDS is working within a well-defined niche market, and though admitting to not being the most inexpensive provider of service, does claim to be the most comprehensive. Its customers tend to be the larger IBM sites based in London and the south of England. Exhibit B illustrates HDS' service positioning. HDS does not intend targetting the price-sensitive sector of the market, but is aiming at local users who prefer service from vendors. HDS' policy of subcontracting back single-source service to the equipment vendor allows it to satisfy clients' needs. The value of a typical contract is around \$500 thousand. HDS does have some smaller contracts, but does

Exhibit B

HDS Service Positioning



not actively seek them. Very often, HDS claims, business is generated by recommendation. It also appears that HDS can afford to pick and choose its clients: work is turned away if HDS believes that it is not suited to the job.

HDS' recruitment policy is "to find the best," and the job is presented to recruits as "the job for the engineer of the future," a new career path. The role of the engineer is changing—the engineer is now seen more and

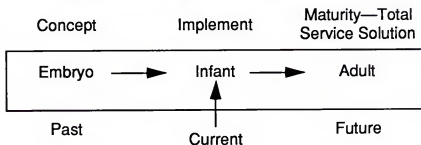
more as a consultant, and a key requirement is skill in customer liaison and account management.

Future Strategy

HDS claims to have identified a niche market, but there is further work to be done before a totally integrated solution can be offered. Exhibit C shows HDS' view of its current position.

Exhibit C

HDS' View of Its Current Position in Providing Service Solutions



Continued on next page

the 1990s, the number of people in the UK who are aged 65 and over has increased from 10.5 million to 13.5 million (1990-2000).

There is a growing awareness of the need to address the needs of older people, and the need to ensure that the health care system is able to meet the needs of this population. This paper discusses the need for a new approach to the care of older people, and the need for a new model of care.

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Hitachi...from page 3

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into place which can now support distributed equipment as long as they are serviced by a large central mainframe site. HDS' portfolio has potential for further growth with the provision of environmental services. HDS has had experience, for example, of managing the move of a customer's computer room.

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supported by INPUT research data. HDS' geographical coverage is limited, however, by the size of its operation. HDS is formulating plans for growth and discussions are now taking place on a nationwide basis with large mainframe users. HDS is also planning for its future growth into Europe. Currently, HDS has two contracts in France and has won a contract for a major site in Holland within the last four months. These contracts are handled by the local customer service and support organisation in each country. Expansion plans into Europe are being actively pursued. The ultimate aim is to provide a truly total service solution. ■

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Unisys U.S. Maintenance Activities

Unisys has been active in the TPM market for five years. Its president is Mr. Gazerwitz and in 1988 Unisys derived revenues of \$35 million from TPM.

It is a large operation, with a total of 9,000 employees involved in service. 7,200 of these are field engineers. Unisys has 339 service locations, including 64 repair depots and one parts depot. The company offers its services throughout the United States, including non-continental US.

Support is provided for mainframes, minis, micros,

peripherals, telecommunications equipment and local area networks. A wide range of brands is supported, including:

- Epson
- DEC
- Compaq
- Fujitsu
- Toshiba
- Wyse
- Mannesmann
- NEC
- Panasonic
- QMS
- Genicom
- Hewlett-Packard

Unisys provides a range of services:

- Manufacturer warranty work
- Software maintenance
- Training

- Refurbishment
- Installation/relocation
- Preventive maintenance
- Remedial maintenance
- Consultancy
- ECO/FCO (change orders)
- Conversions/upgrade

Most of their business (90%) is contract based with the remaining 10% being hourly per-call. Unisys is targeting various vertical markets, including transportation, distribution, services, medical, banking and finance. ■



News from the U.S.A.

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HP—Hewlett-Packard does not offer any special service discounts directed to

Continued on next page

U.S. News...from page 5

universities or educational institutions. HP considers each institutional purchase to be an opportunity for a custom purchase agreement.

IBM—IBM's Educational Allowances program offers discounts on all hardware and software purchases, while the national educational prices apply to microcomputers and related software. To be eligible for these discounts, the institution or university must be an accredited, nonprofit institution of higher education and the equipment must be for its own use, and installed for at least two years before selling. There are no special pricing schedules or discount programs for service—regular service schedules apply.

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1. As part of a software maintenance contract, the upgrades are automatic when the company subscribes to the Media Documentation and Distribution.
2. "A la Carte" upgrades are available where only the upgrade and the documentation are purchased.

It may be more cost-effective under the software maintenance agreement if the system is to be upgraded regularly. Purchasing the individual upgrades is preferable if only an occasional upgrade is required. ■



INPUT Examines the Service Offerings of the Leading Third- Party Maintainers

The updated versions of *Service Vendor Analysis—Third-Party Maintenance, Volumes I & II* (U.S.) are due to be released by the end of the first quarter.

Volume I of *Service Vendor Analysis—Third Party Maintenance* profiles the service organizations of the top ten TPM service providers in the United States, including

revenues from service, and service coverage. Each profile begins with a brief discussion of the organization and its significant actions over the past year. Following the profiles, the report provides summary tables of key service information on the profiled companies to allow quick comparisons. Volume II of the report presents a comprehensive snapshot of the

leading 100 service vendors in the third-party and fourth-party support market, outlining demographic, operational, and strategic information on the vendors in this arena.

These reports will be available in Europe from INPUT at a cost of £1,495.00 each. ■

Snippets

- ❖ IPL Systems Inc., which sells IBM-compatible tape drive subsystems and add-on memory for IBM machines, now has a technical support office in Zaventem, Belgium, which will be responsible for supporting IPL's European clients.
- ❖ Granada has released impressive turnover figures for 1989: £201 million (\$330 million), an increase of around 66% from 1988. The only additional figures currently available are that Granada France achieved 1989 revenues of £17.2m (\$28 million). INPUT estimates that 75-80% of revenues can be attributed to independent maintenance. The remaining revenue is derived from disaster recovery services and DPCE products. DPCE grew by 15% last year.
- ❖ Dixons' maintenance and installation business in the U.K. has been bought by National Technical Services Ltd, part of Bricom PLC. Dixons is retaining its Mastercare after-sales service business.
- ❖ Harwell research has experimented on the effectiveness of smoke detectors in computer rooms. Research has found that as computer rooms are air-conditioned and many pieces of equipment contain cooling fans, it is likely that insufficient smoke reaching the alarm causes a malfunction in the smoke and fire precaution systems.
- ❖ Digital could see losses for the first quarter (to 31 March) as a result of the cost of a major programme of voluntary retirement. This is being implemented to attempt to cut employee numbers by as many as 8,000, in response to the sluggish U.S. computer market.
- ❖ A new entrant to the U.K. disaster recovery market is General Automation Ltd., based in Birmingham. The company is offering disaster recovery services to PICK users and claims that a replacement system can be installed within two hours.
- ❖ Nexus Payment Systems of Welwyn Garden City, U.K., and Cap-RS of Walton-on-Thames, U.K., are the first to launch disaster recovery systems for Stratus and Stratus-compatible systems. The companies offer their clients immediate access to equipment which can be manned by either Stratus or the client.
- ❖ Otis, one of the world's largest lift manufacturers, has signed a worldwide training contract with Macmillan Intek. Based in the U.K., Macmillan Intek has agreed that Otis can reproduce 15 titles from its range of training packages. These packages are part of an 'Open Learning' system, based on books, video and audio tapes. The package for Otis' maintenance staff includes a special lift simulator kit to help train the staff in the latest microprocessor-controlled lifts. This addresses the problem of the knowledge gaps that mechanics experience as a result of their mechanical, rather than electronic, engineering backgrounds.

INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions.

Continuous-information advisory services, proprietary research/consulting, merger/acquisition assistance, and multicient studies are provided to users and vendors of information systems and services (software, processing services, turnkey systems, systems integration, professional services, communications, and systems/software maintenance and support).

Many of INPUT's professional staff members have more than 20 years' experience in their areas of specialisation. Most have held senior management positions in operations, marketing, or planning. This expertise enables INPUT to supply practical solutions to complex business problems.

Formed as a privately held corporation in 1974, INPUT has become a leading international research and consulting firm. Clients include more than 100 of the world's largest and most technically advanced companies.

North America

Headquarters

1280 Villa Street
Mountain View, CA 94041-1194
(415) 961-3300
Telex 171407 Fax (415) 961-3966

New York

959 Route 46 East, Suite 201
Parsippany, NJ 07054
(201) 299-6999
Telex 134630 Fax (201) 263-8341

Washington, D.C.

1953 Gallows Road, Suite 560
Vienna, VA 22182
(703) 847-6870 Fax (703) 847-6872

International

Europe

Piccadilly House
33/37 Regent Street
London SW1Y 4NF, England
(01) 493-9335
Telex 27113 Fax (01) 629-0179

Paris

52, boulevard de Sébastopol
75003 Paris, France
(33-1) 42 77 42 77 Fax (33-1) 42 77 85 82

Tokyo

Saida Building
4-6, Kanda Sakuma-cho
Chiyoda-ku, Tokyo 101, Japan
(03) 864-0531 Fax (03) 864-4114

