INPUT

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U.K. Software and Services Manpower Pricing 1991

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A
The U.K. Professional Services Market

The U.K. Professional Services market is the largest information services sector affected by manpower-based fee rates as surveyed in this report. The Professional Services sector is defined to include:

- Bespoke software development,
- Information systems consulting,
- Education and training,
- Software support and maintenance for custom software.

The INPUT estimate of the size of this Professional Services sector in 1991 is £2.15 billion. This represents a growth of only 8% over 1990's figure.

The previous Manpower Services Report (1989/90) surveyed approximately 52% of this market by respondent sales turnover. This year's survey sample similarly accounts for 34% of the U.K. market for Professional Services and 45% of the market for Software Products (both Systems and Application). The sample registered growth rates between 1990 and 1991 as follows:

· Overall growth	3.0%
· Professional Services	11.2%
· Software Products (including Maintenance Contracts)	9.7%

B
Sample Statistics

The following two tables give some important statistics on the growth of the sample's overall business activities during the last 12 months.

Exhibit I-1

Changes in Sales Turnover of Sample from 1990 to 1991 with Ranges

	Change 1990/91	Ranges of Change
Equipment Suppliers:	+ 2.6%	- 19% to + 14%
Major Systems Integrators & Consultancies:	+ 4.1%	- 5% to + 15%
Smaller Software Houses:	+ 7.6%	- 12% to + 32%*
Software Product companies:	+ 8.7%	- 9% to + 41%

* Excluding recent start-ups with misleadingly large growth rates because of their near-zero revenues in 1990.

Exhibit I-2

Estimated Changes in Sales Revenue per Capita of Samples - 1991/89

	Average Change 1991/89	Ranges of rev./cap '000s	Average rev./cap '000s '91('89)
Equipment Suppliers:	+ 100%	45 to 347	120(60)
Major Systems Integrators & Consultancies:	+ 19%	44 to 134	64(54)
Smaller Software Houses:	+ 89%	36 to 142	83(44)
Software Product companies:	+ 144%	54 to 239	110(45)
TOTAL SAMPLE:	**+ 31%**		

The very large changes in average revenue for three out of the four groups are indicative of the amount of 'fat' which must have accrued in the software industry during the heady expansionist years of the 1980s. The fact that the large systems integrators have improved their ratio least indicates the need for further efficiency/effectiveness improvements in this group.

Table of Contents

Appendices

List of Exhibits

Appendices

Appendices (Cont'd)

I Introduction, Scope and Conduct of the Survey

This report is the eighth in a series of reports describing an annual survey now conducted by INPUT and previously published by MICHAEL LONGY Associates Ltd. The objective of the survey is to obtain pricing information on the software support services provided by four groups of computer services vendors:

- Computer equipment suppliers, including manufacturers,
- Major professional services companies, consultancies and systems integrators,
- Smaller professional services companies or software houses, often specialising in narrower markets eg. in a single manufacturer's equipment or in particular applications, eg. CAD/CAM,
- Software product companies.

The report is in a similar format to that used in previous years. The section which covers the changes in rates over the preceding five years contains data on prices from 1986 to 1990 plus 1991, the current year.

The report also contains an analysis of:

- Training prices,
- Software maintenance,
- Software support policies implemented by the different groups of vendors operating in the professional services sector,
- Discounting policies for manpower-based services.

The usual telephone survey was conducted during the period September 1991 to November 1991.

Telephone interviewing of suppliers allows INPUT to update its database of rates charged by the major companies in the IT industry. It also allows published information to be validated and amplified. In some cases it was found necessary to contact more than one individual in a company or group:

- Different divisions or subsidiaries,
- Consultancy services as well as a systems development department,
- Training and support centres,

The questionnaire used in the survey is found at Appendix D. It was modified for this year's survey principally to permit better analysis of the rate structures of vendors. It also permits us to make good year on year comparisons.

This year over 65 suppliers were contacted by telephone and interviews obtained from 44. Sufficient information was obtained on all these companies, to enable them to be included in the analysis in Chapter III. In one case two divisions of the same company were interviewed and therefore 45 sets of rates have been used in the tables in Chapter II and Appendices A, B & C.

In order to safeguard confidentiality INPUT does not publish the list of respondents.

The combined manpower-based revenues for professional services and software maintenance earned in the U.K. by this sample of 44 companies in their financial years ending in 1990/91 was an estimated £670 million or approximately 34% of the U.K.'s £2.0 billion professional services market. The U.K. professional services market is estimated to have increased by 20% between 1989 and 1990, compared to a 19% pa. growth between the previous two annual surveys.

The growth in the professional services component of INPUT's interview sample between 1990 and 1991 is anticipated to be 11%, registering a significant fall since last year. This growth compares with an overall growth in the UK market of 8%. Many of the larger professional services companies whose revenues have suffered little or nil growth this year declined to be interviewed.

The single most important contributing reason for this slowdown in market growth has been the deepening recession in the U.K. economy which is still taking its toll on the industry.

The individual company pricing information is summarised in the top-level tables in Chapter II, while in Appendices A, B & C the report again shows the detailed pricing information relating to the 44 respondent companies. The three sets of tables in the Appendices are made completely anonymous by the use of a respondent number to tag each line. The company names are not shown.

Chapter III describes the qualitative and quantitative survey findings in an aggregated manner over the whole sample and across the four vendor subsamples.

Chapter IV describes the strategies of the major supplier groups and serves to set their policies within the context of important events and trends affecting the industry in 1991.

Chapter V summarises the overall conclusions on pricing.

II Overview of Pricing Data

This chapter is divided into three sections:

- The first section deals with the 1991 data on manpower pricing and references the sample rates tables which have become standard in this series of reports,
- The second contains a set of tables which show the picture of rate changes over the 1986-1991 period,
- The third section contains the overall MCI (Manpower Charge-Out Index) and its change since the previous survey.

A
Charge-Out Rates for 1991

1991 has seen average increases in Professional Services charge-out rates across the software services industry of between -11% and +16%. This is a wider range of increase than was recorded in the 1989/90 survey.

The largest increases and decreases are for Senior Consultants and Junior Programmers, with increases ranging from -11% to +18%. The most stable rates are for the Consultants/Project Leaders, with their average increases ranging from +1% to +8%.

Equipment suppliers have found that they have been able to make moderate price increases for all categories of staff except for the grades of Senior Consultant/Project Manager and Junior Programmer.

Major Systems Integrators and Consultancies have been experiencing the greatest difficulty of any group in increasing rates. At the top end of the grade scale (ie. Senior Systems Analyst and above) increases/decreases have ranged from -5% to +1%. At the lower end of the scale (ie. Senior Programmer/Analyst and below), rates have increased by progressively larger percentages, the lower the grade, with increases ranging from +3% to +16%. This last increase (of 16% for Junior Programmers) may in fact reflect a lowering of rates for people who were previously graded or charged-out as Programmers. Certainly 1991 has seen an increasing number of companies making use again of the Junior Programmer grade.

Small Software Houses have been able to increase their rates right the way across the spectrum of grades. Increases ranged from 6% to 18% with the higher increases featuring at the top end of the scale.

Software Product companies have the widest range of rates changes over the previous year, with increases/decreases ranging from -11% at the top end of the grade scale to +12% to +14% across the lower end rates. This reflects the change from a seller's to a buyer's market which 1991 has witnessed and to which the UK recession has been the major contributor.

The highest rates charged still tend to be for product-specific skills ie. in the equipment suppliers and with the software product companies. Where the skills may be more generally business orientated, as in the case of major systems houses, the rates have come under heaviest pressure.

For organisations which serve a specific vertical or horizontal market with a strong 'service product' identity or with less competition, as is the case for many of the smaller software houses, the charge-out rates have been more recession proof.

Almost one third of companies interviewed reported that for specific grades and skills they were able to command premium consultancy and training rates. The use of premium rates has contributed to the survival strategy of all groups except for the smaller software houses. Vendors are taking what opportunities they can to make deals which run counter to the general downward pressure on rates.

1. Equipment Suppliers

Equipment suppliers charge-out rates have registered both increases and decreases.

The range is very wide; senior consultants and junior programmers recording decreases of 3% and 4% respectively; project leader/consultants increasing by 4%; programmers by 6%; senior programmers by 10% and senior analysts by 13%. The overall movement in these rates reflects a move to charge for top people at lower grade rates than in the past and to move the bottom grades even lower making more use of the lowest (junior programmer) grade where a real decrease is now being shown. The "bulge" in the increases shown in the middle of the scale indicates the 'resistance' level for top grade staff.

These increases, for all the grades except senior systems analysts, make equipment suppliers rates slightly higher than the software product companies at the upper ends of the rate ranges for most grades but somewhat lower in the bottom of the ranges. This is a catch-up exercise which has happened since early 1990. During the period that the survey has been running the equipment suppliers and major consultancies have tended to be fairly close to each other but this latter group has this year fallen significantly behind, due to the trading difficulties experienced in the Professional Services sector.

2. Major Systems Integrators and Consultancies

Systems integrators and consultancies operate principally in the Professional Services sector of the market but with significant revenue contributions from the Systems Integration and Systems Operations areas of outsourcing.

A lot of their work has suffered from strong pressures to discount and for this reason, (with the exception of the junior programmer grade) increases have been modest - ie. between 1% and 8%. At the same time decreases have been detected for senior consultants and senior analysts. The lowest increase was for consultant/project leaders at an average of only 1%. The highest increases were for junior programmers at 16%. Programmers increased by 8% and senior programmers by only 3%.

Major systems integrators and consultancies' prices are this year anything between 12% and 20% below those of equipment suppliers (except in the junior programmer grade where the average is almost the same and where equipment suppliers have lowered their rates while consultancies have increased them). This widening of the differential (in 1990 it was nearer to 10%) is a measure of how this group of vendors is being worst hit by the UK's current recession.

The software product companies are now pricing up to 60% higher than the major consultancies - in the middle grades.

3. Smaller Software Houses

Smaller software houses have in previous years operated with charge-out rates which were significantly lower than the rest of the players in the market. This year their rates range from about 60%-95% of those for the other groups (comparing their average with that of the highest group at each level). This compares with a gap reported last time of from 55%-85%. The reasons for this closing of the gap are:

- This group is receiving some of the contracts not being placed with the larger more expensive firms,

- They are taking this opportunity to raise their profitability.

The market could well see even higher rates being charged by this group, although larger firms are already known to be discounting down to 'at-cost' pricing levels, in order to compete with them.

4. Software Product Companies

The companies in this group have this year increased average rates in all grades except senior consultants where an average decrease of -11% was recorded. The range of increases is between 2% for consultants, rising to 14% for programmers.

The charge-out rates in this group are the highest of all the groups for all grades except the two highest - Principal and Senior Consultant. This group has historically had the highest top-end rates, exceeding even the Management Consultancies. The effect of the current recession has been to reduce the market for these high premium skills.

On the other hand these companies have over the last five years been steadily building up their Professional Services capabilities to undertake not only Consultancy and Training but also specific modifications, customisation and even whole project implementations using their own products. Oracle in particular has built up strong product group specific Professional Services divisions. Hence rates at the lower end of the grade scale have continued to rise.

5. All Vendor Types

The prices for software installation assistance indicated a considerable fall (of 19%) in the 1989/90 survey. This user resistance to paying 'extra' or 'high' software installation fees has resulted in profitability being impacted in certain vendor activities. Although specific implementation and installation rates were not researched this year, INPUT has noticed that the potential drain on profits represented by inefficiency or overrun at the implementation stage has once again become an issue with vendors.

The trend for 'installation' to become bundled, first noticed in 1988, has continued in the 1989/1990/1991 period although there is now (1991) a lesser amount of bundling of services generally, with a tendency for some form of packaging of the necessary hand holding or formal training to be included in system or software contract prices. A basic amount of assistance is often bundled into the contract and anything over and above this amount is charged at T&M rates. This practice is expected to spread since it has the advantages of the trends both for and against the bundling of services into products.

Exhibit II-1 summarises these rate changes while more detailed analyses are presented in Exhibits II-2 and II-3:

- Exhibit II-1 indicates movements in the average of the extremes of the ranges for each grade over the period since the previous survey, as well as giving the range average changes, and the estimated changes since last year (1990) calculated using respondents' anticipated price rises between 1989 and 1990 as collected in the previous survey,

- Exhibit II-2 shows the averages of all the ranges of all the respondents by type of vendor,

- Exhibit II-3 shows an equivalent chart to Exhibit II-2 for Training and Software Maintenance activities.

Rates are shown as daily (per diem) rates in pounds sterling and are exclusive of expenses and VAT.

Exhibit II-1

Rate Changes Reported Over the last 24 Months - 1989 Q4 to 1991 Q4

	CHANGE IN PER DIEM RATES (%)			
GRADE	AVERAGE LOWER LIMIT 1989-91	AVERAGE UPPER LIMIT 1989-91	AVERAGE OVERALL 1989-91	* AVERAGE OVERALL 1990-91
Consulting Principal Consultant	NA	NA	NA	NA
Senior Consultant/Project Mgr.	- 3.2%	- 4.7%	- 4.0%	-15.8%
Consultant/ Project Leader	+ 9.7	+ 7.6	+ 8.5	- 2.2
Systems & Programming Senior Analyst	+16.1	+16.8	+16.5	+ 6.9
Senior Programmer/Analyst	+17.3	+19.8	+18.6	+10.8
Programmer	+26.4	+27.0	+26.7	+15.2
Junior Programmer	NA	NA	NA	NA

Source: INPUT
* Estimated

Principal Consultant and staff at Director level has been introduced as a new category to match the practice met in the marketplace during the last few years.

Senior Consultant rates have shown a decrease of 4% since the previous study. INPUT estimates that this indicates a drop of 16% over the last 12 months after taking into account a rise of the order of 13% between 1989 and 1990. This fall is attributable to all the groups except for the smaller software houses (see Exhibit II-2). Equipment suppliers' rate dropped the least - by 3%; software product companies the most - by 11%. The decline in rates for this category is exaggerated by the fact that the figures for Principal Consultant and above were included in it in the previous survey.

Exhibit II-2

ALL GROUPS - SUMMARY 1989/1991
AVERAGE CHARGEOUT RATES & CHANGES
- UPPER MANPOWER GRADES

TYPE OF SUPPLIER	PRINCIPAL CONSULTANT/ DIRECTOR			SENIOR CONSULTANT/ PROJECT MANAGER			CONSULTANT/ PROJECT LEADER			SENIOR SYSTEMS ANALYST/ TECHNICAL SPECIALIST		
	1989 #	1991 #	Change 1989-91 %	1989 #	1991 #	Change 1989-91 %	1989 #	1991 #	Change 1989-91 %	1989 #	1991 #	Change 1989-91 %
EQUIPMENT SUPPLIERS	N/A	1017	N/A	786	732	-6.9%	583	628	7.7%	432	551	27.5%
MAJOR SYSTEMS INTEGRATORS & CONSULTANCIES	N/A	823	N/A	700	637	-9.0%	535	543	1.5%	451	437	-3.1%
SMALLER SOFTWARE HOUSES	N/A	602	N/A	495	694	40.2%	440	510	15.9%	336	467	39.0%
SOFTWARE PRODUCT COMPANIES	N/A	968	N/A	872	684	-21.6%	658	691	5.0%	550	691	25.6%
AVERAGES FOR ALL RANGE LIMITS IN SAMPLE	N/A	886	N/A	718	689	-4.0%	545	591	8.4%	443	515	16.3%

All Rates are in Pounds Sterling

Source: INPUT

Exhibit II-2 (Continued)

ALL GROUPS - SUMMARY 1989-1991

AVERAGE CHARGEOUT RATES & CHANGES

- LOWER MANPOWER GRADES

TYPE OF SUPPLIER	SENIOR PROGRAMMER/ANALYST			PROGRAMMER			JUNIOR PROGRAMMER		
	1989 #	1991 #	Change 1989-91 %	1989 #	1991 #	Change 1989-91 %	1989 #	1991 #	Change 1989-91 %
EQUIPMENT SUPPLIERS	416	500	20.2%	333	404	21.3%	N/A	274	N/A
MAJOR SYSTEMS INTEGRATORS & CONSULTANCIES	377	401	6.4%	281	356	26.7%	N/A	272	N/A
SMALLER SOFTWARE HOUSES	301	343	14.0%	259	289	11.6%	N/A	261	N/A
SOFTWARE PRODUCT COMPANIES	431	537	24.6%	342	446	30.4%	N/A	310	N/A
AVERAGES FOR ALL RANGE LIMITS IN SAMPLE	370	439	18.6%	292	370	26.7%	N/A	275	N/A

Source: INPUT

Consultants/Project Leaders at the upper and lower ends of the range are being charged at the same rates or 2% less this year (see Exhibit II-1) than in the fourth quarter of 1990. For many firms this is the most senior grade in which they have a reasonable number of resources. The overall cutting of the rate represents their response to the difficult market conditions of 1991.

Senior Analysts and Senior Programmers ' rates have continued to climb since our previous report averaging a 10% increase in 1990 and an almost 7% rise in 1991. These two middle grades have benefited during the current recession from the fact that staff in senior grades who could not be charged out at their full daily rate are being assigned to the team in these middle grade positions.

Continuation of the current UK recession into 1992 will mean that the squeeze on rates already felt at the top end of the scale will start to have impact further down the scale also. We expect to see much smaller or zero increases in these grades' rates next year.

In contrast Programmer rates (including rates for Junior Programmers) continued to surge forward increasing at both the upper and lower limits by over 25% since 1989, even making a 15% rise between 1990 and 1991. Over the long-term these increases are expected to steady at between 3% and 10% per annum, but in the short-term low-end rates are benefitting from the same recessionary effects noted for the middle grades.

The use of the Junior Programmer grade has become more common in 1991 and is allowing companies to charge more effectively for their less experienced staff. In previous years this grade was not analysed separately. Hence no rate changes can be calculated before next year.

Exhibit II-3 summarises the changes since the previous survey which have taken effect in the manpower-based areas of Training and Software Maintenance.

Exhibit II-7

SMALLER SOFTWARE HOUSES

No. or Name of Vendor	Principal Consultant/ Director		Senior Consultant/ Project Manager		Consultant/ Project Leader		Systems & Programming: Senior Systems Analyst	Systems & Programming: Senior Programr/ Analyst	Systems & Programming: Programmer	Systems & Programming: Junior Programmer	Systems & Programming	Use RSP Yes /No	Software Maintenance Agreement offered - % pa.	Training Price Range - Student Rates	Training Price Range - Trainer Rates
YEAR	RATES	Experience	RATES	Experienc	RATES	Experienc	RATES	RATES	RATES	RATES	Experien			RATES	RATES
1986	NK.	-	300-450 Often not available	12+ yrs	200-375	8+ yrs	180-275	120-250	90-225	NK.	. 6 months to 8 yrs . 130 pd. typical contract r	-	8-15	80-200	NK.
1987	NK.	-	250-550	7-15+ yrs	210-500	4 - 8+ yrs	195-400	135-350	125-295	NK.	. 5-8+ yrs . 3-6+ yrs . 2-4+ . 6 mths t 2 yrs	22% do	8-15	80-300 400 if custom	NK.
1988	NK.	-	350-450 375	N.K.	350-450 350	N.K.	300-420 290	250-320 300	150-270 240	NK.	. 2-8+ yrs . 4+ yrs . 1-3 . 1+ (jun.)	0% do	8-16 11.9	80-350 241	NK.
1989	NK.	-	300-800 495	2-15 yrs	300-750 440	2-8 yrs	250-550 336	140-480 301	105-430 259	NK.	. 2-8 yrs . 2-6 . 1-4 . - (jun.)	10% do	4-20 12.5	80-300 195	NK.
1990 Estimated Avge. O'all	NK.	-	600	-	480	-	375	320	270	-	-	-	5-20	100-300	-
RANGE 1991 Avge. O'all	375-820 602	6 - 15 yrs	550-935 694	5 - 10 yrs	300-880 510	2 - 7 yrs	350-645 467	140-525 343	105-430 289	200-380 261	. 2-5 yrs . 2-5 . 1-3 . 0-1	9% do. Up to 50%	5-25 14.3	100-275 198	75-1000 498
Comp.annual growth rate of range limits (%pa 1986-1991	NA	-	+13 to +16	-	+8 to +19	-	14 to 19	3 to 16	3 to 14	NA	-	-	-9 to +11	+5 to +7	NA

SOURCE: INPUT

* All Rates are in Pounds Sterling per day unless otherwise stated

Exhibit II-8

SOFTWARE PRODUCT COMPANIES

No. or Name of Vendor	Principal Consultant/ Director		Senior Consultant/ Project Manager		Consultant/ Project Leader		Systems & Programming: Senior Systems Analyst	Systems & Programming: Senior Programr/ Analyst	Systems & Programming: Program-mer	Systems & Programming: Junior Program-mer		Use RSP Yes /No	Software Maintenance Agreement offered - % pa.	Training Price Range - Student Rates	Training Price Range - Trainer Rates
YEAR	RATES	Experience	RATES	Experienc	RATES	Experienc	RATES	RATES	RATES	RATES	Experien			RATES	RATES
1986	NK.	-	375-900	15+ yrs	375-750	5-10 yrs	300-600	270-450	180+	NK.	. 4-6 yrs . 3+ . 1+	-	8-20 of current licence fee	Use credits 100-225 400+ on user site	NK.
1987	NK.	-	400-750	6+ yrs	300-600	4+ yrs	200-488	200-413	200-375	NK.	. 2-5 yrs on own products	44% do	7-15 of current product list price	175-400	NK.
1988	NK.	-	300-1200 665	3-5+ yrs	300-900 520	N.K.	250-640 380	250-450 350	285-400 340	NK.	. 2-5 yrs	0% do	10-15 13.7	125-1200 335	NK.
1989	NK.	-	450-1500 872	3-18 yrs	500-900 658	5-8 yrs	300-800 550	300-575 431	250-400 342	NK.	. 3-4 yrs . 2 . 1+ . - (Jun.)	0%	8-18 14.5	175-300 236.3	NK.
1990 Estimated Avge. O'all	-	-	900	-	700	-	630	500	400	-	-	-	5-18	150-450	-
RANGE 1991	480-2000	4 - 20 yrs	480-1000	3 - 10 yrs	500-900	1 - 5 yrs	550-800	350-750	350-550	250-350	. 5-10 yrs . 2-5 . 3m-6 . 2+	73% do.	5-20	140-495	700-1950
Avge. O'all	968		684		691		691	537	446	310		20-80%	13	248	1169
Comp.annual growth rate of range limits (%pa 1986-1991	NA	-	+5 to +2	-	+6 to +4	-	13 to 6	5 to 11	14 to 13	NA	-	-	-9 to 0	+7 to +17	NA

SOURCE: INPUT

* All Rates are in Pounds Sterling per day unless otherwise stated

Exhibit II-3

ALL GROUPS - SUMMARY 1989-1991

AVERAGE CHARGEOUT RATES & CHANGES

- OTHER MANPOWER-BASED TASKS

TYPE OF SUPPLIER	SOFTWARE/SYSTEMS TRAINING - PER STUDENT-DAY RATES			SOFTWARE/SYSTEMS TRAINING - PER TRAINER-DAY RATES			SOFTWARE/SYSTEMS MAINTENANCE CHARGES		
	1989 #	1991 #	Change 1989-91 %	1989 #	1991 #	Change 1989-91 %	1989 #	1991 #	Change 1989-91 %
EQUIPMENT SUPPLIERS	184	198	7.6%	N/A	1124	N/A	13.6	21.2	55.9%
MAJOR SYSTEMS INTEGRATORS & CONSULTANCIES	207	238	15.0%	N/A	654	N/A	13.95	12.8	-8.2%
SMALLER SOFTWARE HOUSES	195	199	2.1%	N/A	498	N/A	12.5	14.3	14.4%
SOFTWARE PRODUCT COMPANIES	236	249	5.5%	N/A	1169	N/A	14.5	13.2	-9.0%
AVERAGES FOR ALL RANGE LIMITS IN SAMPLE	206	215	4.4%	N/A	898	N/A	13.88	15.8	13.8%

Source: INPUT

Training continues to be a moderately strong growth sector which is now being exploited by all vendor companies with average rate increases indicated to be between 1% and 7% in per student-day rates. There is a decided trend towards offering customised courses on user sites. These courses are increasingly being charged for in terms of the number of trainer-days needed to train a small group of user staff (say up to 5 or 10). In some cases this is also in response to a fall-off in the number of applicants for standard training school courses; in other words it is a case of vendor push rather than market pull.

Software Maintenance charges have meanwhile been exhibiting two opposing or contrary features depending on the type of vendor and his service portfolio:

- Equipment Suppliers and the Smaller Software Houses have increased their overall percentage rates in order to counter the effect of decreasing unit software prices,

- Major Systems Integrators and Software Product companies have decreased their percentage rates and increased the amount of support which is chargeable at Professional Services daily rates.

In general for all activities over the last 12 months, the Software and Services Industry in the UK has suffered the intense shock of the deepening UK recession. Professional Services companies at the top-end of the market have suffered worst because of the one-off nature of much of their revenue streams. In spite of this slump in the market, daily rates have for the most part continued to rise although much more slowly than in previous years. This is partly in answer to the need to increase the baseline prices from which vendors are now having to negotiate discounts - a thing that was practically unheard of only three years ago.

Higher fees have been charged, in part this year, by moving staff down the charge bands as evidenced by the lowering of the average quoted experience levels in four out of the top five bands in the grade scale; ie. Senior Consultants through to Senior Programmers.

Some users may be paying more for more experienced personnel, although those members of staff are being charged at a lower rate than in 1990. This reverses the trend of previous years.

Some 51% of respondents indicated that they were experiencing some market pressures to discount their fee rates. More of the larger systems consultancies and product companies groups experienced these pressures (60% and 55% respectively) than do the other two groups (54% and 36% of equipment suppliers and smaller software houses respectively). Willingness to discount on the basis of volume of fees appears to be the most frequently used method, but no clear pattern of discounting emerges with all methods and a lot of adhoc discounting being cited by respondents.

Hardware suppliers tend to discount by customer and increasingly by contract length for work quoted at fixed price. Software product companies favour a formalised discount structure based on the volume of fees.

No regional variations in charge-out rates were indicated, since the question was not specifically explored by the questionnaire. However, respondent comments indicate differentials lying between 15% and 25% lower than London rates for work undertaken from regional offices.

Premium charges for rare skills are being used more frequently in 1991, as all types of vendors seek to take higher fees in niches where greatest revenue and profit ratios can be found. Premiums are being charged by more Equipment Suppliers (31% compared to 8% in 1989), but by less Major Systems Integrators & Consultancies (20% against 48% in 1989). They are being used by only 9% of Smaller Software Houses but by a massive 73% of the Software Product companies. This is a particularly significant change for this latter group, who at the time of our previous survey claimed that all their skills were 'rare' and that their pricing reflected this fact.

The total U.K. market for professional services is now growing at close to 8% and is set to reach £2.2 billion in calendar 1991.

About half of this growth is coming from demand for more work and the rest from inflationary pressures leading to increased rates. Since more professional services work is now related to specific products it is classified by INPUT under the submode of IS Consultancy. This subsector is growing faster at 12% pa. than either Education and Training (growth 9% pa.) or Custom Software Development (6%). This year INPUT has followed the same format as last year in the detailed tables showing the individual company charge-out rates obtained by interview from the anonymous members of our vendor panel. The data on any one vendor is again split into three tables:

- Tables Ax for Upper Staff grades,
- Tables Bx for Lower Staff grades (including Other Grades which are not analysed),
- Tables Cx for Other Activities.

The tables have again been positioned at the back of the report this time in Appendices A, B and C. The summary table has again been retained in this chapter as Exhibit II-4. Although it is in a similar format to last time, this year's now reflects precisely the full seven grades and three other activities contained in the Appendices.

There are four Upper Staff grades:

- Principal Consultant and above (ie. up to Associate Director and Director level).
- Senior Consultant/Project Manager (renamed to reflect market practice.
- Consultant/Project Leader (renamed to reflect market practice),
- Senior Systems Analyst/Senior Technical Specialist.

There are four Lower Staff grades:

- Senior Programmer/Analyst/Technical Specialist,
- Programmer,
- Junior Programmer (this grade is now quoted separately on the questionnaire and analysed separately in the summary tables),
- Others, usually used for non-professional staff and hardware engineering grades, sometimes, but rarely, quoted and not aggregated into any of the summary tables.

Other Activities listed are:

- Software Maintenance and Support,
- Training, at per Student-day rates,
- Training, at per Trainer-day rates.

For each series of tables (prefixed A, B or C) there are four tables of charge-out rates, one for each of the four types of supplier:

- Tables x1 gives the rates and associated data for 13 equipment suppliers, whose professional services, excluding software maintenance, revenues in 1991 amounted to £ 254 million,
- Tables x2 contains the same details for 9 major computing services companies, including major systems integrators and large multi-services vendors , whose professional services revenues amounted in 1991 to £ 257 million,
- Tables x3 shows the equivalent data for 11 of the smaller software houses. The dividing line between major and smaller software houses has this year again been set by revenue size ie. smaller houses had a 1991 U.K. derived revenue of less than £ 6 million. These firms' professional services revenues amounted in 1991 to £ 14 million,

- Tables x4 covers the details for 10 software product companies. These are offering a range of products on equipment of different sizes - principally mainframe or minicomputers - and their professional services revenues in 1991 amounted to £ 63 million.

Exhibit II-4 shows the ranges of values and their average changes from 1990 to 1991 found to apply to each of the four types of vendor, together with the ranges applicable to the whole sample. The annual increases/decreases have been calculated against INPUT's estimates of the average rates obtaining in 1990, when this survey was not conducted.

The rates quoted are exclusive of VAT and, where on-site visits or on-site work are involved, are exclusive of travelling and subsistence expenses.

B
Six-Year Period Comparison

Exhibits II-5 to II-8 tabulate the summary lines for each of the latest six years in which this survey has been conducted for each of the four types of vendor, one type to each table. The bottom line on each table gives the Compound Annual Growth Rates (CAGRs) in percent for each range of rates over the five-year period 1986-1991 inclusive. A 5-year CAGR is calculated as:- the 5th root of (the 1991 value divided by the equivalent 1986 value) minus 100%.

Exhibit II-9 gives the equivalent tabulation for the ranges of rates calculated over all vendor types.

This set of tabulations is being maintained on a 6-year rolling forward basis and allows 5-year average changes to be easily calculated from the latest year's report. Key market characteristics highlighted by this analysis are:

- Most upper limit rates have gone up by a CAGR close to, or in, double figures. This is true for all suppliers other than the major systems integrators, who have increased only their programmer rates by more than single figures ie. 10%,

- Rates at the lower limits of the ranges have also pushed up but not so fast, ie. mostly with CAGRs in single figures,

- The rate changes for the major systems integrators and consultancies have been depressed most by the current recession.

- Overall (ie. for all groups) the upper limit rates have been rising by between 7% (lower grades) and 15% (upper grades).

Exhibit II-4

ALL TYPES OF VENDOR (1991 RATES & CHANGES FROM 1989 AND 1990 TO 1991)

No. or Name of Vendor	Principal Consultant/ Director		Senior Consultant/ Project Manager		Consultant/ Project Leader		Systems & Programming: Senior Systems Analyst	Senior Programr/ Analyst	Program-mer	Junior Program-mer		Use RSP %	Software Maintenance Agreement offered - % pa.	Training Price Range - Student Rates	- Trainer Rates
	RATES	Experience	RATES	Experienc	RATES	Experienc	RATES	RATES	RATES	RATES	Experience			RATES	RATES
RANGES OF EACH TABLE (Ave.change since 1989)							(a)	(b)	(c)	(d)					
1991 EQUIPMENT SUPPLIER	600-2000	7-15+ yrs	462-1500	4-15 yrs	450-1500	2.5-10 yr	336-1225	315-980	200-700	180-350	. 1-8 yrs . 1-8 . 1-6 . 0-1	31% do. Up to 50%	9-100% (11-31%)	100-300	498-5000
Ave.change	NA		- 3%		+ 4%		+13%	+10%	+ 6%	- 4%				+ 4%	+ 27%
1991 SYSTEMS INTEGRATOR/ CONSULTANCY	468-1500	10-20 yrs	400-960	7-12 yrs	350-700	5-9 yrs	300-625	200-600	175-575	100-550	. 4-8 yrs . 2-7 . 1-5 . 0-4	20% do	5-25% (9-16%)	100-350	250-1500
Ave.change	NA		- 5%		+ 1%		- 2%	+ 3%	+ 8%	+ 16%		-		- 5%	+ 21%
1991 SMALLER SOFTWARE HOUSE	375-820	6-15 yrs	550-935	5-10 yrs	300-880	2-7 yrs	350-645	140-525	105-430	200-380	. 2-5 yrs . 2-5 . 1-3 . 0-1	9% do. Up to 50%	5-25% (14%)	100-275	75-1000
Ave.change	NA		+18%		+ 8%		+13%	+ 7%	+ 6%	NA				+ 1%	+ 17%
1991 SOFTWARE PRODUCT COMPANY	480-2000	4-20 yrs	480-1000	3-10 yrs	500-900	1-5 yrs	550-800	350-750	350-550	250-350	. 5-10 yrs . 2-5 . 3m-6 . 2+	73% do. 20-80%	5-20% (11-15%)	140-495	700-1950
Ave.change	NA		-11%		+ 2%		+12%	+12%	+ 14%	NA				+ 2%	+ 8%
ALL TYPES Range	375-2000	4-20 yrs	400-1500	3-15 yrs	300-1500	1-10 yrs	300-1225	140-980	105-700	100-550	. 1-10 yrs . 1-8 . 3m-6 . 0-4	33% do.	5-100%	100-495	75-5000
Avges. of Range limits	788-984	10.7-14	628-750	8-8.3	542-641	5.8-7.9	468-563	400-478	340-400	242-308		1 - 80%	11-20%	180-249	748-1047
Change in % in avge. of whole range since 1990	NA	-	-16%	-30%	- 2%	-10%	+ 7%	+11%	+ 15%	NA	a) - 6% b) - 2% c) + 3% d) +54%	-	- 2%	+ 3%	-

SOURCE: INPUT

* All Rates are in Pounds Sterling per day unless otherwise stated.

Exhibit II-5

EQUIPMENT SUPPLIERS

No. or Name of Vendor	Principal Consultant/ Director		Senior Consultant/ Project Manager		Consultant/ Project Leader		Systems & Programming: Senior Systems Analyst	Senior Programr/ Analyst	Program-mer	Junior Program-mer		Use RSP Yes /No	Software Maintenance Agreement offered - % pa.	Training Price Range - Student Rates	- Trainer Rates
YEAR	RATES	Experience	RATES	Experienc	RATES	Experienc	RATES	RATES	RATES	RATES	Experien			RATES	RATES
1986	NK.	-	320-600	8-20+ yrs	280-500	7-10+ yrs	220-575	190-540	110-500	NK.	. 2-10+ yr . Price of task dependen	-	. 3-40 . (10-15 more usual)	80-245 standard Customised dearer	NK.
1987	NK.	-	400-800	8-15+ yrs	275-675	5-10+ yrs	275-675	210-540	115-365	NK.	. 5-8+ yrs . 2-7 . 0-3 . Some tas dependen	25% do	. 1-40 (9-21 is avge.)	100-500 (172 average)	NK.
1988	NK.	-	270-755 555	6-10+ yrs	220-680 470	6-10+ yrs	350-540 435	220-540 345	175-370 275	NK.	. 2-8+ yrs . 2-4+ . 1-3+ . 6m -1+ (jun.)	34% do	5-120 5-25 12.5	80-375 173	NK.
1989	NK.	-	485-1260 786	5-12+ yrs	270-1260 583	2-10+ yrs	220-600 432	220-735 416	165-460 333	NK.	. 2-15 yrs . 2-7 . 1-4 . 6m-1 (jun.)	8% do	5-100 14	100-400 183.8	NK.
1990 Estimated Avge. O'all	NK.	-	850		640		500	450	380	NK.	-	-	7-100	100-350	NK.
RANGE 1991 Avge. O'all	600 - 2000 1017	7-15+ yrs	462-1500 732	4-15 yrs	450-1500 628	2.5-10 yrs	336 - 1225 551	315-980 500	200-700 404	180-350 274	. 1-8 yrs . 1-8 . 1-6 . 0-1	31% do. Up to 50%	9-100 21	100-300 198	498-5000 1124
Comp.annual growth rate of range limits (%pa 1986-1991	NA	-	+8 to +20	-	+10 to +25	-	9 to 16	11 to 13	13 to 7	NA	-	-	+25 to +20	+5 to +4	NA

SOURCE: INPUT

* All Rates are in Pounds Sterling per day unless otherwise stated

Exhibit II-6

MAJOR SYSTEMS INTEGRATORS & CONSULTANCIES

No. or Name of Vendor	Principal Consultant/ Director		Senior Consultant/ Project Manager		Consultant/ Project Leader		Systems & Programming					Use RSP	Software Maintenance Agreement offered	Training Price Range	
							Senior Systems Analyst	Senior Programr/ Analyst	Programmer	Junior Programmer		Yes /No	- % pa.	- Student Rates	- Trainer Rates
YEAR	RATES	Experience	RATES	Experienc	RATES	Experienc	RATES	RATES	RATES	RATES	Experien			RATES	RATES
1986	NK.	-	300-900	8 - 20+ yrs	250-600	5+ - 15+ yrs	180-450	150-400	130-350	NK.	. 3-10 yrs . 2-7 . 0-5 dependen	-	. 5-20 Occasionally bundled at flat rate	50-350 Customised at top end	NK.
1987	NK.	-	385-1200	5 - 20+ yrs	320-600	5 - 10+ yrs	230-500	170-450+	105-350	NK.	. 5-8+ yrs . 3.5-10 y . 2-6+ . 0-4+	67% do	10-20 (12 typical)	100-220 350-500 if custom	NK.
1988	NK.	-	400-1250 680	5 - 15+ yrs	300-750 505	6 - 10+ yrs	300-500 420	250-420 335	140-350 270	NK.	. 2-8+ yrs . 3.5-8 yr . 2-8 . 0-4 (jun.)	55% do	10-15 12.8	200-250 210	NK.
1989	NK.	-	325-1300 700	5 - 25 yrs	300-960 535	3 - 15 yrs	250-960 451	244-570 377	150-560 281	NK.	. 2-10 yrs . 1-7 . 0-5 . 0-1 (jun.)	48% do	2-20 14	110-375 206.5	NK.
1990 Estimated Avge. O'all	NK.	-	700	-	560	-	440	380	300	NK.	-	-	3-25	120-350	NK.
RANGE 1991	468-1500	10 - 20 yrs	400-960	7 - 12 yrs	350-700	5 - 9 yrs	300-625	200-600	175-575	100-550	. 4-8 yrs . 2-7 . 1-5 . 0-4	20% do	5-25	100-350	250-1500
Avge. O'all	984		637		543		437	401	356	272			12.5	188	654
Comp.annual growth rate of range limits (%pa 1986-1991	NA	-	+6 to +1	-	+7 to +3	-	11 to 9	6 to 8	6 to 10	NA	-	-	0 to +5	15 to 0	NA

SOURCE: INPUT

* All Rates are in Pounds Sterling per day unless otherwise stated

Exhibit II-9

ALL TYPES OF VENDOR

No. or Name of Vendor	Principal Consultant/ Director		Senior Consultant/ Project Manager		Consultant/ Project Leader		Systems & Programming: Senior Systems Analyst	Systems & Programming: Senior Programr/ Analyst	Systems & Programming: Programmer	Systems & Programming: Junior Programmer	Systems & Programming	Use RSP Yes /No	Software Maintenance Agreement offered - % pa.	Training Price Range - Student Rates	Training Price Range - Trainer Rates
YEAR	RATES	Experience	RATES	Experienc	RATES	Experienc	RATES	RATES	RATES	RATES	Experien			RATES	RATES
1986	NK.	-	300-900	8+ yrs	200-750	5+ yrs	180-600	120-540	90-500	NK.	. 4-10 yrs . 2-7 . 6 mths - 5 yr	-	8-20 normal range	50-350	NK.
1987	NK.	-	250-1200	5+ yrs	210-675	4+ yrs	195-675	135-540	105-375	NK.	. 3-10 yrs . 2-7 . 0-4+	40% do	7-20 normal range	80-500	NK.
1988	NK.	-	270-1250	3+ yrs	220-900	3+ yrs	300-640	220-540	175-370	NK.	. 2-8+ yrs . 1-8+ . 0-4	45% do	5-120 8-14 ave. 5-20 most	80-1200	NK.
1989	NK.	-	300-1500 718	2-25 yrs	270-1260 545	2-15 yrs	220-960 443	140-735 370	105-560 267	NK.	. 2-15 yrs . 1-7 . 0-5 . 0-1 (Jun.)	23% do	2-100 16	80-400 206	NK.
1990 Estimated Avge. O'all	-	-	818	-	605	-	482	395	321	-	-	-	3-100	100-450	-
RANGE 1991	375-2000	4 - 20 yrs	400-1500	3 - 15 yrs	300-1500	1 - 10 yrs	300 - 1225	140-980	105-700	100-550	. 1-10 yrs . 1-8 . 3m-6 . 0-4	33% do.	5-100	100-495	75-5000
Avge. O'all	886		689		591.5		515.5	439	370	275		1-80%	15.5	219	898
Comp.annual growth rate of range limits (%pa 1986-1991	NA	-	+6 to +11	-	+8 to +15	-	11 to 15	3 to 13	3 to 7	NA	-	-	-9 to +38	+15 to +7	NA

SOURCE: INPUT

* All Rates are in Pounds Sterling per day unless otherwise stated

C
The Manpower Charge-Out Index (MCI)

The 1989/90 Manpower Pricing survey provided for the first time a single index which acts as a national guide to the service pricing levels existing in the U.K. software industry. In line with INPUT's aim to increase the scope of the survey progressively in terms of the sample size and its coverage of the market:

- This year's survey includes analysis of seven professional staff grades,
- It covers some 27% of the software-related Professional Services sector in terms of revenues obtained in 1991 by the responding companies,
- The staff employed by the responding companies approached 43,000 and of these some 14,000 could be directly attributed to Software Development and Support activities,
- This body of professional staff is an estimated 25% of the equivalent total employed in the U.K. computing services sector.
- INPUT is continuing to provide the manpower charge-out index calculated this year on a composite basis across the seven grades used in the survey.

The composite MCI (Manpower Charge-out Index) was set at 100 for 1988. It increased to 109.6 in 1989, and has now reached 125.4 at the end of 1991. The index is estimated according to rates obtaining at the end of each year. The increases are derived from a weighted aggregation of the average rate increases in the seven grades as illustrated in Exhibit II-10. The weighting factor is based upon the numbers of staff in each grade in the sample and the estimated revenue stream associated with each grade.

The annual MCI change becomes an important yardstick in comparing and setting competitive rates for both long- and short-term computing services projects in Systems Integration, Turnkey Systems and other consulting or system development activities.

Exhibit II-10

Changes in the MCI (Manpower Charge-Out Index) between 1989 Q4 and 1991 Q4

	Average Rate Change			
Grade	To End 1989	To End 1990	To End 1991	1991 Weight Factors
Consulting Principal Consultant	NK	NK	NK	2.3%
Senior Consultant	+16.9%	+14.0%	-15.8%	9.3%
Consultant/Project Leader	+13.1%	+10.9	-2.2	18.7%
Systems & Programming Senior Analyst	+10.5	+9.0	+6.9	28.%
Senior Programmer/Analyst	+9.8%	+7.0%	+10.8	25.7%
Programmer	+5.4	+10.0	+15.2	14%
Junior Programmer	NK	NK	NK	2%
Overall Average	**+9.61%**	**+9.03%**	**+4.91%**	**100%**
MCI Index (1988 = 100)	109.61	119.51	125.38	-
Change in Composite Index (MCI)	+9.61	+9.9	+5.87	-

Source: INPUT

III Analysis of Vendors' Manpower-Based Activities

This chapter presents the results of analysis of the 45 vendor interviews obtained. The format used follows the sequence of the main questions in the questionnaire, a copy of which is attached at Appendix D. Charts are included to show the overall sample analyses, while variations between the different types of company are dealt with in the text.

A
Installation and Implementation

Although these areas have in recent years proved less difficult for suppliers to handle with profit, INPUT has found further evidence that during the last 12 months vendors have needed to keep the problems involved under control. The principle strategy adopted has been to separate out the closely product-related activities associated with installing product from the more application-related activities of helping customers implement systems in their own specific business environments:

- Installation of standard products/systems is often handled by the user with the help of training and documentation.

- Implementation is increasingly often charged for at daily T&M rates.

A key trend which was first noted in our previous report is that the software product vendors are increasing the amount of consultancy which is included in their "start-up packages" comprising product, training and advice. This trend has now also been transferred to the maintenance package.

We analyse across five different installation methods in use in the market-place:

- Installation assistance and advice up to a maximum number of days or hours is sometimes given free-of-charge or bundled into the price of the product or project (this is nominated code B for Bundled in Exhibit III-1 below),

- Installation charges are set at a daily rate taken from the suppliers' time and materials tariff; sometimes a maximum, or ceiling, number of days is estimated by the supplier in advance of the assignment being awarded (code DR for Daily Rate),

- A fixed price is given for the implementation work and this fixed price is irrespective of the cost of the product or the size of the project being implemented (code FP for Fixed Price),

- A price for the implementation is shown as an item in a total project estimate. This method is common for tailored software projects and for turnkey systems (code IC for Itemised Cost),

- A user installs the software himself from a machine-readable medium (tape, disk, diskette, CD-ROM) using manuals, on-line training aids etc. (code UI for User Installed). This method also includes software tele-delivered across a network linking vendor to user. In this last case the user is normally responsible for final installation/configuration of the product/piece of software.

The breakdowns across these methods, this year (1991) and in the last survey (1989/90), are given in Exhibit III-1 below.

Exhibit III-1

Installation Charging Methods

(% of companies mentioning using each method)						
	B 91(89)	DR 91(89)	FP 91(89)	IC 91(89)	UI 91(89)	Other 91(89)
Equipment Suppliers	38(42)	92(50)	15(8)	46(25)	62(42)	8(8)
Major Systems Integrators/ Consultancies	40(35)	60(65)	30(16)	60(18)	20(11)	0(4)
Smaller Software Houses	36(50)	73(70)	18(50)	45(30)	27(10)	0(0)
Product Companies	45(60)	73(64)	9(36)	18(27)	82(45)	0(0)
All Groups	41	77	27	43	50	2

In 1989/90 there was a definite trend to unbundle installation from other product or project costs, being exhibited by all except the software product companies. This year the software product companies again exhibit a different pattern to the other groups of vendors. Product companies have moved away from the bundled approach and towards the user self-installation option with installation by the vendor then becoming a chargeable extra. Daily rates are still the most favoured method for all groups and now especially for the equipment suppliers. Users are being strongly encouraged to install systems themselves by all groups, judging by the increasing numbers of mentions, but this is particularly true of the equipment and product suppliers.

Use of an Itemised Cost in an overall quotation for Installation/Implementation shows a significant increase for all groups, but especially for equipment suppliers and major systems integrators.

The profitability of installation is analysed below in Exhibit III-2.

Exhibit III-2

Installation as profit/break-even/cost activity

(% of companies stating)				
	Profitable 91(89)	Break-even 91(89)	Cost 91(89)	N/A 91(89)
Equipment Suppliers	62(92)	15(8)	23(0)	0(0)
Major Systems Integrators & Consultancies	66(68)	22(14)	12(18)	0(0)
Smaller Software Houses	73(50)	9(20)	18(30)	0(0)
Software Product Companies	37(45)	27(36)	36(19)	0(0)
All Groups	59(66)	18(18)	23(16)	0(0)

This analysis shows that installation and implementation have become less profitable activities across the sample since 1989/90. The smaller software houses sample, although including some turnkey solution companies which have in the past tended to recover these costs within a 'packaged contract' structure, have moved strongly away from their traditional attitude towards treating the implementation phase as profitable in its own right.

Equipment suppliers have in theory abandoned the "installation as a cost" approach. They are almost entirely profit-centre orientated but appear to have had difficulty in making the policy stick, since the number claiming profitable installation has declined sharply.

Project-based implementation is still a profitable area overall. Yet all groups except the smaller software houses report a decline in profitability in this area. Software product installation, on the other hand, is more often treated as a necessary service. Often suppliers do not wish to involve their own highly skilled employees, so users are encouraged to do it themselves wherever possible.

This sets into reverse the trend reported on in 1990 whereby the users were doing less "DIY" implementation because they thought that the product should be 'up and running' once installed. One of the major driving forces in this issue is the spread of open systems implemented on downsized, often UNIX-based, equipment. Software for this sector is moving towards becoming a shrink-wrapped product with a very basic level of implementation support. The irony is that because of the complexity of incompatible UNIX variants and the lack of networking expertise, many users are singularly incapable of implementing anything except simple application on standard platforms. This presents a significant Professional Services opportunity. Because full unbundling is often unacceptable to users, respondents indicate that extra costs need to be offset against their more profitable activities such as training, consultancy or maintenance contracts.

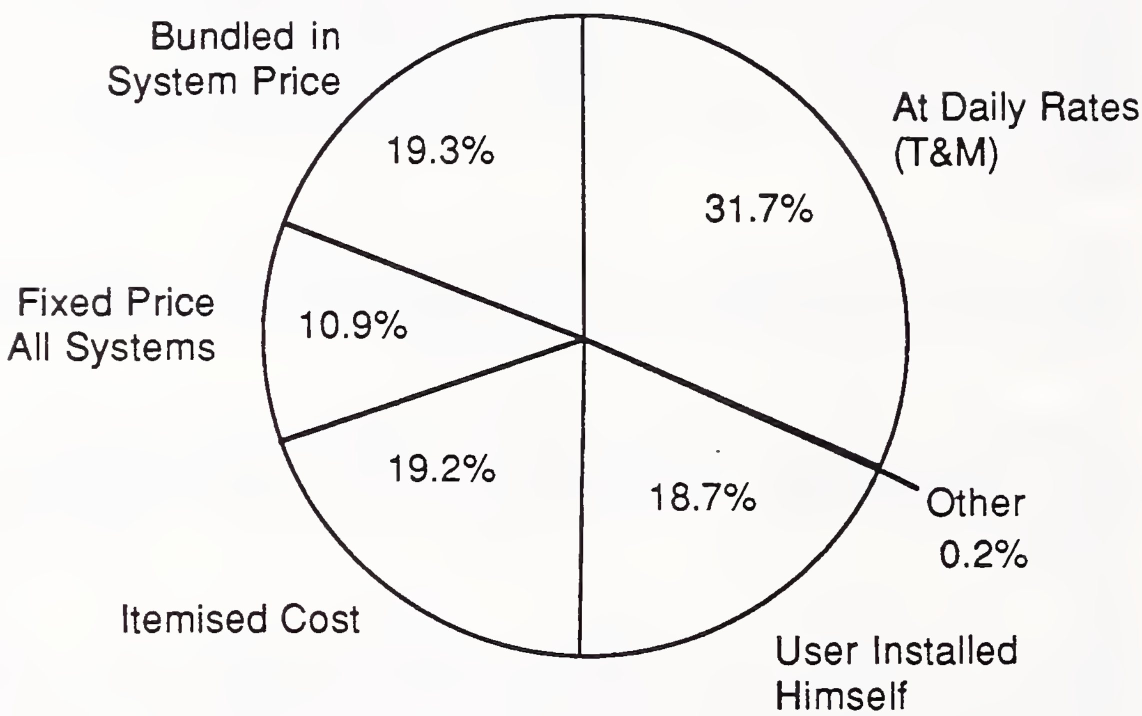
Software customisation is usually clearly highlighted to customers by the vendors, and charging for it is profitable for most companies that do so. Software product vendors are looking to increase revenue in this area.

Equipment suppliers and major Systems Integrators/Consultancies often 'include' a free-training allowance. Small software houses and Software Product companies nearly always charge for training. This area is another one where profit is likely in future to be eroded.

Exhibit III-3 illustrates the breakdown by charging method of the sample's charging practices in the matter of installation. The methods have been sequenced in order of importance. Where a vendor reported use of more than one method the vendor's contribution to the aggregates has been split according to our estimate of the importance of each method to that vendor, in terms of the percentage of products/systems installed/implemented using each method.

Exhibit III-3

Charging for Installation and Implementation



Daily rates (T&M) has this year again taken first place in importance over the bundled method, with nearly one-third of respondents (32%) using this method (31% in 1989/90).

The "DIY" option (where the user himself installs a product from a magnetic medium) was placed fifth in importance (behind both Itemised Costs and Fixed Price) having risen in favour from 14% in 1989/90 to almost 19% this year. Customers of software product companies and equipment suppliers account for most of the self-installation. Since there is a tendency to distinguish between installation and implementation (as noted above), user installation can often act as a preliminary to further chargeable application-orientated implementation services. This applies to all groups as evidenced by the rise in the use of daily rates as a second most favoured option when it is not the first.

Nineteen percent of the sample favoured the bundled installation method (down from 22% in 1989/90). Almost 19% charged for implementation as an item of cost in a total project cost; up from the 15% shown in 1989/90. Systems integrators and software houses have shown a trend over the last few years of this survey to unbundle installation from the main body of the software production. This trend continues.
The fixed price method has fallen in popularity this year - 11% against the 15% recorded in 1989/90.

In the sample taken as a whole 59% (in 1989/90 it was 66%) of respondents saw installation as a profitable activity. Eighteen percent again saw installation as a break-even activity, while 23% saw installation as a 'cost' which may be recovered elsewhere. Exhibit III-4 lists the important vendor comments on these activities. They illustrate well the conflicting forces which operate in software projects at the crucial implementation stage.

Exhibit III-4

Comments on Installation/Implementation

- Yes, we will adopt a more aggressive approach to T&M billing
- Some are profitable, yes; we are making more installation charges than before especially for smaller items
- Not profitable for Open Systems; therefore most UNIX customers install themselves. This is the trend
- Installation is only 1% of project cost - probably achieved at break-even. Bundle 2 or 3 man-days in
- We install new users' systems; they install updates. We charge extra for specials
- Installation by us is a formal service option
- Profitable installation occurs in only 20% of cases
- Looking at tele-delivery on-line. Customers will favour this. Easy for applications difficult for systems
- Self-installation is declining but still fairly common
- Bundled installation is at a fixed price - a necessary part of the service
- Selling operating system upgrades as a service package
- The average UNIX user is not capable of installing and configuring his own system
- Have been setting up business units as profit centres with return on revenue objectives
- Trend to unbundle installation

Exhibit III-4 (Cont'd)

Comments on Installation/Implementation (Cont'd.)

- Implementation as a separate activity is only profitable in the minority of cases where we charge T&M
- Only profitable if at T&M rates - therefore go for that option
- Implementation is where most value-added is. Clients mostly can't do it
- Customers insist on a fixed price for implementation. We insist they take some training (which is chargeable)
- We are going to make more installation charges than before especially for the smaller items
- We have made changes to ensure installation is profitable
- Installation is worth £800,000 a year to us in revenue
- Installation rates are raised each year
- Few users need our help. We are making it so easy for them
- Having installation as a bundled cost saves on our support costs subsequently. We need to be off-site within five days
- Try to sell 10-15 days implementation at daily rates
- Balance installation cost with maintenance charges
- The pressures are there but bundled implementation is still profitable
- Encourage new users to take a 1-day installation package plus training. It's their choice
- Standard products are break-even

B
System/Software Maintenance

Maintenance is taken to include all ongoing support and improvements to a software system or product during its lifetime. This definition therefore covers:

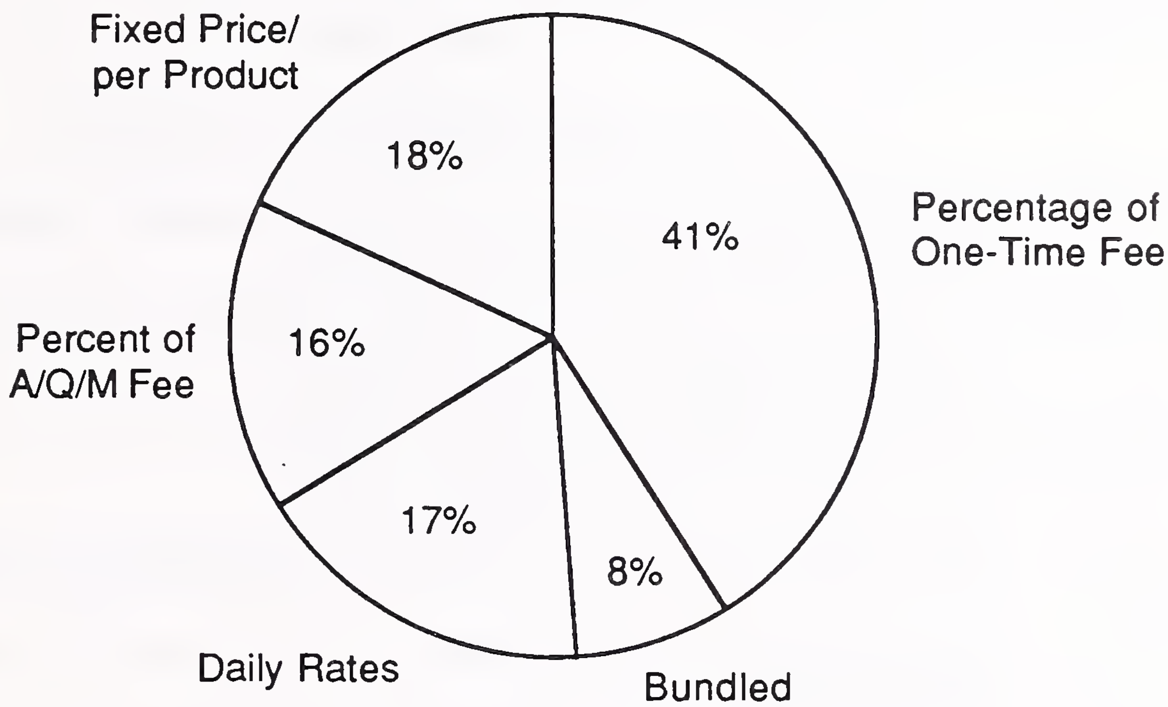
- Post-installation or post-delivery warranty,
- Telephone support either to users or to third-parties in the distribution chain,
- Problem report procedures for suspected bugs,
- Entitlement to problem fixes and new releases,
- Provision of agreed enhancements to system functionality,
- Regular visits for consultation, progress meetings or on-site support and training,
- Provision of remote diagnostics/support facilities,
- On-site call-out on demand to troubleshoot and/or install temporary fixes or patches,
- Provision of access to vendor-maintained databases of problems encountered and/or fixed,
- Other miscellaneous functions ranging from newsletters to discounts on other services not included in the maintenance agreement.

Exhibit III-5 shows the breakdown of vendor offerings by charging method:

- Setting a tariff based on a percentage of the current initial product licence fee is the favourite method, used as the primary method by 41% of the sample,
- Setting a fixed price, either on a cost plus basis per product or for maintaining the product irrespective of its purchase price has continued to rise in popularity since 1988, now at 18% (13% in the last survey up from 11% in 1988),
- Use of daily rates on a time and materials basis (at 17%) is also more common than in 1989/90 (12%),
- The method using a percentage of a recurring periodic annual, quarterly or monthly (A/Q/M) fee is chosen by 16% of respondents' offerings,
- Inclusion in a bundled price (8%), is now slightly less favoured (it was 9% in the last survey).

Exhibit III-5

Charging of Vendor Software Maintenance Offerings



The rise in the use of daily time and materials rates indicates an increase in the frequency of adhoc software maintenance on demand. The percentage of a 1-time license fee method was the leading method in all four subsamples of companies, but it was particularly strongly favoured in software product companies (82% of that group used it).

Exhibit III-6 lists some vendor comments on charging methods.

Exhibit III-6

Comments on Maintenance Charging

- Based on value and complexity of software and our willingness to support (phase-out products are more expensive)
- Annual fees range from £ 20 or £ 30 to £ 500 or £ 600 by product. Per customer the range is £ 1,500 to £ 10,000
- It is mandatory to have a support contract
- T&M is a lesser proportion but growing, for customised products especially
- T&M used only if customer wanted extras to standard maintenance (ie. not in contract terms)
- Company is moving towards compulsory maintenance contracts
- A percentage of current licence fee (15%). Customers buy licence (1-time) but the percentage is based on what licence fees are being charged for new licences. The percentage is stable
- Annual fees are varied and tailored
- All methods to some extent. Bottom-end as 1-time fee; Top-end as part of rental including upgrades
- Twelve month warranty, ie. first year free, subsequent years 15% of current price of product
- By annual royalty; percentage of purchase price. Amount indexed each year by RPI; some are at T&M rates
- An annual contract but payments charged quarterly. Based on the number of users

Exhibit III-7 shows the facilities offered by vendors in the area of basic software maintenance, comparing the equipment suppliers with the other three types of vendor:

- Forty-six percent of Equipment Suppliers offer three or more levels of support contract,

- Thirty-three percent of Systems Integrators & Consultancies offer two or three levels of maintenance contract. This is a move towards more formality and indicates that these companies are following the example of the hardware suppliers on the road to greater formality in the area of support,

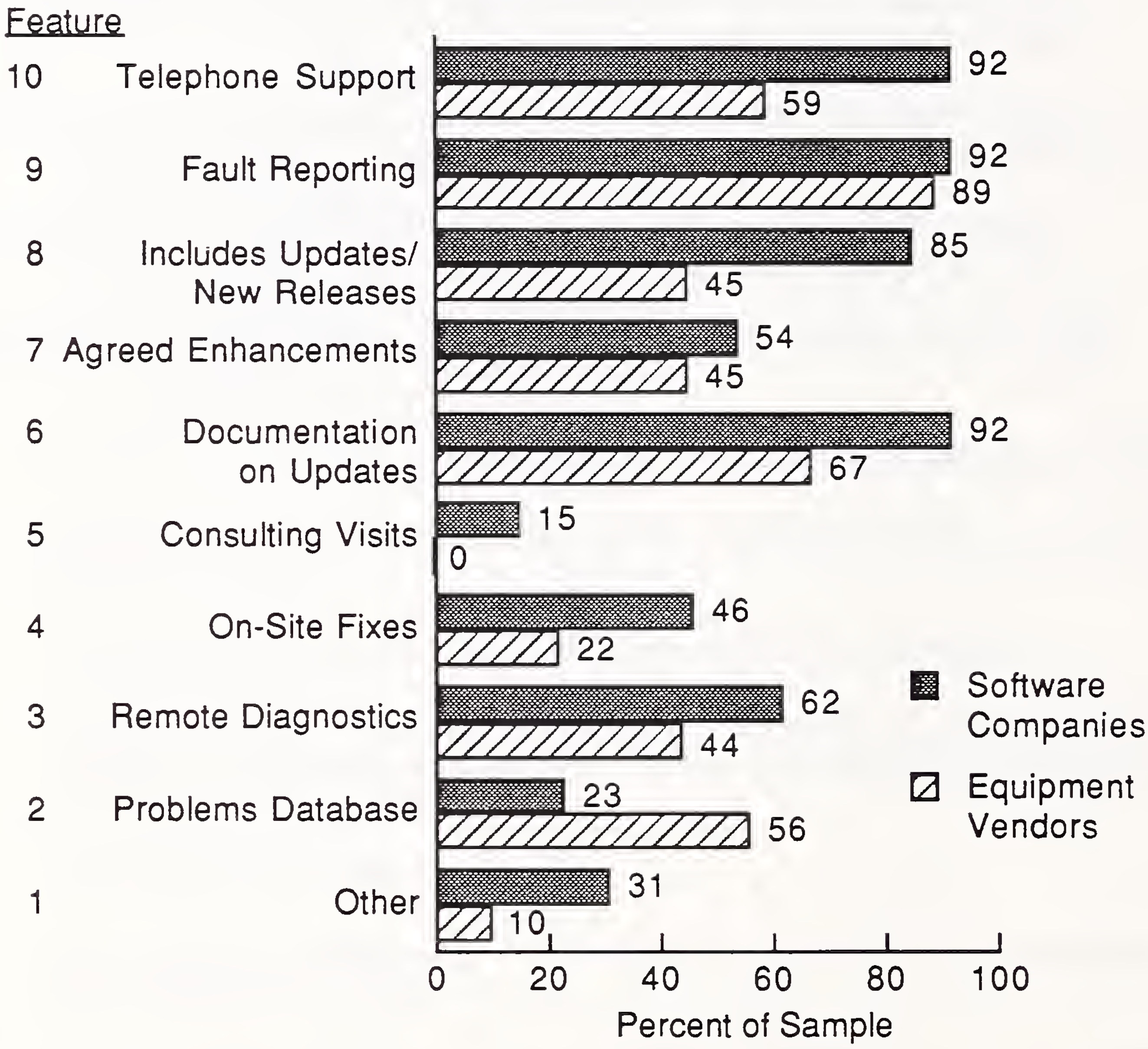
- Most Smaller Software Houses offer one level only with the option to have a tailored contract being still highly favoured,

- Software Product companies offer one level only (64%); two levels (18%); and three or more levels the remaining 18%.

Most vendors offering only one level of support considered it to be a "full support" service.

Exhibit III-7

Services Features in Vendors' Basic Maintenance/Support Offerings Hardware versus Software Vendors



Warranty, which 82% of the sample offers, is a choice between 30 days, 90 days, 6 months and 1 year with 90 days the most frequent. Over 40% of vendors offer 90 days on most products; 9% offer only 30 days, while 6 months and 1 year are each offered by 10% and 20% of the sample respectively. One respondent organisation offered as much as 60 months on warranty.

Forty-five percent of the sample (27% in 1989/90) provided second level support to their distribution chains, leaving all the detailed elements of maintenance to their dealers, distributors or value-added resellers. In most of these cases direct service support to users was also provided.

The lowest level of direct support offered to users with a maintenance contract covers the ability to 'phone in to the support centre to report a problem. True 'hotline' telephone support, including problem resolution as well as diagnosis, was claimed to be offered at one level or another by 100% of our sample.

Problem fixes and software updates are also offered by 100% of the sample. These services are restricted however to those which solve problems 'not of the users making' or act to bring performance levels up to spec. They do not include additions to system functionality which normally command increased licence fees or additional tailored development charges. Over 90% of both equipment suppliers and other vendors now also include agreed enhancements in the maintenance contract, up from the 45% quoted in 1989/90.

Only 45% of the sample make regular visits to the sites of customers with maintenance agreements, either to discuss future requirements or to offer advice on how to run products already installed. This activity level has remained constant over the period since our last survey, but is normally only offered in what were termed full support contracts and not therefore at the basic level.

On demand call-out to fix problems has declined this year as a feature offered. It is now offered as part of the basic level service by 22% of the equipment suppliers (down from 82%) and by 46% of other vendors (down from 73% in 1989). In many cases the reliability of the product means that calls-out will be infrequent and the service can be offered without undue risk. Phone-fixes and on-line 'patch' databases for users are still strongly preferred by most vendors where possible.

The use of remote diagnostics for software support has increased since 1989. Equipment suppliers - 70% (up from 54% in 1989), and systems houses, consultancies and product companies - 59% (up from 49%).

Other services which were mentioned as not included in contracts nor in the software price, ie. were chargeable as extras were:

- Disaster recovery services and facilities management,
- Business consulting,
- Referral of programmer problems to "workshop" sessions,
- Modelling and modelling tools,
- Seminars for customers and prospects,
- Provision of training videos/disks,
- Enhanced 24-hour support for the top levels of service contract.

C
Training

Ninety-five percent of the sample again offered some form of chargeable user training.

Training course rates have been evaluated in per student daily rates and in per trainer day rates. Both types of rate are shown in the tables in Appendix C. Trainer daily rates are most commonly applied to customised courses and courses held at customer sites. They are becoming more popular as a charging mechanism, being now offered by 68% of the sample as opposed to the 57% offering per student-day rates. Software product companies are most likely to offer both charging methods.

Four types of course were researched:

- Standard or public training courses usually offered in the vendor's training school or training centre. These courses are provided by 90% of the equipment suppliers, all but two of the software product companies but by only 55% of the systems integrators and software houses,
- Self-study courses in hard copy supplemented by audio and video cassettes are offered by 36% of the sample (25% in 1989/90), and include a few offering computer based training (CBT) either on-line or PC-video interactive.
- Customised courses held on customer premises, now offered by 93% of the sample (86% in 1989/90), are often versions of the standard courses which have been tailored to place the emphasis where individual customers need it,

- Customised courses held in the vendor's training centre are offered by 91% of the sample (up from 82% in 1989/90). These are usually formally structured courses held for new clients with the accent on the hands-on, workshop style of learning. They are favoured by all of the groups, except the smaller software houses, of which 72% offer these courses now compared to about 90% in 1989.

Self-study courses have the widest range of prices. A small handbook or manual may only cost £ 15 whereas a complete application system course based on PC/video techniques may cost a considerable sum to develop, and so will have a restricted application as reflected in the four-figure prices often charged.

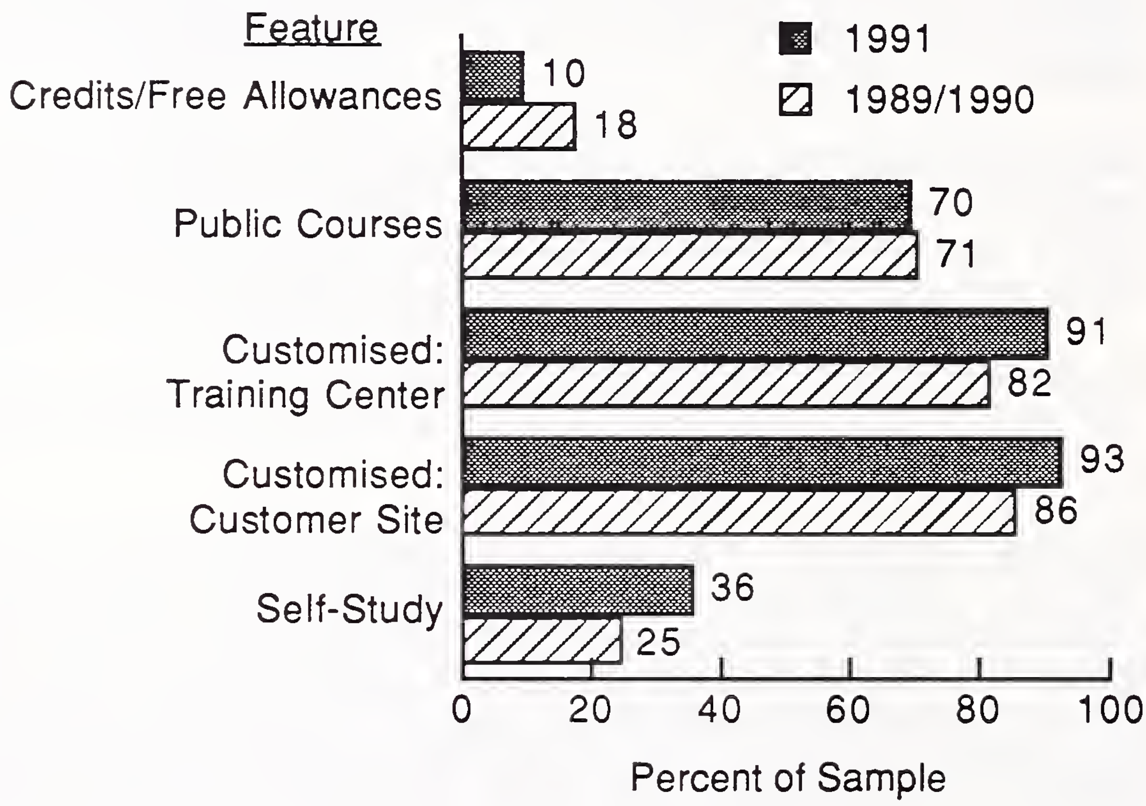
The average daily rate per student for standard courses has risen by less than inflation overall ie at 3% since 1990. Equipment supplier rates have risen more than the other three groups - at 4%. Major systems integrators' rates have actually fallen by 5%. Prices now range between £ 100 and £ 495 per student day; with an average of £ 215.

Customised courses quoted at per trainer-day rates range from £ 75 per day to as much as £ 5,000. Typically these courses are for not more than 10 attendees. The average daily rate is £ 898.

Exhibit III-8 shows the breakdown of the usage of the four types of courses for 1989/90 and 1991. Featured as the top bar on the chart is the fact that now only 10% of the sample (down from 18% last time), give free allowances of training or training credits with new software or with support and maintenance contracts. The number of credits or size of the allowance is a function of the cost of the product. These allowances range from 5-10 days for large systems, but typically amount to about 5 course-days per product, reversing the trend exhibited previously to extend this type of bundled feature.

Exhibit III-8

Service Features in Vendors' Training Offerings



D
Tariff Price increases

As usual vendors were asked whether they had raised prices over the last 12 months, and whether they felt they would be doing so in the next 12 months. Exhibit III-9 summarises the answers given to these questions for each of the sub-samples as well as for the whole sample. The analysis only includes those who responded, ie. it excludes those who didn't answer to the sensitive price rise questions (only 9% of the sample refused).

In the past twelve months, prices were reported to have risen overall by between -16% and +15% at the range limits. The average changes are shown in Exhibit III-9 in the third and fourth columns. These figures were derived from averaging the ranges' minima and maxima for each vendor type subset's responses and for the whole sample (the bottom row of the table).

Exhibit III-9

Annual Percentage Price Increases Reported (1990 to 1991) and Anticipated (1991 to 1992) by Vendors

TYPE OF COMPANY	No. in Sample	1990/91 Reported		1991/92 Anticipated	
		Average Rise		Average Rise	
		From	To	From	To
Equipment Suppliers	12	+4.2%	+7.3%	-0.4%	+5.2%
Systems Integrators & Consultancies	7	5.0	10.2	5.5	7.4
Small Software Houses	11	6.6	9.5	3.6	13.3
Software Product Coys.	10	4.3	7.1	2.4	2.7
All Types	40	5.0	8.3	2.7	7.2

Source: INPUT

The last two (fifth and sixth) columns shows the equivalent changes to prices expected over the next 12 months.

Eighty percent of respondents had put up their rates during 1991. Of the remaining 20%, two-thirds had raised them in 1990, and one-third last in 1989. Thirty-seven percent each of the sample use the 1st of January and the 1st of July as the date to introduce the new tariff. Twenty percent raise them on the 1st of April and six percent on the 1st of September.

The changes anticipated for the next 12 months look as follows:

- Equipment suppliers are expecting a considerably reduced rate of increase from around an average 9% anticipated in 1990 to a forecast of about 2.5% for 1992, with some decreases anticipated as high as -10%,

- Major Systems Integrators and Consultancies expect to decelerate their rate of increases from the +9.5% anticipated in 1990 to around +6.5% for 1992,

- Small Software Houses anticipated an 8% increase for 1990 and expect nearly the same in 1992 - around 8.5%,

- Software Product Companies expect to keep their increases low again but rising slightly on the 1.7% anticipated for 1990 to around 2.5% for 1992.

Discounting for any project or service has now become an established practice in the professional services sector. In the intensely competitive conditions of 1991 some 50% of respondents reported having to discount. About 48% of respondents were discounting on T&M work, another 5% discounted on managed projects. This year's rather modest rate increases go some of the way towards compensating for this now common fact of life in the sector.

Methods used for discounting were too varied and vague to yield any hard and fast conclusions. Almost 75% of the sample now have some formal discounting structure for their support services. It is usually based on the volume of business with the particular user. Decisions to discount by whatever method seem to be more and more on a case by case basis involving commercial judgement.

Software product discounts occur for:

- Multiple copies of the same product,

- Multiple use on various sites or on more than one processor,

- Multi-user situations where copy protection is virtually uncontrollable,

- Corporate and PC licences.

Among the 1991 sample, 33% (up from 18% in 1989/90) discounted support by the number of sites; 22% (was 9%) by multiple processor use; and 40% (was 21%) by fee volume and 22% (21%) by other criteria, such as by specific customer.

Other situations favouring discount include:

- Special relationships with some clients,
- 'Partner Programmes' or VAR relationships with other companies,
- Project duration ie. more than 6 months,
- Training only contracts.

Rare Skills Premiums (RSPs) of up to 80% on normal rates were mentioned by a third of the sample. Almost 75% of software product companies use RSPs (see Exhibit II-4).

IV Company Support Policies

The notes in this chapter are written to describe the current emphases being put by the different groups of vendors on the various aspects of software support. They should also aid in interpreting the tables provided in Chapter II and Appendices A to C.

1991 has seen the impact of downsizing combined with the UK recession to produce shockwaves to the software services industry. Taken with the two other important trends in the software industry:

- The move to open systems using networking,
- The increasing acceptance of UNIX in many industry sectors.

Vendors have been required to put intense effort into maintaining basic revenue streams and support policies have had to take a lower priority.

A
Equipment Suppliers

Exhibit IV-1 illustrates the tariff charged by a European computer manufacturer and total system supplier. These charges are for work performed on a project basis in a variety of industry sectors including manufacturing, distribution and healthcare.

It has become standard practice for some equipment suppliers to position their software services offerings with the Customer Services function, which also include:

- Hardware maintenance and support,
- Training and Consultancy.

Equipment suppliers continue to market various versions of the 'total solutions' concept:

- IBM has established itself in the market for large systems integration (SI) contracts,
- H-P has a standing policy of offering the total solutions approach, but is flexible enough to involve sub-contractors and third parties when specialist skills and resources are in demand,
- Unisys has acquired a good reputation with its separate professional services division competing with the major systems houses and now gains some 30% of its revenues from this line of business,
- Siemens-Nixdorf and ICL are both active in the retail and banking sectors. Turnkey supply of cooperative or distributed systems based on open networks and UNIX is a strategic aim for both these suppliers.

Exhibit IV-1

Grades and their Associated Rates & Experience Levels for a Total System Supplier

	Range of Rates - Per Diem		
Grade of Personnel	Long-Term	Short-Term	Experience Levels
1. Principal Consultant years experience	£700	£900	10 +
2. Senior Consultant/ Project manager	650	800	8 to 10
3. Consultant/Project Leader	500	550	5 to 10
4. Senior Systems Analyst	350	450	3 to 8
5. Senior Programmer/Analyst	350	450	2 to 5
6. Progammer	200	300	1 to 3
7. Junior Programmer	180	250	1+

Source: INPUT

During 1991 the software maintenance and professional services sectors both exhibited trends towards innovative packaging of service products.:

- In response to market conditions, some suppliers started to place subcontractors with their customers or in their own project teams in order to offer more cost-effective solutions.

- IBM acknowledges that it is actively seeking to increase its UK services revenue stream. As a first move, from 1st September 1991, the company introduced discounted professional services fee rates based on the length of the period for which a user is willing to contract for IBM SE or CE staff. Daily, quarterly and annual rates are now quoted as well as the traditional hourly rates.

These moves position the equipment suppliers firmly in the bodyshopping business which is therefore likely to regain some of its lost respectability.

B
Major Systems Integrators and Consultancies

Key factors operating during the 1990/1991 timeframe for this group of vendors have been:

- Mergers and acquisitions among the top echelon of companies have continued with most noticeably EDS acquiring a majority holding in SD-Scicon to place itself as the number two in Europe and able to challenge CGS for the leadership,

- Price competition has become more obvious as downsizing and recession affect user buying patterns. The large professional services companies are most affected because of the one-off profiles of many of their business units,

- The drive for increased profitability is leading to more stripped down support services being offered to cover open systems and UNIX-based products.

Many of the larger integrators are turning to software applications products to assist in sharpening their competitive edge. Pre-built software has historically been anathema to this group of suppliers with their strong tailored software and customisation skills. Major changes to service portfolios are starting to happen, assisted by alliances with US-owned product companies, wishing to expand in Europe.

In our previous report we said: "In the uncertain economic world governed by market forces, the major systems companies have now become susceptible to the ups and downs of the business cycle. This applies also to the consulting wings of the top accountancy firms who seem to be following along the same route". Both these groups of companies have felt the current climate to be exceedingly harsh on business constructed largely on one-off contracts. Continuing revenue streams and repeatable business are therefore becoming more important.

Discount pressures have this year become much more intense and discounts continue to be given for large amounts of skill-hiring work in both commercial and government contracts, The CASE market-place continues to require:

- Education and training in how to implement a CASE strategy,

- Training in development methods, addressing all parts of the system life-cycle,

- Consultancy in the use of both the tools and the methods.

The rates tables for two professional services vendors are again included. These are not the same two companies as appeared in our 1989/90 report since both of those declined to respond.

Exhibit IV-2 and IV-3 illustrate the current tariffs (from 1/1/91) of two well-known systems companies.

Exhibit IV-2

Grades and their Associated Rates & Experience Levels for a Major Service Company

	Range of Rates - Per Diem		
Grade of Personnel	Long-Term	Short-Term	Experience Levels
1. Principal Consultant	£ 550	£ 1,500	15 + years
2. Senior Consultant/ Project manager	500	650	10 +
3. Consultant/Project Leader	450	600	7
4. Senior Systems Analyst	400	450	4 +
5. Senior Programmer/Analyst	330	400	2 to 3
6. Progammer	270	330	1 to 3
7. Junior Programmer	180	270	Up to 2 years

Source: INPUT

Exhibit IV-3

Grades and their Associated Rates & Experience Levels for a Major Systems Integrator

	Range of Rates - Per Diem		
Grade of Personnel	Long-Term	Short-Term	Experience Levels
1. Principal Consultant	£980	£980	11 + years
2. Senior Consultant	860	860	10 +
3. Consultant/Project Leader	650	650	9 +
4. Senior Systems Analyst	580	580	8 +
5. Senior Programmer/Analyst	525	525	7 +
6. Programmer	490	490	5 +
7. Junior Programmer	425	425	4 +

Source: INPUT

These two companies continue the trend to offer rates for Junior Programmers. However, in certain cases these rates are actually for fairly senior people whom their employers wish to hire out at much lower rates. Reports from the market-place speak of the need for many professional services companies to offer staff at around cost levels of fees. Hopefully this will be a temporary phenomenon, but INPUT believes that even when the market returns to more normal conditions rate increases will have to be made much more cautiously than in the past.

Exhibit IV-4 shows for the eighth time the rates of what used to be one of the smaller systems houses. Originally a firm which specialised in only one supplier's equipment it has grown to having a revenue of almost £20 million and a staff of 350.

Exhibit IV-4

Grades and their Associated Rates & Experience Levels for a Software House which has Graduated From the Smaller to the Large Company Category

	Range of Rates - Per Diem		
Grade of Personnel	Long-Term	Short-Term	Experience Levels
1. Principal/Senior Consultant	£500	£600	10 + years
2. Consultant/ Project manager	350	600	5 +
3. Systems Analyst	300	500	4 to 5
4. Senior Programmer	300	500	4 +
5. Programmer	250	375	2 +
6. Junior Programmer	175	250	at least 3 months
7. -			

Source: INPUT

The increases in this firm's rates since 1989 are, where they occur, smaller than those noted last time and range from zero up to an increase of 33% for the senior programmer grade, compared to the maximum increase last time of 56%. This is one of the firms which have re-introduced the grade of Junior Programmer.

C
Smaller Software Houses

Exhibit IV-5 shows the rates for a small software company which employs just over 50 staff and has a simple five-grade tariff.

Like other firms in the smaller company sub-group of the panel, it only quotes one rate per grade with rate adjustment or discounting being part of the final negotiations for any contract.

Exhibit IV-5

Grades and their Associated Rates & Experience Levels for a Small Professional Services Company

	Range of Rates - Per Diem		
Grade of Personnel	1989	1991	Experience Levels
1. Senior Consultant	£700	£700	10 + years
2. Project Leader/Consultant	600	600	5 - 9
3. Senior Analyst	550	550	5 +
4. Senior Programmer/Analyst	450	450	5 +
5. Programmer	350	350	1 +
6. -			
7. -			

Source: INPUT

Firms, at the level of size we are discussing - under £6 million turnover, have exhibited a steady trend towards becoming more involved with 'open systems' hardware delivery as part of a 'turnkey' system solution. In view of their smaller overheads and their historically lower fee rates, these companies have been able to increase their rates more easily during the current recession, where larger firms have not. They have also wisely decided to increase their revenues from software products ie. pre-built solutions.

This is in line with the increasing use of third-party product licensing agreements and VAR (value-added reseller) arrangements with the hardware suppliers. Most major equipment suppliers are currently re-engineering their commercial relationships with this class of software vendor in order to improve their indirect sales channels capabilities in the new open systems world in which profit margins are under constant squeeze.

D
Software Product Companies

In 1991 there was a pause in the rise of the software product vendor both in terms of licence fee growth and in terms of profitability. In fact this group's professional services revenues have grown faster than their product related revenues. Acquisitions have now started to take place at the lower end of the sector, with the take-over of Ashton-Tate by Borland being a prime example.

Product vendors' rates have grown more slowly since the last report and now it is the equipment suppliers and not they who ask the highest rates in most grades. A consulting rate of £2,000 per day was quoted for the first time this year by both the equipment and the software product suppliers.

1991 continued the emergence of UNIX as the leading open operating system, with equipment suppliers and independent software vendors both porting major products to this environment in order to increase accessibility across the many new platforms appearing on the market. Nevertheless, the emergence of any number of slightly different UNIX operating systems variants gives the lie to the claim that open systems excel in ease of use. Many vendors believe that users of UNIX at departmental level are in no way capable of implementing their own systems. Although UNIX raises expectations of needing only a simple support capability, in fact the complexities of the environment are very great. Caveat vendor.

Multiple and mixed proprietary and open environments (both separately and in networking combination) will condition the intensely competitive climate for the remainder of the 1990s.

For software product companies, there is an increasing proportion of vendor revenues (currently some 30%) coming from consultancy, training and support as these firms seek to market with a balanced mix of Professional Services and Software Product. Some vendors are expecting the mix to change and approach 60:40 (still in favour of product) by 1995. This has already happened for some of the more technically biassed firms, operating in specialist areas such as CAD/CAM/CAE.

V Conclusions

Rates quoted by suppliers for individual grades and activities continue to exhibit wide divergence between their upper and lower limits as shown in Exhibit V-1 below.

Exhibit V-1

Changes in the Spread of Rates at Different Grades

	Ratio of Upper to Lower Limit	
	1989	1991
- Principal Consultant	NA	5.3:1
- Senior Consultant/ Project Manager	5.0:1	3.8:1
- Consultant/Project Leader	4.7:1	5.0:1
- Senior Analyst	4.4:1	4.1:1
- Senior Programmer/Analyst	5.3:1	7.0:1
- Programmer	5.3:1	6.7:1
- Junior Programmer	NA	5.5:1
- Training per student day	5.0:1	5.0:1

In the majority of the seven system development grades given above, since 1989 the ratio of upper to lower limit has increased over the similar figure derivable from the 1989/90 survey. In other words, for these activities the range of rates offered in the market-place has continued to widen.

In the case of per student-day Training rates, the ratio has stayed constant. This year both per student and per trainer figures are shown in the detail tables in Appendix C, and in the analysis in Chapter III.

Since 1989, the changes in the averages of the ranges of per diem rates have shown more positive values than negative values indicating a possibly overall positive rate change.

- Consultancy rates have gone down on average, while systems and programming rates have gone up,
- The more senior consulting rates have decreased more than the basic consultancy rates,
- The more junior systems and programming rates have risen more than the senior rates.

Taken together, this also suggests that staff have been and are being charged out on less than their full or standard rates. This conclusion is backed up by the evidence of the high rates and high experience levels of some of the companies now offering Junior Programmers. At the bottom end of the scale, "downsizing" of staff cannot be so easily disguised.

At the same time, the average Experience Levels applicable to each grade have fallen by between 2% and 30%:

- Except for the Programmer and Junior Programmer levels which have gone up by 3% and 54% respectively.

The user resistance to price increases, which we had first anticipated in our 1988 report but which did not materialise, showed itself in 1989 in the form of greater pressure to discount fee rates. Since 1990 rates have overall only increased enough to cover inflation, while discounting pressures have become very strong.

The major systems integrators no longer ask the highest average rates in any grade. The software product companies can this year claim to have the highest averages across most grades of any of the four groups of suppliers. The equipment suppliers have the highest average rates for the top two consulting grades, while the major systems integrators have been pushing into third place in all grades except two, and in these two they lie in fourth place behind even the smaller software houses.

The approximate ranking by descending charge-out rates (weighted by the average of the range for each of the seven manpower grades used) is:

- Software Product companies,
- Equipment Suppliers,
- Major Systems Integrators,
- Smaller Software Houses.

The weighted rating now separates the middle two groups from each other by more than in previous years. It is clearly the major systems integrators who have been most affected by the market conditions since they are most vulnerable with high fee-earner head-counts and high overheads. Most rates quoted by suppliers are asking rates, exclusive of expenses. Where a range is quoted for each grade, the difference can be to take account of:

- Length of contract, the most important factor,
- Discounts for volume deals in skill hiring contracts,
- Regional variations, normally of the order of 15% to 18%,
- Negotiating limits for branch managers.

This year the report has for the second time calculated an overall Index to cover charge-out rates across all seven of the manpower grades being used. This composite index is called the Manpower Charge-out Index (MCI) and was set at an initial value of 100 for 1988. The 1991 MCI value, corresponding to fees charged at the end of the year, is 125.4 indicating an average weighted rise over the 1990 rate of +5.9. The index has therefore grown by over 25 points in its first three years.

Appendices

Appendix A

FEE RATES OF INDIVIDUAL COMPANIES
- UPPER GRADES

TABLE A-1

TYPE OF SUPPLIER = EQUIPMENT SUPPLIERS

NUMBER OF SUPPLIER	PRINCIPAL CONSULTANT & ABOVE			SENIOR CONSULTANT			CONSULTANT/PROJECT LEADER			SENIOR SYSTEMS ANALYST		
	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years
NO. 1	700	900	10 - 15	650	800	8 - 10	500	550	5 - 10	350	450	3 - 8
2		NA		462	504	5 - 10	462	504	5 - 10	336	420	5
3		NA				10			8 - 10			6 - 8
4	600	750	10	550	650		450	575		385	450	
5		NA		750	750	5	750	750	2.5 - 3	750	750	1
6	1190	1400	10	910	1050	15	630	770	5 - 10	560	630	5
7	1500	2000		912	1500		760	1500		640	1225	
8		NA		500	500	4	500	500	4	425	425	2
9	800	800	7	700	700	7	600	600	5	550	550	3
10	1005	1005		710	710		550	570		500	550	
11		NA			NA		490	560	10	490	560	5
12	650	650		600	600		550	550		500	500	
13	860	1460	12	740	860	10	650	740	8	570	650	6

SOURCE: INPUT

All Rates are in Pounds Sterling per day unless otherwise stated

FEE RATES OF INDIVIDUAL COMPANIES
- UPPER GRADES

TABLE A-4

TYPE OF SUPPLIER = SOFTWARE PRODUCT COMPANIES

NUMBER OF SUPPLIER	PRINCIPAL CONSULTANT & ABOVE			SENIOR CONSULTANT			CONSULTANT/PROJECT LEADER			SENIOR SYSTEMS ANALYST		
	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years
NO. 35	900	900	5		NA		770	770				
36	1100	1100			NA		900	900			NA	
37	480	600	8	480	600	8		NA			NA	
38		NA		700	800	7	600	730			NA	
39		NA			NA			NA			NA	
40	850	850		650	650		500	500			NA	
41	1000	2000	10	600	1000	10	550	800	5	550	800	
42		NA			NA			NA		800	800	5
43	1000	1100	4	500	600	4		NA			NA	
44	800	1000	20	600	800	10	550	700	5	600	600	10
45	900	900	5	800	800	3 - 5	700	700	1 - 3		NA	

SOURCE: INPUT

All Rates are in Pounds Sterling per day unless otherwise stated

Appendix B

FEE RATES OF INDIVIDUAL COMPANIES
- LOWER GRADES

TABLE B-1

TYPE OF SUPPLIER = EQUIPMENT SUPPLIERS

NUMBER OF SUPPLIER	SENIOR PROGRAMMER/ANALYST			PROGRAMMER			JUNIOR PROGRAMMER			OTHER		
	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years
NO. 1	350	450	2 - 5	200	300	1 - 3	180	250	1		NA	
2		NA			NA			NA		273	343	2
3			6 - 8			1 - 6			0 - 1		NA	
4	325	375			NA			NA		490	490	
5	750	750	1		NA			NA			NA	
6		NA			NA			NA			NA	
7	500	980		320	700			NA		280	280	
8	425	425	3	400	400	2		NA			NA	
9	500	500	3	450	450	1		NA			NA	
10	450	510	2		NA			NA			NA	
11	315	350	5	315	350	2 - 3	315	350	1		NA	
12		NA		450	450			NA			NA	
13	480	570	4	395	480	1		NA			NA	

SOURCE: INPUT

All Rates are in Pounds Sterling per day unless otherwise stated

FEE RATES OF INDIVIDUAL COMPANIES
- LOWER GRADES

TABLE B-2

TYPE OF SUPPLIER = MAJOR SYSTEMS INTEGRATORS AND CONSULTANCIES

NUMBER OF SUPPLIER	SENIOR PROGRAMMER/ANALYST			PROGRAMMER			JUNIOR PROGRAMMER			OTHER		
	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years
NO. 14	525	525	7	490	490	5	425	425	4	375	375	2
15	420	420		420	420			NA			NA	
16	200	360	4		NA			NA			NA	
17	330	400		269	330		180	269			NA	
18	245	360	2 - 5	175	245	1 - 2	100	175	0 - 1		NA	
19	550	550		450	450			NA			NA	
20	300	400	4	250	350	1 - 3	200	200	1 - 3		NA	
21	300	400	4	250	300	1 - 3	250	300	1 - 3		NA	
22	330	600	4 - 6	316	575	2	303	550	4	275	500	2
23	300	500	4	250	375	2	175	250	0.25		NA	

SOURCE: INPUT

All Rates are in Pounds Sterling per day unless otherwise stated

FEE RATES OF INDIVIDUAL COMPANIES
- LOWER GRADES

TABLE B-3

TYPE OF SUPPLIER = SMALLER SOFTWARE HOUSES

NUMBER OF SUPPLIER	SENIOR PROGRAMMER/ANALYST			PROGRAMMER			JUNIOR PROGRAMMER			OTHER		
	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years
NO. 24	325	325		250	250		200	200				
25	380	480	3	330	430	1	280	380	0 - 1		NA	
26		NA			NA			NA			NA	
27		NA			NA			NA			NA	
28		NA			NA			NA			NA	
29	175	275	3 - 5		NA			NA			NA	
30	450	450	5	350	350	1		NA			NA	
31	410	525		295	350		210	295			NA	
32	275	350	3		NA			NA			NA	
33	140	140	2 - 3	105	105	2 - 3		NA			NA	
34	394	394		328	328			NA		328	394	

SOURCE: INPUT

All Rates are in Pounds Sterling per day unless otherwise stated
<N/A> = Not Applicable

FEE RATES OF INDIVIDUAL COMPANIES
- LOWER GRADES

TABLE B-4

TYPE OF SUPPLIER = SOFTWARE PRODUCT COMPANIES

NUMBER OF SUPPLIER	SENIOR PROGRAMMER/ANALYST			PROGRAMMER			JUNIOR PROGRAMMER			OTHER		
	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years	FROM #	TO #	Experience - Years
NO. 35		NA			NA			NA			NA	
36	750	750		500	500			NA			NA	
37	350	500	2		NA			NA			NA	
38		NA			NA			NA			NA	
39		NA			NA			NA			NA	
40	450	450		400	400			NA			NA	
41	350	550	2	350	550	2	250	350			NA	
42	650	650	2	500	500	0.25		NA			NA	
43		NA			NA			NA			NA	
44	500	500	5	380	380	5 - 6	320	320	2	500	500	5
45		NA			NA			NA			NA	

SOURCE: INPUT

All Rates are in Pounds Sterling per day unless otherwise stated
<N/A> = Not Applicable

Appendix C

OTHER ACTIVITIES
- TRAINING / MAINTENANCE

TABLE C-2

TYPE OF SUPPLIER = MAJOR SYSTEMS INTEGRATORS AND CONSULTANCIES

NUMBER OF SUPPLIER	SOFTWARE/SYSTEMS TRAINING - DAILY RATES					SOFTWARE/SYSTEMS MAINTENANCE - AVERAGE CHARGES		
	PER STUDENT		PER TRAINER		Comments			
	FROM #	TO #	FROM #	TO #		FROM % pa.	TO % pa.	Comments
NO. 14			800	800				AdHoc;Bespoke
15	150	150	400	400		5	15	% of 1-time fee; T&M
16	200	350	500	1500	Some training included	7.5	15	% of 1-time fee; Qtly/Mthly
17					Depends on contract	8	15	% of 1-time fee; T&M
18			250	600	Some bundled	5	15	Bundled; or Annual fee of #12000 to #25000
19					All bespoke	15	15	% of 1-time fee
20					Free 5-10 man-days	12	15	Mthly or Annual fee; T&M
21					Free 5-10 man-days	12	15	T&M; % Mthly.;Tailored has Annual fee
22	200	225	800	1000		10	25	% Annually
23	100	125	400	400		8	17	% of 1-time fee

Source: INPUT

\# All Rates are in Pounds Sterling per Day unless otherwise stated
<N/A> = Not Applicable

OTHER ACTIVITIES
- TRAINING / MAINTENANCE

TABLE C-3

TYPE OF SUPPLIER = SMALLER SOFTWARE HOUSES

NUMBER OF SUPPLIER	SOFTWARE/SYSTEMS TRAINING - DAILY RATES					SOFTWARE/SYSTEMS MAINTENANCE - AVERAGE CHARGES		
	PER STUDENT		PER TRAINER					
	FROM #	TO #	FROM #	TO #	Comments	FROM % pa.	TO % pa.	Comments
NO. 24						15	15	% of 1-time fee
25	220	220	800	800	Some custom at #600 pd.	15	15	% of 1-time; or % of Annual fee ; or T&M
26						15	15	% Annually
27			300	300	Some Training included			Annual fee #80-#300
28	100	100	350	350		10	10	% of 1-time fee
29			350	750		25	25	Annual fee #2,500-#25,000
30	275	275	550	550		15	15	% of 1-time fee; T&M
31								T&M
32	150	250	550	1000	Some Training included eg.1 free day.	15	15	% of 1-time fee
33			75	250		5	5	Annual fee #60-#600
34						12.5	15	% of 1-time fee

Source: INPUT

All Rates are in Pounds Sterling per Day unless otherwise stated
<N/A> = Not Applicable

OTHER ACTIVITIES
- TRAINING / MAINTENANCE

TABLE C-4

TYPE OF SUPPLIER = SOFTWARE PRODUCT COMPANIES

NUMBER OF SUPPLIER	SOFTWARE/SYSTEMS TRAINING - DAILY RATES: PER STUDENT FROM #	PER STUDENT TO #	PER TRAINER FROM #	PER TRAINER TO #	Comments	SOFTWARE/SYSTEMS MAINTENANCE - AVERAGE CHARGES: FROM % pa.	TO % pa.	Comments
NO. 35	150	250	1200	1400		15	20	% of 1-time fee: T&M
36	220	300	1540	1540	Some customised	7	15	Annual fee
37	198	245	900	900		15	15	% of 1-time fee
38	225	225	1950	1950		15	15	Bundled
39					Various	5	15	% of 1-time fee
40	150	495			#440 2-day #1,100 5-day	15	15	Bundled & % of 1-time fee
41	140	288	810	910		7.5	15	% of 1-time fee
42	350	350	750	750	Some Training included	15	15	% of 1-time fee
43	240	240	900	900		8	15	Bundled & % of 1-time fee
44	150	250	1100	1650		11.5	18	% of 1-time fee
45			700	1200		8	10	% of 1-time fee

Source: INPUT

All Rates are in Pounds Sterling per Day unless otherwise stated
<N/A> = Not Applicable

Appendix D

3c Do you see installation as:

a) Profitable: ______________________________

b) Cost to vendor/supplier: ______________________________

3d If b) above will you adopt more "commercial" practices in the future to stem this drain in profits?

____

4. Software Maintenance

Ie: on-going support to software system or product during its life-cycle

4a Is it generally provided for?

Application Software ____ please tick if YES
Utility/system software ____

4b How is it charged for, predominantly?

____ Bundled into product licence or project cost
____ As a percentage of a one-time initial fee
____ As a percentage of an annual/quarterly/monthly regular fee
____ Annual fees of from _____ to _____
____ T&M rates
____ Other, eg: rental

4c What percentage of the equivalent purchase price/licence charge do your maintenance/support fees range from and to?

From ______% to ______%

4d How many levels of software maintenance/support services are available?

____

4e What items are included in support at the different levels of contract:

Basic	Full	Intermediate	
____	____	____	Telephone support
____	____	____	Fault reporting
____	____	____	New releases, fixes
____	____	____	Agreed enhancements
____	____	____	Documentation
____	____	____	Consulting visits
____	____	____	On-site trouble shooting
____	____	____	Remote diagnostics
____	____	____	Problems database
____	____	____	Other: ______________________

4f Will maintenance charges *increase/decrease/remain stable over 1991/92?

* please tick alternative applicable

4g Please specify your policy on discounting support:

________________________________ ___ By site

________________________________ ___ By processor

________________________________ ___ By volume of fees

________________________________ ___ By other

4h Do you restrict maintenance to one central site? Yes ___ No ___

5. Other Features

5a Do you provide the following?

___ Warranty, and please state its period (if given) __________
___ Second level support (to VARs/OEMs etc)

5b What other services are offered as chargeable?

___ Training
___ Modelling or performance evaluation
___ Seminars
___ Provisions of demo/training disks
___ Other: ________________________________

5c Will any current chargeable services be bundled into future support offerings?

____

6. Training

6a Is training included in software fees? ________________________

___ Free allowance of ___ man-days/___
___ Hourly, daily/weekly rate of from _____ to _____ student rates
___ Hourly, daily/weekly rate of from _____ to _____ trainer rates
___ Other ________________________________

6b Are any changes envisaged? ________________________

6c Types of courses offered?

___ Standard - public training - vendor site
___ Customised at vendor site
___ Customised at customer site
___ Self study in hard copy

7. Charge-out rates for manpower-based services

7a Do you apply any rare skills premiums to your basic rates?

- For what grades/skills: ______________________
- Range of percentage: ______________________

7b What standard expertise levels and charge-out rates are associated with the different grades of staff:

$ - please answer YES or NO and give the title(s) you use if different from ours.
* - ie: Rate is per Man-day, week, month, hour

Staff Grade	$ Grade included in Tariff?	Expertise required in years or otherwise	* Time Unit	Rates Charged () From	To	No of staff in the Grade
Principal Consultant/ Director Level						
Senior Consultant						
Consultant/ Project Leader						
Senior Systems Analyst						
Analyst/Senior Programmer						
Programmer						
Junior Programmer /Installation Assistant						

Other grades(s), eg FS engineer: ______________________

8. What range of percentage price increases/decreases have you imposed in the last 12 months?

8a From ______% to ______%

8b Which grades were affected?: ________________________________

9. What tariff increases/changes are planned/likely for 1992 (next 12 months)?

9a From ______% to ______%

9b Which grades will be affected?

____

10. When did/do you introduce your tariff changes?

Last change on __________ Next change on __________

11. Are you experiencing any market pressures to discount your manpower fee rates?

Yes / No

If so, please amplify:

____

____

12. Are the discounts formalised or are they by customer, contract, etc?

Customer:

____

Sector: ________________________________

Volume: ________________________________

Product: ________________________________

Length of contract: ________________________________

Grade/function of staff: ________________________________

13. Does the discounting apply to Time & Materials work or to Managed Projects or to both?

____ T & M
____ Managed Projects
____ Both

14. Are there any other issues or market trends you think should be noted?

____

____

____

THANK YOU FOR YOUR TIME!

A SUMMARY OF FINDINGS WILL BE SENT TO YOU AT THE END OF THE PROJECT

Please send your completed questionnaire to:

INPUT-Europe, Piccadilly House, 33/37 Regent Street, London, SW1Y 4NF
Tel No: 071 493 9335 Fax No: 071 629 0179