

INDEPENDENT MAINTENANCE
OPPORTUNITIES IN THE UK FOR
OLIVETTI

PREPARED FOR:

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ITALY.

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EXHIBITS

- 1.1 List of Vendors Interviewed

- 2.1 European Market for Independent Maintenance - 1984
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1. INTRODUCTION

A. OBJECTIVES

- * This study, prepared by INPUT for Olivetti, provides research and analysis for the pursuit of Olivetti's independent maintenance activities in the UK.
- * The research concentrates on two key areas:
 - An overview of the independent maintenance market in the UK, showing its size and development.
 - Detailed profiles of a number of companies currently active in the UK independent maintenance market. Exhibit 1.1 lists the companies interviewed by INPUT.
- * At this stage, the study has been restricted to the UK.

B. METHODOLOGY

- * User data has been drawn from respondents to INPUT'S 1984 and 1985 annual and independent maintenance surveys.
- * The vendor companies were all interviewed either face-to-face or by telephone.
- * As all data relates to the UK, Pounds Sterling have been used throughout the report.

The Board of Directors has reviewed the financial statements of the Corporation for the year ended December 31, 1948, and has approved them for inclusion in the annual report to the stockholders.

The Board also has approved the dividend of \$1.00 per share payable on or about March 1, 1949, to the stockholders of record as of February 1, 1949.

The Board has also approved the appointment of Messrs. [Names] as directors of the Corporation for the year ending December 31, 1949, and the resignation of Messrs. [Names] as directors of the Corporation.

RESOLUTIONS

Resolved, that the Board of Directors approve the financial statements of the Corporation for the year ended December 31, 1948, and the dividend of \$1.00 per share payable on or about March 1, 1949, to the stockholders of record as of February 1, 1949.

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II. Independent Maintenance: Market Overview

II.1 Market Size

- ° In INPUT'S 1984 update of the Third Party Maintenance Market in Europe the UK Market was estimated to be \$67 million, at the then exchange rate, that is equivalent to a value of £46.2 million. The UK Market was also considered to be the most developed in Europe at that time - see Exhibit 2.1.

The UK penetration level of 5.9% is far higher than that in the other major European markets, West Germany, France or Italy.

- ° The companies interviewed by INPUT for the current study have a total independent maintenance turnover of £76.7 million. As there are many small companies which have not been surveyed, the indications are that the total market has grown to just over £100 million.

II.2 Market Development

- ° Most respondents to the survey felt that the high growth rates experienced in 1984/85 were constrained more by lack of resources to capitalise on the demand rather than through any tail-off in the market itself.
- ° Apart from the high growth rate, 1984/85 also saw a number of structural changes in the market, which will have far-reaching consequences for its development.

- The independent maintenance market in the USA had seen a number of mergers and acquisitions. This pattern appears to be repeating itself in the U.K. Bell Canada to some extent led the way with the take-over first of GCS, and subsequently of Cable and Wireless Maintenance. Now, several of the companies interviewed expressed interest in acquisitions and/or mergers. The ultimate effect of this strategy is to improve the credibility of independent maintenance among potential users, and also to give increased access to capital for future developments.

- As two of the greatest barriers to the use of independent maintenance are credibility rated - fear of vendor collapse or lack of suitable vendor - (see Exhibit 2.2), the market could be stimulated to grow even more quickly.

- Despite the fact that there is still considerable market development potential in the United Kingdom, a number of UK independent maintenance companies are now looking to establish themselves in Europe - DPCE, Mills and Mainstay among others. This could help to accelerate development elsewhere in Europe.

II.3 The Companies in the Market

- ° The main active companies in the IM market in the UK are those listed in Exhibit 4.2 which account for over 75% of the market. In addition a number of computer manufacturers - CDC, Burroughs-Memorex, and Sperry - are also involved in the market. In addition, many dealers and small local maintenance companies are also involved in the industry. Exhibit 2.3 lists a number of such companies.

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EXHIBIT 2.1

EUROPEAN MARKET FOR INDEPENDENT MAINTENANCE

1984

MARKET	TOTAL ESTIMATED MAINTENANCE EXPENDITURE (\$ Millions)	ESTIMATED CURRENT EXPENDITURE FOR TPM (\$ Millions)	I of MARKET COVERED BY TPM	ESTIMATED NUMBER OF TPM FIRMS	ESTIMATED TOTAL TPM MARKET INCLUDING CURRENT EXPENDITURE (\$ Millions)	
					Pessimistic	Optimistic
West Germany	\$ 1,824	\$ 17	0.9%	11	\$ 85	\$ 274
France	1,480	11	0.7%	8	90	222
United Kingdom	1,130	67	5.9%	107	297	339
Italy	795	6	0.8%	10	14	159
Scandinavia	458	8	1.7%	5	35	92
Netherlands	269	7	2.6%	5	32	55
Spain	269	1	0.4%	2	4	40
Switzerland	242	1	0.4%	2	5	46
Belgium	148	3	2.0%	3	17	41
Austria	68	1	1.5%	1	3	8
Portugal	47	1	2.1%	1	3	6
	\$ 6,730	\$ 123	1.8%	155	\$ 585	\$ 1,282

SOURCE: INPUT ESTIMATE

Figure 1

Figure 1: A pie chart showing the distribution of the population across different regions.



Figure 1: A pie chart showing the distribution of the population across different regions.

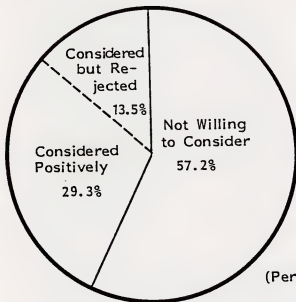
Figure 2: A pie chart showing the distribution of the population across different regions.



Figure 2: A pie chart showing the distribution of the population across different regions.

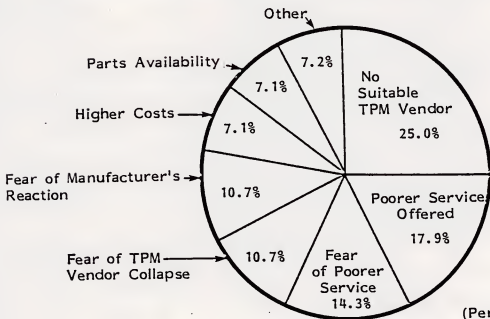
EXHIBIT 2.2

UNITED KINGDOM USERS' WILLINGNESS TO CONSIDER TPM



(Percent of Respondents)

REASONS FOR REJECTING TPM OPTION AFTER CONSIDERATION



(Percent of Reasons Given)

THE HISTORY OF THE UNITED STATES OF AMERICA

The history of the United States of America is a complex and multifaceted subject, encompassing a wide range of political, social, and economic developments. The early years of the nation, from the late 18th century to the mid-19th century, were characterized by a struggle for independence and the establishment of a new form of government. The American Revolution, which began in 1775, led to the signing of the Declaration of Independence in 1776 and the adoption of the Constitution in 1787. The early years of the nation were marked by a period of rapid expansion and growth, as the United States moved westward and established a strong economic base. The mid-19th century was a period of intense social and political conflict, as the issue of slavery became a central focus of the nation's political life. The Civil War, which began in 1861, was a defining moment in the nation's history, leading to the abolition of slavery and the establishment of a more unified and democratic society. The late 19th and early 20th centuries were a period of rapid industrialization and economic growth, as the United States emerged as a major world power. The Progressive Era, which began in the late 19th century, was a period of social and political reform, as the nation sought to address the challenges of industrialization and urbanization. The 1920s and 1930s were a period of economic crisis and social upheaval, as the United States faced the challenges of the Great Depression and the rise of fascism in Europe. The Second World War, which began in 1939, was a defining moment in the nation's history, leading to the establishment of the United Nations and the emergence of the United States as a superpower. The post-war period was a period of rapid economic growth and social change, as the United States emerged as a global leader and a model of democracy. The 1960s and 1970s were a period of social and political upheaval, as the nation faced the challenges of the Vietnam War, the civil rights movement, and the energy crisis. The 1980s and 1990s were a period of economic growth and social change, as the United States emerged as a global leader and a model of democracy. The 21st century has been a period of rapid technological advancement and social change, as the United States has emerged as a global leader and a model of democracy.

THE HISTORY OF THE UNITED STATES OF AMERICA

THE HISTORY OF THE UNITED STATES OF AMERICA

EXHIBIT 2.3Summary: Other Companies Providing Independent Maintenance

	<u>No. of Engineers</u>	<u>Area</u>
Advanced Computer Maintenance	6	150 mile radius of London
Alveronic Computer Systems Ltd.	23	UK, Europe
Atlantic Computer (Engineering) Ltd.	5	UK, EEC
Computerfix Ltd.	4	Southern England
Computer Engineering Ltd.	11	UK, Belgium
Computer Investments	20	UK
Computer Systems & Products	7	UK (South & Midlands)
Computer Terminal Systems	25	UK
Cytek	5	North-West England
Datalect	5	Home Counties
Data Type Ltd.	21	UK
Digital Systems Maintenance	6	Southern England
Field Engineering Force	7	England & Wales
Kent Site Services	40	UK, Europe
Logica (UK)	5	UK
Midas Computer Services Ltd.	7	UK
Optim MCS Ltd.	70	UK
PCML Ltd.	10	UK, France, Germany, Benelux
SK Computer Systems	13	UK
Sun Computer Maintenance Ltd.	15	UK, EEC
TE Datacare	21	UK
Trident Computer Engineering Ltd.	16	England/Wales
Universal Computers Ltd.	20	UK

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author outlines the various methods used to collect and analyze the data. This includes both manual and automated processes. The goal is to ensure that the data is as accurate and reliable as possible.

The third part of the document provides a detailed breakdown of the results. It shows that there has been a significant increase in sales over the period covered. This is attributed to several factors, including improved marketing strategies and better customer service.

Finally, the document concludes with a series of recommendations for future actions. It suggests that the company should continue to invest in its marketing efforts and focus on building long-term relationships with its customers.

Conclusion

In conclusion, the data presented in this report clearly shows that the company's performance has improved significantly. This is a result of the efforts of the entire team and the support of our customers. We are confident that these trends will continue in the future.

The following table provides a summary of the key findings from the report. It shows that sales have increased by 15% over the last year, while customer satisfaction has also improved.

Overall, the company is well-positioned for continued growth and success. We will continue to work hard to provide the best possible service to our customers and to achieve our business goals.

II.4 The Future

- ° As has been said in Section II.2 above, the future of independent maintenance is assured for at least the medium (up to five years) term. The potential changes which may significantly change the structure are:
 - the entry of more mainframe manufacturers in an aggressively competitive manner, causing perhaps extreme defensive measures.
 - further investment in the UK from companies established in the US increasing the ratchet effect on the independent maintenance market increase.
- ° A major proportion of the IM market is related to PC sales, a fact which has a number of implications:
 - there is an increasing trend away from contract maintenance towards time and materials - possibly as a result of the increasingly high levels of equipment reliability being experienced. A number of companies interviewed commented on this trend and expressed concern at its implications.
 - the continuing sales boom in this product area will continue to provide a degree of natural market expansion. So long as IBM continue their policy of not becoming directly involved in PC maintenance there is considerable scope for the small business to capitalise on this opportunity.
 - the close relationship between many dealers and maintenance companies suggests that the business may not all be truly independent, but could rather more accurately be described as "semi-independent".

III. User Views

III.1 Reasons for using TPM

- ° As can be seen in Exhibit 3.1, the most common reason for turning to independent maintenance is cost. The caveat here is that, particularly with larger systems, users still expect a high quality of service.
- ° Comparing user comments about the reasons for using TPM with interviewed vendors' customers use them is interesting. Users rarely say that TPM companies are more flexible, yet IM vendors often claim flexibility is one of their great advantages.

III.2 Reasons for not using TPM

Satisfaction with the users current level of service is the main reason given for not using TPM. The interesting aspect is the number of reasons given which could be converted from negative to positive: (Again see Exhibit 3.1.)

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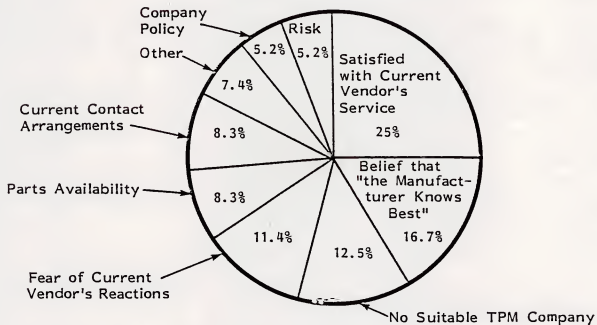


EXHIBIT 3.1

REASONS FOR AND AGAINST CONSIDERING TPM - - UNITED KINGDOM

REASONS FOR NOT CONSIDERING TPM

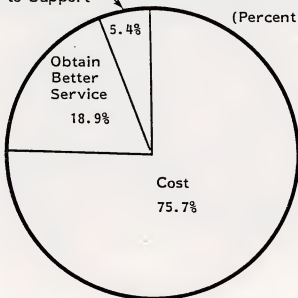
(Percent of Reasons Given)



Manufacturer No Longer Prepared to Support Product

REASONS FOR CONSIDERING TPM

(Percent of Reasons Given)



THE HISTORY OF THE

REPUBLIC OF THE PHILIPPINES

BY

FRANCIS J. CARROLL



THE HISTORY OF THE
REPUBLIC OF THE PHILIPPINES
BY
FRANCIS J. CARROLL
NEW YORK
THE CENTRAL BOOK CONCERN
1908

THE HISTORY OF THE
REPUBLIC OF THE PHILIPPINES
BY
FRANCIS J. CARROLL
NEW YORK
THE CENTRAL BOOK CONCERN
1908

* No suitable TPM company	12.5%
* Parts availability	8.3%
* Risk	5.2%
* Fear of current vendor reaction	11.4%
	<hr/>
	37.4%

- ° Well over one third of users currently against the idea of TPM could be converted given the right approach from the right company.
- ° Growth of financially sound independent maintenance companies, in some cases backed by computer manufacturers, could be the stimulus needed to move the market into a new growth phase.

IV. Summary Data

- IV.1 Exhibit 4.1 summarises the ownership structure of those companies interviewed.
- IV.2 Exhibit 4.2 summarises the main performance data of the surveyed companies.
- IV.3 Exhibit 4.3 shows the forecast turnover growth rates of the IM companies and confirms the bullishness of market projections. Rarely is growth expected to be less than 20% and more often is in the 30%-40% range.
- IV.4 Exhibit 4.4 compares relative company performance in terms of revenue, and, where possible, profits per engineer and per employee. As can be seen, the average revenue per engineer over all the companies is £37,180. Those with a better than average performance are:

- * ATM
- * Computeraid
- * CFM
- * Computer Maintenance Ireland
- * Data Dynamics
- * DDT
- * DPCE
- * ISG
- * Mainstay
- * MBS
- * Quest
- * Sintrom
- * Systems Reliability
- * Vistec

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in the context of public administration and financial management. The text notes that without reliable records, it is difficult to track expenditures, assess performance, and ensure that resources are used effectively and efficiently.

2. The second part of the document outlines the various methods and tools used for data collection and analysis. It mentions the use of surveys, interviews, and focus groups to gather qualitative and quantitative data. The text also discusses the importance of using statistical software and other analytical tools to process and interpret the data collected. It highlights that the choice of methods and tools should be based on the specific needs and objectives of the study or project.

3. The third part of the document focuses on the ethical considerations and standards that must be followed during the data collection and analysis process. It stresses the importance of obtaining informed consent from participants, ensuring the confidentiality and anonymity of the data, and adhering to established ethical guidelines and regulations. The text notes that ethical considerations are not only a moral obligation but also a legal requirement in many cases.

4. The fourth part of the document discusses the challenges and limitations of data collection and analysis. It mentions issues such as data quality, bias, and the potential for misinterpretation of results. The text suggests ways to address these challenges, such as using multiple data sources, conducting pilot studies, and being transparent about the limitations of the data and the analysis.

5. The fifth part of the document concludes by summarizing the key points and emphasizing the overall importance of data collection and analysis in decision-making and policy development. It notes that while the process can be complex and time-consuming, the benefits of having accurate and reliable data are significant. The text encourages a commitment to high standards of data collection and analysis to ensure that decisions are based on the best available evidence.

EXHIBIT 4.1

OWNERSHIP STRUCTURE

ATM	:		(Private)
Commercial Data Systems Ltd.	:	Commercial Data Ltd.	(Private)
Computeraid Services	:	Thorn - EMI	(Public)
Computer Field Maintenance	:	IAL : STC	(Public)
Computer Maintenance Ireland	:	ICS : Lamont Holdings	(Public)
Data Dynamics Ltd.	:	Innotech	(Private)
DDT Maintenance	:	DDT Group Ltd.	(Public)
DPCE (UK)	:	DPCE (Holdings) Ltd.	(Public)
ISG	:		(Private)
Kode Services Ltd.	:	Kode International Group	(Public)
Mainstay Computer Cover Ltd.	:		(Private)
MBS Rentals	:	MBS Engineering	(Public)
Memory Maintenance Ltd./ Micro Systems Maintenance	:		(Private)
Mills Associates	:		(Private)
Nexel Ltd.	:		(Private)
Quest International Computer Services Ltd.	:	Quest Automation PLC	(Public)
Sintrom Electronics	:	Sintrom PLC	(Public)
Systems Reliability Ltd.	:	(Public - 100% Directors)	
Vistec - TSS	:	Electronics Rental Group	(Public)
Zygal Services	:	Zygal Dynamics PLC	(Public)

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EXHIBIT 4.2

T. F. M. COMPANIES: SUMMARY

	TOTAL TURNOVER (£000)	U.K. TURNOVER (£000)	U.K. MAINTENANCE TURNOVER (£000)	U.K. MARKET SHARE*	PRE- TAX PROFIT (£000)	PROFIT % OF TURNOVER	R.O.I. (PBT) %	NO. OF CENTRES	NO. OF ENGINEERS	NO. OF SITES
British Olivetti	2,500	2,500	2,500	2.5	-	-	-	-	-	-
Bell Technical Services	20,000	14,000*	14,000*	13.8	-	-	-	-	260*	-
CFM	12,000	12,000	10,800	10.6	1,200	10.0%	52.7%	22	300	2000
DPCE	11,200	10,024*	10,024*	9.9	2,610*	23.3%	42.7%	9	230	400
Systems Reliability	10,800	10,800*	3,780	3.7	2,600*	24.1%	-	9	100	3000
Hills Associates	7,500	7,500	3,000	3.0	-	-	-	19	115	2000
Kode	6,400	5,900*	3,600*	3.5	490*	7.7%	-	-	130	-
Quest International	5,200	3,900*	3,900*	3.8	-	-	-	8	100	2000
MBS Rentals	5,000	5,000	5,000	4.9	2,800*	56.0%	-	12	106	4000
ISG	4,500	4,500	1,000	1.0	-	-	-	5	24	750
Computersaid Services	3,750	3,750	3,750	3.7	-	-	-	8	65	8000
Data Dynamics	3,500	3,500	700	0.7	-	-	-	3	40	300
Vistec - TSS	3,342	3,342	1,550	1.5	264	7.9%	63.4%	11	40	1000
DDT Maintenance	3,000	3,000	3,000	3.0	360	12.0%	27.7%	9	70	1300
ATM	1,800	1,800	1,800	1.8	288	16.0%	-	8	25	5000
Memory Maintenance/ Micro-Systems Maintenance	1,600	1,600	1,600	1.6	300	18.8%	200.0%	5	49	2000
Mainstay Computer Cover	1,500	1,500	1,500	1.5	250	16.7%	-	1	16	-
Commercial Data Systems	1,350	1,350	1,350	1.3	40	-	-	6	60	2000
Computer Maintenance Ireland	1,250	1,250	1,250	1.2	200	16.0%	26.7%	4	27	-
Sintrom	1,200**	1,200	1,200	1.2	360	30.0%	-	3	22	370
Nexel	1,000	1,000	700	0.7	-	-	-	9	60	5500
Zygal	1,000	1,000	750	0.7	-	-	-	5	40	1000
Surveyed Companies	109,392	100,416	76,754	75.6%						
All Companies	N/A	N/A	101,500	100.0%						

* INPUT Estimate

** Maintenance Only



EXHIBIT 4.3TURNOVER GROWTH FORECASTS

	<u>1985/4</u>	<u>1986/5</u>
CFM	20%	17%
DPCE	40%	40%
Systems Reliability	20%	20%
Mills Associates	20% *	25%
Quest	30%	-
MBS Rentals	30% *	74%
ISG	125%	33%
Computeraid	25%	-
Data Dynamics	-	40%
Vistec - TSS	50%	-
DDT	35%	67%
ATM	38%	39%
Micro System Maintenance	108%	-
Mainstay	-	-
Commercial Data Systems	35%	-
Computer Maintenance Ireland	25%	-
Sintrom	20%	30%
Nexel Ltd.	-	40%
Zygal	-	45%

* INPUT Estimate

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EXHIBIT 4.4

PERSONNEL PERFORMANCE STATISTICS - 1985 FORECAST

	TOTAL REVENUE (£000)	GROSS PROFIT (£000)	REVENUE PER ENGINEER (£)	REVENUE PER HEAD (£)	PROFIT PER ENGINEER (£)	PROFIT PER HEAD (£)
Advanced Technology Maintenance	1,800	288	72,000	32,700	11,520	5,240
Commercial Data Systems	1,350	40	22,500	16,875	675	506
Computeraid Services	3,750	-	42,900	30,000	-	-
CFM	10,800	1,200	40,000	30,000	4,000	3,000
Computer Maintenance Ireland	1,190	200	46,300	35,700	7,400	5,700
Data Dynamics Ltd.	700	-	122,500	-	-	-
DDT	3,000	-	42,900	-	5,100	-
DPCE	10,024	2,610	48,700	-	10,960	-
IŞG	1,000	-	41,700	-	-	-
Kode Services	3,600	-	27,700	-	-	-
Mainstay Computer Cover Ltd.	1,500	250	93,750	36,600	15,600	6,100
MBS Rental	5,000	2,800	47,200	-	26,415	-
Memory Maintenance/Micro-Systems Maintenance	1,600	300	32,650	-	6,122	-
Mills Associates	3,000	-	26,100	-	-	-
Nexel Ltd.	700	-	11,700	8,750	-	-
Quest International	3,900	-	39,000	-	-	-
Sintrom Electronics	1,200	-	54,500	-	-	-
Systems Reliability Ltd.	3,780	-	37,800	-	-	-
Vistec	1,550	264	38,750	-	6,600	-
Zygal	750	-	18,750	-	-	-
Average	60,194	-	37,180	-	-	-

The first part of the paper discusses the importance of the research and the objectives of the study. It then proceeds to a literature review, followed by a description of the methodology used. The results of the study are presented in the next section, and the final section discusses the conclusions and implications of the findings.

The research was conducted in a laboratory setting, and the data collected was analyzed using statistical methods. The results show that there is a significant difference between the two groups, and this difference is attributed to the intervention.

The findings of this study have important implications for the field of research. They suggest that the intervention used in this study is effective, and this information can be used to inform future research and practice.

In conclusion, this study has provided valuable insights into the effectiveness of the intervention. The results are promising, and further research is needed to confirm these findings and explore the underlying mechanisms.

V. Attitude to Acquisition

- ° Respondents were asked for their reactions to the idea of a take-over, merger or joint-venture. The question was framed so openly so as to avoid speculation about the nature of INPUT'S enquiries.
- ° Most companies are willing to be approached, at least on a joint venture level. These are listed on Exhibit 5.1 with their UK maintenance turnover and market share.
- ° A number of other companies were more keen on acquiring than being acquired, and these are shown on Exhibit 5.2, with a number of companies who were positively hostile to the idea of being taken over.



EXHIBIT 5.1

TPM STUDYCOMPANIES WILLING TO BE APPROACHED

	Market Share	UK Mtce. Turnover £K.
	-----	-----
ATM (Advanced Technology Maintenance)	1.6%	1,800
Commercial Data Systems	1.3%	1,350
Computeraid Services	3.7%	3,750
Computer Field Maintenance	9.9%	10,800
Computer Maintenance Ireland	1.2%	1,250
Data Dynamics	0.7%	700
DDT Maintenance	3.0%	3,000
ISG	1.6%	1,650
Mainstay	1.5%	1,500
Nexel Ltd.	0.7%	700
Sintrom Electronics	1.2%	1,200
Vistec - TSS	1.5%	1,550
Zygal	0.7%	750



EXHIBIT 5.2

COMPANIES IN ACQUISITION MODE

DDT Maintenance

DPCE

MBS Rentals

Mills Associates

Quest International

COMPANIES AGAINST ACQUISITION

Micro System Maintenance

Mills Associates

Quest International

[The page contains extremely faint, illegible text, likely bleed-through from the reverse side of the document.]

APPENDIX

COMPANY PROFILES

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion.

There are a number of reasons why the number of children in the world is increasing. One of the main reasons is that the number of children who are surviving to the age of 15 is increasing. This is due to a number of factors, including improved medical care, better nutrition, and a decrease in child mortality.

Another reason why the number of children in the world is increasing is that the number of children who are being born is increasing. This is due to a number of factors, including a decrease in the age at which women are having children, and an increase in the number of children who are being born to women who are already having children.

There are a number of other reasons why the number of children in the world is increasing. These include a decrease in the number of children who are being adopted, and an increase in the number of children who are being born to women who are already having children.

The number of children in the world is increasing at a rapid rate. This is a cause for concern, as it means that there will be a large number of children who will need to be supported in the future. This is a challenge that the world must face in the coming decades.

There are a number of ways in which the world can address this challenge. One of the most important is to improve the quality of education for all children. This will help to ensure that children are able to support themselves in the future.

Another way in which the world can address this challenge is to improve the quality of health care for all children. This will help to ensure that children are able to survive and thrive.

There are a number of other ways in which the world can address this challenge. These include providing financial support for children and their families, and ensuring that children have access to basic necessities such as food and shelter.

The number of children in the world is increasing at a rapid rate. This is a challenge that the world must face in the coming decades. There are a number of ways in which the world can address this challenge, and it is important that we take action now to ensure that all children have a bright future.

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ADVANCE TECHNOLOGY MAINTENANCE LTD.

Address: 2 Bristol Road,
Metropolitan Centre,
Greenford,
Middlesex UB6 8UB.

Ownership: Privately owned, mainly financed by Meritor Investments, a joint venture of the Midland Bank and Rolls Royce Pension Trust. Originally the service arm of Hamilton Rentals, ATM has been in independent maintenance since December 1983.

<u>Financial</u>	Turnover:	1984	£1.3 million	
<u>Data:</u>		1985	£1.8 million	+ 38% growth
		1986	£2.5 million	+ 39% growth

Pre-tax profits expected to remain steady 16% of turnover, rising from 1984's £208K to £400K by 1986.

All Revenue comes from maintenance.

Employees: ATM has 25 engineers working from premises in Greenford, Birmingham, Manchester, Aberdeen and Coatbridge. Three engineers work from home in Bristol, Leicester and Leeds.

Total staff of the company is 55. With only 25 field engineers, this total looks out of balance. Revenue per engineer in 1985 is forecast to be £72,000, with revenue per head (total employees) down to £32,700. Pre-tax profit per engineer and employee are £11,520 and £5,240 respectively.

Products Mainly DEC and IBM small systems, office automation equipment, peripherals and terminals. Although primarily IBM/DEC oriented
Maintained: will maintain most makes of peripheral and Rascal data and tele-communications equipment.

ATM provides all normal services with the exception of effecting any engineering changes. They also sell accessories. They do not carry out any warranty work on behalf of a manufacturer.

Customer Wide ranging with no particular profile.
Profile:

Management ATM believe that their growth both past and future is the result
Issues: of effective management. For the future they are aiming to improve the quality of their service to ensure continued growth and are also considering acquisitions.

Their key strength, as they see it, lies in a broad product range and their flexibility. Low prices and flexibility are given as the main reason for customers using their service. They quote themselves as costing 16-20% less than DEC for equivalent service. For PC service, they will aim to undercut their lowest-priced competitors, usually DDT.

Competitors: ATM's competitors are considered to be Bell Technical Services (ex GCS), CFM and DDT.



COMMERCIAL DATA SYSTEMS LTD.

Address: Downham Road,
Ramsden Heath,
Billericay,
Essex CM11 1PU.

Ownership: Privately owned, though a holding company, Commercial Data Ltd.
by the Managing Director, Richard Biggs and one other person.

<u>Financial</u>	Turnover:	1984	£1.0 million
<u>Data:</u>		1985	£1.35 million
		1986	£1.76 million (INPUT estimate)

Pre-tax profits of £30,000 in 1984 represent only 3% return on turnover. A constant level will yield profits of £40,500 in 1985.

All revenue is from maintenance, of which 80% is contracted and 20% T & M.

Employees: CDS employs 60 engineers to cover the whole of UK, working out of 6 locations: Scotland, Birmingham, London, Manchester, Essex and Bristol. Any work in Northern Ireland is sub-contracted.

Total staff of the company is 80.

Revenue per engineer in 1985 is forecast to be £22,500 with revenue per employee only £16,875. The profit figures are £675 and £506 respectively. Such low figures gives the company little room to manoeuvre in an increasingly competitive market.

Products
Maintained: CDS specialises wholly in the PC area, particularly Apples, IBM, some Sirius and Apricots. The main product is Apple, but IBM and Apricot are becoming increasingly important.

They provide all hardware service to these products but have no consulting of programming services. They do not sell supplies or accessories.

Account
Profile: Ranges from simple machine user to multi-national company.

Management
Issues: CDS believes that it is able to generate and handle a growth rate of 30% per annum, mainly through the natural growth in the market place.

Their main strategy for the future is to greater density on sites.

Customers use them mainly on the recommendation of the dealer.

Competitors: Bell Technical Services (ex GCS)

DDT

Nelsons (in the North only)



COMPUTERAID SERVICES

Address: 21 Invincible Road,
Farnborough,
Hants GU14 7BR.

Ownership: A division of Software Sciences, itself a division of Thorn-EMI, a public company. Computeraid has been in the independent maintenance since 1982.

<u>Financial</u>	Turnover:	1984	£2.2 million (INPUT estimate)
<u>Data:</u>		1985	£3.0 million + 37% growth
		1986	£4.1 million + 35% growth

1986 turnover could be as high as £4.5 million if Computeraid's most optimistic forecast is used. Separate profit figures are not available.

All revenue comes from maintenance.

Employees: The company employs 100 people in all, with around 70 field engineers. This gives a turnover per engineer in 1985 of £42,900 and per employee of £30,000.

Products
Maintained: Computeraid are mainly active among PC's, peripherals and terminals, but do maintain a few DEC 1123's. The PC's serviced are IBM, Compaq, Teletype, Future and Columbia.

There is a growing involvement in the area of data communications.

All normal hardware service is provided, but no software support, programming, consulting or sales of supplies or accessories are offered. Service is usually offered as an agent of the manufacturer, and invariably service is provided as necessary.

Some 85% of service is provided on a contract basis, with only 15% being T & M.

Management
Issues: Computeraid's main strategy is to concentrate on other directions of the Thorn-EMI group - marketing to a semi-captive audience.

Their key strengths they see as being the quality of their service, the Thorn-EMI name, and their price competitiveness.

Competitors: They see their main competitors as being:

Bell Technical Services

DDT

DPCE

Kode

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial statements. The text also highlights the need for regular audits and reconciliations to identify any discrepancies or errors early on.

In the second section, the author provides a detailed overview of the accounting cycle. This process involves ten distinct steps, from identifying the accounting entity to preparing financial statements. Each step is explained in detail, with examples provided to illustrate how they are applied in a real-world business context.

The third section focuses on the classification of accounts. It distinguishes between assets, liabilities, and equity, and further breaks these down into sub-categories such as current and non-current assets. The text explains how these classifications are used to prepare the balance sheet and other financial statements.

The final part of the document discusses the importance of ethical considerations in accounting. It stresses that accountants have a duty to provide accurate and unbiased information to their stakeholders. The text also touches upon the consequences of unethical behavior, such as fraud and misstatement, and the role of professional organizations in enforcing ethical standards.

COMPUTER FIELD MAINTENANCE (CFM)

Address: Excell House,
Trust Industrial Estate,
Hitchin,
Herts SG4 0U2.

Ownership: Owned by Internation Aeradio, which is in turn owned by Standard Telephones and Cables, a public company. STC once part of ITT, also own ICL.

<u>Financial</u>	Turnover:	1984	£10.0 million	
<u>Data:</u>		1985	£12.0 million	+ 20% growth
		1986	£14.0 million	+ 17% growth

Pre-tax profits of £900K in 1984 are expected to rise to £1.2 million in 1985 and £1.4 million in 1986, representing 10% return on turnover.

Assets are estimated to be £3 million, giving a healthy 40% return on investment in 1985.

90% of revenue is derived from maintenance, the remainder being sales of supplies.

Employees: CFM has a total staff of 400, with 300 being service engineers, working from 22 centres in the U.K. Turnover per engineer in 1985 will be £40,000 and per employee £30,000. Forecast profit figures are £4,000 and £3,000 respectively.

CFM's central workshop activity is growing and they are currently buying a new 5 acre site in Stoke-on-Trent.

Products
Maintained: CFM are mainly involved in medium systems terminals and PC's, but do have a contract to maintain Bank of Scotland Cash Dispensers. The breakdown of their turnover is:

Large Contracts	£2.0 million (B.O.S., Barclaycard)
Terminals/PC's	£2.0 million (Main growth area)
Medium Systems	£4.7 million (Mainly DEC range)
Ad-Hoc	£0.3 million
Sales of Supplies	£1.0 million
	<hr/>
	£10.0 million

They provide all hardware services except refurbishment, but do not add, improve or extend software features, carry out programming or consulting. They do, however, offer free advice on hardware enhancements.

CFM acts both on an agent of a manufacturer but also competes with manufacturers for service revenue.

Almost all business is on a contract basis (97%).

the study. The first author (JJG) was responsible for the study design, data collection, data analysis and writing of the manuscript. The other authors were involved in the design, data collection and data analysis. All authors were involved in writing and reviewing the manuscript.

Discussion

The present study is the first to show that the prevalence of self-reported depression is higher in the general population of the Netherlands than in the general population of the United States. The prevalence of self-reported depression in the Netherlands is 10.7%, whereas the prevalence of self-reported depression in the United States is 7.1%.

The prevalence of self-reported depression in the Netherlands is higher than in the United States. This may be due to the fact that the prevalence of self-reported depression is higher in the Netherlands than in the United States. This may be due to the fact that the prevalence of self-reported depression is higher in the Netherlands than in the United States. This may be due to the fact that the prevalence of self-reported depression is higher in the Netherlands than in the United States.

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Management

Issues:

CFM view themselves as the leading independent maintenance company in the U.K., and are intent on retaining that position.

Their main strenghts they see as their price competitiveness (up to 20% lower than equivalent manufacturer service), coupled with high quality giving good value for money.

For the futurethey are keen to obtain more business in the banking/ insurance area.

Competitors: Their main, and only quoted competitor is Bell Technical Services.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income. The document provides a detailed list of items that should be tracked, such as inventory levels, customer orders, and supplier invoices. It also outlines the procedures for recording these transactions, including the use of specific forms and the assignment of responsibilities to different staff members.

The second part of the document focuses on the analysis of the recorded data. It describes various methods for identifying trends and anomalies in the financial performance. This includes comparing current data with historical data, as well as benchmarking against industry standards. The document also discusses the importance of regular reviews and reports to management, highlighting the need for clear communication and transparency in the reporting process. It provides examples of how to present the data in a way that is easy to understand and actionable.

The final part of the document addresses the challenges of maintaining accurate records and offers practical solutions. It discusses the importance of training staff members on the correct recording procedures and the need for regular audits to ensure compliance. It also highlights the benefits of using modern accounting software to streamline the recording process and reduce the risk of errors. The document concludes by emphasizing the long-term value of accurate financial records in making informed business decisions and ensuring the overall success of the organization.

COMPUTER MAINTENANCE IRELAND

Address: Queens Road,
Belfast BT3 ODT,
Northern Ireland.

Ownership: A wholly-owned subsidiary of ICS (Irish Computer Services), in turn a subsidiary of Lamont Holdings. Until recently ICS was a subsidiary, ultimately, of the National Westminster Bank Group.

<u>Financial Data:</u>	Turnover:	1984	£1.0 million
		1985	£1.25 million
		1986	£1.60 million (INPUT estimate)

Pre-tax profits, £100K in 1984 are expected to double to £200K in 1985, representing 16% of turnover. With assets of some £750K, the return on investment is around 27%.

95% of revenue comes from independent maintenance.

Employees: CMI operates only in Ireland, both North and South of the border. 27 engineers work out of sites in Belfast, Dublin, Cork and Limerick, and the company has 35 employees in all. Revenue per engineer is £46,300 and per employee, £35,700. Profit per engineer is £7,400 and per head, £5,700.

Products Maintained: CMI's main speciality is the DEC range, due mainly to their link with ICS who sell DEC products in Ireland. They also handle DG Novas and a range of PC's and peripherals including IBM, ACT, Texas Instruments, Equinox, Redifon, Fujitsu.

Although providing most hardware services, conversion and upgrades are carried out by ICS.

All programming and consulting services are offered by ICS not CMI. Nearly all customers are on annual contracts. Service is carried out as an agent of the manufacturer.

Management Issues: CMI are the largest independent maintenance company in Ireland, and are seeking to expand both in Ireland and the UK generally.

Their main strengths are price - up to 30% cheaper than DEC, a service quality better than DEC's and the flexibility to maintain mixed systems.

Competitors: The only significant competition, other than from DEC, comes from DDT.



DATA DYNAMICS LTD.

Address: Clayton Road,
Hayes,
Middlesex UB3 1BD.

Ownership: A private company, wholly owned by Innotech Investments. They have been in business since 1968 maintaining their own manufactured products, but commenced independent maintenance only in 1981.

<u>Financial</u>	Turnover:	1984	£3.5 million
<u>Data:</u>		1985	£4.9 million
		1986	£6.4 million (INPUT estimate)

Note, however, that only 20%, at most, is truly independent maintenance, the balance being the maintenance of the company's own products. Although closely tied at the moment, DDL is aggressively seeking new independent business.

Employees: DDL has 40 engineers and support staff working from centres in Hayes, Manchester and Edinburgh. Repair centres are attached to all three centres. Revenue per engineer is a very high £122,500, but again it must be stressed that this is not all independent maintenance revenue.

Products
Maintained: DDL concentrates on small systems, peripherals, telecommunications equipment and Apple PC's. They shortly anticipate extending their PC range to include IBM PC's.

All hardware services are provided, but only limited user training and no significant software or consulting activities are undertaken. They do undertake a little support of their own software.

Management
Issues: As a manufacturer themselves, they believe that they are better able than their competitors to understand the problems of support, especially in the early stages.

Their immediate goal is to improve product quality in the field to enable them to offer a full 5-year warranty period.

Competitive strengths include pricing, which they regard as lower than manufacturers' price, and the quality of their service.

DDT MAINTENANCE LTD.

Address: 58-62 Kingston Road,
Kings Norton,
Birmingham B30 1JH.

Ownership: Public Company linked with Data Design Techniques Ltd., who sell hardware. The company have been in independent maintenance since 1974.

<u>Financial</u>	Turnover:	1984	£2.0 million (INPUT estimate)
<u>Data:</u>		1985	£3.0 million
		1986	£5.0 million

Pre-tax profits are currently running at 12% of turnover and are expected to continue to do so for the foreseeable future. This will give annual profits of £360,000 in 1985 rising to £600,000 in 1986.

All revenue quoted above is from independent maintenance.

Employees: DDT has some 70 engineers working from centres in Edinburgh, Warrington, Birmingham, London, South Wales, Belfast, Dublin, Cork and Jersey. They are supported by a workshop and product specialists in South Wales.

Turnover per engineer in 1985 is £42,900 and profit per employee £5,100.

Future plans include expansion into Europe, particularly Holland and France.

Products
Maintained: DDT specialise in the 'low-cost' end of the market, maintaining peripherals, terminals and PC's. They cover an extensive range of manufacturers, including ACT, Apple, Compaq, IBM, Torch, Sanyo and North Star.

As well as normal hardware service, they do have a software support capability, albeit limited, and also offer programming and consulting services.

They do not sell any supplies or accessories.

Customer
Profile: DDT are targeting multi-system users with 5000 pieces of equipment spread over 1300 customers. Many of their accounts are large users: Legal and General and Prudential Assurance, Tesco and Argos for example.

Management
Issues: In terms of their growth, DDT believe that they have achieved their 'critical mass' and can cope with rapidly increasing business volume..

For the future, they are aiming to expand by increasing their coverage in Europe and expanding their product range to cover telecommunications equipment, software and larger systems. This rather contradicts what they see as their key strength, their specialism in the micro-market.

DDT are also in an acquisition mood as one way of increasing their business.



Other strengths they highlight are their flexibility, the depth of their 'back-up' service and their ability to meet their contracted targets.

Competitors: DDF have identified three main competitors:

Bell Technical Services

Kode

MBS

the 1990s, the number of people aged 65 and over in the United States is projected to increase from 20 million to 35 million.

As the number of people aged 65 and over increases, the number of people aged 75 and over is also projected to increase. In 1990, there were 10 million people aged 75 and over in the United States. By 2010, the number of people aged 75 and over is projected to increase to 15 million. This increase in the number of people aged 75 and over is expected to be driven by the increase in the number of people aged 65 and over, as well as the increase in life expectancy.

The increase in the number of people aged 75 and over is expected to have a significant impact on the economy. The number of people aged 75 and over is expected to increase from 10 million in 1990 to 15 million in 2010. This increase in the number of people aged 75 and over is expected to be driven by the increase in the number of people aged 65 and over, as well as the increase in life expectancy.

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DPCE (UK) LTD.

Address: 6 Broad Street,
Wokingham,
Berks RG11 1AB.

Ownership: DPCE (UK) is a wholly-owned subsidiary of DPCE Holdings PLC, a company which also owns DPC BV and Storage Technology in Holland, DPC INC in the USA and DPCE Products.

They are fully listed on the Stock Exchange and shareholders are mainly large pension organisations.

<u>Financial</u>	Turnover:	1984	£8.0 million
<u>Data:</u>		1985	£11.2 million
		1986	£15.7 million

DPCE are quite certain that they are able to maintain this 40% annual growth rate.

The 1984 gross profit was 22.5% of turnover. If this is maintained through to 1986, gross profits will rise to £3.5 million.

Employees: DPCE have 230 engineers, some working mainly from customer sites. The turnover per engineer in 1985 will be £48,700 and the resultant gross profit almost £11,000.

Products
Maintained: DPCE cover a large range of equipment from IBM mainframes, DEC VAX's down to PC's (IBM, Sirius and Acorn) and network services. The PC maintenance business is restricted to large customers only. DPCE maintain hardware from over 150 manufacturers (see attachment).

Customer
Profile: Compared to many other independent maintenance companies, DPCE have a relatively small, 400, but high quality customer base, including KLM, British Airways, Sainsburys, Racal, Hunting, National Girobank, British Telecom, Save and Prosper Group.

Management
Issues: Currently provide all normal hardware maintenance, but intend in the future to develop an increased software support capability.

Their goal is to maintain the current 40% growth achievement partly through 'natural' market growth, but also through diversification into smaller systems and software support.

DPCE have recently been looking at acquisition of other independent maintenance companies.

Competitors: DPCE do not perceive any competitors across the total sweep of their business, but identify CFM and SMS as occasional competitors and IBM where the National Girobank contract is concerned.

1000

1000

DPCE currently maintains hardware from over 150 manufacturers, ranging from te and peripheral equipment to the most powerful mainframes. Among them are

Acorn Computers
 Adds
 Advanced Electronic Design
 Amdahl
 Amperif
 Ampex
 Anadex
 Anderson Jacobson
 Apple Computer
 Benson
 Bowe
 Bright
 CMC
 Calcomp
 Case
 Centronics
 Century Data Systems
 Cifer Systems
 Codex
 Commodore Business Machines
 Computer Automation
 Computer Communications Inc
 Computer Link
 Computer Technology
 Control Data
 Dacoll
 Data 100
 Data Card
 Data Dynamics
 Data General

Data Printer Corp
 Data Translation
 Data-Type Terminals
 Datagraphix
 Datalogic
 Datapoint
 Dataproducts
 DataRAM
 Decision Data
 Delta Data Systems
 Diablo
 Digico
 Digi-Data
 Digital Equipment Co
 Digitran
 Documation
 Dynatech-Nolton
 EMC Corporation
 EM & M Inc
 Elbit Data Systems
 Epson
 Fabritek
 Facit
 Ferranti Computer Systems
 Fima
 Fujitsu
 Gandalf Digital Computer
 General Automation
 General Electric Co USA
 Harris Intertype

Hazeltine
 Hewlett-Packard
 Hitachi
 Honeywell
 Hytec Microsystems
 IBM
 ICL
 Intel
 Intermec
 Intermet
 Intersil
 K & N Electronics
 Kennedy International
 Keytech
 Kodak
 Kode
 Lamson
 Lear Siegler
 Lexidata
 Lion Systems Developments
 Lockheed Inc
 Logica
 Lundy-Farrington
 Lynwood Scientific Development
 Mannesmann Tally
 Master Systems
 MDB Systems
 Mellor Data
 Menorex
 Micom-Borer

Micro Consultants
 Midlectron
 Modular Technology
 Monolithic Systems
 Moore Paragon
 Mostek
 National Advanced Systems
 NCR
 Newbury Data Recording
 North Star Horizon
 Olivetti
 Paper Tiger
 Penny & Giles
 Pericomp Data Systems
 Peritek International
 Plessey Microsystems
 Potter Instrument Co
 Prime
 Printronix
 Quest Cil
 Qume
 Racal-Milgo
 Rair
 Recognition Equipment
 Redifon Computers
 Rixon
 S & B Electronic Systems
 STC
 Sension
 Set

Shugart
 Siemens
 Sigma Data
 Sintrom Ellip
 Spectronics
 Sperry
 Standard Re
 Storage Tec
 Summagrap
 Systems Ind
 Systems Rel
 Systeme
 T-Bar
 T.N.W. Inc
 Tec
 Tektronix
 Teletype
 Telex
 Texas Instru
 Transdata
 Trend
 Versatec
 Videcom
 Volker Graf
 Walters Mic
 Westward
 Zentek

Note: The absence of a particular make of equipment from this list does not necessarily mean that it is not covered by DPCE's maintenance schedules.



ISG

Address: Unit 5, Wellington Industrial Estate,
Basingstoke Road,
Spencers Wood,
Reading,
Berks.

Ownership: A private company jointly owned by its five directors. The company has been in existence since 1978, but only became involved in independent maintenance in 1982.

Financial Data: Independent maintenance represents only 22-25% of the total company turnover, the remainder being sales of hardware, supplies and accessories.

Turnover: (Mtce only)	1984	£0.4 million
	1985	£1.0 million
	1986	£1.6 million

Employees: ISG are heavily 'engineer weighted' with 29 out of 35 personnel being engineers working for 5 centres: Reading, Farnborough, Manchester, Birmingham and Leeds.

Turnover (maintenance) per engineer is £41,700. Total number of sites supported is between 7 and 800.

Equipment Maintained: Very much in the low-value end of the market, specialising in printers, VDU's and PC's (mainly IBM). They offer all hardware service facilities, but as yet, no software support. They do sell supplies and accessories.

Unlike most other independent maintenance companies, most (55%) of their business is on an ad-hoc rather than contract basis/

Management Issues: ISG are very coy about revealing their group objectives, but did reveal that they had been approached for acquisition/joint venture on a number of occasions, mainly by U.S. companies.

Their belief is that the market is and will continue to boom, being demand-driven. Within that market, ISG are keen to increase their involvement with large accounts. In terms of the total group, maintenance is seen to be the main growth area.

Their market strengths are perceived to be reliability and a good reputation.

Customer Profile: Varied, but now concentrating on blue-chip companies like STC and British Aerospace.



MAINSTAY COMPUTER COVER

Address: Bamford Grange,
Adswold Road,
Stockport,
Cheshire.

Ownership: A private company 60% owned by the employees and 40% owned by bankers and a private investor.

<u>Financial</u>	Turnover:	1984	£0.9 million	
<u>Data:</u>		1985	£1.5 million	+ 66.7% growth
		1986	£3.0 million	+ 100% growth

Total company turnover is rather higher than expected because of the additional insurance aspect of the business. Engineering services account directly for 40% of the turnover.

Pre-tax profits in 1984, at £100,000 were 11.7% of turnover rising to 16.7%, or £250,000 in 1985.

Employees: Still a very small company, employing 41 people in all, 16 of whom are engineers. In 1985, revenue per engineer and per employee will be £93,750 and £36,600 respectively. The corresponding profit figures are £15,600 and £6,100 respectively.

Equipment
Maintained: Almost entirely IBM "General Systems Division" hardware e.g. IBM 4300 series, with a few PC's and some IBM compatible equipment also.

They carry out most normal hardware services but have little software capability, and little or no sales of supplies or accessories.

Management
Issues: Mainstay see themselves as entirely in competition with IBM for service revenues.

In the medium term, their goal is a quotation on the unlisted securities market.

Their key strength they see as being the high quality of their engineering staff, counterbalanced to some extent by management inexperience in the growth and handling of the rapid business growth. Pricing is also a major factor, being pitched at 70-80% of equivalent IBM prices.

Mainstay have had talks with other parties regarding mergers/taker-over.

Overall, Mainstay have some 360 customers - 300 in the UK, and 60 in Europe.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions.

2. It is essential to ensure that all entries are supported by proper documentation and receipts.

3. Regular audits should be conducted to verify the accuracy of the records and identify any discrepancies.

4. The second part of the document outlines the procedures for handling cash and credit transactions.

5. All cash transactions must be recorded immediately and accurately, with a clear description of the nature of the transaction.

6. Credit transactions should be recorded at the time of sale, and the amount should be entered in the appropriate account.

7. The third part of the document provides guidelines for the treatment of expenses and deductions.

8. Only those expenses that are directly related to the business and are necessary for the production of income are eligible for deduction.

9. The final part of the document discusses the importance of maintaining proper records for tax purposes.

10. It is recommended that all records be kept for a minimum of seven years to ensure compliance with tax regulations.

MICRO SYSTEM MAINTENANCE LTD/MEMORY MAINTENANCE LTD

Address: 16 Westmead Industrial Estate,
Westlea,
Swindon,
Wilts SN5 7YS.

Ownership: Although these are two separate companies, there is a common ownership, and so they have been treated as one. It is a private company, 75% owned by two directors and 25% owned by the staff.

<u>Financial</u>	Turnover:	1984	£0.3 million
<u>Data:</u>		1985	£0.8 million
		1986	£1.6 million

The company made a loss of £4000 in 1984, turned round to a £40,000 profit in 1985 and forecasting £300,000 by 1986. The 1986 profit is equal between the two component companies. Memory Maintenance has a specialisation in repairing memory media, including Winchester Disks.

Employees: Micro System Maintenance supports 2,000 customers with 13,000 micros with a staff of 43 engineers and a total staff of 53. The turnover per engineer in 1985 will be £18,600 with profit of £465. Taking the personnel in all, 53, the per capita turnover is £15,100 and profit £377.

Combining the results of both companies, turnover per engineer is £16,300, turnover per head £12,700. Total profit per engineer £816, and per employee £635.

Equipment Maintained: Memory Maintenance, as said above, specialise in maintenance of magnetic media. Micro System Maintenance specialises in micro computers, particularly Research Machines, Sirius and Apricot.

Most hardware services are provided, but no software support, training, consultancy or supplies sales.

Generally service is provided as an agent of the manufacturer, and is virtually 100% contracted.

Management Issues: The main fact is that the company is run almost as a hobby. Most stated objectives are people-oriented rather than more traditionally business-oriented. These are 3rd and 4th companies that the MD has started, and he is not yet ready to retire.

The overall corporate strategy is to develop the people within the company, the people who are regarded as the key company strength. To that end, he would like to keep the company private and increase the level of ownership of the employee in the company.

Customer Profile: Approximately 50% of the company business is within the education market, mainly because of the involvement with Research Machines.

They do not rely on price to gain customers, but are more reliant on word-of-mouth recommendation. Prices are generally the same as those charged by the manufacturer.

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MBS RENTALS

Address: 25 Worship Street,
London EC2.

MBS Engineering,
Unit C Horton Trading Estate,
Stanwell Road,
Nr. Slough, SL5 9PF.

Ownership: Independent Maintenance is provided by MBS Engineering, a division of MBS Rentals, a public quoted company.

Financial Data: Although nominally operating in independent maintenance since 1979, a very high proportion of their revenue comes from the sales of telex and IBM PC's by other MBS group companies. They acquired the Jacquard engineering base when the latter folded.

Turnover:	1984	£2.8 million
	1985	£5.0 million
	1986	£8.7 million

Profit levels on that turnover are quoted by MBS as being "embarrassingly high", although this may have something to do with transfer pricing/warranty work within the Group.

Personnel: MBS service runs out of 12 branch offices with some 70 engineers and a total staff of 106. This gives a revenue per engineer of £40,000 and per employee of £26,400.

Equipment Maintained: Primarily interested in IBM PC's, claiming that the group is the largest IBM dealer in the UK. Other equipment includes Altos and Diablopinters. All standard hardware service is offered, but no software support as yet.

Customer Profile: MBS has a number of significant contracts, e.g. 500 PC's at British Telecom, 600 with ICI and a large number at British Rail. 80% of all work is under contract, with 20% being T & M.

Management Issues: Their strategy for the future is one of controlled growth, that is by concentrating of a narrow range of equipment.

They are very growth-orientated, and are themselves committed to acquisition as a method. They point to their takeover of Jacquard and also claim that they almost bought GCS.

Their greatest strength is the "semi-tied" nature of their customer base through their other group contracts.

Competitors: Mainly GCS (Bell Technical Services) is the IBM PC area, and MBS believe that they themselves are more price competitive and higher quality than GCS.

MILLS ASSOCIATES LTD.

Address: Wonastow Road,
Monmouth,
Gwent NP5 4YE.

Ownership: Private company

<u>Financial</u>	Turnover:	1984	£6.1 million * (INPUT estimate)
<u>Data:</u>		1985	£7.5 million
		1986	£9.4 million

Of their total turnover, only 40% is generated by independent maintenance, the balance being for equipment and supply sales, and bureaux services. They have recently sold off their loss-making software business.

Their estimated independent maintenance figures are, therefore:

1984	£2.4 million
1985	£3.0 million
1986	£3.8 million

Employees: Mills employ 115 engineers working out of 19 UK centres, all holding stocks. This gives a revenue per engineer of £20,810 per annum.

Equipment ICL systems including 2903/4 DRS range, ME29 PC's including
Maintained: Commodore, Olivetti, IBM and Apricot Networks.

They provide most basic hardware support, but not engineering changes, conversions or upgrades. Nor do they have any particular software or consulting capability.

Management Mills are aggressively looking to expand their business, and will
Issues: probably go to the USM to raise capital, possibly later this year. They are keen to acquire other good TPM companies, are not interested in being bought out by another company. They would, however, consider a joint-venture approach.

Competition: In their own field of operations they do not believe that they have any real competition.

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NEXEL LTD.

Address: Harcourt House,
Worsley Road North,
Walkden,
Worsley,
Manchester.

Head Office:
3 Jefferson Way,
Thame,
Oxon.

Ownership: A private company owned mainly by the Managing and Financial Directors backed by some venture capital. Nexel was essentially a management buy-out after a chain of merger/take-overs involving Ultronic Data Systems, Ultra Electronics, Doughty and Nexos.

<u>Financial</u>	Turnover:	1984	£0.5 million
<u>Data:</u>		1985	£0.7 million
		1986	£1.0 million

Independent maintenance accounts for some 75% of their total takeover.

Employees: Nexel have 60 engineers working out of 9 centres in the U.K. and are supported by 10 technical support/engineers. This gives a revenue per engineer figure of £11,700 and a per capita figure estimated to be £8,750.

Equipment Maintained: Currently Nexel operate only in the UK, but are looking to expand into Europe and the USA by the end of 1985.

They maintain a range of equipment including Fortune, Logica and Ricoh systems, peripherals, terminals and office automation equipment. They are currently trying to become an authorised maintainer of IBM equipment.

They provide the normal range of hardware services and also supply accessories and supplies.

Most of their business, (97%) is contracted.

They act almost entirely as an agent of the manufacturers whose equipment they maintain.

Management Issues: Nexel are keen to expand abroad and are looking to a listing on the USM within the next two years. Their key strength they see to be the high quality of the personnel.

The main reason they give for people using their service is a dislike of that provided by the manufacturer, and their organisation structure which is 'user-friendly'. They do not set out to under-prise the manufacturer.

Customer Profile: They claim to have as customers, 122 of the Times Top 200 companies.

Competitors: Other than the manufacturers themselves, their only competitor is CFM.

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QUEST INTERNATIONAL COMPUTER SERVICES LTD.

Address: School Lane,
Chandlers Ford,
Hants,
SO5 3YU.

Ownership: Quest International Computer Services Ltd. is a subsidiary of Quest International Computers Ltd., itself a subsidiary of Quest Automation PLC, a publicly quoted company.

<u>Financial</u>	Turnover:	1984	£4.0 million
<u>Data:</u>		1985	£5.2 million
		1986	£6.8 million

Of this turnover, true independent maintenance accounts for only 10%. The revenue composition is:

Maintaining own manufactured equipment	20%
Maintaining equipment sold by Quest	70%
Independent Maintenance	10%

Employees: Quest have 100 engineers, giving a revenue per engineer of £52,000. It is difficult to estimate the total size of the company, as they share many 'overhead' functions with other parts of the Group, e.g. financial services, stock control and purchasing.

Equipment Mainly small systems, peripherals, terminals and a wide range of
Maintained: PC's including: IBM, ACT, IIL, Wren.

Their operation is international, covering UK, Germany, Switzerland, France, Austria and they also have operations in Eastern Europe (including an office in Moscow).

They offer all hardware services, and also programming and consulting services. Sales of supplies and accessories are catered for in other parts of the group.

Quest are currently examining the possibility of providing a software maintenance service.

A comparatively high percentage of Quest's independent maintenance work is ad-hoc - 62.5%.

Management Quest are looking to be regarded as one of the most professional
Issues: companies in the market, and so are trying to recruit a high-calibre team. They regard their current management and good information systems as major strengths.

Their key weakness is being tied to a larger company which restricts their flexibility in operation, although they are flexible in the types of service they offer to customers.

Customer Quest are mainly interested in the office automation market, and
Profile: they have a number of blue-chip customers. Their biggest customer is Her Majesty's Stationery Office and W.H. Smith is also a major client.

Competitors: Bell Technical Services.

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SINTROM ELECTRONICS

Address: 14 Arkwright Road,
Reading,
Berks.

Ownership: A subsidiary of Sintrom PLC.

<u>Financial</u>	Turnover:	1984	£1.0 million
<u>Data:</u>		1985	£1.3 million
		1986	£1.7 million

Current gross profit performance is 30% of turnover, but there appears to be some doubt regarding the allocation of overheads from the parent company which is confusing the picture.

Although 100% of their business is maintenance, half of that is semi-tied in that it is maintaining equipment distributed by the group. The current success of the Group's distribution activity is expected to contribute to the growth of the maintenance company.

Employees: Sintrom have 22 engineers in all, giving an annual revenue per engineer of £59,100, a figure much higher than the average. These 22 engineers support 370 sites in all.

They cover the UK form locations in Manchester, Leeds and Rochester.

Equipment Maintained: Their main area of activity is in maintaining DEC small registers, and peripherals from a number of different manufacturers, including CDC, Dialog, Dataproducts and Centronics. IBM PC's are becoming an increasingly important part of their business.

They will provide all necessary hardware support and have contacts to whom they will sub-contract software support.

Generally they act as an agent of the manufacturer when providing service, but they regard themselves as competing with CDC and Centronics.

80% of their business is on a contract basis.

Management Issues: They have a very straightforward objective of maintaining growth at 30% per annum.

Their strengths they see as being their high 'first-call' hit-rate - 90%, and also the fact that in the case of Dataproducts, the manufacturer is unable to service the equipment.

Their prices are slightly lower than DEC's for equivalent service.

Customer Profile: They are very active in the scientific market, and their customers include British Telecom, British Aerospace, Plessey, Ferranti and the Ministry of Defence.

Competitors: CFM, but Sintrom do, on occasions act as sub-contractors for CFM also.

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SYSTEMS RELIABILITY

Address: 400 Dallow Road,
Luton,
L1 1UR.

Ownership: The independent maintenance activity is a division of Systems Reliability PLC.

Financial Data: Total group turnover for 1984 was £9.0 million. Independent maintenance accounts for only 35% of that total giving a maintenance picture as below:

1984	£3.15 million
1985	£3.78 million
1986	£4.54 million

Personnel: SRL has 100 engineers out of a total staff of 130, working out of centres in Croydon, Bristol, Birmingham, Luttermworth, Luton, Manchester, Newcastle, Dunfermline and Alpernton.

The maintenance revenue per engineer and per employee are £37,800 and £29,100 respectively.

As well as the UK, they also have operations in Brussels, Paris, Lisbon and Johannesburg.

Equipment Maintained: SRL have considerable involvement in maintaining Elliott equipment, but are becoming increasingly involved in the PC market, servicing Alpha Micro, Altos, IBM PC's, Sanyo, Dynabytes and Microstars.

They provide software support for their own hardware and all hardware service for the complete range. All service is provided as an agent of the manufacturer, and is 80% contracted.

Management Issues: SRL are concerned about growth getting out-of-hand, so are trying hard to control their diversification. Their aim is for annual growth rate of 20%.

They are vulnerable because of the high number of old Elliott Automation accounts.

Customer Profile: A mixture of blue-chip companies, e.g. British Telecom, Government Ministries and a large number of small accounts.

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VISTEC - TSS

Address: Vistec House,
Nottingham Road,
Belper,
Derby, DG5 1JQ.

Ownership: Vistec - TSS is a subsidiary of the Electronics Rental Group,
who also own Vision Hire.

<u>Financial Data:</u>	Turnover:	1984	£2.23	million
		1985	£3.0	million (INPUT estimate)
		1986	£3.8	million (INPUT estimate)

Of the £2.23 million in 1984, around 70% was from maintenance, with the balance coming from sale of supplies, the maintenance figure is therefore £1.55 million. For the period 1984-86 the maintenance profile is estimated to be:

	1984	£1.55	million
	1985	£2.1	million
	1986	£2.7	million

Employees Vistec employ 52 people in all, with 40 engineers based at 11 service locations. The maintenance revenue per engineer and per head are, therefore, in 1985, £52,500 and £40,400 respectively.

Equipment Maintained: Essentially peripherals, terminals and PC's including Qume, Apple, DEC and IBM.

Vistec are developing their expertise in the area of LANs. All normal hardware services are provided.

They act as agents in some cases, but regard themselves as in competition with DEC.

Management Issues: As with several other companies, Vistec are ambitious to become the best in the UK. Their key strategy to this is flexibility, having the ability to tailor their service to each individual customer.

As far as price is concerned, they are slightly cheaper, between 5-10% than DEC.

Customer Profile: Wide ranging with some major accounts, such as Unilever and Reed, the Police National Computer Unit, the Home Office and a range of small clients.

Competitors: Bell Technical Services
CFM
DDT
DPCE - increasingly so

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ZYGAL SERVICES LTD.

Address: Zygal House,
Telford Road,
Bicester,
Oxfordshire OX6 OXB.

Ownership: Zygal Services Ltd. are a subsidiary of Zygal Dynamics PLC. They established in maintenance in 1980 to service Zygal Dynamics equipment.

<u>Financial</u>	Turnover:	1984	£0.8 million
<u>Data:</u>		1985	£1.0 million
		1986	£1.5 million

Maintenance represents 75% of their turnover, with the remaining 25% coming from the sale of supplies and consumables.

Employees: Zygal employ 13 field and 7 workshop engineers, out of a total company workforce of 40. This shows a revenue per engineer of £50,000 (including workshop engineers) and per capita of £25,000.

The engineers work from centres in London, Bristol, Manchester and Sheffield, as well as the Head Office in Bicester.

Equipment
Maintained: Zygal concentrate on DEC small systems almost exclusively, but are negotiating with Convergent Technology to become a key service agent for them.

They provide all hardware support, but no consulting or programming. They are currently establishing a software support capability (1 person) but this is aimed mainly at the Convergent Technology unit.

They also sell significant amount of supplies and accessories. 80% of their maintenance business, generally performed as an agent of the manufacturer, is under contract.

Management
Issues: Their aim is to grow and expand, mainly through their link with Convergent Technology.

In geographical terms, they are also keen to expand into Scotland.

Their key strength they see as being their good relationship with the manufacturers they support. This is particularly so with Diablo and Fujitsu, whose printer Zygal will customise to a client's specific need.

Customer
Profile: No specific characteristic; they include educational establishments, financial institutions and government departments.

Competitors: Mainly CFM, DDT and ATM.

