



**ASSOCIATION OF DATA PROCESSING  
SERVICE ORGANIZATIONS**

**COMPUTER SERVICES INDUSTRY  
1983**

**INPUT**



# About ADAPSO

The Association of Data Processing Service Organizations (ADAPSO), founded in 1961, is a nonprofit business organization committed to meeting the needs of the multibillion dollar computer services industry. More than 625 members represent all phases of the industry — data centers, software products, professional services, timesharing, facilities management, and integrated systems companies. Corporate members range from large publicly owned companies and conglomerates with both national and international operations to small companies that serve local, regional, or specialty market segments of the industry.

ADAPSO's programs are designed to protect the interests of the computer services industry from unlawful competition and unwise governmental regulations and legislation while helping to improve industry standards and management performance. As the industry voice, it is dedicated to identifying the industry to the customer as being professional and capable; to the financial community for its growth and stability; and to government to support a vigorous, independent computer services industry.

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# About INPUT

INPUT provides planning information for manufacturing industries. Through market research, INPUT helps management in making informed decisions about office products and services.

The company carries out consulting services. Its members analyze and interpret market data. Clients receive reports, presentations, and seminars.

Many of INPUT's professional staff have held senior management positions in their areas of specialization. Most have held senior management positions in their areas of specialization.

Formed in 1974, INPUT has the largest and most technically advanced staff in the industry.

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and executives in the information processing industry. Through market research, INPUT supports client management in making informed decisions about vendors of computers, communications, and office products and services.

clients on important issues, INPUT's staff provides innovative ideas to meet clients' needs. Clients receive reports, presentations, and seminars.

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ASSOCIATION OF DATA PROCESSING  
SERVICE ORGANIZATIONS, INC.  
(ADAPSO)

SEVENTEENTH ANNUAL SURVEY  
OF  
THE COMPUTER SERVICES INDUSTRY

Based On Data For The Year 1982

Published August 1983

By

INPUT



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ANNUAL INFORMATION SERVICES INDUSTRY REPORT FOR 1982

CONTENTS

	<u>Page</u>
I INTRODUCTION.....	1
II EXECUTIVE SUMMARY .....	7
A. Market Size And Growth Of Information Service Companies	7
B. Growth Rates By Segment	10
C. Productivity Rates	14
D. Public Company Performance	16
E. Summary	16
III TOTAL INFORMATION SERVICES INDUSTRY .....	19
A. Industry Analysis	19
B. Industry Trends	37
IV PROCESSING SERVICES COMPANIES: ANALYSIS AND TRENDS TRENDS .....	53
V SOFTWARE PRODUCTS COMPANIES: ANALYSIS AND TRENDS .....	61
VI PROFESSIONAL SERVICES COMPANIES: ANALYSIS AND TRENDS .....	69
VII INTEGRATED SYSTEMS COMPANIES: ANALYSIS AND TRENDS .....	75
APPENDIX A: DEFINITION OF TERMS .....	83
A. Revenue	83
B. Service Modes	84
C. Uses Of Processing Services	86
D. Trends And Issues	87
APPENDIX B: METHODOLOGY AND RECONCILIATION.....	89
APPENDIX C: DATA BASE OF INFORMATION SERVICES REVENUE.....	93
APPENDIX D: QUESTIONNAIRE .....	95





# ANNUAL INFORMATION SERVICES INDUSTRY REPORT FOR 1982

## EXHIBITS

		<u>Page</u>	
I	-1	Number Of Companies In Research Base By Type And Size Of Company	3
	-2	Number Of Companies In Public Company Analysis By Type And Size Of Company	5
II	-1	Revenue Growth In The Information Services Industry, 1970-1982	8
	-2	Comparison Of Revenue Growth In Information Services Industry To Selected Other Industries, 1976-1981	9
	-3	Information Services Industry Statistical Overview	11
	-4	Revenue Growth By Type Of Company	12
	-5	Revenue Growth By Mode Of Service	13
	-6	Productivity Growth By Type Of Company	15
	-7	U.S. Information Services Market Forecast By Mode Of Service, 1982-1987	17
III	-1	Revenue Distribution Of Information Services Companies	20
	-2	Revenue Growth Of Information Services Companies, 1981-1982	21
	-3	Information Services Revenue By Type Of Company	22
	-4	Revenue And Percent Of Total By Type Of Company	25
	-5	Revenue And Percent Of Total By Mode Of Service	26
	-6	Revenue And Percent Of Total By Size Of Company	28
	-7	Revenue And Growth Rates By Type Of Company And Mode Of Service	29
	-8	Revenue And Growth Rates Of Submodes Of Service	31
	-9	Revenue Of Submodes Of Service By Type Of Company	32
	-10	Revenue Distribution Of Submodes Of Services By Type Of Company	33
	-11	Revenue Growth Rates Of Submodes Of Service By Type Of Company	34
	-12	Market Share By Type And Size Of Company	36
	-13	Revenue And Growth Rates Of Public Companies	38
	-14	Pretax Profit Margins Of Public Companies	39
	-15	Productivity Rates By Type And Size Of Company	40
	-16	Impact Of Selected Factors On Industry Growth By Type Of Company	42
	-17	Targeted Versus Actual Growth Rates By Type Of Company	43
	-18	Opportunities Identified By Information Services Companies	45

		<u>Page</u>
	-19 New Product And Service Offerings By Type And Size Of Company	46
	-20 Involvement With Microcomputers	48
	-21 Types Of Microcomputer Products Offered By Processing Services Companies	49
	-22 Types Of Involvement With Microcomputer Products By Software Companies	51
	-23 Potential Threats Identified By Information Services Companies	52
IV	-1 Revenue Growth Of Processing Services Companies Compared To Industry Growth	54
	-2 Distribution Of Processing Services Companies' Revenue By Mode Of Service	55
	-3 Distribution Of Submode Revenue Of Processing Services Companies	56
	-4 Largest Revenue-Generating Application Areas In Processing Services	58
	-5 Distribution Of Processing Services Revenue By Type Of Application	60
V	-1 Revenue Growth Of Software Products Companies Compared To Industry Growth	62
	-2 Distribution Of Software Products Companies' Revenue By Mode Of Service	63
	-3 Distribution Of Software Products Revenue By Major Type Of Product	64
	-4 Largest Revenue-Generating Application Areas In Software Products	66
	-5 Distribution Of Software Products Revenue By Size Of Target Machine	67
VI	-1 Revenue Growth Of Professional Services Companies Compared To Industry Growth	70
	-2 Distribution Of Professional Services Companies' Revenue By Mode Of Service	71
	-3 Distribution Of Submode Revenue Of Professional Services Companies	72
	-4 Largest Revenue-Generating Application Areas In Professional Services	74
VII	-1 Revenue Growth Of Integrated Systems Companies Compared To Industry Growth	76
	-2 Distribution Of Integrated Systems Companies' Revenue By Mode Of Service	77
	-3 Distribution Of Submode Revenue Of Integrated Systems Companies	78



		<u>Page</u>
	-4 Largest Revenue-Generating Application Areas In Integrated Systems	80
	-5 Distribution Of Integrated Systems Revenue By Major Type Of Product	81
B	-1 Change In Number Of Companies, 1981-1982	90
	-2 Change In 1981 Revenue As Reported In 1982 Research	92
C	-1 Data Base Of Information Services Revenue	93



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I INTRODUCTION





## I INTRODUCTION

- This 17th annual report on the information services industry has been prepared by INPUT under a commission from the Association of Data Processing Service Organizations (ADAPSO). It is designed for use by industry managers and financial analysts who wish to gain a fuller understanding of the size, growth, and trends of this important and rapidly changing industry.
  - ADAPSO consists of over 625 member companies and represents the interests of the information services industry in such areas as industry statistics, government relations, legal representation, and communications with the financial community.
  - INPUT is a highly regarded international planning services and marketing research company specializing in the information industry. INPUT has studied the information services industry since 1974 and maintains several ongoing research programs for the industry.
- As in previous years, this report analyzes information services industry activities in terms of both mode of service and type of company.
  - "Mode of service" focuses on the end product - processing services, software, professional services, or integrated systems - in regard to the revenue sources of the vending companies.

- "Type of company," on the other hand, is a means of classifying companies according to their primary source of revenue. For example, in this research, companies earning a majority of their revenues from processing services are classified as processing services companies, even though they may also receive revenue from sales of software products, professional services, or integrated systems (see Appendix A for a list of definitions used in this report).
- The scope of the research for this year's report is essentially identical to that in the previous year's report, although a few adjustments were made. The major research activities included:
  - A census of all companies with more than \$10 million annually in noncaptive, U.S. information services revenue.
    - More than 400 companies were interviewed or researched.
    - Two hundred sixty-three (263) companies qualified for the final list and were included in the study.
  - A stratified random sampling of companies with annual revenues less than \$10 million in noncaptive, U.S. information services revenue.
    - Over 400 companies were interviewed by telephone.
    - One hundred seventy-two (172) companies met the criteria for inclusion in this report.
- The distribution of these companies by size and type of company is included as Exhibit I-1.
- Research was also performed on all publicly held, U.S.-based information services companies. Ninety (90) companies were selected for inclusion in this



EXHIBIT I-1

NUMBER OF COMPANIES IN RESEARCH BASE  
BY TYPE AND SIZE OF COMPANY

TYPE OF COMPANY	SIZE OF COMPANY		
	> \$10 MILLION	< \$10 MILLION	TOTAL
Processing Services	112	62	174
Software Products	48	52	100
Professional Services	73	34	107
Integrated Systems	30	24	54
Total	263	172	435

research. The distribution of these companies by major type of service offered is included as Exhibit I-2.

- To be included in this analysis, a company was required to derive at least 75% of its total revenue from information services with not more than 25% of total information services revenue coming from foreign sources.
- The reader should also note the following:
  - All references to revenue include only U.S. noncaptive information services revenue unless otherwise indicated.
  - The data for this study were gathered from March to May of 1983.
  - Appendix B contains a reconciliation of figures reported in last year's report compared to those included in this year's report.
  - A data base of industry statistics is included in Appendix C.
  - A copy of the telephone interview questionnaire is included as Appendix D.

EXHIBIT I-2

NUMBER OF COMPANIES IN PUBLIC COMPANY ANALYSIS  
BY TYPE AND SIZE OF COMPANY

TYPE OF COMPANY	SIZE OF COMPANY		
	>\$10 MILLION	<\$10 MILLION	TOTAL
Processing Services	17	22	39
Software Products	14	0	14
Professional Services	21	1	22
Integrated Systems	11	4	15
Total	63	27	90





## II EXECUTIVE SUMMARY





## II EXECUTIVE SUMMARY

- The reader interested in the macro-level analysis of the information services industry in 1982 will find this chapter useful.

### A. MARKET SIZE AND GROWTH OF INFORMATION SERVICE COMPANIES

- The information services industry continued its high rate of revenue growth in 1982 despite severe recessionary pressure from the U.S. economy.
  - Total industry revenue grew a healthy 18% in 1982 reaching \$26.4 billion, as shown in Exhibit II-1.
  - The 18% growth rate far outpaced most other industries in 1982. The five-year average annual growth rate of the information services industry, as shown in Exhibit II-2, compares quite favorably with other fast-paced industries including securities (18%), banking (17%), electrical and electronic manufacturing (12%).
  - The average annual growth rate for the past five years for the information services industry, at 20%, exceeds the average for all U.S. industries, at 11%, a significant margin.

EXHIBIT II-1

REVENUE GROWTH IN THE  
INFORMATION SERVICES INDUSTRY, 1970-1982

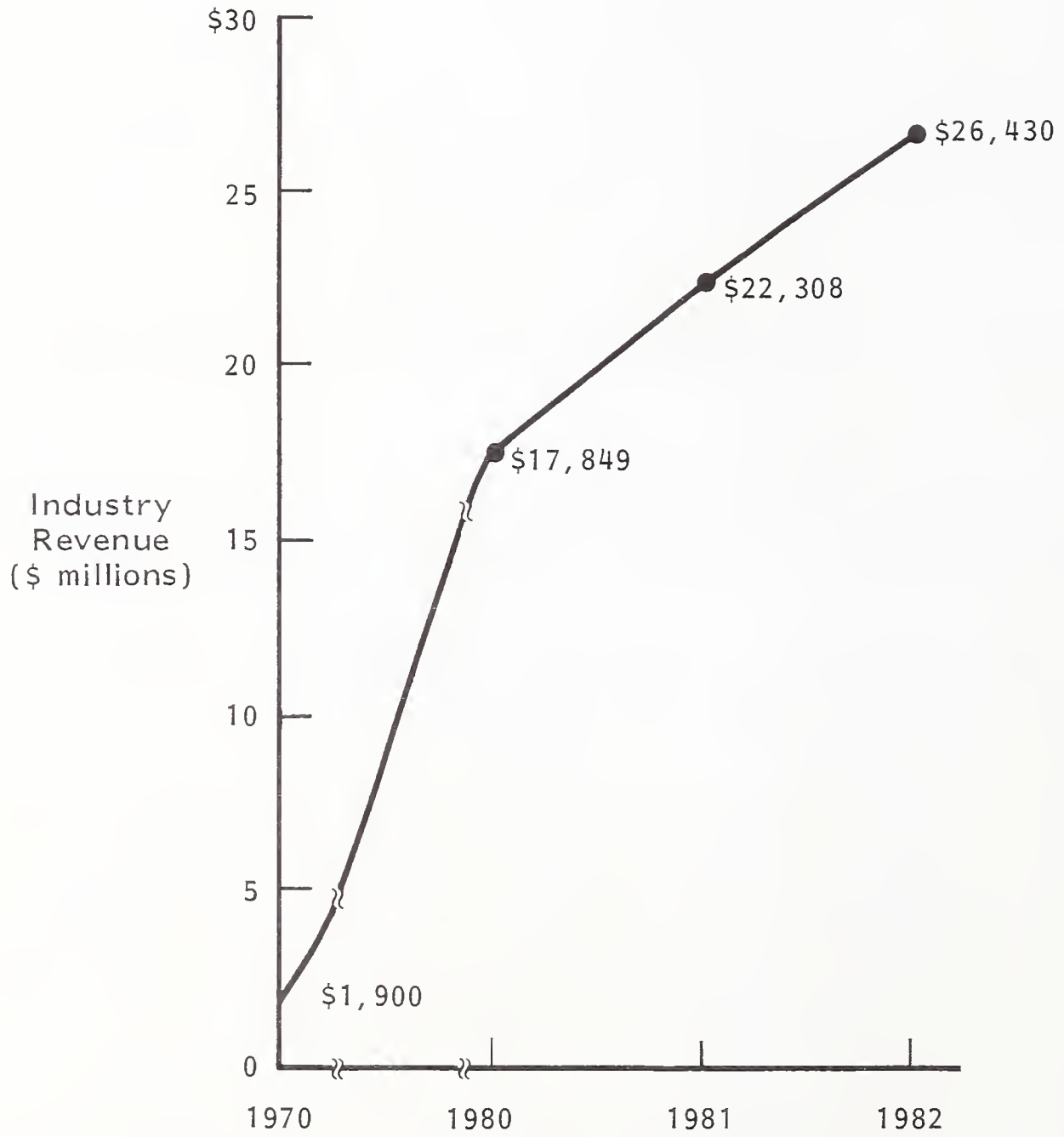


EXHIBIT II-2

COMPARISON OF REVENUE GROWTH IN  
INFORMATION SERVICES INDUSTRY TO SELECTED OTHER INDUSTRIES  
1976-1981

INDUSTRY	FIVE-YEAR AAGR* (percent)
Information Services	20%
Securities	18
Banking	17
Electrical and Electronic Manufacturing	12
All U.S. Industry	11

\* Average Annual Growth Rate

- A summary of statistics for the 1982 information services industry is provided in Exhibit II-3.

## B. GROWTH RATES BY SEGMENT

- Processing services companies continue to garner the lion's share of industry revenues, although the revenue share held by these companies has fallen to under 50% of the industry for the first time, as shown in Exhibit II-4.
  - Software companies continued their explosive growth rate in 1982, advancing 41%.
  - Professional service companies grew at a rate of 17%, just under the industry average, while integrated systems companies increased revenue at a rate of 21%, somewhat faster than the industry pace.
- By mode of service offered, regardless of the type of company offering the service, processing services continued to hold over 40% of the market in 1982 with a growth rate of 10%, as shown in Exhibit II-5.
  - Software products took a 3% market share from the other services in 1982.
  - Professional services maintained their market share of 23%, as did integrated systems services at 13%.
- Companies with over \$10 million in revenue, although only 263 in number, maintained their share of industry revenue at 57% and grew faster than their smaller counterparts.



EXHIBIT II-3

INFORMATION SERVICES INDUSTRY STATISTICAL OVERVIEW

TYPE OF COMPANY	NUMBER OF COMPANIES	NONCAPTIVE U.S. REVENUE 1982 (\$ millions)	EMPLOYEES (thousands)	PUBLIC COMPANIES PRETAX PROFIT MARGINS (percent)
Processing Services	2,130	\$12,484	226	13.2%
Software Products	1,879	5,295	68	18.3
Professional Services	1,348	5,329	110	5.7
Integrated Systems	1,113	3,322	46	12.9
Total	6,470	\$26,430	450	11.8%

EXHIBIT II-4

REVENUE GROWTH BY TYPE OF COMPANY

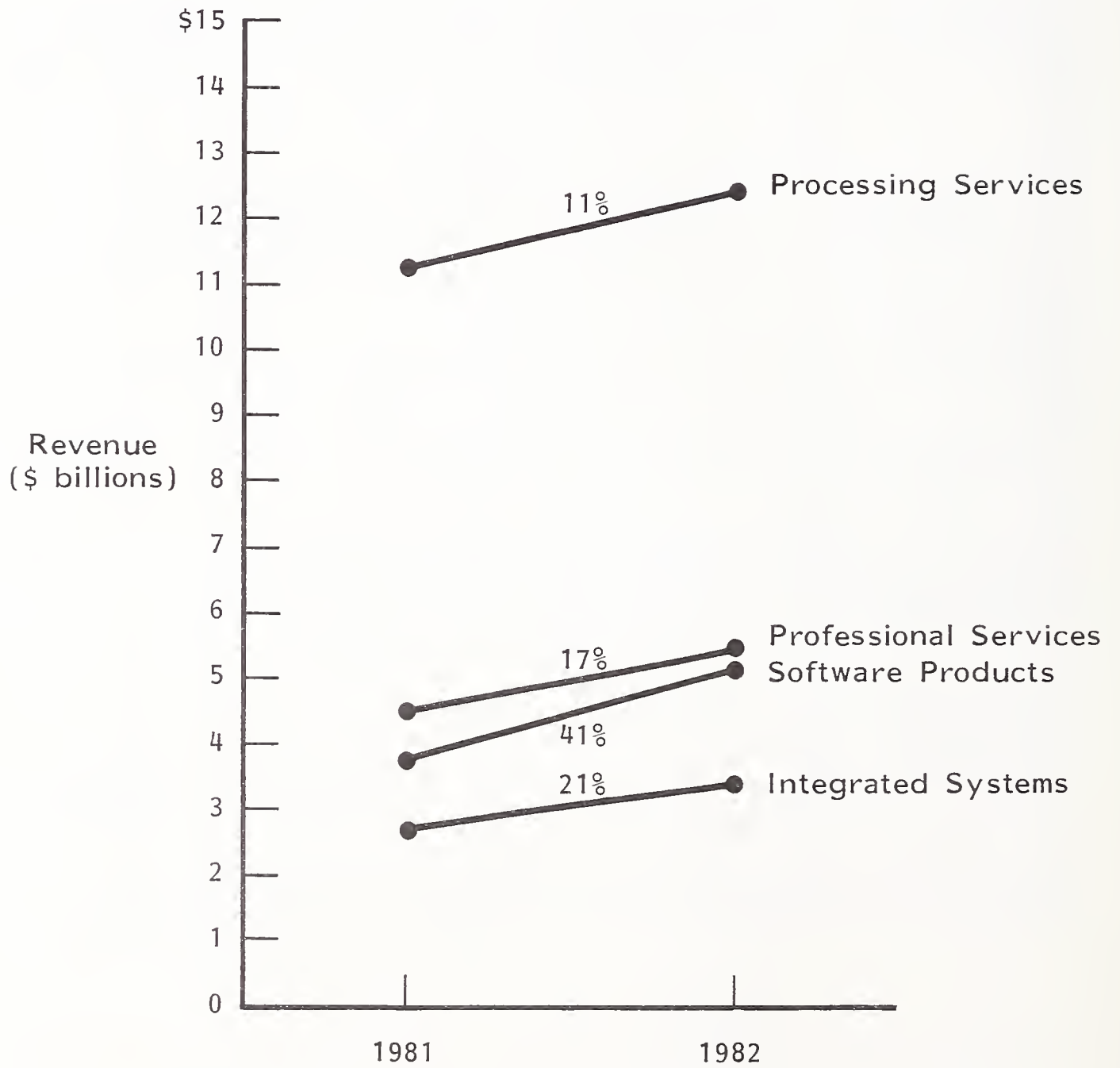
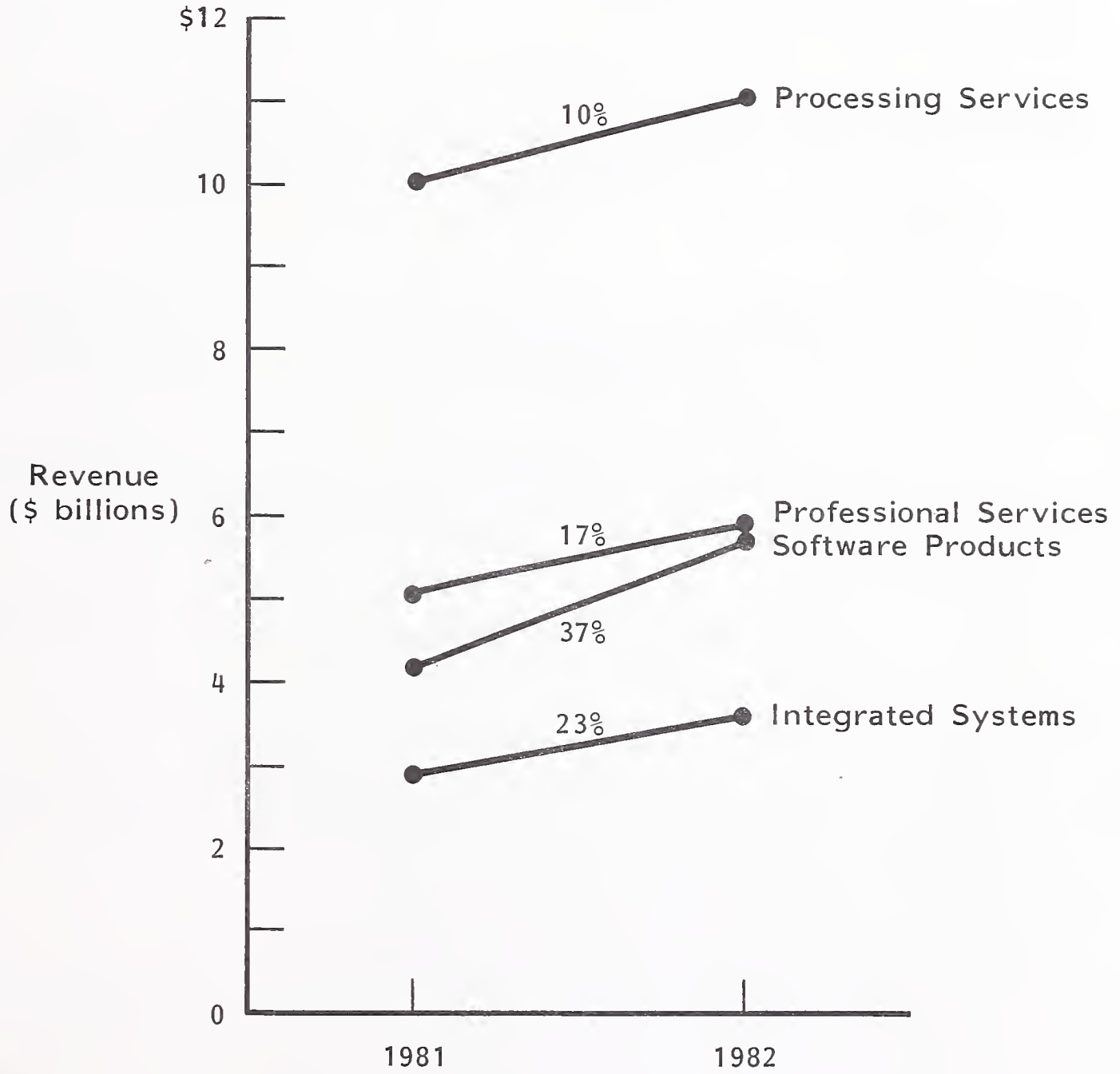


EXHIBIT II-5

REVENUE GROWTH BY MODE OF SERVICE



- Companies in the \$1-10 million revenue range also maintained their revenue share at 32% but grew at a slower rate of 17%.
- The under \$1 million companies, local firms and start-up enterprises, captured an 11% share and experienced a 17% growth rate over 1981.

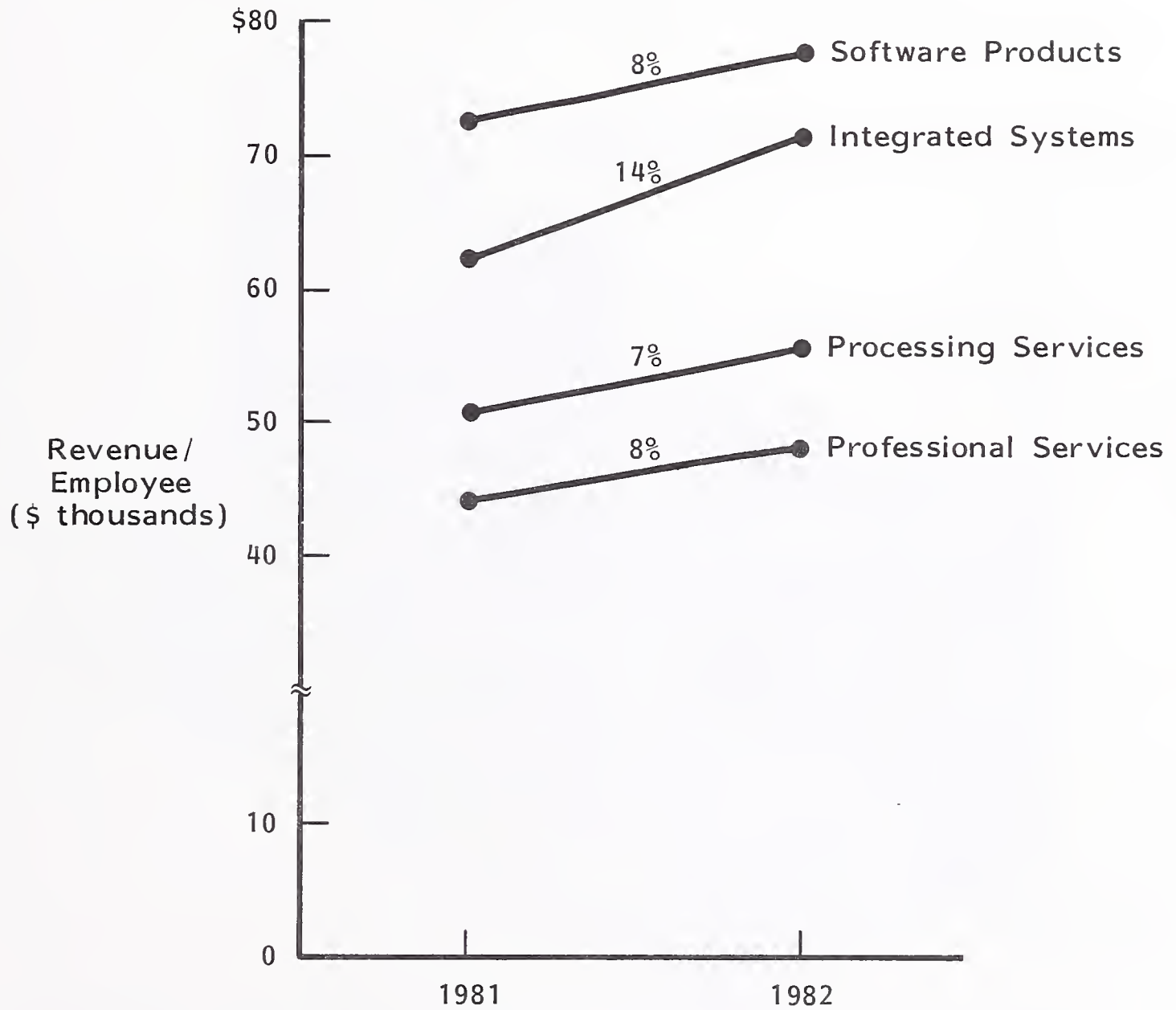
### C. PRODUCTIVITY RATES

- Productivity, measured by the ratio of revenue per employee, exhibited improvement both by type of company, as shown in Exhibit II-6, and size of company for 1982.
  - Integrated systems companies had the second highest productivity rate (\$78,170 per employee) and advanced at the fastest rate, 14%.
  - Software products companies, with the highest per employee rate, slowed to an 8% growth rate, down from 14% last year.
  - Processing services companies revealed a modest productivity increase of 7%.
  - Productivity ratios of professional services companies increased 8%. This productivity level may not be indicative of those companies whose business is labor intensive.
- By company size, \$1-10 million companies improved productivity at a rate of 14%, 4% higher than the industry average. These companies were closely followed by the very smallest companies (under \$1 million in revenue) with a 10% productivity increase. The over \$10 million companies experienced a 7% improvement.



EXHIBIT II-6

PRODUCTIVITY GROWTH BY TYPE OF COMPANY



- Total industry employment reached 450,000 employees in 1982. While growth in employment was modest in three types of companies, software products companies increased employee counts by 32%. It is likely that economic conditions held back increased employment in 1982.
- For the industry to reach its anticipated growth during this decade, both employment and productivity must increase substantially.

#### D. PUBLIC COMPANY PERFORMANCE

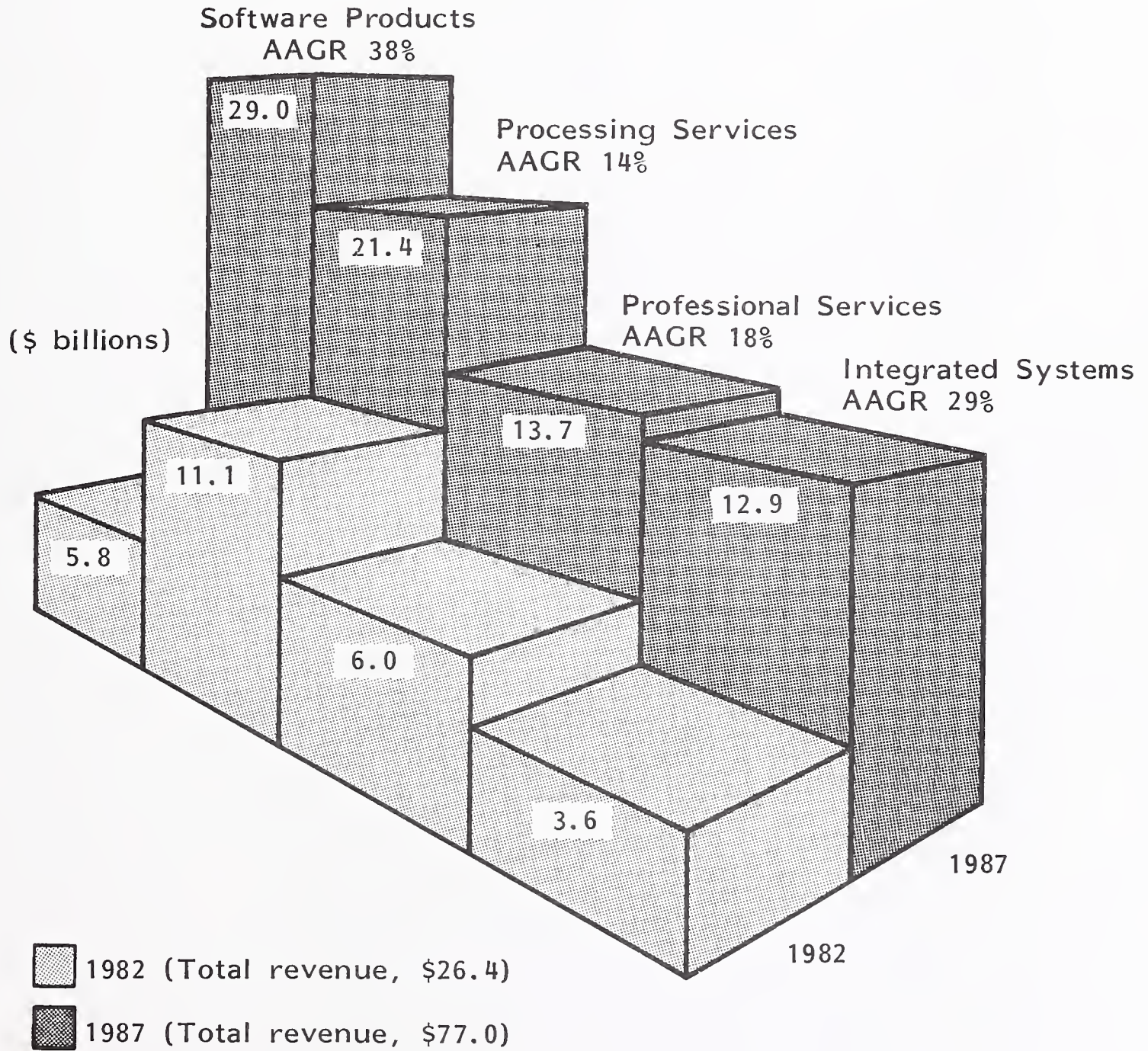
- In general, public companies outpaced their private counterparts in revenue growth and profitability.
  - Revenue growth for processing services companies increased by 16%, with software products companies increasing by 38%, professional services companies by 15%, and integrated systems companies by 15%.
  - Profitability (pretax) margin increased in amounts ranging from 6% for professional services companies to 18% for software products companies.

#### E. SUMMARY

- The information services industry experienced good growth in 1982 despite an economic climate that held back many industries.
- Based on the healthy growth history of this industry, the revenue projection for 1987 by mode of service indicates an average annual growth rate of 24% and a total industry size of \$77 billion, as shown in Exhibit II-7.

EXHIBIT II-7

U.S. INFORMATION SERVICES MARKET  
FORECAST BY MODE OF SERVICE, 1982-1987\*



\* Average Annual Growth Rate = 24%





III TOTAL INFORMATION SERVICES INDUSTRY



### III TOTAL INFORMATION SERVICES INDUSTRY

- The companies that comprise the information services industry grew in 1982. In this section of the report, this growth and the factors that contributed to it are explored in detail.

#### A. INDUSTRY ANALYSIS

- Total revenue for all companies in the information services industry is comprised of captive revenue, U.S. noncaptive revenue, and foreign noncaptive revenue. Exhibits III-1 and III-2 depict the percentage of total information services revenue derived from each of these sources together with 1981-1982 growth rates for these revenues.
  - For the industry as a whole, the proportion of total revenue from each source did not change significantly in the past year.
  - Approximately 83% of the revenue of information services companies comes from U.S. noncaptive sources. It is this revenue stream that will be the focal point for the remainder of this report.
- Over 6,500 companies comprise the information services industry. In 1982 these companies generated \$26.4 billion in U.S. noncaptive revenue from information services. See Exhibit III-3 for greater detail.

EXHIBIT III-1

REVENUE DISTRIBUTION OF INFORMATION SERVICES COMPANIES

TYPE OF COMPANY	REVENUE TYPE AS PERCENT OF TOTAL COMPUTER SERVICES REVENUE			
	CAPTIVE	NONCAPTIVE		TOTAL COMPUTER SERVICES
		FOREIGN	U.S.	
Processing Services				
1981	8%	7%	85%	100%
1982	10	7	83	100
Software Products				
1981	0	31	69	100
1982	0	28	72	100
Professional Services				
1981	0	7	93	100
1982	0	12	88	100
Integrated Systems				
1981	0	12	88	100
1982	0	12	88	100
All Types				
1981	4%	13%	83%	100%
1982	5	12	83	100

EXHIBIT III-2

REVENUE GROWTH OF INFORMATION SERVICES COMPANIES  
1981-1982

TYPE OF COMPANY	CAPTIVE	NONCAPTIVE		TOTAL COMPUTER
		FOREIGN	U.S.	
Processing Services	54%	-2%	11%	14%
Software Products	45	20	41	34
Professional Services	-	52	17	19
Integrated Systems	-	20	21	21
All Types	54%	17%	18%	20%



EXHIBIT III-3

INFORMATION SERVICES REVENUE BY TYPE OF COMPANY

TYPE OF COMPANY	NUMBER OF COMPANIES	NONCAPTIVE U.S. REVENUE			EMPLOYEES	
		1981 (\$ millions)	1982 (\$ millions)	GROWTH (percent)	NUMBER (thousands)	GROWTH (percent)
Processing Services	2,130	\$11,217	\$12,484	11%	226	4%
Software Products	1,879	3,765	5,295	41	68	32
Professional Services	1,348	4,570	5,329	17	110	6
Integrated Systems	1,113	2,756	3,322	21	46	5
All Types	6,470	\$22,308	\$26,430	18%	450	8%

- Processing services companies led the industry in number of companies (2,130), U.S. noncaptive revenue (\$12.5 billion), and number of employees (226,000). However, the increasing number of companies establishing their own in-house processing service as well as growing interest in the use of microcomputers contributed to a revenue growth rate below the industry rate.
  - Professional services companies, the second largest sector in number of companies, revenue, and employees, grew at about the industry average.
  - Software products companies, likely to be the second largest segment in terms of revenue within the year, continued their fast pace, growing at a rate of 41% in revenue and 32% in number of employees.
  - Integrated systems companies were independently recognized in the ADAPSO research for the first time last year. Their performance in 1982 with a 21% revenue growth rate confirms that these companies are on the move and likely to be even bigger players in this industry in the coming years.
- Companies, when classified by their major source of revenue, indicate interesting changes in percent of total revenues they control, as shown in Exhibit III-3.
    - While all four types of companies grew in 1982, processing services companies lost some three percentage points to other types of companies, primarily software products companies. Processing services companies now comprise less than 50% of total industry revenues.
    - Software products companies, on the other hand, grew their industry position and now rival professional services companies as the second largest type of company in the industry.

- Integrated systems companies were independently recognized in the ADAPSO research last year, and their performance in 1982 with a 21% revenue growth rate confirms that these companies are on the move and likely to be even bigger players in this industry in the coming years.
- Companies, when classified by their major source of revenue, indicate interesting changes in percent of total revenues they control, as shown in Exhibit III-4.
  - While all four types of companies grew in 1982, processing services companies lost some three percentage points to the other types of companies, most noticeably to software products companies. Processing services companies now comprise less than 50% of the total industry revenues.
  - Software products companies, on the other hand, enhanced their industry position and now rival professional services companies as the second largest type of company in the industry.
- By mode of service without regard for the type of company offering the service, processing services continued to hold a commanding market share at 42% but did lose share to the other services, as shown in Exhibit III-5.
  - Software products increased in market share from 19% in 1981 to 22% in 1982. This increase reflects not only a strong growth pattern for software products companies, but also the continuing increase in revenues generated in the software products area by companies whose primary service is not software. Many companies not known for their software products sales are taking advantage of the growth in this segment and are producing software products to enhance their major revenue streams.

EXHIBIT III-4

REVENUE AND PERCENT OF TOTAL BY TYPE OF COMPANY

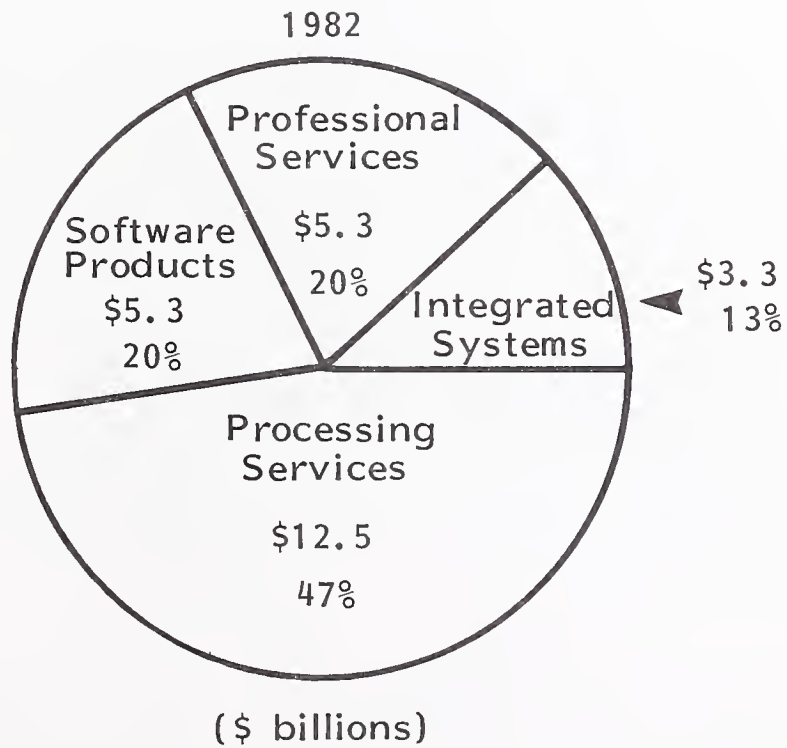
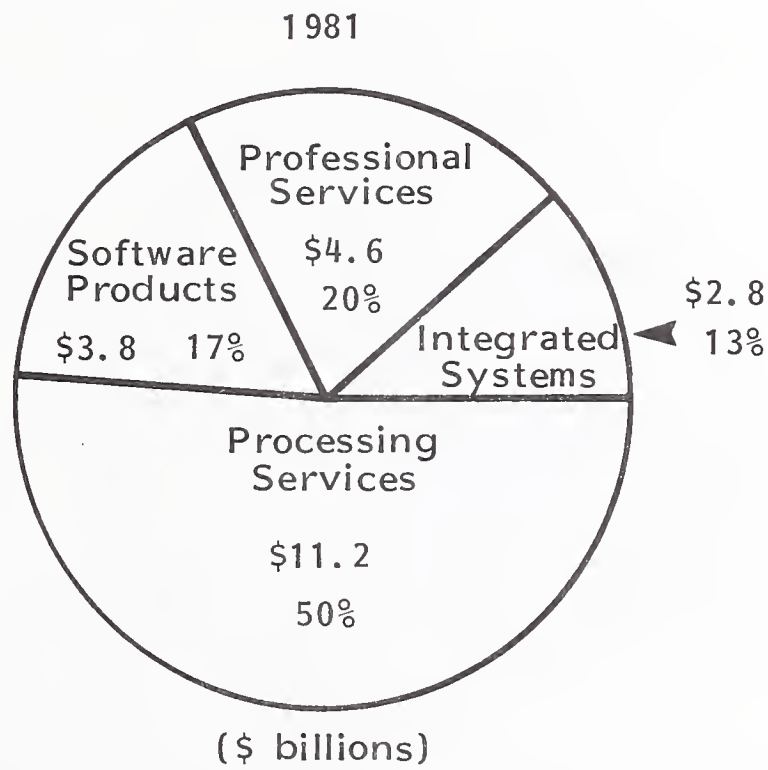
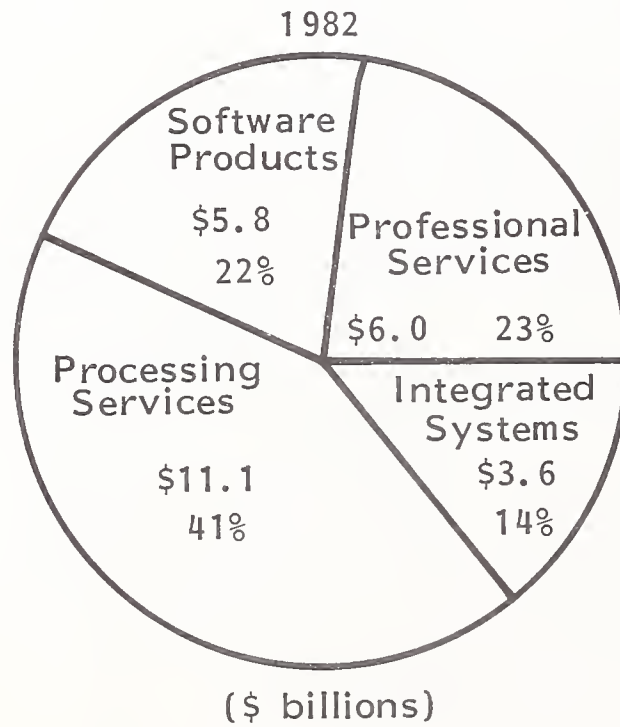
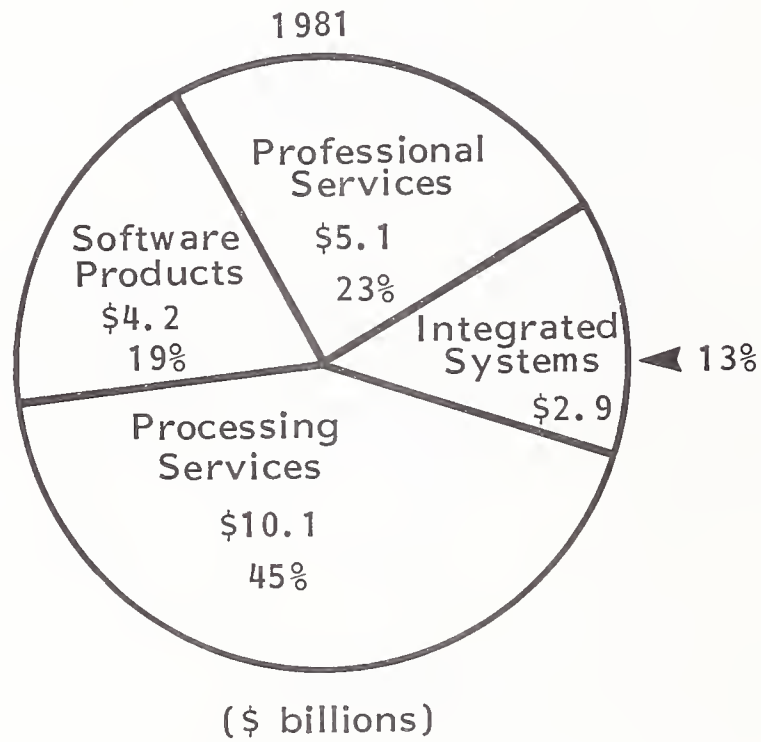


EXHIBIT III-5

REVENUE AND PERCENT OF TOTAL BY MODE OF SERVICE

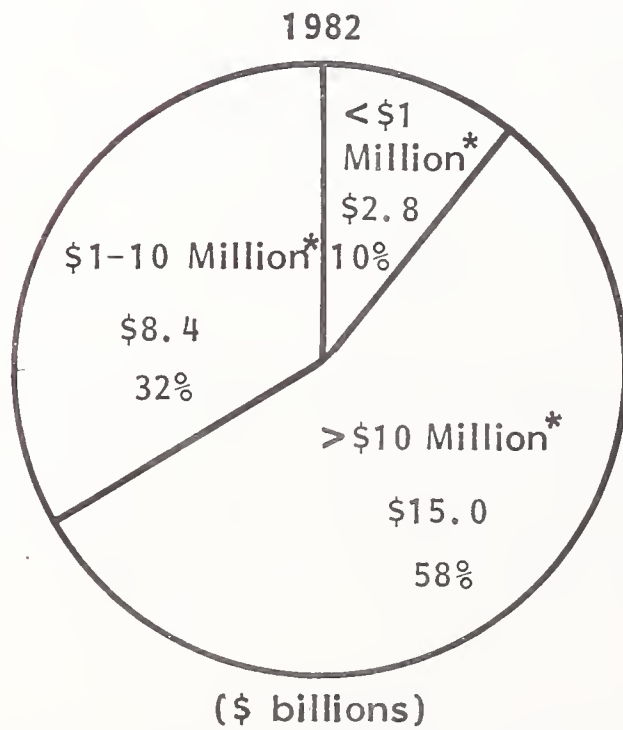
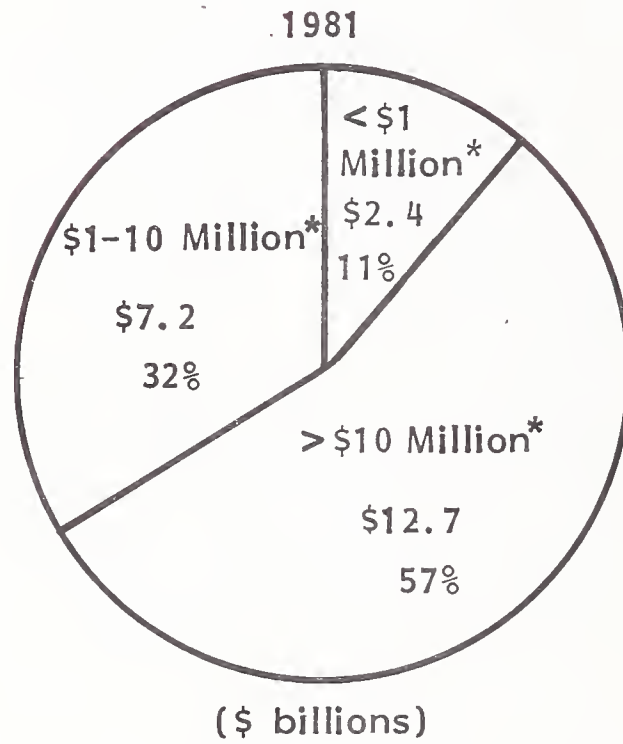




- Professional services maintained market share while integrated systems increased share from 13% in 1981 to 14% in 1982.
- Exhibit III-6 represents the proportion of the industry revenue captured by companies of various sizes as classified by their total U.S. noncaptive revenue. In general, each company size category - under \$1 million in revenues, companies with \$1-10 million in revenues, and companies with over \$10 million in revenues - maintained their respective positions. Large companies, although only 263 in number, comprise nearly 60% of the industry revenue with medium-sized companies accounting for an additional one-third, and small companies comprising 10%.
- The change in product mix for the four types of companies analyzed is depicted in Exhibit III-7. In general, each type of company experienced solid revenue growth in each of the service modes although in some cases the 1981 base on which the growth occurred was a small source of revenue for that type of company.
  - Processing services companies experienced stronger growth rates in each of the other three modes than they did in processing services. This would seem to indicate that these companies intend to support the slowing processing services revenue stream with the addition of other modes of service offerings.
  - Software companies had significant revenue increases in each of the three other modes although, in each case, the increase was on a relatively small 1981 revenue base. Only the processing services of software products companies was greater than 10% of total revenue in 1981.
  - As expected, professional service companies experienced strong growth in software revenue, offsetting a weak performance in processing

EXHIBIT III-6

REVENUE AND PERCENT OF TOTAL BY SIZE OF COMPANY



\*Company size in terms of total 1982 U.S. noncaptive information services revenue.

EXHIBIT III-7

REVENUE AND GROWTH RATES  
BY TYPE OF COMPANY AND MODE OF SERVICE  
(\$ millions)

MODE OF SERVICE	TYPE OF COMPANY				REVENUE BY MODE
	Processing Services	Software Products	Professional Services	Integrated Systems	
<b>Processing Services</b>					
1981	\$9,439	\$45	\$401	\$170	\$10,055
1982	\$10,361	\$69	\$426	\$226	\$11,082
Percent Change	10%	53%	6%	33%	10%
<b>Software Products</b>					
1981	\$567	\$3,306	\$280	\$52	\$4,205
1982	\$685	\$4,619	\$363	\$98	\$5,765
Percent Change	21%	40%	30%	88%	37%
<b>Professional Services</b>					
1981	\$823	\$393	\$3,828	\$79	\$5,121
1982	\$913	\$524	\$4,442	\$101	\$5,980
Percent Change	11%	33%	16%	28%	17%
<b>Integrated Systems</b>					
1981	\$388	\$21	\$63	\$2,455	\$2,927
1982	\$525	\$83	\$98	\$2,897	\$3,603
Percent Change	35%	295%	56%	18%	23%
<b>Revenues by Type</b>					
1981	\$11,217	\$3,765	\$4,570	\$2,756	\$22,308
1982	\$12,484	\$5,295	\$5,329	\$3,322	\$26,430
Percent Change	11%	41%	17%	21%	18%

services revenues. These companies also made significant progress in integrated systems offerings although revenue from this mode is still small for these companies.

- Integrated systems companies increased processing service revenues by 33%, a strong showing on a moderate 1981 revenue base for this mode. Software and professional service revenues were extremely high compared to the average growth for integrated systems companies as a whole but, again, were on a smaller 1981 base.
- At a lower level of detail, Exhibit III-8 depicts the revenue and growth rates of submodes of service across each type of company.
  - The processing services mode increased remote computing business by a respectable 14% and facilities management business by 15%. However, batch services, which comprise the second major source of revenue, increased only 3%. INPUT believes that the influence of in-house processing and the use of microcomputers has begun to impact this revenue.
  - Software product revenue growth was stronger in applications software, but systems software revenue growth, at 35%, is almost equally as impressive.
  - Each submode grew at about the same rate for both professional services and integrated systems.
- Exhibits III-9, III-10, and III-11, when viewed together, provide a clear picture of the revenue, distribution, and growth rates of submodes of service by type of company.
  - The primary service mode of each type of company accounts for over 80% of the total company revenue. Each type of company has at least



EXHIBIT III-8

REVENUE AND GROWTH RATES OF SUBMODES OF SERVICE

MODE OF SERVICE	NONCAPTIVE U.S. REVENUE		
	1981 (\$ millions)	1982 (\$ millions)	GROWTH 1981-1982 (percent)
Processing Services			
Remote Computing	\$ 5,117	\$ 5,857	14%
Batch Services	3,822	3,939	3
Facilities Management	1,116	1,286	15
Subtotal	\$10,055	\$11,082	10%
Software Products			
Applications	\$ 2,212	\$ 3,080	39%
Systems	1,993	2,685	35
Subtotal	\$ 4,205	\$ 5,765	37%
Professional Services			
Programming	\$ 3,596	\$ 4,177	16%
Consulting	718	850	18
Education	362	414	14
Facilities Management	445	539	21
Subtotal	\$ 5,121	\$ 5,980	17%
Integrated Systems			
CAD/CAM	\$ 791	\$ 949	20%
Cross Industry	958	1,189	24
Industry Specific	1,178	1,465	24
Subtotal	\$ 2,927	\$ 3,603	23%



EXHIBIT III-9

REVENUE OF SUBMODES OF SERVICE BY TYPE OF COMPANY

MODE OF SERVICE	TYPE OF COMPANY				TOTAL
	Processing Services	Software Products	Professional Services	Integrated Systems	
Processing Services					
Remote Computing	\$ 5,485	\$ 44	\$ 192	\$ 136	\$ 5,857
Batch Services	3,665	25	159	90	3,939
Facilities Management	1,211	0	75	0	1,286
Subtotal	\$10,361	\$ 69	\$ 426	\$ 226	\$11,082
Software Products					
Applications	\$ 478	\$2,289	\$ 241	\$ 72	\$ 3,080
Systems	207	2,330	122	26	2,685
Subtotal	\$ 685	\$4,619	\$ 363	\$ 98	\$ 5,765
Professional Services					
Programming	\$ 612	\$ 326	\$3,179	\$ 60	\$ 4,177
Consulting	109	93	618	30	850
Education	69	101	233	11	414
Facilities Management	123	4	412	0	539
Subtotal	\$ 913	\$ 524	\$4,442	\$ 101	\$ 5,980
Integrated Systems					
CAD/CAM	<sup>1981 #s</sup> 69 \$ 94	\$ 16	\$ 7	\$ 832	\$ 949
Cross Industry	125 145	23	30	991	1,189
Industry Specific	194 286	44	61	1,074	1,465
Subtotal	<del>358</del> \$ 525	\$ 83	\$ 98	\$2,897	\$ 3,603
Total	\$12,484	\$5,295	\$5,329	\$3,322	\$26,430

EXHIBIT III-10

REVENUE DISTRIBUTION OF SUBMODES OF SERVICES  
BY TYPE OF COMPANY (percent)

MODE OF SERVICE	TYPE OF COMPANY				All Types
	Processing Services	Software Products	Professional Services	Integrated Systems	
Processing Services					
Remote Computing	44%	1%	4%	4%	22%
Batch Services	29	0	3	3	15
Facilities Management	10	0	1	0	5
All Processing	83%	1%	8%	7%	42%
Software Products					
Applications	4%	43%	5%	2%	12%
Systems	2	44	2	1	10
All Software	6%	87%	7%	3%	22%
Professional Services					
Programming	5%	6%	60%	2%	16%
Consulting	1	2	12	1	3
Education	1	2	3	0	2
Facilities Management	1	0	8	0	2
All Professional Services	7%	10%	83%	3%	23%
Integrated Systems					
CAD/CAM	1%	0%	0%	25%	3%
Cross Industry	1	0	1	30	4
Industry Specific	2	1	1	32	6
All Integrated Systems	4%	2%	2%	87%	13%
All Service Modes	100%	100%	100%	100%	100%

EXHIBIT III-11

REVENUE GROWTH RATES OF SUBMODES  
OF SERVICE BY TYPE OF COMPANY (percent)

MODE OF SERVICE	TYPE OF COMPANY				All Types
	Processing Services	Software Products	Professional Services	Integrated Systems	
Processing Services					
Remote Computing	13%	100%	13%	106%	14%
Batch Services	3	9	12	(13)	3
Facilities Management	18	0	(16)	0	15
All Processing	10%	53%	6%	33%	10%
Software Products					
Applications	15%	44%	43%	95%	39%
Systems	35	36	10	73	35
All Software	21%	40%	30%	88%	37%
Professional Services					
Programming	11%	31%	16%	28%	16%
Consulting	(9)	35	22	30	18
Education	1	42	9	22	14
Facilities Management	50	0	15	0	21
All Professional Services	11%	33%	16%	28%	17%
Integrated Systems					
CAD/CAM	<del>36%</del> (25%)	220%	0%	17%	12%
Cross Industry	<del>16%</del> (25)	360	50	23	16
Industry Specific	<del>47%</del> 314	300	69	15	39
All Integrated Systems	35%	295%	56%	18%	23%

Per Rich Peterson 11/22/83: Processing Services Co's / Integrated Systems growth rates are in error. Correct growth rates are written in; previous year's revenues are written in - 34 - on p. 32

one secondary service mode that accounts for 7% to 10% of the total revenue with the other modes accounting for the remainder.

- There are only five instances where companies experienced a decline in revenue from a submode of service. Processing service companies declined 9% in professional consulting and 25% in CAD/CAM and cross-industry integrated systems. Professional services companies' revenue from processing services facilities management declined 16%, and integrated systems companies' batch services declined 13%. In all other cases revenue growth was experienced by each type of company in each submode of service.
- When the 1982 revenue numbers are considered vis-a-vis the size of the companies generating that revenue, there is little change in market share held by companies of each size, regardless of the type of company, as shown in Exhibit III-12.
  - In processing services, the over \$10 million companies have a majority of the business and are followed by \$1-10 million companies at a distant second.
  - Software products companies show a 50%, 30%, and 20% distribution for large, medium, and small companies, respectively.
  - Professional services companies show a similar but more concentrated distribution; large companies have a 65% share with medium-sized companies capturing 25% and small companies capturing 10%.
  - It is interesting that mid-sized integrated systems companies have the largest growth rate, although they are followed closely by larger companies.



EXHIBIT III-12

MARKET SHARE BY TYPE AND SIZE OF COMPANY

TYPE OF COMPANY ● SIZE (\$ millions)	PERCENT OF MARKET SERVED	
	1981	1982
Processing Services		
● \$.25-1.0	3%	2%
● \$1.1-10	16	14
● \$10.1-25	3	4
● > \$25	28	27
All Processing	50%	47%
Software Products		
● \$.25-1.0	3%	4%
● \$1.1-10	5	6
● > 10	9	10
All Software	17%	20%
Professional Services		
● \$.25-1.0	2%	2%
● \$1.1-10	5	5
● > \$10	13	13
All Professional	20%	20%
Integrated Systems		
● \$.25-1.0	2%	2%
● \$1.1-10	6	6
● > \$10	5	5
All Integrated	13%	13%
All Types	100%	100%



- As shown in Exhibits III-13 and III-14, revenue growth rates of the public companies analyzed for the study indicated that software products companies grew at about the same rate as their private counterparts, 38% to 41%. Public processing services companies grew faster than their private counterparts while both professional services companies and integrated systems companies grew at a slower rate in the public sector as compared to the private sector (see Exhibits III-13 and III-14).
- Pretax profit margins for these public companies weakened during 1981 but still managed to stay in the double-digit range, except for professional services companies who have had single-digit margins for the past two years. The most ground in profit margin decline was given up by integrated systems companies who went from a 15.7% rate to 12.9%.

## B. INDUSTRY TRENDS

- The information services industry experienced healthy revenue growth in nearly all modes of service regardless of the segment viewed. Will this growth continue into 1983? Clues to the answer to this question are presented in this section.
- Productivity rates provide a gross indication both of the extent of the "people intensity" of each business and the extent to which companies are expanding or subtracting from staff in response to business conditions, as shown in Exhibit III-15.
  - Processing services companies' productivity rates increased over the 1981 rate but were held back by a decline of 1% in the productivity rate of employees at companies with revenues over \$10 million. Still, with a 4% increase in the number of employees and a 7% increase in productivity, these companies appeared to ask for and receive more from each employee.

EXHIBIT III-13

REVENUE AND GROWTH RATES OF PUBLIC COMPANIES

TYPE OF COMPANY	REVENUE*		GROWTH (percent)
	1981 (\$ millions)	1982 (\$ millions)	
Processing Services	\$2,470	\$2,860	16%
Software Products	379	521	38
Professional	1,205	1,389	15
Integrated Systems	771	885	15

\* Based on 90 Public Companies

EXHIBIT III-14

PRETAX PROFIT MARGINS OF PUBLIC COMPANIES

TYPE OF COMPANY	PROFIT MARGIN*	
	1981 (percent)	1982 (percent)
Processing Services	14.0%	13.2%
Software Products	19.2	18.3
Professional Services	5.9	5.7
Integrated Systems	15.7	12.9

\* Based on 90 Public Companies

EXHIBIT III-15

PRODUCTIVITY RATES BY TYPE AND SIZE OF COMPANY

TYPE OF COMPANY ● SIZE (\$ millions)	AVERAGE REVENUE PER EMPLOYEE		
	1981 (\$ thousands)	1982 (\$ thousands)	PERCENT CHANGE
Processing Services			
● <\$10	\$46	\$51	10%
● >\$10	56	55	(1)
All Processing	\$52	\$55	7%
Software Products			
● <\$10	\$65	\$70	7%
● >\$10	81	85	5
All Software	\$72	\$78	8%
Professional Services			
● <\$10	\$45	\$54	20%
● >\$10	44	46	5
All Processing Services	\$44	\$49	10%
Integrated Systems			
● <\$10	\$59	\$75	27%
● >\$10	75	84	13
All Integrated Systems	\$64	\$73	14%
Total Information Services			
● <\$10	\$51	\$57	12%
● >\$10	56	60	7
All Types	\$54	\$59	10%

- Software companies increased their employee counts by 32% in 1982 but realized only an 8% growth in productivity. The rapid expansion of this segment of the industry may be requiring employers to hire at a rate that temporarily depresses productivity.
- Professional services companies and integrated systems companies both increased their employee count and productivity at about the same rate. It is interesting that the smaller companies (under \$10 million) experienced greater productivity rate changes than did their larger counterparts (over \$10 million). This may reflect the rapid expansion of revenues in these fledgling companies where revenue growth outpaces new hires.
- Participating companies in this research were asked to assess the impact of selected environmental factors on their 1981 revenues. As Exhibit III-16 indicates, each type and size of company felt that price increases and increased revenue from company acquisitions were low to moderately important contributors to 1982 revenue. These companies put considerably more weight on increased revenue from new products and even more weight on revenue obtained from marketing existing products to existing customers. The indications, of course, are that while the recession held price increases down in 1982, companies' existing customers were willing to increase their expenditures for existing products and, to a slightly lesser extent, spend additional money on new products. The fact that information services companies grew at an 18% rate on the basis of products to existing customers suggests that users continue to have large unmet needs.
- Targeted versus actual growth rates are presented in Exhibit III-17.
  - 1982 actual revenue growth for companies with over \$10 million in revenue was below target for each type of company. The range of the miss was from 4% (target versus actual) for processing services com-



EXHIBIT III-16

IMPACT OF SELECTED FACTORS ON  
INDUSTRY GROWTH BY TYPE OF COMPANY

TYPE OF COMPANY	FACTORS*			
	PRICE INCREASES	ACQUISITIONS	EXISTING BUSINESS	NEW PRODUCTS
Processing Services	1.9	1.8	4.1	3.6
Software Products	1.7	1.4	4.2	4.2
Professional Services	2.2	1.9	4.0	3.7
Integrated Systems	1.9	1.4	4.0	3.9
All Companies	1.9	1.7	4.1	3.8

\* Legend: 1 = Low Impact, 3 = Medium Impact, 5 = High Impact

EXHIBIT III-17

TARGETED VERSUS ACTUAL GROWTH RATES  
BY TYPE OF COMPANY

TYPE OF COMPANY	WEIGHTED AVERAGE PERCENT GROWTH RATES*		
	ACTUAL	TARGETED	
	1982	1982	1983
Processing Services	17%	21%	19%
Software Products	33	45	47
Professional Services	16	22	22
Integrated Systems	20	36	35
All Types	19%	27%	26%

\*U.S. Noncaptive Revenue

panies to 16% for integrated systems companies. For these companies the overall target was 8% higher than the actual growth rate.

- 1983 targeted growth rates seem very optimistic, with each type of company projecting growth above the 1982 actual growth reported in this report. Processing services are expecting a 19% growth, software products 47%, professional services 22%, and integrated systems 35%. For all companies over \$10 million in revenues the target growth rate is 26% in 1983.
- Companies were also asked to identify areas of opportunity that they intend to capitalize on in 1983. That list, presented in Exhibit III-18, indicates, as expected, that microcomputer and software products will be keys to growth in 1983. Companies believe they see growth industries in finance, government, and health care and want to increase their positions as information service providers to these industries.
  - New product and service offerings were mainly for administrative applications, with almost 25% of respondent companies indicating that they offer products in these areas, as shown in Exhibit III-19.
  - The second largest product offerings were for financial and banking applications. Each of these applications was offered by approximately 12% of the companies researched.
- Likewise, the tremendous growth in microcomputer use and the aggressive expansion of software are seen as real opportunities. Regarding the microcomputer opportunities, it is also interesting to note that at least some of the 6% of the respondents who saw networks as an opportunity identified the link between the microcomputer and the mainframe computer as a significant opportunity for new growth.

EXHIBIT III-18

OPPORTUNITIES IDENTIFIED BY  
INFORMATION SERVICES COMPANIES

OPPORTUNITY	NUMBER OF RESPONDENTS	PERCENT
Specific Vertical Markets	87	20%
Microcomputer Products	77	17
Software Products	67	15
New Markets (unspecified)	48	11
Integrated Systems	34	8
Processing Services	29	7
Networks	25	6
New Products	22	5
Training	15	3
Economic Environment	10	.2

Total Responses: 444

EXHIBIT III-19

NEW PRODUCT AND SERVICE OFFERINGS BY TYPE AND SIZE OF COMPANY

APPLICATION ● Size of Company (\$ millions)	PERCENT OF RESPONDENTS	TYPE OF COMPANY				TOTAL
		Processing Services	Software Products	Professional Services	Integrated Systems	
Administrative						
● \$ <10	24%	34%	26%	26%	14%	100%
● \$ >10	26	43	37	8	12	100
Financial						
● \$ <10	12	38	28	28	6	100
● \$ >10	12	43	22	13	22	100
Banking						
● \$ <10	12	81	11	4	4	100
● \$ >10	6	46	27	9	18	100
Health Care						
● \$ <10	6	46	0	15	39	100
● \$ >10	7	57	14	7	22	100



- Exhibit III-20 depicts the amount of involvement that processing service and software products companies have, or plan to have, with microcomputers.
- Over 40% of the respondents from each type of company indicated that they currently had product offerings for microcomputers. Another one-quarter to one-third of the respondents indicated that such products are being planned.
- Thirty-four percent of the processing companies and 18% of the software companies surveyed indicated no plans.
- For both processing services and software products, those companies over \$10 million in revenue were likely either to have microcomputer-based products or to have plans for such products. It is likely that smaller businesses, while recognizing the opportunities with microcomputers, are not in positions to make the heavy investment necessary to develop or acquire microcomputer products.
- Companies offering or planning to offer microcomputer products have concentrated their attention on financial and administrative applications. This is the case regardless of company size.
- Major industries being served by microcomputer products available from information services companies include manufacturing, health services, banking and finance, and state and local government.
- When asked whether the microcomputer products would be tied to a network or offered as standalone products, the processing companies, regardless of revenue size, indicated that both strategies would be used extensively, as shown in Exhibit III-21.

EXHIBIT III-20

INVOLVEMENT WITH MICROCOMPUTERS

TYPE OF COMPANY	NUMBER OF RESPONDENTS	CURRENTLY OFFER PRODUCTS	PLAN TO OFFER PRODUCTS	NO PLANS TO OFFER PRODUCTS
Processing Services	91	40%	26%	34%
Software Products	55	49%	33%	18%

EXHIBIT III-21

TYPES OF MICROCOMPUTER PRODUCTS OFFERED BY  
PROCESSING SERVICES COMPANIES

TYPE OF PRODUCT	NUMBER OF RESPONDENTS	PERCENT *
Tied to a Network	26	72%
Standalone	28	78%

Respondents: 36

\*Does not total 100% due to multiple responses.

- Of those processing services companies that offer software products for microcomputers, two-thirds are developing those products in-house while the remaining one-third act as a software agent for outside developers.
  - Software companies, in a similar vein, indicated their involvement with microcomputers and pointed out that they are involved in microcomputer software either as publishers, distributors, or authors, as shown in Exhibit III-22.
  - Note: Additional information regarding this influence of microcomputers on this industry is included in the analysis by company type.
- To create a complete picture of the industry, the negative issues - the factors that threaten revenue - must also be studied. When asked what they considered most threatening to their future revenues, companies listed, in order: competition, the economy, and the proliferation of microcomputers. Although receiving recognition by fewer than 10% of the respondents, three other threats are of note: the movement to in-house processing, the pressure to keep products current with the rapid changes in technology, and the impact of the growth of software products. Again, there were no significant differences in perceived threats on the basis of company type or size. Exhibit III-23 presents a summary of companies' responses to this question of business threats.

EXHIBIT III-22

TYPES OF INVOLVEMENT WITH  
MICROCOMPUTER PRODUCTS BY SOFTWARE COMPANIES

TYPE OF INVOLVEMENT	RESPONDENTS	
	NUMBER	PERCENT *
Author	21	38
Publisher	22	40
Distributor	22	40
Retailer	10	18
Other	2	1

Respondents: 55

\*Does not total 100% due to multiple responses.



EXHIBIT III-23

POTENTIAL THREATS IDENTIFIED BY  
INFORMATION SERVICES COMPANIES

THREATS	RESPONDENTS	
	NUMBER	PERCENT *
Competition	52	20%
Economy	38	15
Microcomputers	34	13
In-house Processing	17	7
Advance in Technology	17	7
Software	17	7
Regulations	10	4
Other	76	28

Respondents: 261

\*Does not total 100% due to multiple responses.

IV PROCESSING SERVICES COMPANIES:  
ANALYSIS AND TRENDS



#### IV PROCESSING SERVICES COMPANIES: ANALYSIS AND TRENDS

- While still capturing the largest share of information services revenues, processing services' rate of growth lagged behind the industry as a whole, as shown in Exhibit IV-1. As a result, their share of the industry revenue decreased slightly in 1982, falling below 50% for the first time in recent history.
- The distribution of revenue for processing services companies across service modes remained virtually unchanged from 1981 to 1982. Exhibit IV-2 depicts the proportion of the revenue of processing services companies provided by each mode of service.
- Remote computing service remains the largest mode of delivery for processing service companies, generating 53% of the revenues, as shown in Exhibit IV-3.
- Processing companies led the information services industry in number of companies, 2,130, and number of employees, 226,000.
- Almost two-thirds of processing service revenue is generated by companies over \$10 million in size. However, the productivity rate of employees in these companies declined by one percent.
- Several factors had a negative impact on processing service revenue growth in 1982. Particularly hard hit was batch services, which grew by only 3%. These factors, in order of perceived impact, included:

EXHIBIT IV-1

REVENUE GROWTH OF PROCESSING SERVICES COMPANIES  
COMPARED TO INDUSTRY GROWTH

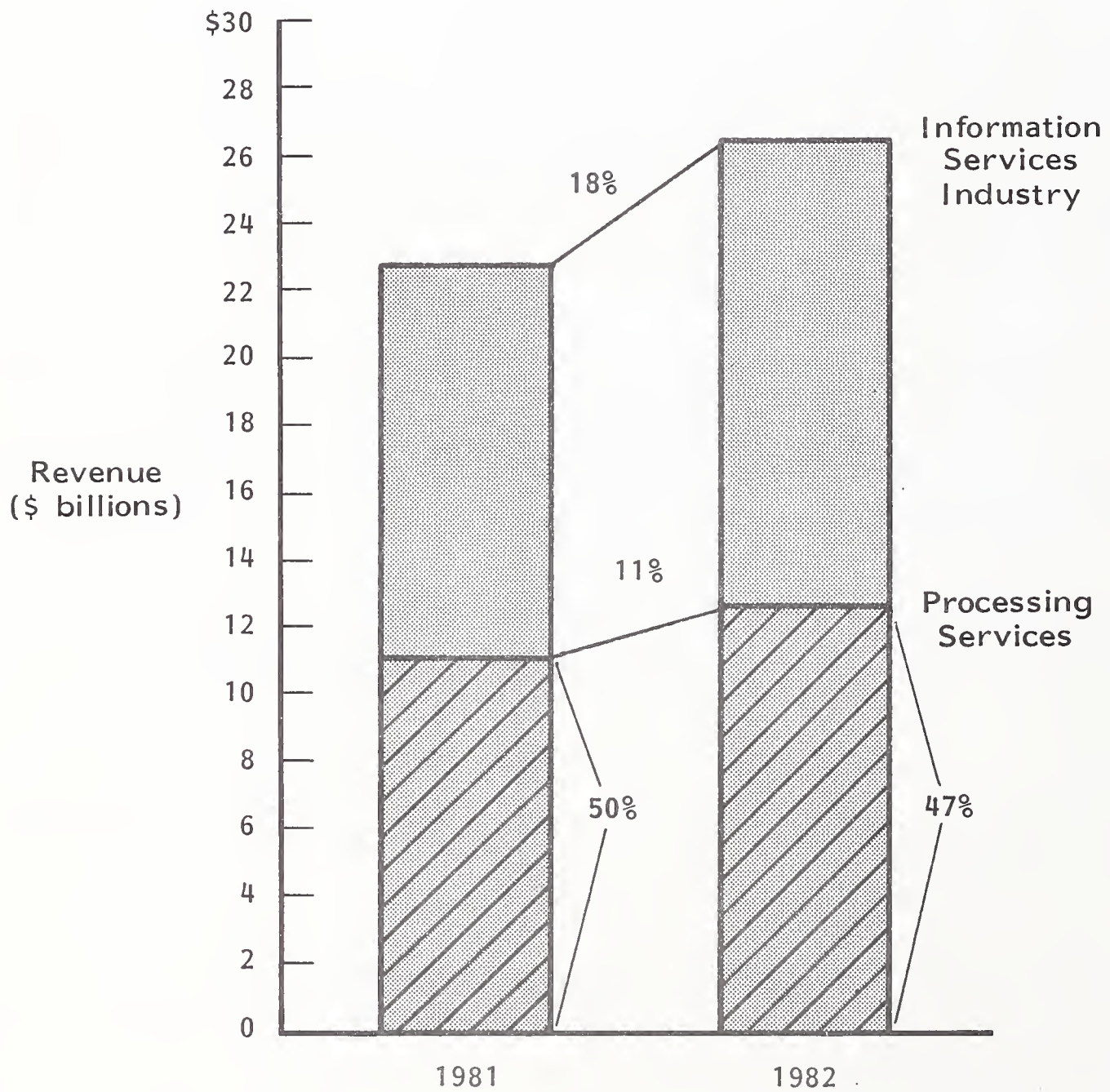
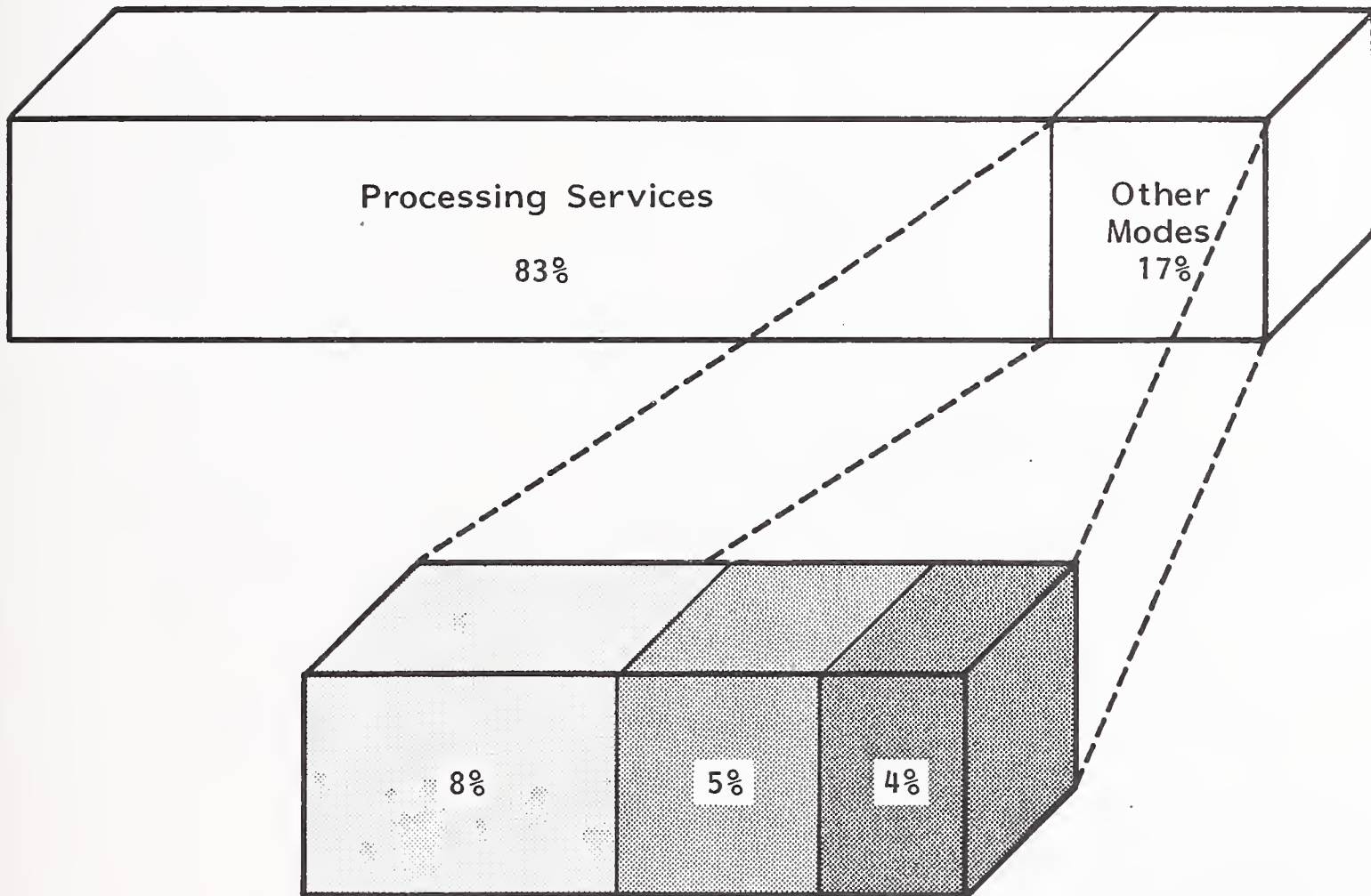




EXHIBIT IV-2

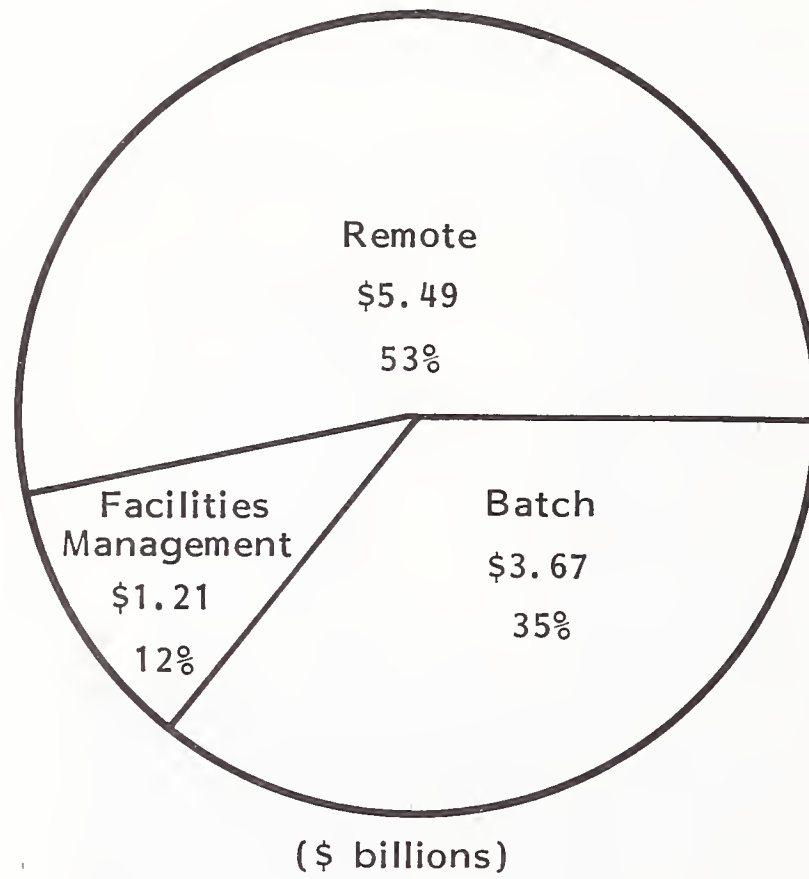
DISTRIBUTION OF PROCESSING SERVICES COMPANIES' REVENUE  
BY MODE OF SERVICE



- Professional Services
- Software Products
- Integrated Systems

EXHIBIT IV-3

DISTRIBUTION OF SUBMODE REVENUE OF  
PROCESSING SERVICES COMPANIES



- The economic recession.
  - The increasing use of in-house processing services.
  - More sophisticated data communications technology.
  - The growing interest of customers in use of the microcomputer for business applications.
- Almost two-thirds of software product use was in cross-industry applications. Cross-industry applications generating the largest revenues were for administrative and financial purposes, 31% and 29% respectively. The largest industry-specific applications were for the banking and health care industries, 19% and 6% respectively. A comparison of these and other applications is shown in Exhibit IV-4.
  - Those companies that offer processing services view software products as a growing source of revenue. Less than 30% of the responding companies indicated no plans to sell software products within the next 12 months.
  - Processing services companies report plans to capitalize on the changes occurring in the marketplace.
    - Of 28 company representatives who responded, 100% indicated that their company plans to become a value-added remarketer of hardware and integrated systems.
    - Over 18% of the total number of opportunities mentioned by processing services respondents were related to opportunities with microcomputers.

EXHIBIT IV-4

LARGEST REVENUE-GENERATING APPLICATION AREAS  
IN PROCESSING SERVICES

APPLICATION AREA	PERCENT OF MENTIONS
Cross Industry:	
Administration	31%
Financial	29
Scientific	5
Cross Industry Total	<u>65%</u>
Industry Specific:	
Banking	19%
Health Care	6
Government	2
Manufacturing	2
Retail/Wholesale	2
Insurance	1
Education	1
Other*	2
Industry Specific Total	<u>35%</u>

Total Mentions = 175

\* Communications and Miscellaneous Services

- Exhibit IV-5 provides information on the weighted average distribution of processing services revenue according to the type of service provided. The type of service from which companies derive processing services revenue differs depending on the size of the company.
  - Smaller companies tend to depend on "raw" processing rather than application "tools," while larger companies depend more on revenue from tools and less on raw processing.
  - Smaller companies derive less of their revenue from proprietary data bases than do larger companies.



EXHIBIT IV-5

DISTRIBUTION OF PROCESSING SERVICES REVENUE  
BY TYPE OF APPLICATION

TYPE OF APPLICATION	SIZE OF COMPANY	
	<\$10 Million (percent) *	>\$10 Million (percent) *
Decision Support, Planning Services, Data Base Management, Utility Services	37%	47%
Proprietary Data Bases	14	23
Other Transactions Processing	49	30

\* Weighted Average

V SOFTWARE PRODUCTS COMPANIES:  
ANALYSIS AND TRENDS



## V SOFTWARE PRODUCTS COMPANIES: ANALYSIS AND TRENDS

- Software products continued to grow in 1982 at a rate far exceeding that for the industry as a whole, capturing a larger share of the market for information services, as shown in Exhibit V-1.
  - The growth rate for software products was 41% percent as compared to 18% for the information services industry.
  - Software products captured 20% of the information services market compared to 17% in 1981. This increase came mostly at the expense of processing services.
- As depicted in Exhibit V-2, 87% of software companies' revenue comes from software products, with professional services accounting for an additional 10%.
- Software products companies had the highest growth rate in number of employees, more than five times the nearest company type, but experienced productivity growth of only eight percent.
- Over \$10 million companies generate 50% of software product revenues.
- The software products' mode of delivery continues to be weighted toward applications software rather than systems software, as shown in Exhibit V-3. This is especially true for smaller companies who derive 70% of their revenues from applications software.

EXHIBIT V-1

REVENUE GROWTH OF SOFTWARE PRODUCTS COMPANIES  
COMPARED TO INDUSTRY GROWTH

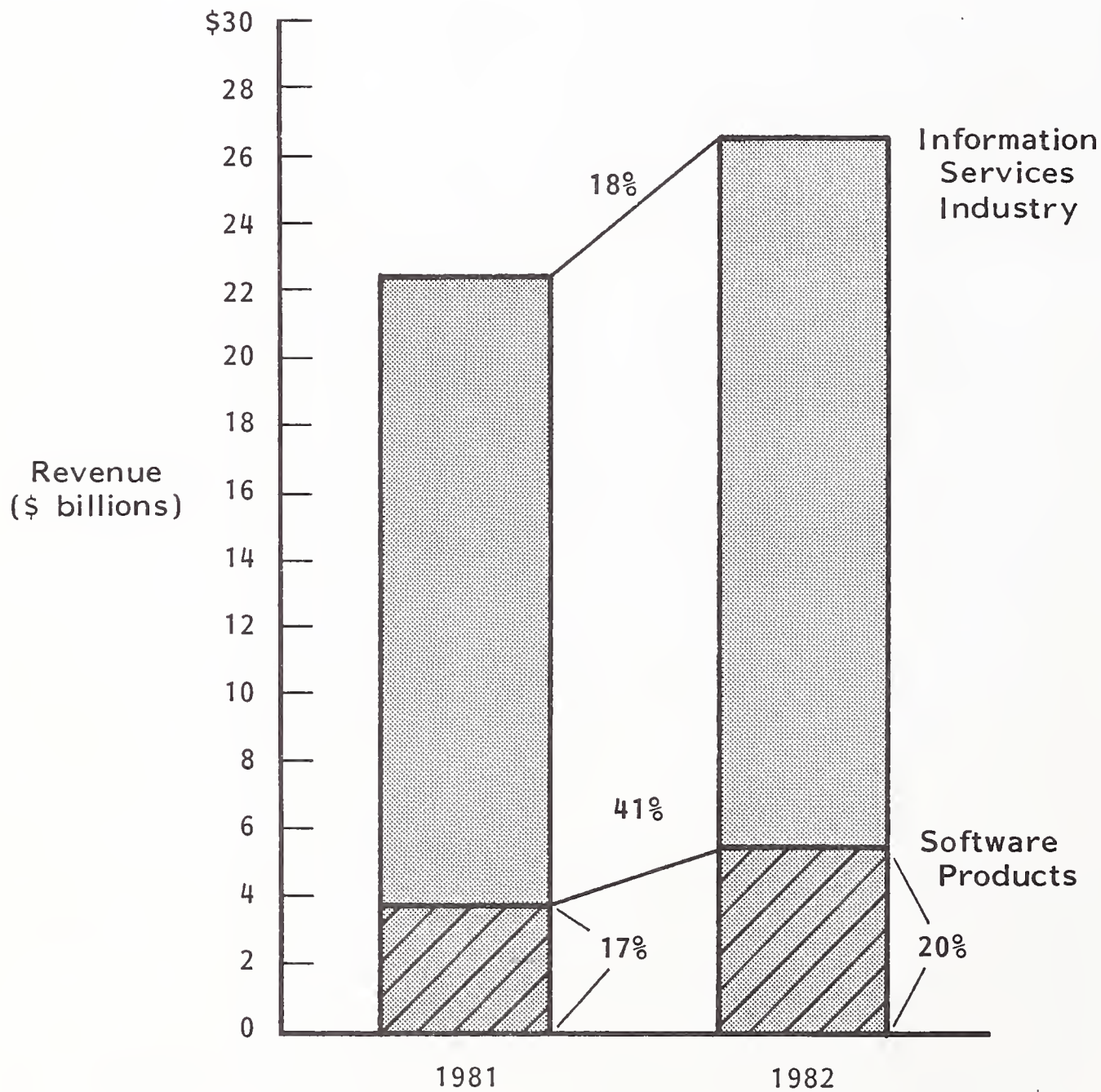
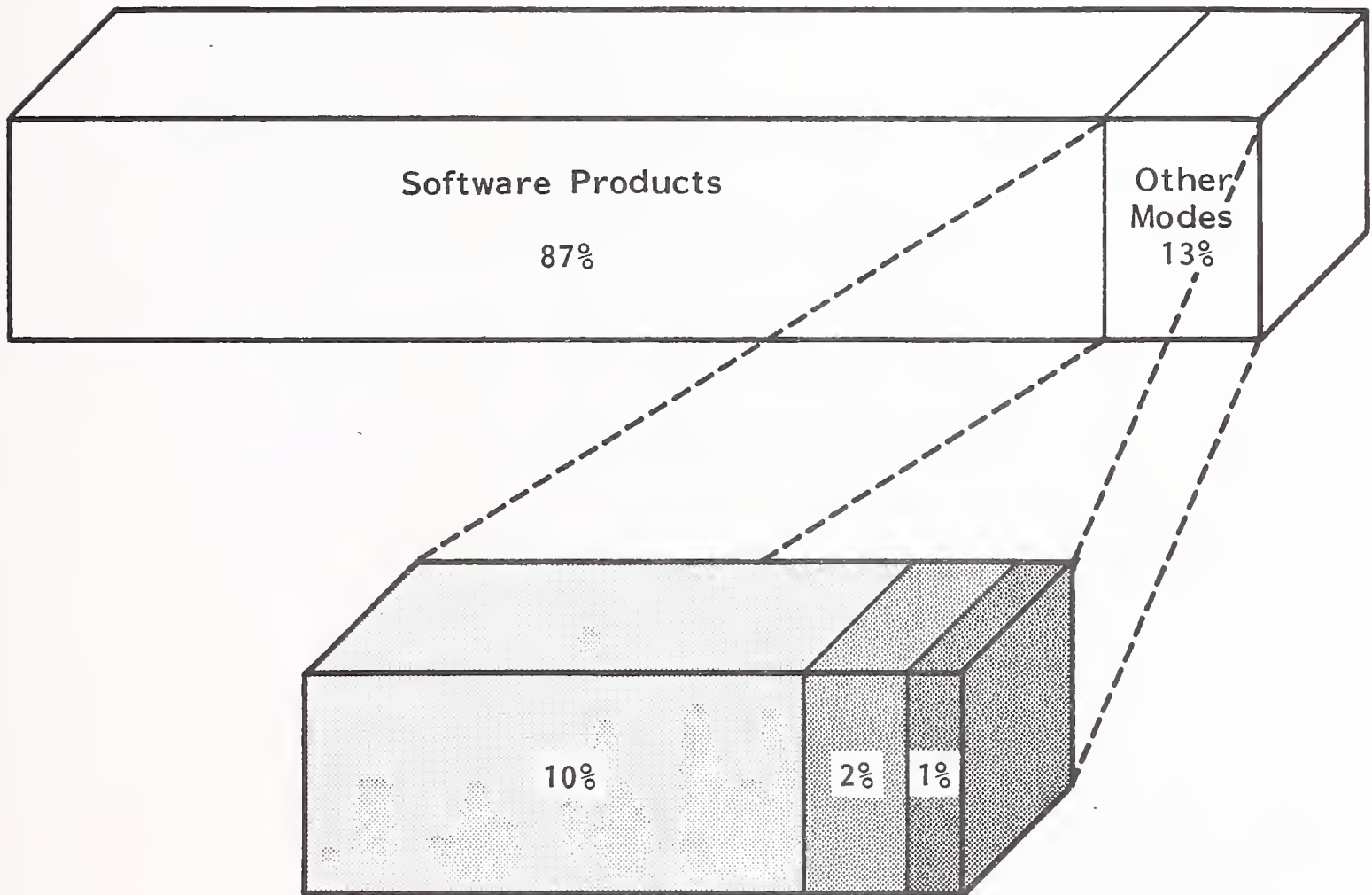




EXHIBIT V-2

DISTRIBUTION OF SOFTWARE PRODUCTS COMPANIES' REVENUE  
BY MODE OF SERVICE



- Professional Services
- Integrated Systems
- Processing Services

EXHIBIT V-3

DISTRIBUTION OF SOFTWARE PRODUCTS REVENUE  
BY MAJOR TYPE OF PRODUCT

TYPE OF PRODUCT	SIZE OF COMPANY	
	<\$10 Million (percent) *	>\$10 Million (percent) *
Applications Software	70%	58%
Systems Software	30	42

64

36

\* Weighted Average

- More than three-fourths of software product use was in cross-industry applications. Cross-industry applications generating the largest revenues were for administrative and financial purposes, 42% and 28% respectively. The largest revenue-generating industry-specific applications were used primarily in the banking industry, 7%. A comparison of these and other applications is shown in Exhibit V-4.
- While the preponderance of software products revenue is generated by the sale of products for use on mini and mainframe computers, microcomputer revenues continue to increase, as shown in Exhibit V-5, particularly for companies producing systems software for microcomputers.

EXHIBIT V-4

LARGEST REVENUE-GENERATING APPLICATION AREAS  
IN SOFTWARE PRODUCTS

APPLICATION AREA	PERCENT OF MENTIONS
Cross Industry:	
Administration	42%
Financial	28
Scientific	6
Cross Industry Total	<u>76%</u>
Industry Specific:	
Banking	7%
Government	4
Retail/Wholesale	4
Insurance	3
Other*	6
Industry Specific Total	<u>24%</u>

Total Mentions = 68

\*Health Care, Manufacturing, and Miscellaneous Services

EXHIBIT V-5

DISTRIBUTION OF SOFTWARE PRODUCTS REVENUE BY  
SIZE OF TARGET MACHINE

SIZE OF MACHINE	SIZE OF COMPANY	
	<\$10 Million (percent) *	>\$10 Million (percent) *
Mini/Mainframe	77%	87%
Microcomputer	23	13

\* Weighted Average





**VI PROFESSIONAL SERVICES COMPANIES:  
ANALYSIS AND TRENDS**



## VI PROFESSIONAL SERVICES COMPANIES: ANALYSIS AND TRENDS

- Professional services' growth rate in 1982 was slightly below the rate of growth of the information services industry, as shown in Exhibit VI-1. The growth rate for professional services was 17% compared to 18% for the information services industry. The share of the information services market remained constant compared to 1981.
- The growth rate for professional services was 17% compared to 18% for the information services industry.
- Professional services companies captured 20% of the information services market, identical to 1981.
- Almost two-thirds of professional service revenue is generated by over \$10 million companies.
- The distribution of revenue by service mode did not change dramatically for these companies in 1982. Professional services firms continue to derive over 80% of their revenue from their main source of business, professional services, as shown in Exhibit VI-2.
- Programming and analysis continues to dominate as the primary source of revenue, generating \$3.18 billion last year, or 70% of all professional service revenue in 1982, as shown in Exhibit VI-3.

EXHIBIT VI-1

REVENUE GROWTH OF PROFESSIONAL SERVICES COMPANIES  
COMPARED TO INDUSTRY GROWTH

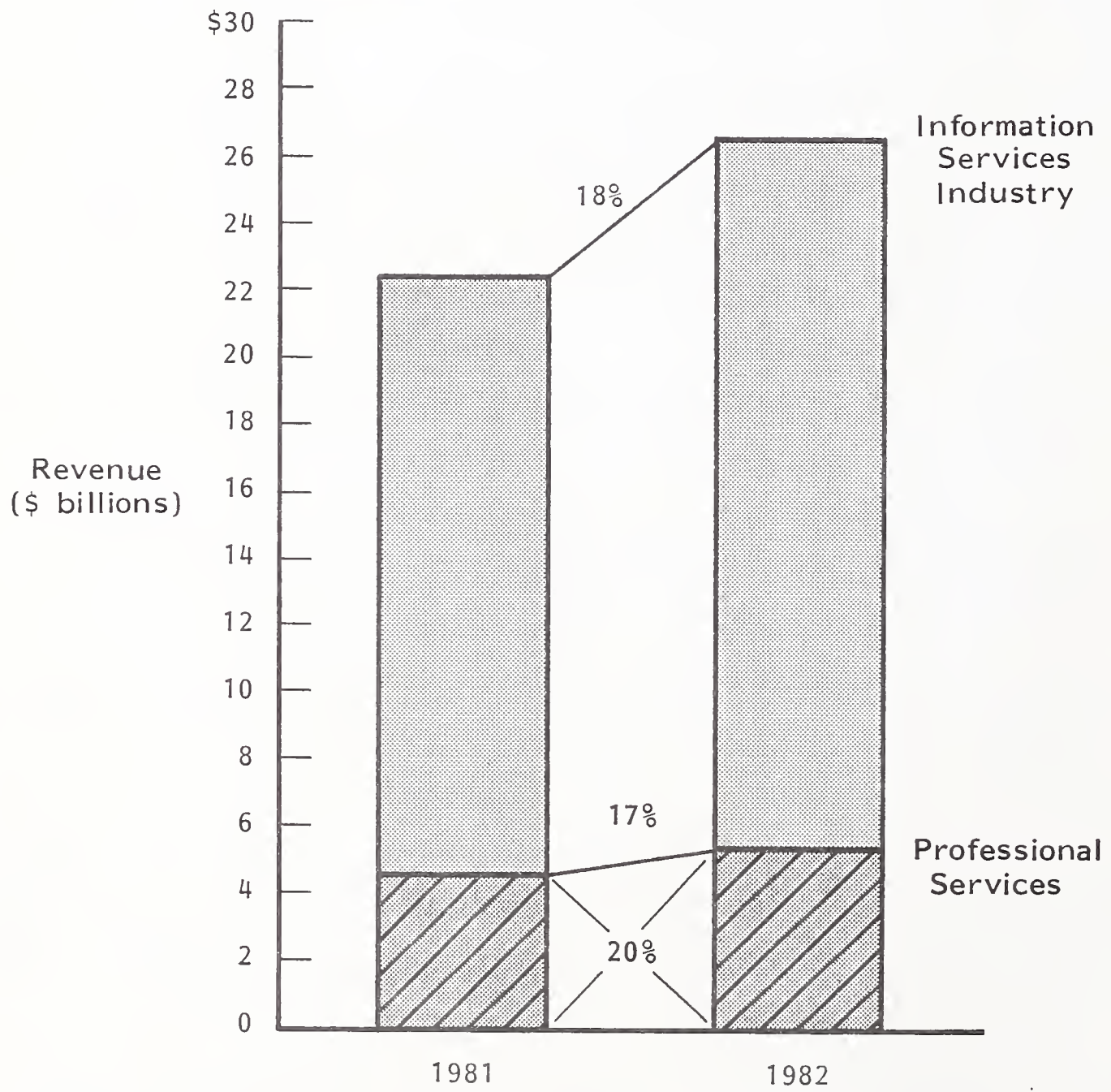
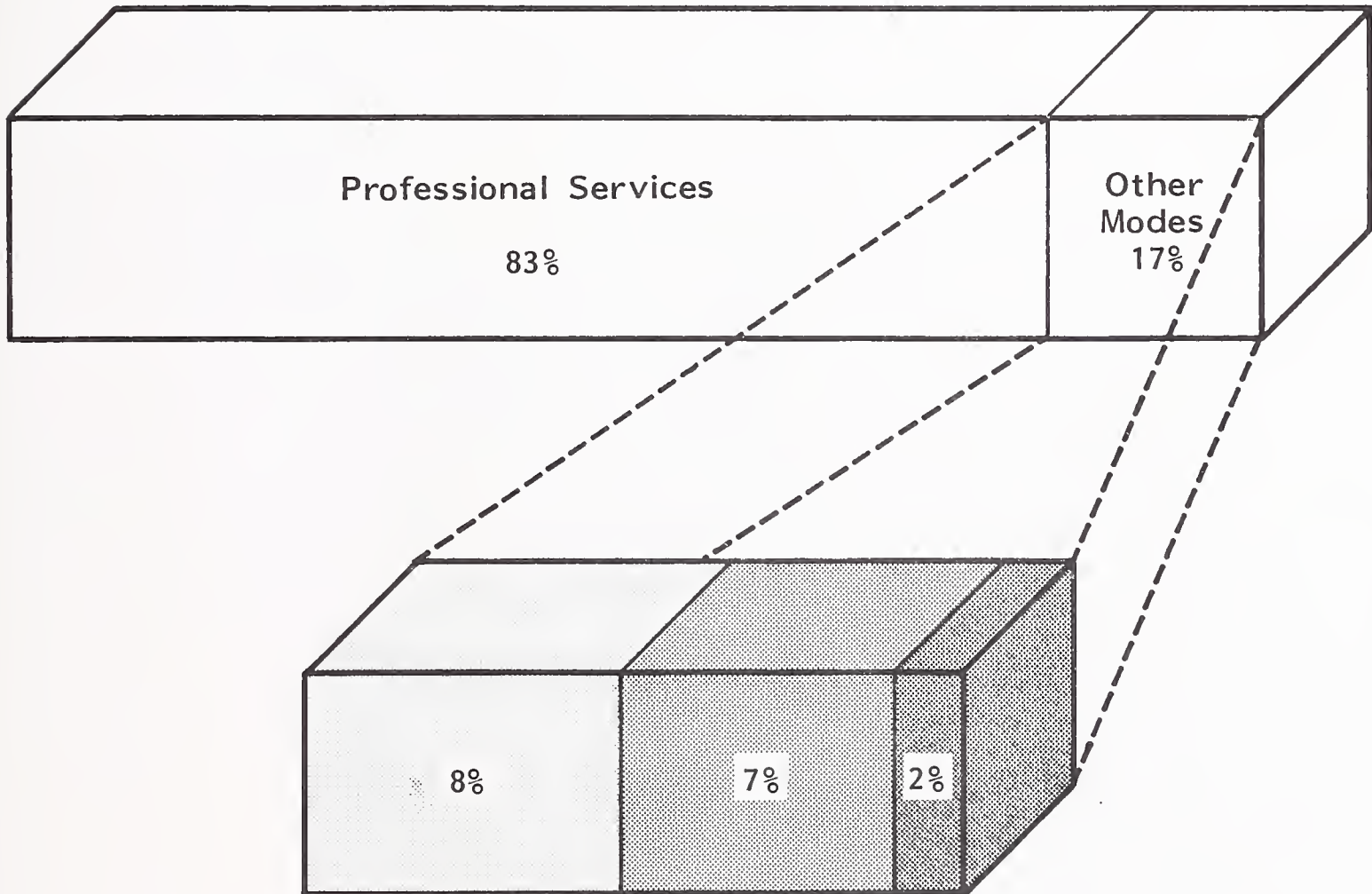




EXHIBIT VI-2

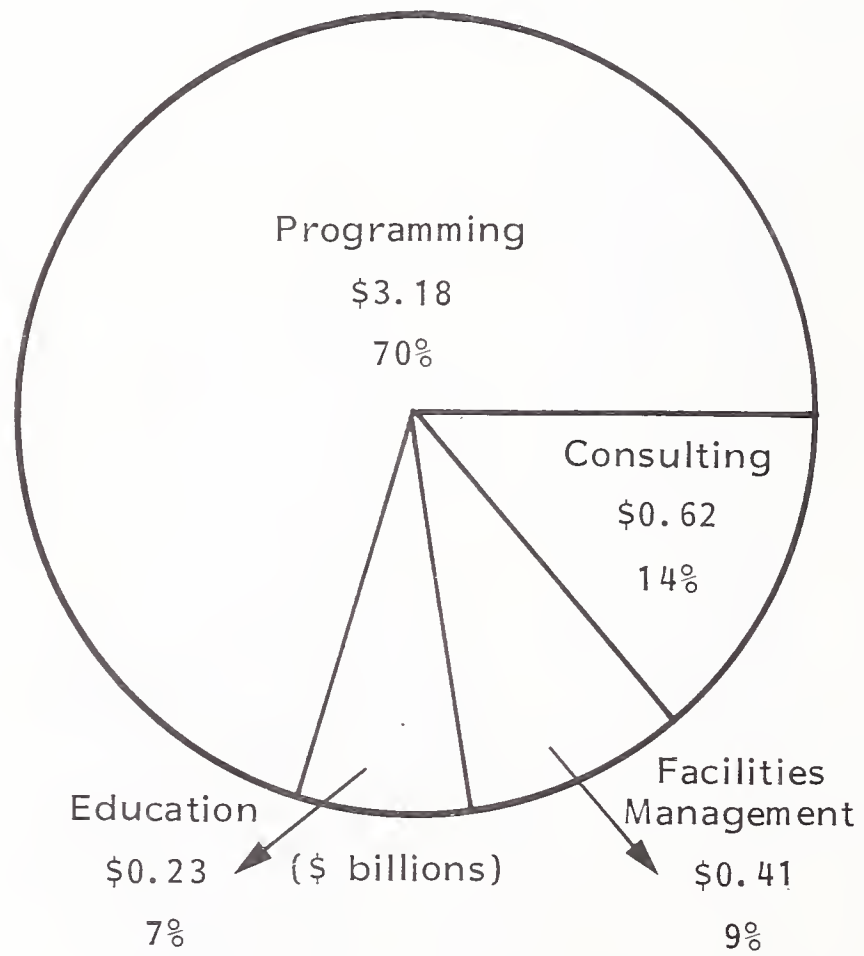
DISTRIBUTION OF PROFESSIONAL SERVICES COMPANIES' REVENUE  
BY MODE OF SERVICE



- Processing Services
- Software Products
- Integrated Systems

EXHIBIT VI-3

DISTRIBUTION OF SUBMODE REVENUE OF  
PROFESSIONAL SERVICES COMPANIES



- Professional service applications were split fairly evenly between cross industry and industry specific, 56% and 44% respectively. Administrative applications were the most dominant cross-industry application, 32%, while industry-specific applications were used primarily in the retail/wholesale, government, and banking industries, 10%, 9%, and 8% respectively. A comparison of these and other applications is shown in Exhibit VI-4.
  
- Professional service revenue is obtained from commercial sources and government sources:
  - Smaller companies derive nearly all of their professional services revenue from commercial sources (87%).
  
  - Larger companies show more even distribution with 58% of revenue from commercial and 42% from government.

EXHIBIT VI-4

LARGEST REVENUE-GENERATING APPLICATION AREAS  
IN PROFESSIONAL SERVICES

APPLICATION AREA	PERCENT OF MENTIONS
Cross Industry:	
Administration	32%
Financial	12
Scientific	12
Cross Industry Total	<u>56%</u>
Industry Specific:	
Retail/Wholesale	10%
Government	9
Banking	8
Communications	5
Health Care	3
Manufacturing	3
Education	2
Insurance	2
Other*	2
Industry Specific Total	<u>44%</u>

Total Mentions = 116

\* Utilities and Miscellaneous Services

VII INTEGRATED SYSTEMS COMPANIES:  
ANALYSIS AND TRENDS





## VII INTEGRATED SYSTEMS COMPANIES: ANALYSIS AND TRENDS

- Integrated systems companies' growth rate in 1982 exceeded the rate of growth of the information services industry, as shown in Exhibit VII-1. Their share of the information services market did not change compared to 1981.
  - The growth rate for integrated systems was 21% compared to 18% for the information services industry.
  - Integrated systems companies captured 13% of the information services market, identical to 1981.
- Eighty-seven percent of the companies' revenue was derived from integrated systems, as shown in Exhibit VII-2.
- Over 50% of integrated systems revenue is generated by under \$10 million companies.
- Exhibit VII-3 indicates that, just as in 1981, CAD/CAM systems account for approximately 29% of the systems, with cross-industry and industry-specific systems accounting for the larger percentage.
- The majority of integrated systems companies feel that if there has been any effect from the introduction of the microcomputer it has been to increase revenues. Only a small portion of under \$10 million companies feel that the microcomputer has had a negative impact on revenue.

EXHIBIT VII-1

REVENUE GROWTH OF INTEGRATED SYSTEMS COMPANIES  
COMPARED TO INDUSTRY GROWTH

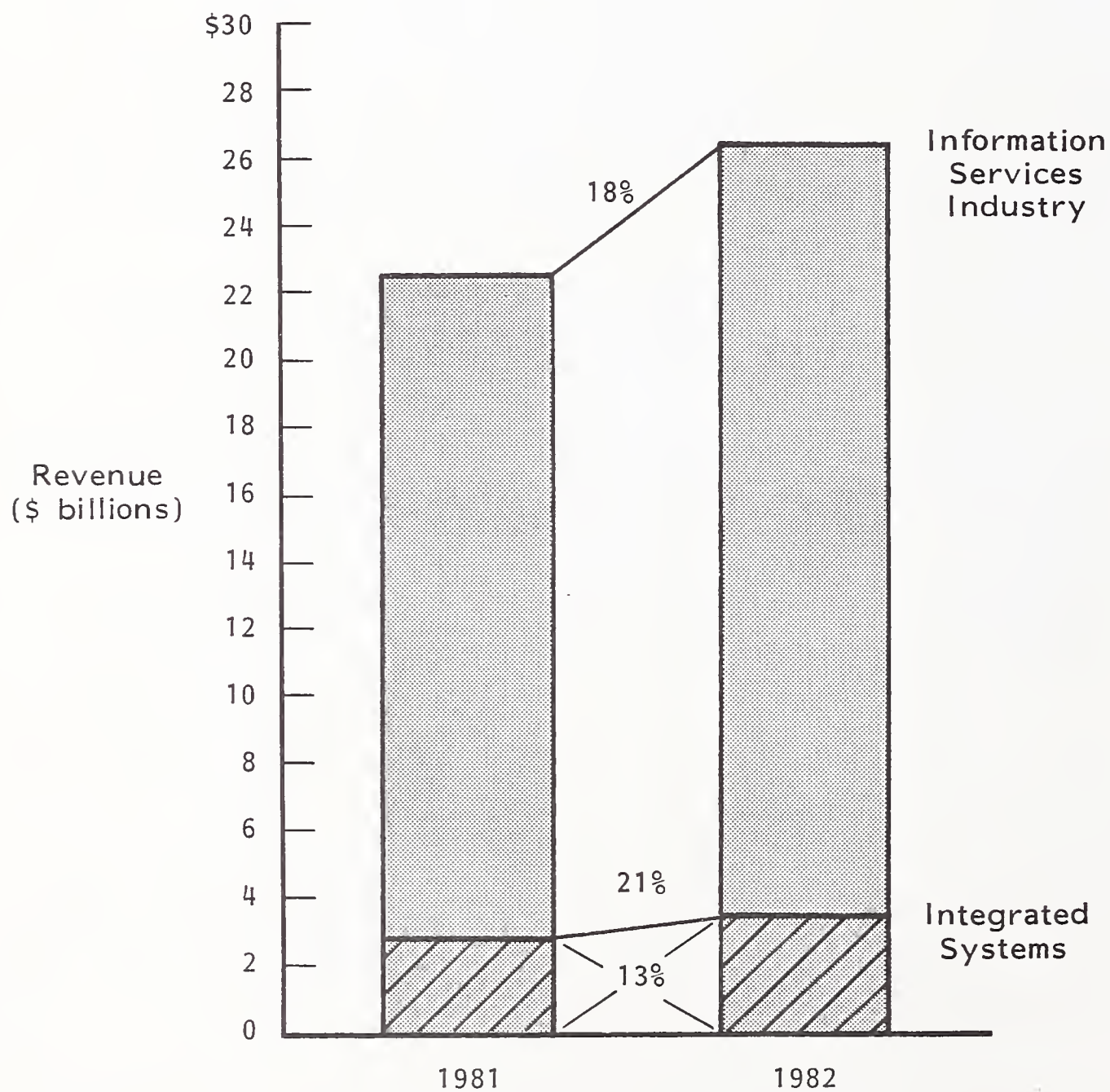
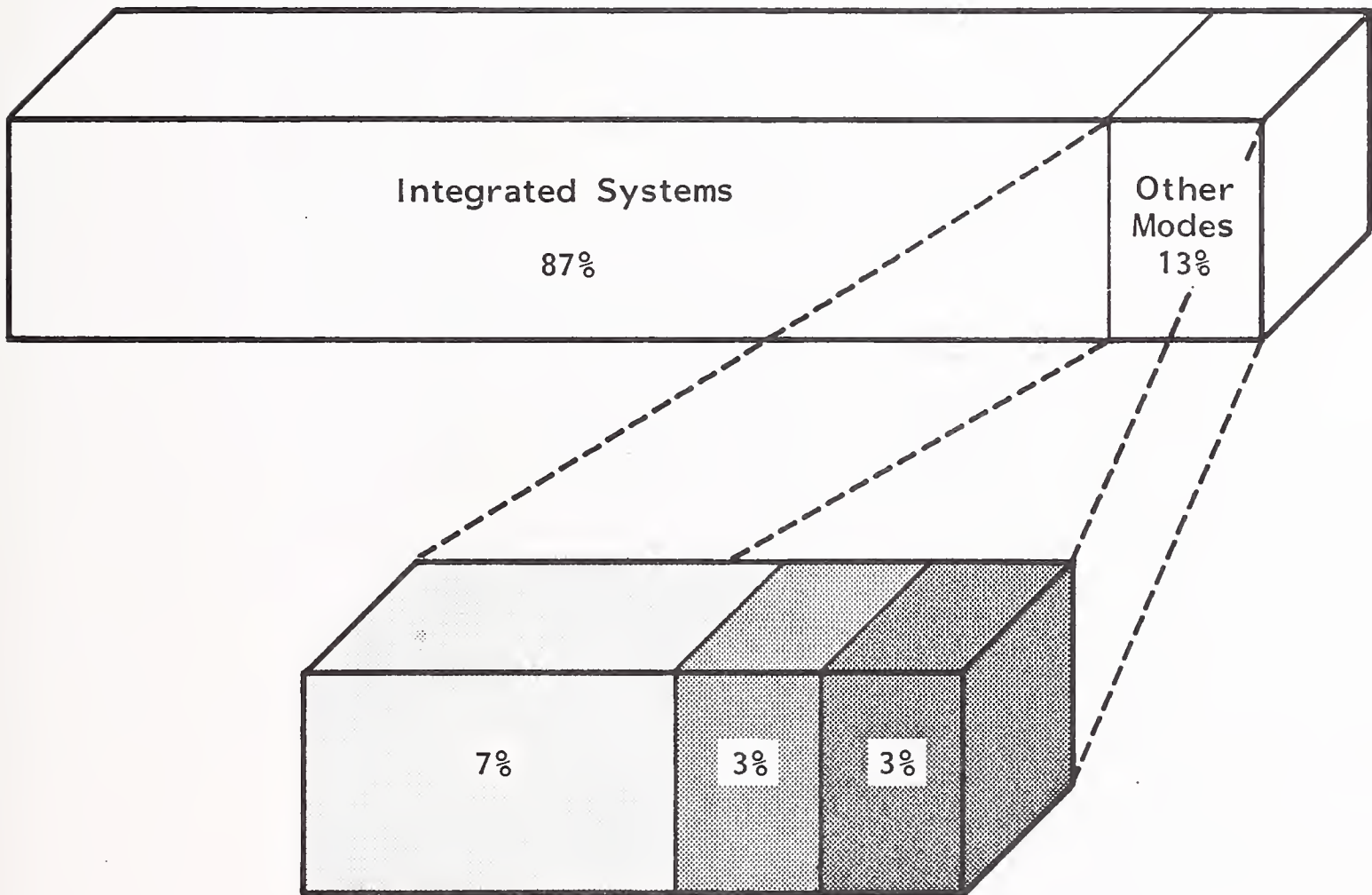


EXHIBIT VII-2

DISTRIBUTION OF INTEGRATED SYSTEMS COMPANIES' REVENUE  
BY MODE OF SERVICE






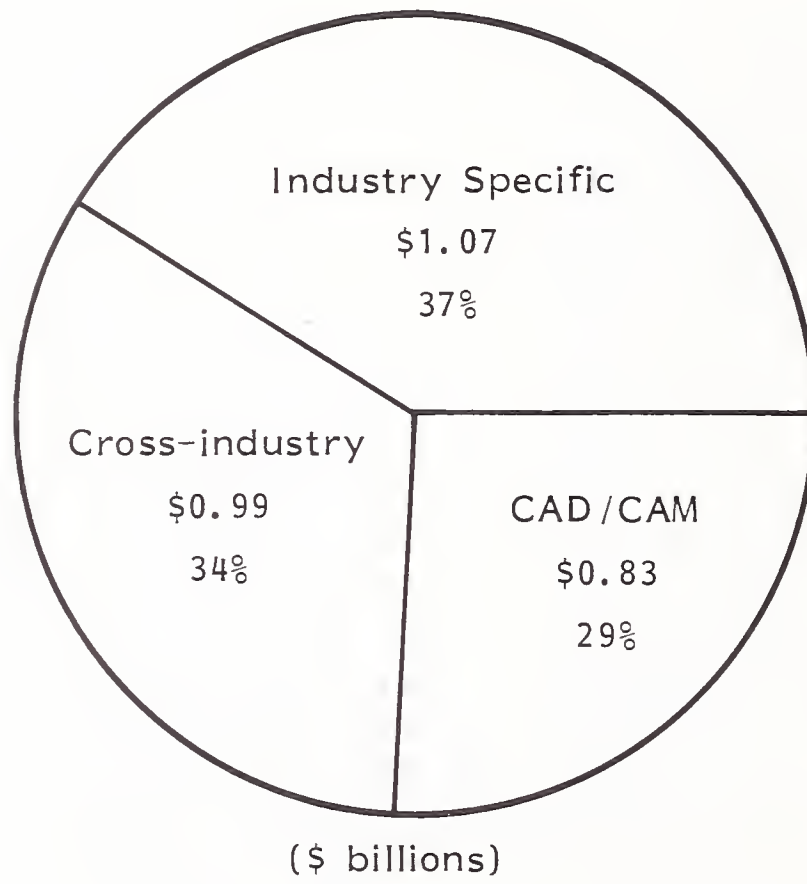
-  Processing Services
-  Professional Services
-  Software Products

EXHIBIT VII-3

DISTRIBUTION OF SUBMODE REVENUE OF  
INTEGRATED SYSTEMS COMPANIES





- Almost 60% of integrated systems use was in cross-industry applications. Cross-industry applications generating the largest revenues were primarily for administrative purposes, 34%, while industry-specific applications were used primarily in the health care and banking industries, 18% and 11% respectively. A comparison of those and other integrated system applications is shown in Exhibit VII-4.
- Hardware accounted for over 50% of total revenue for integrated systems companies, while software accounted for approximately 25% of total revenue, as shown in Exhibit VII-5. Maintenance, training, and documentation make up the remainder. By size of company, the only difference in distribution is in hardware maintenance, from which smaller companies earn only 2% of total revenue while large companies earn 11%. This distribution is consistent with that uncovered in the 1981 research.

EXHIBIT VII-4

LARGEST REVENUE-GENERATING APPLICATION AREAS  
IN INTEGRATED SYSTEMS

APPLICATION AREA	PERCENT OF MENTIONS
Cross Industry:	
Administration	34%
Financial	16
Scientific	9
Cross Industry Total	<u>59%</u>
Industry Specific:	
Health Care	18%
Banking	11
Manufacturing	6
Insurance	2
Other *	4
Industry Specific Total	<u>41%</u>

Total Mentions = 85

\* Government, Education and Communications



EXHIBIT VII-5

DISTRIBUTION OF INTEGRATED SYSTEMS REVENUE BY  
MAJOR TYPE OF PRODUCT

TYPE OF PRODUCT	SIZE OF COMPANY	
	<\$10 Million (percent) *	>\$10 Million (percent) *
Hardware	64%	55%
Hardware Maintenance	2	11
Software	26	24
Software Maintenance/ Modifications	4	5
Training and Documentation	4	5

\* Weighted Average



## APPENDIX A: DEFINITION OF TERMS



## APPENDIX A: DEFINITION OF TERMS

### A. REVENUE

- TOTAL COMPANY REVENUE - Revenue received from total computer services and other sources of revenue.
- TOTAL COMPUTER SERVICES REVENUE - Revenue received from services provided by vendors who perform data processing using vendor computers (processing services) or who assist users to perform such functions on their own computers (software products and/or professional services) or a combination of hardware and software integrated into a total system (integrated systems).
- CAPTIVE COMPUTER SERVICES REVENUE - Revenue received from users who are part of the same parent corporation as the vendors.
- NONCAPTIVE COMPUTER SERVICES REVENUE - Revenue received for computer services provided within the United States from users who are not part of the same parent corporation as the vendor.
- NONCAPTIVE FOREIGN COMPUTER SERVICES REVENUE - Revenue received for computer services provided outside the United States from users who are not part of the same parent corporation as the vendor.

- OTHER REVENUE - Revenue derived from lines of business other than those defined above.

## B. SERVICE MODES

- PROCESSING SERVICES - Remote computing services, batch services, and facilities management.
  - REMOTE COMPUTING SERVICES - Provision of data processing to a user by means of terminals at the user's site connected by a data communications network to the vendor's central computer.
  - BATCH SERVICES - This includes data processing performed at vendors' sites of user programs and/or data that are physically transported (as opposed to electronically by telecommunications media) to and from those sites. Data entry and data output services, such as keypunching and computer output microfilm processing, are also included. Batch services include those expenditures by users who take their data to a vendor site that has a terminal connected to a remote computer for the actual processing.
  - FACILITIES MANAGEMENT (FM) (Also referred to as "resource management" or "systems management") - The management of all or part of a user's data processing functions under a long-term contract (not less than one year). This would include both remote computing and batch services. To qualify as FM, the contractor must directly plan and control as well as operate the facility provided to the user on-site, through communications lines or mixed modes. Simply providing resources, even though under a long-term contract and/or for all of a user's processing needs, does not necessarily qualify as FM.



- SYSTEMS IMPLEMENTATION PRODUCTS - These are used to prepare applications for execution by assisting in designing, programming, testing, and related functions. Examples include languages, sorts, productivity aids, data dictionaries, report writers, project control systems, program library management systems, and retrieval systems.
- PROFESSIONAL SERVICES - This category is made up of services related to EDP, including systems management, systems design, custom/contract programming, consulting, education, and training.
  - Services are sold to:
    - GOVERNMENT - which includes federal, state, and local governments and their agencies.
    - COMMERCIAL - which includes all nongovernment organizations.
- INTEGRATED SYSTEMS - An integration of systems and applications software with hardware, packaged as a single entity. The value added by the vendor is primarily in the software. Most CAD/CAM systems and many small business systems are integrated systems. This does not include specialized hardware systems such as word processors, cash registers, and process control systems.
- SOFTWARE PRODUCTS - This category includes users' purchases of applications and systems packages for use on in-house computer systems. Included are lease and purchase expenditures, as well as fees for work performed by the vendor to implement and maintain the package at the users' sites. Fees for work performed by organizations other than the package vendor are counted in professional services. There are several subcategories of software products.

- APPLICATIONS PRODUCTS - These are software products that perform processing to service user functions. They consist of:
  - CROSS-INDUSTRY PRODUCTS - which are used in multiple user industry sectors. Examples are payroll, inventory control, and financial planning.
  - INDUSTRY-SPECIALIZED PRODUCTS - which are used in a specific industry sector such as banking and finance, transportation, or discrete manufacturing. Examples are demand deposit accounting and airline scheduling.
  
- SYSTEMS PRODUCTS - These are software products that enable the computer/communications system to perform basic functions. They consist of:
  - SYSTEMS OPERATIONS PRODUCTS - which function during applications program execution to manage the computer system resource. Examples include operating systems, DBMS, communication monitors, emulators, and spoolers.
  - SYSTEMS UTILIZATION PRODUCTS - which are used by operations personnel to utilize the computer system more effectively. Examples include performance measurement, job accounting, computer operations scheduling, and utilities.

### C. USES OF PROCESSING SERVICES

- PROBLEM SOLVING AND DATA BASE MANAGEMENT SERVICES - These are based on software tools designed to manage user data bases and/or

convert data into usable information through the use of mathematical, statistical, or financial analysis tools. These tools usually enable the end user to readily and easily display the results in report or graphical form.

- TRANSACTION PROCESSING SERVICES - These are usually highly repetitive, clerical applications. Most business accounting fits into this category: payroll, accounts receivable, order entry, portfolio accounting, and inventory control are all good examples. Many industry-specific applications also fit into this category, for example, wholesale distribution and most hospital processing services.
  
- VENDOR DATA BASE SERVICES - These are based on data bases supplied by the vendor. Although the data base may be public or owned by a third party, the vendor controls access to it. Credit authorization and legal data bases are examples.
  
- UTILITY SERVICES - Provide access to a computer and/or communications network with basic software that enables users to develop their own programs. Terminal-handling software, sorts, language compilers, scientific library routines, and other systems software, including language, are included in this category.

#### D. TRENDS AND ISSUES

- REVENUE GROWTH - Derived from one or more of the following:
  - PRICE INCREASE - Proportion of revenue increase derived solely from increasing the price of services.
  
  - ACQUISITION - Proportion of revenue increase derived from the acquisition of other companies.

- REAL GROWTH - Proportion of revenue increase derived from all sources net of the effect of price increases and acquisitions.
- PRETAX PROFITS - Profits before taxes and extraordinary items.
- EMPLOYEE PRODUCTIVITY - Average U.S. noncaptive revenue generated per employee.

**APPENDIX B: METHODOLOGY AND RECONCILIATION**





## APPENDIX B:        METHODOLOGY AND RECONCILIATION

- Industry performance data in 1981 and 1982 were established by two methods:
  - A census of all known information services firms with U.S. noncaptive revenue exceeding \$10 million.
  - A stratified random sample of companies from a pool of all known companies under \$10 million in U.S. noncaptive revenue.
- Data on each company were obtained through a telephone interview with a company representative. All data were validated using INPUT file information, when available.
- The public company data were extracted from public documents issued by these firms.
- Exhibit B-1 shows the reconciliation in number of companies between 1981 and 1982. In general, the industry increased in known member companies by 5% to 6,470.
  - Twelve companies with revenues over \$10 million in 1981 were disqualified this year because they had 1982 revenue under \$10 million or received less than 75% of their revenues from U.S. noncaptive sources.

EXHIBIT B-1

CHANGE IN NUMBER OF COMPANIES, 1981-1982

TYPE OF COMPANY ● SIZE (\$ millions)	NUMBER OF COMPANIES		CHANGE	PERCENT
	1981	1982		
<b>Processing Services</b>				
● \$.25-1.0	1,100	1,000	(100)	(9)%
● \$1.1-10	1,050	1,010	(40)	(4)
● \$10.0-25	50	57	7	14
● > \$25	59	63	4	7
<b>All Processing Services</b>	<b>2,259</b>	<b>2,130</b>	<b>(129)</b>	<b>(6)%</b>
<b>Software Products</b>				
● \$.25-1.0	1,180	1,390	210	18%
● \$1.1-10	390	440	50	13
● > \$10	35	49	14	40
<b>All Software Products</b>	<b>1,605</b>	<b>1,879</b>	<b>274</b>	<b>17%</b>
<b>Professional Services</b>				
● \$.25-1.0	905	950	45	5%
● \$1.1-10	310	325	15	5
● > \$10	69	73	4	6
<b>All Professional Services</b>	<b>1,284</b>	<b>1,348</b>	<b>64</b>	<b>5%</b>
<b>Integrated Systems</b>				
● \$.25-1.0	600	660	60	10%
● \$1.1-10	400	420	20	5
● > \$10	30	33	3	10
<b>All Integrated Systems</b>	<b>1,030</b>	<b>1,113</b>	<b>83</b>	<b>8%</b>
<b>All Types</b>	<b>6,178</b>	<b>6,470</b>	<b>292</b>	<b>5%</b>

- Thirty-two companies were added to the census of companies with over \$10 million in revenue. This represents a 13% increase in the number of these companies in 1982.
- INPUT estimates that the number of companies with less than \$10 million in revenue increased by 271 in 1982. Each type of company increased in number except processing services companies, which decreased 6%. The most dramatic growth was in the number of small software companies.
- The revenue reconciliation between the 1981 report on 1981 revenue and the 1982 report on 1981 revenue is included as Exhibit B-2.
  - The 1981 revenue base increased \$207 million.
  - \$101 million was added to the revenue of companies over \$10 million to account for companies included for the first time due to acquisition and divestitures.
  - \$83 million of the remaining \$106 million was added to reflect revenue increases in companies with \$1-10 million in revenue.
  - This 1% change in the 1981 revenue number is well within statistical confidence limits.

EXHIBIT B-2

CHANGE IN 1981 REVENUE AS REPORTED IN 1982 RESEARCH

TYPE OF COMPANY ● SIZE (\$ millions)	1981 REVENUE		CHANGE	
	1981 REPORT	1982 REPORT	DOLLARS	PERCENT
<b>Processing Services</b>				
● \$.25-1.0	\$ 791	\$ 790	\$ (1)	< 1%
● \$1.1-10	3,458	3,541	83	2
● \$10.1-25	732	736	4	< 1
● > \$25	6,130	6,150	20	< 1
<b>All Processing Services</b>	<b>\$11,111</b>	<b>\$11,217</b>	<b>\$106</b>	<b>1%</b>
<b>Software Products</b>				
● \$.25-1.0	712	712	0	0%
● \$1.1-10	1,109	1,109	0	0
● > \$10	1,883	1,944	61	3
<b>All Software Products</b>	<b>\$ 3,704</b>	<b>\$ 3,765</b>	<b>\$ 61</b>	<b>2%</b>
<b>Professional Services</b>				
● \$.25-1.0	526	551	25	5%
● \$1.1-10	1,164	1,163	(1)	< 1
● > \$10	2,801	2,856	55	2
<b>All Professional Services</b>	<b>\$ 4,491</b>	<b>\$ 4,570</b>	<b>\$ 79</b>	<b>2%</b>
<b>Integrated Systems</b>				
● \$.25-1.0	376	376	0	0%
● \$1.1-10	1,351	1,351	0	0
● > \$10	1,068	1,029	(39)	1
<b>All Integrated Systems</b>	<b>\$ 2,795</b>	<b>\$ 2,756</b>	<b>(39)</b>	<b>1%</b>
<b>All Types</b>	<b>\$22,101</b>	<b>\$22,308</b>	<b>207</b>	<b>1%</b>

APPENDIX C: DATA BASE OF INFORMATION  
SERVICES REVENUE





## DATA BASE OF INFORMATION SERVICES REVENUE

TYPE OF COMPANY ● SIZE (\$ millions)	YEAR	NUMBER OF COMPANIES	MODE OF DELIVERY (\$ millions)				TOTAL ALL MODES (\$ millions)
			Processing Services	Software Products	Professional Services	Integrated Systems	
Processing Services ● \$ .25-1.0 ● \$1.1-10 ● \$10.1-25 ● > \$25	1981	1,100	\$ 716	\$ 24	\$ 50	\$ 0	\$ 790
	1982	1,000	544	30	34	10	618
	1981	1,050	3,045	248	163	85	3,541
	1982	1,010	3,249	290	139	130	3,808
	1981	50	638	28	27	43	736
1982	57	783	33	50	50	916	
1981	59	5,040	583	260	260	6,150	
1982	63	5,785	690	332	335	7,142	
Subtotal	1981	2,259	\$ 9,439	\$ 567	\$ 823	\$ 388	\$11,217
	1982	2,130	\$10,361	\$ 685	913	525	12,484
Software Products ● < \$1.0 ● \$1.1-10.0 ● > \$10	1981	1,180	0	\$ 622	\$ 86	\$ 4	712
	1982	1,390	0	979	95	10	1,084
	1981	390	\$ 12	1,074	19	4	1,109
	1982	440	20	1,465	109	25	1,619
	1981	35	33	1,610	288	13	1,944
1982	49	49	2,175	320	48	2,592	
Subtotal	1981	1,605	\$ 45	\$3,306	\$ 393	\$ 21	\$ 3,765
	1982	1,879	\$ 69	\$4,619	524	83	\$ 5,295

Continued

EXHIBIT C-1 (Cont.)

DATA BASE OF INFORMATION SERVICES REVENUE

TYPE OF COMPANY ● SIZE (\$ millions)	YEAR	NUMBER OF COMPANIES	MODE OF DELIVERY (\$ millions)					TOTAL ALL MODES (\$ millions)
			Processing Services	Software Products	Professional Services	Integrated Systems		
Professional Services ● < \$1.0 ● \$1.1-10.0 ● > \$10	1981	905	0	\$ 125	\$ 426	0	\$ 551	
	1982	950	0	136	450	23	609	
	1981	310	\$ 149	38	975	1	1,163	
	1982	325	126	55	1,190	38	1,409	
	1981	69	252	117	2,425	62	2,856	
	1982	73	300	172	2,802	37	3,311	
Subtotal	1981	1,284	\$ 401	\$ 280	\$3,826	\$ 63	\$ 4,570	
	1982	1,348	426	363	4,442	98	5,329	
Integrated. Systems ● < \$1.0 ● \$1.1-10.0 ● > \$10	1981	600	\$ 49	\$ 5	\$ 5	\$ 317	\$ 376	
	1982	660	30	10	10	443	493	
	1981	400	20	10	33	1,288	1,351	
	1982	420	76	44	38	1,441	1,599	
	1981	30	101	37	41	850	1,029	
	1982	33	120	44	53	1,013	1,230	
Subtotal	1981	1,030	\$ 170	\$ 52	\$ 79	\$2,455	\$ 2,756	
	1982	1,113	226	98	101	2,897	3,322	
Total All Types	1981	6,178	\$10,055	\$4,205	\$5,121	\$2,927	\$22,308	
	1982	6,470	\$11,082	\$5,765	\$5,980	\$3,603	\$26,430	

## APPENDIX D: QUESTIONNAIRE



# ADAPSO Questionnaire - 1983

FOR OFFICE USE ONLY CATALOG NO. YAD6 _____
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## GENERAL INFORMATION

1. Fiscal Year End  8  Month End
2. Company Status  Public  Private  Subsidiary/Division
3. Please list the average or mid-year number of employees associated with U.S. Noncaptive Information Services Revenue.  
1981: \_\_\_\_\_ 1982: \_\_\_\_\_
4. What are your total worldwide captive information services revenues?  
1981: \$ \_\_\_\_\_,000 1982: \$ \_\_\_\_\_,000



5. PROFILE OF **NONCAPTIVE** INFORMATION SERVICES REVENUE

DELIVERY MODE	FISCAL 1981 (\$000)		FISCAL 1982 (\$000)	
	UNITED STATES	FOREIGN	UNITED STATES	FOREIGN
● PROCESSING (TOTAL)	\$ (13)	\$ (42)	\$ (47)*	\$ (76)
– Remote Computing	\$ (14)*		\$ (48)*	
– Batch	\$ (15)*		\$ (49)*	
– Facilities Management	\$ (16)*		\$ (50)*	
Of the Largest Delivery Mode Above				
– Cross Industry	\$ (17)		\$ (51)	
– Utility	\$ (18)		\$ (52)	
– Industry Specific	\$ (19)		\$ (53)	
● SOFTWARE PRODUCTS (TOTAL)	\$ (20)	\$ (43)	\$ (54)*	\$ (77)
– Applications Total	\$ (21)		\$ (55)	
. Cross Industry	\$ (22)		\$ (56)	
. Industry Specific	\$ (23)		\$ (57)	
– Systems Total	\$ (24)		\$ (58)	
. Systems Control	\$ (25)		\$ (59)	
. Data Center Management	\$ (26)		\$ (60)	
. Application Development Tools	\$ (27)		\$ (61)	
● PROFESSIONAL SERVICES (TOTAL)	\$ (28)	\$ (44)	\$ (62)*	\$ (78)
– Programming	\$ (29)		\$ (63)	
– Consulting	\$ (30)		\$ (64)	
– Education	\$ (31)		\$ (65)	
– Professional Services FM	\$ (32)		\$ (66)	
● INTEGRATED SYSTEMS (TOTAL)	\$ (33)	\$ (45)	\$ (67)*	\$ (79)
– CAD/CAM	\$ (34)		\$ (68)	
– Cross Industry (except CAD/CAM)	\$ (35)		\$ (69)	
– Industry Specific (except CAD/CAM)	\$ (36)		\$ (70)	
<b>TOTAL NONCAPTIVE</b>				
– United States	\$ (37)		\$ (71)	
– Foreign		\$ (46)		\$ (80)
Worldwide Total Captive Information Services Revenue	\$ (38)		\$ (72)	
Worldwide Total Information Services Revenue	\$ (39)		\$ (73)	
Worldwide Total Noninformation Services Revenue	\$ (40)		\$ (74)	
Worldwide Total Company Revenue	\$ (41)		\$ (75)	

\*NOTE: THE LARGEST OF THESE NUMBERS IS YOUR PRIMARY SERVICE.



6. What annual growth rates were targeted for your U.S. noncaptive information services revenues in 1981, 1982, and 1983?

1981:        %      1982:        %      1983:        %  
(81)                      (82)                      (83)

7. On a scale of 1 to 5 (5 being high), please rate the importance of the following factors on your growth rates for the two years specified.

FACTORS BEHIND TARGETED GROWTH

Factor	1982 (5 = High 1 = Low)	1983 (5 = High 1 = Low)	Reason for Change 1982-1983	For Internal Use Only
Price Increases	<u>      </u> <small>(84)</small>	<u>      </u> <small>(88)</small>	<u>      </u> <small>(92)</small>	<input type="checkbox"/> <input type="checkbox"/>
Acquisitions	<u>      </u> <small>(85)</small>	<u>      </u> <small>(89)</small>	<u>      </u> <small>(93)</small>	<input type="checkbox"/> <input type="checkbox"/>
Customers of Existing Products	<u>      </u> <small>(86)</small>	<u>      </u> <small>(90)</small>	<u>      </u> <small>(94)</small>	<input type="checkbox"/> <input type="checkbox"/>
New Offerings	<u>      </u> <small>(87)</small>	<u>      </u> <small>(91)</small>	<u>      </u> <small>(95)</small>	<input type="checkbox"/> <input type="checkbox"/>

8. What areas (products, services, key markets, or technologies) do you see as the greatest opportunities or threats to your success in the next two to three years?

- A. Areas holding opportunities: \_\_\_\_\_    
(96)
- \_\_\_\_\_    
(97)
- \_\_\_\_\_    
(98)
- B. Areas threatening your success: \_\_\_\_\_    
(99)
- \_\_\_\_\_    
(100)
- \_\_\_\_\_    
(101)

9. Are there any business areas you will de-emphasize?  Yes  No  
(102)      1                      2

- If yes, what are they and why? \_\_\_\_\_    
(103)
- \_\_\_\_\_    
(104)
- \_\_\_\_\_    
(105)

## PROCESSING SERVICES

10. What percent of your noncaptive U.S. processing revenues in 1981 and 1982 came from:

	<u>1981</u>	<u>1982</u>	<u>Reason for Change</u>
● Decision support, planning services, data base management of client data	_____ %	_____ %	_____
● Proprietary data banks	_____ %	_____ %	_____
● Utility services	_____ %	_____ %	_____
● Other transaction processing	_____ %	_____ %	_____
Total	100%	100%	

11. Are you now selling personal computer systems or services:

- Yes, tied to a network
- Yes, standalone systems
- No, but plan to within the next 12 months
- No, no plans to in next 12 months

12. Are you selling software products (PC or Non-PC)?

	<u>Check Which Type of Software</u>	
	<u>PC</u>	<u>Non-PC</u>
<input type="checkbox"/> Yes, will offer in-house developed products . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yes, as an agent . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> No, but will offer in next 12 months. . . . .	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> No, no plans to offer in next 12 months . . . . .	<input type="checkbox"/>	<input type="checkbox"/>

13. Have you become or do you plan to become a value-added remarketer of hardware or integrated systems in the next 12 months?

Yes     No

14. What are your three largest industry or cross-industry processing applications?

Industry Specific

<u>Application/Function</u>	<u>Industry (If Industry Specific)</u>
_____	_____
_____	_____
_____	_____

15. To what extent were your 1982 processing revenues negatively impacted by the following: (1 = low impact, 5 = high impact)

	<u>Impact</u>
Recessionary economy	_____
Clients' use of personal computers	_____
Clients going to in-house systems	_____
Data communications cost	_____
Other: _____	_____
_____	_____

## PROFESSIONAL SERVICES

16. In 1981 and 1982 what percent of your noncaptive U.S. professional services revenue came from the government sector as opposed to the commercial sector?

	<u>1981</u>	<u>1982</u>
Government (federal, state, and local)	_____ %	_____ %
Commercial	_____ %	_____ %
Total	100%	100%

17. Are you developing software products or integrated systems?

- No
- Yes, software products
- Yes, integrated systems

If yes to either or both of the above, will you be marketing these through:

	For Software Products	For Integrated Systems
In-house sales staff	<input type="checkbox"/>	<input type="checkbox"/>
Specialized sales staff	<input type="checkbox"/>	<input type="checkbox"/>
Existing sales staff	<input type="checkbox"/>	<input type="checkbox"/>
Distributors/publishers	<input type="checkbox"/>	<input type="checkbox"/>
Jointly with another party	<input type="checkbox"/>	<input type="checkbox"/>
Retail outlets	<input type="checkbox"/>	<input type="checkbox"/>
Direct mail	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>
_____		

18. What are your three largest application/market specialty areas for professional services ?

<u>Application/Function</u>	<u>Industry (If Industry Specific)</u>
_____	_____
_____	_____
_____	_____

## SOFTWARE PRODUCTS

19. In 1981 and 1982 what percent of your noncaptive U.S. software product revenues came from applications software and systems software, divided into personal computer and mini/mainframe software?

	<u>1981</u>	<u>1982</u>	<u>Reason for Change</u>
<u>Mini/Mainframe-Based</u>			
Applications Software	_____ %	_____ %	_____
Systems Software	_____ %	_____ %	_____
<u>Personal-Computer-Based</u>			
Education Software	_____ %	_____ %	_____
Applications Software (except education)	_____ %	_____ %	_____
Systems Software	_____ %	_____ %	_____
Total	100%	100%	_____

20. For personal computer software: in what part of the distribution network is your company involved? (Check all that apply.)

- Author
- Publisher
- Distributor
- Retailer
- Other
- Do not offer personal computer software



21. If you do not offer software products for personal computers now, do you plan to in the next 12 months?

Yes  No If Yes:

A. What applications? \_\_\_\_\_

\_\_\_\_\_

B. On what size machine?

8 bit  16 bit  32 bit

22. In 1981 and 1982 what percent of your mini/mainframe software products revenues came from:

	<u>1981</u>	<u>1982</u>
Product sales (including rental)	_____ %	_____ %
Maintenance	_____ %	_____ %
Custom modifications	_____ %	_____ %
Training and documentation	_____ %	_____ %
Total	100 %	100 %

23. What are the three largest revenue-producing application and systems software products that you offer?

Application Software Products

<u>Application/Function</u>	<u>Industry (If Industry Specific)</u>
_____	_____
_____	_____
_____	_____

Systems Software Products

<u>Function</u>
_____
_____
_____

## INTEGRATED SYSTEMS

24. What percent of your U.S. noncaptive revenues in 1981 and 1982 came from:

	<u>1981</u>	<u>1982</u>
Hardware	_____ %	_____ %
Hardware maintenance	_____ %	_____ %
Software	_____ %	_____ %
Software modifications and maintenance	_____ %	_____ %
Training and documentation	_____ %	_____ %
<b>Total</b>	<b>100%</b>	<b>100%</b>

25. A. What percent of your 1982 integrated systems revenues came from:

8-bit systems	_____ %
16-bit systems	_____ %
32-bit systems	_____ %
<b>Total</b>	<b>100%</b>

B. If you do not now use personal computers in your integrated systems, do you plan to in the next 12 months?

Yes  No

26. What are your three largest applications and what are their growth rates?

Industry Specific

<u>Application/Function</u>	<u>Industry (If Industry Specific)</u>
_____	_____
_____	_____
_____	_____





