SOFTWARE PRODUCT PRICING
TRENDS AND OPPORTUNITIES

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The company carries out continuous and in-depth research. Working closely with clients on important issues, INPUT's staff members analyze and interpret the research data, then develop recommendations and innovative ideas to meet clients' needs.

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

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SOFTWARE PRODUCT PRICING TRENDS AND OPPORTUNITIES

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SOFTWARE PRODUCT PRICING TRENDS
AND OPPORTUNITIES

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I INTRODUCTION

I   INTRODUCTION

A.   OBJECTIVE AND SCOPE

- This study was produced by INPUT as part of the Software Markets Program of the Market Analysis and Planning Service (MAPS). Due to the high degree of client interest in this subject, this report is an update of an earlier study entitled Information Services Pricing Trends and Techniques, Volume II.

- Effective pricing of software products in today's volatile environment is perceived by most vendors as an especially crucial management task. A number of factors are making pricing decisions especially challenging. These factors include:

  - Pressure on profit margins.

  - Emergence of new competitors, both small and inexperienced, and large with deep financial pockets.

  - Arrival of increasingly sophisticated microcomputer software products priced at one-thousandth (or less) of a mainframe version.

  - The continual requirement to invest in product improvements due to changes in hardware and operating systems, as well as competition and changing user expectations.

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- The primary objective of this report is to help vendors develop more profitable pricing strategies during the highly challenging times ahead.

- This report addresses pricing issues related to mainframe- and mini-based software products. Included are analyses of applications software (both industry-specific and cross-industry) as well as systems software (applications development tools and others).

- The report focuses on software products provided by independent vendors costing at least $5,000 per copy (on an equivalent purchase price basis) and sold through direct sales distribution channels.

- This report is written primarily for:

  - Marketing executives and planners desirous of developing successful pricing strategies.

  - P&L managers interested in ascertaining that the pricing activity is properly positioned in management's priorities.

  - Managers, analysts, consultants, and others wishing to compare the pricing approaches of an existing business entity with those of other vendors.

  - Investment analysts wanting to calibrate pricing policies of a firm of interest to the experiences and practices of the industry at large.

  - Information systems managers wanting to better understand what other users are expecting and doing, as well as what are common (and uncommon) practices of vendors.

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B.   KEY ISSUES

- This report deals primarily with current practices as well as future trends related to pricing structures, levels, and methods.

- Key issues addressed in this report include:

  - What differences exist between user expectations and vendor practices and plans?

  - To what extent are software products prices likely to increase or decrease during the next three years?

  - What types of discount structures and payment plans are most appealing to users, and why?

  - What innovative new approaches to pricing are currently in place or soon to be announced?

  - What changes in pricing approaches can be expected in the near future?

C.   METHODOLOGY

- Primary research which contributed to the analysis and conclusions in this report came from three main sources:

  - Research Source A: In-depth personal interviews in April 1985 with 43 high-level managers whose job functions directly relate to issues addressed in this report. This included 26 information systems managers who were directly responsible for buying software products

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for their organizations. In addition, 17 independent software products vendors were interviewed about their practices and plans. Appendix B contains a profile of both the user and vendor respondents of this survey in terms of the characteristics of their organizations.

- Research Source B: Interviews with 306 information systems managers of computer centers using large-scale hardware--completed in the first quarter of 1985.

- Research Source C: Interviews with 372 information systems managers of computer centers using minicomputers--completed in the first quarter of 1985.

- The latter two research sources also involved issues other than pricing. The analysis of all issues covered in that research can be found in the INPUT reports listed in Appendix D.

● Vendors were asked to describe confidential information concerning their pricing approaches and directions. As a result, vendors participating in interviews for this report are not identified by name.

D.   REPORT ORGANIZATION

● The report is organized as follows:

- Chapter II is an Executive Summary. This recap of the key points of the entire report is provided in a presentation-with-script format to facilitate the client's internal briefing session concerning the major findings of the report.

- Chapter III addresses trends in price levels for various categories of software products for the period 1985-1988. Differences by market segment are discussed.

- Chapter IV covers pricing methods, and contrasts user attitudes with vendor practices. Included are discounting approaches, payment plans, and customer support policies and plans.

- Chapter V discusses ways that vendors can improve the process by which they develop prices. This chapter includes the role of pricing, timing of pricing changes, and how prices can be developed.

- Chapter VI provides conclusions and recommendations to vendors wishing to reassess their pricing practices. Pricing opportunities are identified, and suggestions are offered concerning discounting, payment plans, structures, and timing.

- Appendix A contains definitions related to this report.

- Appendix B profiles respondents to the survey.

- Appendix C identifies previous INPUT reports related to software products pricing.

- Appendices D and E provide copies of the user and vendor question-naires used for Research Source A.

• Exhibits in this report are drawn from Research Source A unless otherwise indicated.

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II EXECUTIVE SUMMARY

II   EXECUTIVE SUMMARY

- This Executive Summary is designed in a presentation format in order to:

    - Help the busy reader quickly review key research findings.

    - Provide a ready-to-go executive presentation, complete with a script, to facilitate group communication.

- Key points of the report are summarized in Exhibits II-1 through II-8. On the left-hand page facing each exhibit is a script explaining the contents of the exhibit.

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A. PRICING STRATEGIES UNDER PRESSURE, NEED FREQUENT REVIEW

- Pricing as a central element in a well-conceived mainframe/mini software products marketing strategy has not yet reached its full potential. Symptoms of the problem include:

  - Recent discounting that reflects management reactions to temporary market pressures. Although these pressures will prove to be short-lived, the lingering negative effects of excessive discounting on profit margins, image, and vendor viability will endure far longer.

  - Lack of pricing innovations. In spite of the fact that in other U.S. industries pricing innovations have enabled creative vendors to make large improvements in their market positions, software products vendors have, for the most part, been tradition-bound.

  - A too-casual approach by vendor management to the central role of pricing and the process by which it is formulated. Methods for establishing prices need improvement. Too frequently pricing is viewed as a once-a-year phenomenon, usually set to coincide with the budgeting cycle rather than market developments.

- The business implications of these pricing deficiencies are significant. Pricing which is too high takes its toll in terms of lost business. Underpricing brings in unprofitable business. The net result of either approach is reduced profit margins. Misguided solutions to pricing pressures often accentuate the problem. For example, the response to discounting or competitive price increases is often to follow suite blindly.

- In view of the above, INPUT believes it is vital for vendors to reassess current pricing strategies now in order to help assure targeted marketing and financial goals.

EXHIBIT II-1

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PRICING STRATEGIES UNDER PRESSURE, NEED FREQUENT REVIEW
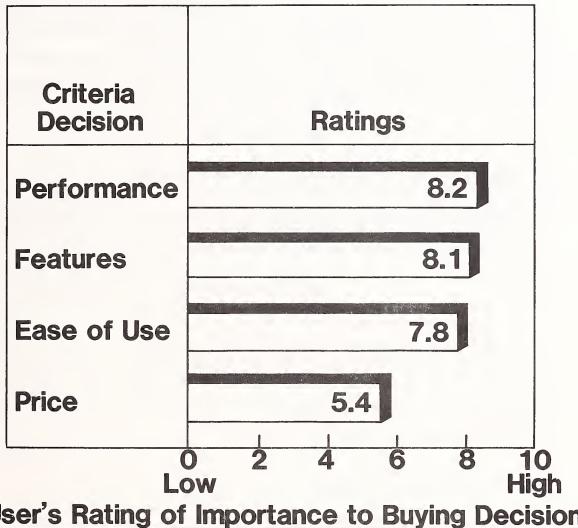
- **Symptoms**

  - **Recent Discounting Outbreaks**

  - **Lack of Pricing Innovations**

  - **Too-Casual Approach to Pricing**

- **Business Implications**

  - **Squeezed Profit Margins**

  - **Misguided Solutions**

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B. PERFORMANCE, FEATURES AT TOP OF USER LIST

- Users indicate that software performance (i.e., efficiency of operations) is one of the most important of 10 software product buying decision criteria. The widespread movement of information systems organizations to more highly integrated (and more widely visible) on-line systems and networks is a primary factor in boosting performance to the top of the decision criteria list.

- "Features" and "ease of use" as decision criteria also rank high. This is due to factors such as the insatiable demands for end-user computing capabilities, and the increasing integration of systems that in turn place a premium on special features not considered important in previous years.

- "Price" remains at the number 10 position, which is identical to its position in the previous survey. It is viewed by buyers as a minor, not major, character-istic of the product offering in the overall selection process. However, it plays a central role in terms of qualifying a vendor for future consideration during the vendor screening process. Thus, price strategy must be carefully assessed, but only in the context of the total buying decision.

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EXHIBIT II-2

PERFORMANCE, FEATURES AT TOP OF USER LIST

Criteria Decision	Ratings
Performance	8.2
Features	8.1
Ease of Use	7.8
Price	5.4

```
     0    2    4    6    8    10
    Low                      High
```

User's Rating of Importance to Buying Decision

C.   VENDORS MISPERCEIVING USER ATTITUDES

- Vendors are misperceiving user decision criteria in several areas.

- The widest gap of all vendor-user perceptions is in "performance." Vendors are placing too much faith in declining hardware prices as the factor which negates the issue of performance. By clinging to this belief, vendors are underestimating two recent developments, namely increased top-management emphasis on information systems as an internally cost effective operation, and the widespread impact of poor performance on multitudes of end users.

- Documentation is the perennial whipping boy between users and vendors. Many vendors still consider documentation as mundane and unworthy of significant attention from technical experts. Users, however, having seen the tangible payoffs possible from good documentation such as that provided by microcomputer software vendors, continue to expect mainframe/mini software products suppliers to at least come up to those standards. The users will prevail.

- Vendor financial stability is overrated by vendors. While this criterion has importance to the overall decision process, it is vital that vendors not fool themselves into believing that financial strength can overcome deficiencies in other areas, such as product performance.

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EXHIBIT II-3

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VENDORS MISPERCEIVING USER ATTITUDES

Buying Criteria
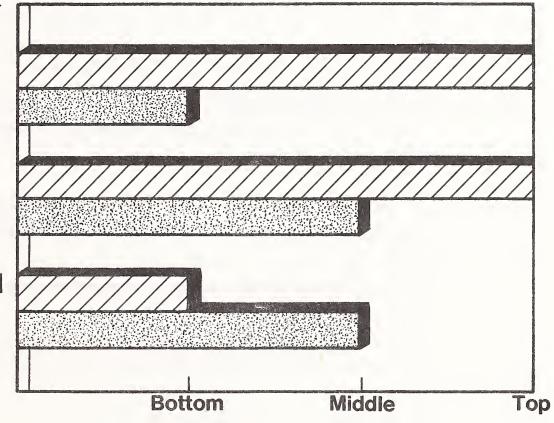
Performance

Documentation

Vendor Financial Stability

◻ User

▦ Vendor

Bottom   Middle   Top

Importance Rating

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D.   VENDOR MANAGEMENT INHIBITING PRICING OPPORTUNITIES

- For many vendors, current financial strategies are inhibiting their ability to provide more flexible and innovative pricing approaches. This occurs when pricing structures are established so that a majority of revenue is derived from "lump sum" payment plans. This results in immediate cash (and revenue credit) and can generate impressive revenue and profit growth curves. However, for most vendors, this financial strategy becomes highly addictive. Management does not want to give up short-term growth rates, which could be reduced if more emphasis were placed on leasing, rental, and/or usage payment plans. The outcome of management's reluctance to change is that internal financial policies are now overriding marketing needs—a detrimental situation in the long run.

- An additional frustration among many pricing decision-makers is lack of management support for more frequent pricing reviews and more creative pricing approaches. Pricing is complex and fraught with the possibility of error. It often demands market information which is either non-existent or sketchy at best. Top management, being preoccupied with many other business issues, often drags its feet when asked to approve additional resource time to review pricing structures more than once annually.

- Both of these top management-controllable approaches should be reassessed by practioners immediately.

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EXHIBIT II-4

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VENDOR MANAGEMENT
INHIBITING PRICING OPPORTUNITIES

- Addiction to Lump Sum Payments Hurting Pricing Flexibility

- Internal Frustration with:

  - Lack of Management Support

  - Infrequent Pricing Reviews

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E. PRICE INCREASES HAVE SLOWED RECENTLY

- INPUT estimates that, on the average, software products prices experienced a slowing in growth rates during the past 18 months. Whereas software prices were estimated to have grown by 4% in the year 1983, the annual growth ending mid-1985 dropped to 2%. Reasons for this decline in price increases include more aggressive competition, especially among market segment leaders, and an increased willingness to discount in order to keep short-term revenues at acceptable levels.

- Declines in growth rates for this same period were shown by all three major market segments profiled on the accompanying exhibit--accounting, discrete manufacturing (industry-specific), and systems software.

    - Accounting underwent some extremely aggressive discounting recently, although prices on the average did not decline precipitously. This was because a great deal of added functionality was present in the systems, which in less volatile times would have supported far greater levels of price increases.

    - Discrete manufacturing software prices showed the most softness during this period, mainly due to the aggressive actions of larger vendors who responded to greatly-increased competition by implementing larger-than-usual discounts.

    - Systems software prices were especially impacted by increased competition in the DBMS area, where much of the basic software (before "add-ons") is evolving to more of a commodity image.

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EXHIBIT II-5

PRICE INCREASES HAVE SLOWED RECENTLY

Price Changes During Prior 12 Months (Percent)

Accounting

All

Systems Software

Discrete Manufacturing

1983

Mid 1985

F. PRICES VOLATILE, BUT TREND IS UP
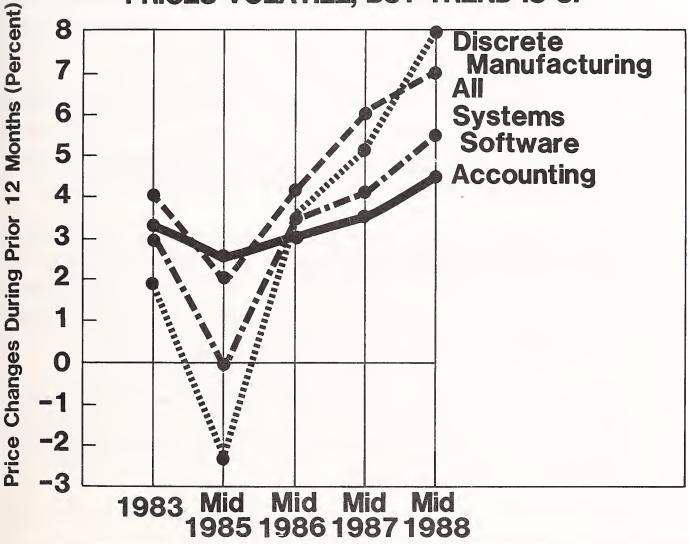
- INPUT believes that the price levels for software products in general and for accounting, discrete manufacturing, and systems software in particular will increase in the next three years.

- Discrete manufacturing software will demonstrate the greatest rebound in price levels. This is due to a combination of factors, including heightened user demand (as the push for factory automation gathers additional momentum) and a return by vendor management to a longer-term business outlook, which will result in less discounting pressure.

- Accounting software will show a reasonable increase, averaging from 3% to 5%. This market segment will increasingly benefit from replacement markets as obsolete one- and two-decade-old systems are superceded by new vendor technology. However, a countervailing force in the future for accounting software is that the rate of change in accounting systems requirements is less than that found in many other application areas. As a result, saturation becomes a larger issue for accounting segments as we move closer to the end of the decade.

  6 8% discrete manufacturing

- Systems software will average 3% to 5% annual increases for the next three years, primarily on the strength of the high demand for end-user computing solutions. In addition, increased buyer sophistication will enable vendors to emphasize buying aspects other than price.

- As a basis for forecasting, INPUT assumed a 3% inflation rate for 1985 and a 6% inflation rate for each year from 1986 through 1988.

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EXHIBIT II-6

PRICES VOLATILE, BUT TREND IS UP

G.   ELEVATE ROLE OF PRICING STRATEGY

- Vendors are urged to give pricing a more central role in marketing strategy. This can be done by educating key company personnel concerning the payoffs possible from improved pricing approaches, keeping them abreast of marketplace changes which can be effectively addressed via pricing changes, and encouraging them to contribute their pricing ideas, thus giving pricing an image of a teamwork decision process instead of a corporate fiat.

- Pricing strategies should be reviewed whenever significant changes in the marketplace occur, or every four months, whichever comes first. This approach helps make pricing an opportunity-driven undertaking, rather than an administrative chore that is required because "it is that time of the year."

- Careful attention should be given to the relationship between the financial requirements of the corporation and the pricing strategy of its products. A financial strategy should be developed which supports and encourages any pricing strategy to be implemented that is responsive to significant market opportunities.

- Discount policies should be approached with extreme reverence and caution. They should be developed based on long-term business objectives, rather than being created in response to short-term needs which could poison longer-term reputations as well as profit margins.

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EXHIBIT II-7

ELEVATE ROLE OF PRICING STRATEGY

- Give Pricing a More Central Role

- Review Pricing More Frequently

- Develop a Supporting Financial Strategy

- Set Discounts Based on Long-Term Business Objectives

H.   IMPLEMENT PRICE INCREASES AND "LOW ENTRY" OPTIONS

- A major pricing opportunity is the development of pricing structures which appeal to cash flow-conscious buyers. These "low entry" offerings could take the form of more attractive lease or rental plans, as well as creative approaches to usage pricing.

- Vendors are urged to consider carefully the possibility of product price increases. INPUT believes that buyers are becoming increasingly sophisticated concerning where the real value in software lies. In addition, vendor management in general will become more long-term-oriented as it becomes increasingly obvious what the ravages of inappropriate pricing strategies may bring to the perpetrator. Price increases in the range of 3% to 6% may, in many cases, be made almost immediately since buyers generally expect this type of occurrence.

- Vendors are also urged to consider increasing their software support services, then increasing their software support prices. Annual software support prices should be at least 12% of the equivalent lump sum product price. Increases beyond that can be justified with additional services. Individual software support services should be marketed and sold separately.

- All pricing policies should be firmly enforced by vendors within their own organization. If pricing strategies are as carefully developed as is urged in this report, it is extremely counterproductive for the organization to defeat that sound rationale by allowing pricing implementors to distort the corporate intent.

- Pricing is a major opportunity which INPUT urges its clients to pursue aggressively.

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EXHIBIT II-8

IMPLEMENT PRICE INCREASES AND "LOW ENTRY" OPTIONS

- **Increase Product Price**

- **Add Software Support Services Prices**

- **Increase Software Support Prices**

- **Offer More Lease, Rental Plans**

- **Firmly Enforce Pricing Policies**

III PRICING TRENDS: THREE-YEAR FORECAST
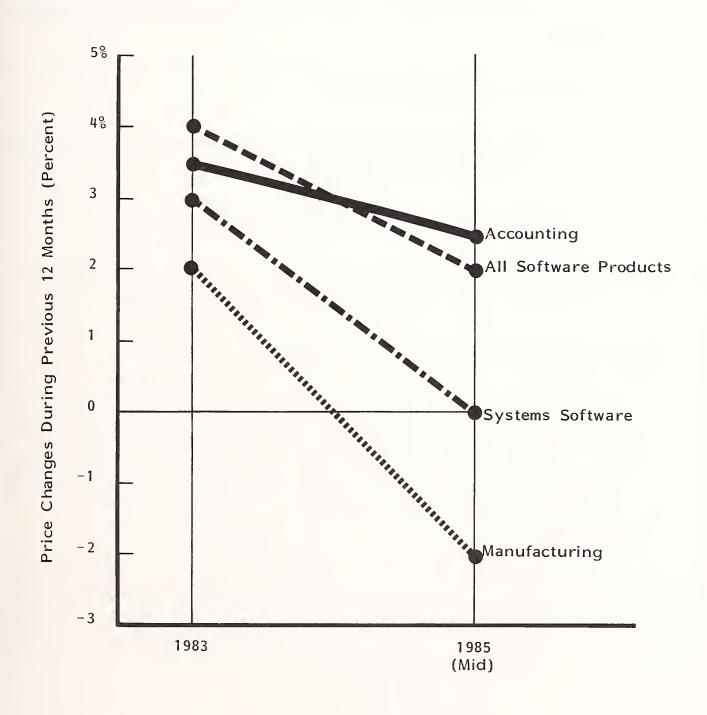
III   PRICING TRENDS: THREE-YEAR FORECAST

- The price at which a software product sells is the net result of the complex interaction of hundreds of factors ranging from logical, vendor-controllable considerations such as product features and support to emotionally-based, vendor-uncontrollable factors such as long-held buyer values concerning the type of people they feel can or cannot be trusted.

- The "market price" of a software offering is of concern to the buyer, but only at the one point in time when the buying decision is being made. In the life of the buying organization, it is but a brief note in a continuous progression of thousands of decisions required to maintain the organization as a viable concern. In contrast to the buyer's project- and time-dependent interest in price, the seller's continual economic survival depends upon accurate pricing. Selection of just the right price that will optimally balance buyer interest with the vendor's income requirements is one of the most challenging management functions. One of the oft-heard laments of software vendors is the difficulty of tracking and anticipating price levels. It is the purpose of this chapter to identify likely price changes of several main categories of software and to define and weigh the impact of major factors which will be influencing these prices during the next several years.

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A. RECENT PRICE LEVELS

- INPUT estimates that mainframe/mini software products as a whole increased an average annual rate of only 2% through mid-1985, a decline from the 4% annual increase enjoyed in 1983 (see Exhibit III-1).

- The three major software product market segments addressed in this report-- manufacturing (industry-specific) applications, accounting applications, and systems software--all showed similar declines.

- The primary contributor to these lessened price increases was not so much softening of demand per se, but instead the convergence of a number of factors which reinforced each other negatively (in terms of price increases). These factors included:

    - "Blindsiding" of older, more established vendors by upstart competitors with newer technology and less abhorrence of price cutting. Some of the established vendors, many of whom had promised Wall Street continuously high quarterly growth rates, cut prices to try to avoid losing the business and thus disappointing an unforgiving Wall Street. This action, in turn, set off additional discounting and further encouraged many buyers to pressure even the reluctant-to-discount vendors. Because software products is a high fixed-cost business, once this type of market behavior begins, it is hard to contain.

    - Entry into industry-specific markets by established vendors from other segments. For example, many leading vendors marched into manufacturing and banking markets for the first time only to discover that the cherries were hard to pick. This market invasion greatly increased the competitive furor and, thus, contributed to price pressures.

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EXHIBIT III-1

HISTORIC PRICE TRENDS: 1983-1985
(Mainframe/Mini Software Products)

B.   FUTURE PRICE LEVELS

- Exhibit III-2 highlights 17 characteristics of the marketplace which INPUT believes will have a significant impact on the level of software product prices during the next several years. The impact on annual price changes of each factor is shown for each year 1986 to 1988 in terms of an arbitrary, weighting system.

- The major positive factors include:

  - Innate demand for more comprehensive systems (e.g., factors 4, 6, 14, and 15) and solutions on a timely basis.

  - Buyer sophistication and brand loyalty (factors 2 and 5).

  - Increased functionality (factor 15); i.e., more features added to the basic system, including those to handle new technology.

- Major factors exerting downward pressure on prices include:

  - Declining hardware prices (factor 13). The price-performance characteristics of hardware set a psychological boundary on what buyers feel they should pay for software. Cheaper hardware means cheaper software at the moment. In the long run, in the late 1980s and beyond, this thinking will change.

  - More strategic partnering (factor 17). Mergers, acquisitions, joint ventures, technology, and marketing arrangements all hold the promise of improved sales, support, development, and distribution economies of scale. The potential exists to maintain or improve margins and still offer lower prices.

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EXHIBIT III-2

FACTORS IMPACTING SOFTWARE PRODUCT PRICING LEVELS
(Mainframe/Minicomputer Software)

FACTOR I.D. NUMBER	FACTOR	EXTENT OF PRICING IMPACT			COMMENTS
		MID 1986	MID 1987	MID 1988	
	USER FACTORS				
1	Site Licenses	0	−1	−2	Fewer add-on sales available in later years.
2	Sophistication of Buyers	0	+1	+2	Less susceptible to discounting
3	Buyers' Financial Health	+1	0	+1	Impact of national economy.
4	Demand for End-User Computing	+1	+2	+3	Increasing grass roots demand
5	Brand Loyality	+1	+2	+2	More complex systems
6	Systems as a Competitive edge	+1	+1	+2	Increasing top management commitment

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EXHIBIT III-2 (Cont.)

FACTORS IMPACTING SOFTWARE PRODUCT PRICING LEVELS
(Mainframe/Minicomputer Software)

FACTOR I.D. NUMBER	FACTOR	EXTENT OF PRICING IMPACT			COMMENTS
		MID 1986	MID 1987	MID 1988	
	COMPETITION				
7	Management Sophistication	0	+1	+2	Vendors more long-term oriented
8	Vendors' Financial Health	-1	0	+1	More realistic growth goals
9	Vendor Aggressiveness	-2	-1	0	Tempered over time
10	Larger Competitors	0	+1	+1	More financial stability
11	Competition from Other Delivery Modes	-1	-2	-1	Turnkey, processing, and professional services
12	Opportunity for Product Differentiation	+1	+1	+1	More sophisticated marketing

EXHIBIT III-2 (Cont.)

FACTORS IMPACTING SOFTWARE PRODUCT PRICING LEVELS
(Mainframe/Minicomputer Software)

FACTOR I.D. NUMBER	FACTOR	EXTENT OF PRICING IMPACT			COMMENTS
		MID 1986	MID 1987	MID 1988	
	TECHNOLOGY				
13	Declining Hardware Prices	-1	-2	-4	Pulls software down
14	Increased Applications Systems Software Integration	+1	+1	+2	Distributed processing, inter-application integration
15	Increased Product Functionality	+2	+4	+4	Adapting new technology: new user needs
	ENVIRONMENT				
16	Inflation	+1	+1	+1	3% for 1985 and 6% annually for 1986 through 1988
	DISTRIBUTION CHANNELS				
17	More Strategic Partnering	0	-1	-2	Distribution economics
	Summary	+4	+8	+13	

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- Exhibit III-3 shows adjustments to the factors in Exhibit III-2 which INPUT believes should be made to best assess the outlook for manufacturing software. Short-term pricing pressures are greater for this segment than for the market overall, due primarily to the negative impact of an end-user-influenced buying decision and vendor scrambling for market position due to new competition and new application interests. However, these negatives will dissolve in the longer term. By mid-1987, the strong user demand for automated solutions will help push manufacturing software price increases above that expected for the software products marketplace overall.

- Accounting software market factor adjustments are shown in Exhibit III-4. Pricing pressures will be greater than the average for all software products throughout this decade. This is due to the slower-than-average rate of change of systems requirements. Financial systems are much more homogenous in functionality over time than are industry-specific systems primarily directed at the heart of a firm's operations, such as Manufacturing Resources Planning (MRP II) for manufacturing. While the replacement of obsolete systems with more fully integrated software will provide major opportunities in the short term, the issue of marketplace saturation will begin to arise more significantly in the last few remaining years of the decade.

- Systems software prices will be subjected to pressures which are both positive (e.g., high-end user demand, more buying sophistication) and negative (e.g., declining hardware prices) during the next three years (see Exhibit III-5). On balance, systems software prices will grow slightly less rapidly than software products overall.

- As a result of this analysis, Exhibit III-6 shows INPUT's estimates of average price levels for mid-1985 through mid-1988. The composite average price of all software products will increase 4% by mid-1986 and reach 7% by mid-1988. Manufacturing, accounting, and systems software will all show average annual increases of three to eight percentage points above their mid-1985 performance.

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EXHIBIT III-3

ADJUSTMENTS TO PRICING LEVEL FACTORS FOR
MANUFACTURING SOFTWARE PRODUCTS
(Mainframe/Minicomputer Software)

ADJUSTMENT FACTORS	MID 1986	MID 1987	MID 1988	COMMENTS
User Factors				
● Less Sophisticated Buyers	-2	-1	0	More Susceptibility to Pricecutting
● High Visibility of Industry-wide Push Towards Automation	+1	+1	+2	CIM
Competition				
● Vendor Market Position Upheaval - - IBM Actions, New Products, New Competition, etc.	-1	0	+1	Short-Term Discounting
Technology				
Total Adjustments	-2	0	+3	
Total of All Software	+4	+8	+13	From Exhibit III-2
● Adjustments Above	-2	0	+3	
Net Impact for Manufacturing	+2	+8	+16	

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EXHIBIT III-4

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ADJUSTMENTS TO PRICING LEVEL FACTORS FOR
ACCOUNTING SOFTWARE PRODUCTS
(Mainframe/Minicomputer Software)
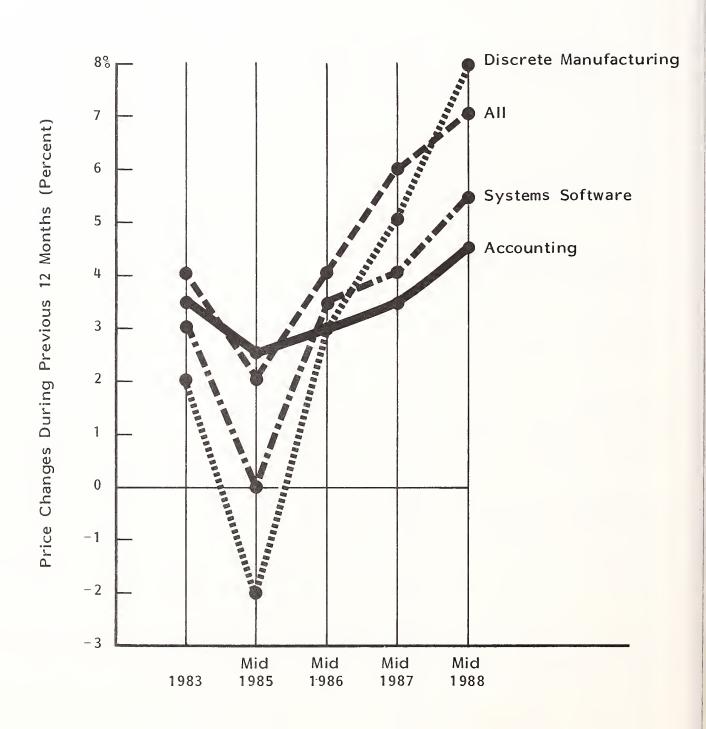
ADJUSTMENT FACTORS	MID 1986	MID 1987	MID 1988	COMMENTS
User Factors				
● Replacement of Obsolete Systems with More Fully Integrated Software	+1	-2	0	
● Saturation	0	-1	-2	
● Rate of Change of Systems Requirement is Less Than Many Other Segments	-3	-2	-1	Move to Specialized Systems
Competition				
● IBM's Aggressive Market Entry	0	-1	0	
Total Adjustments	-2	-2	-3	
Total All Software	+4	+8	+13	From EXHIBIT III-2
● Adjustments Above	-2	-2	-3	
Net Impact for Accounting	+2	+6	+10	

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EXHIBIT III-5

ADJUSTMENTS TO PRICING LEVEL FACTORS FOR
SYSTEMS SOFTWARE PRODUCTS
(Mainframe/Minicomputer Software)

ADJUSTMENT FACTORS	MID 1986	MID 1987	MID 1988	COMMENTS
User Factors				
• High Demand for End-User Computing Tools	+1	+2	+1	Information Center Growth
• Buyer Sophistication	+1	+1	+1	Heavy Information Systems Influence
• Perception That 'Tools' Have Less Inherent Value than 'Solutions'	-2	-1	0	Commodity Image of Tools
• Expansion of Functions for Operating Systems	0	+1	+1	
Competition				
• Closer Ties with Applications Vendors	0	-1	-2	Increased Product Integration Lessens Visibility of Systems Software
Technology				
• Declining Hardware Prices	-1	-2	-3	Impacts Perceived Value Especially Among End Users
Total Adjustments	-1	0	-2	
Total All Software	+4	+8	+13	From Exhibit III-2
• Adjustments Above	-1	0	-2	
Net Impact for Systems Software	+3	+8	+11	

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EXHIBIT III-6

SOFTWARE PRODUCT PRICE TRENDS: 1983-1988
(Mainframe/Minicomputer Software)

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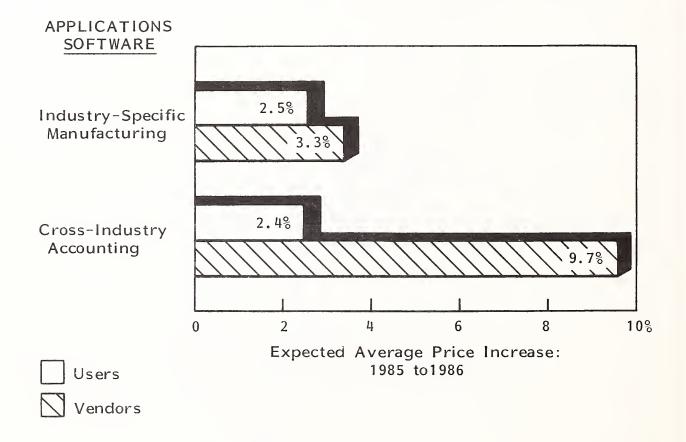
C. DIFFERENCES IN PRICING EXPECTATIONS

• INPUT's survey reveals that applications software vendors have a higher expectation of price increases through 1986 than do users. Exhibit III-7 shows that the largest gap is between users and vendors of accounting software. Much of this difference is due to many vendors' belief that increased functionality, combined with lessened discount activities, will make such an increase possible. INPUT believes vendors are correct in their identification of legitimate price increase pressures, but feels they are overly optimistic in terms of the magnitude of impact of those functions on prices.

D. PRICING VOLATILITY
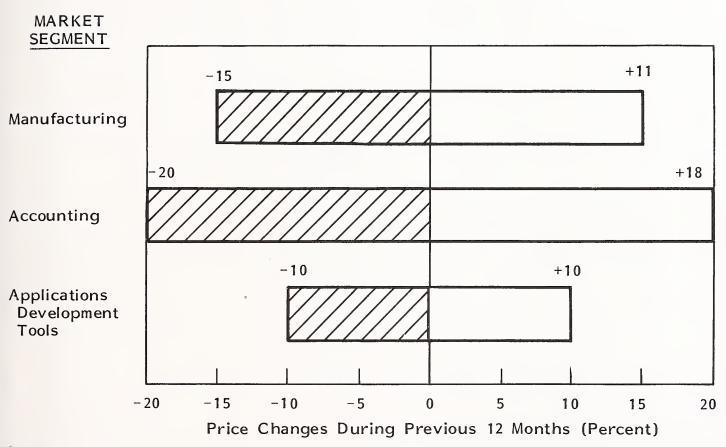
• Individual software product market segments are complex entities often involving hundreds of packages from almost as many vendors. One measure of the stability (and hence predictability) of a given market arena is the examination of the range of price changes that are being experienced. Exhibit III-8 compares the variation in price changes in three different market segments.

    - Accounting software shows the greatest volatility. This wide range reflects the confusion in the market caused by recent waves of discounting combined with some price increases due to expanded functionality.

    - Manufacturing software price changes in the previous 12 months have clustered in the 0% to -5% area, although some increases as high as 11% have been reported. Prices in this market segment are considered generally less volatile than most markets due to such factors as the sheer complexity of the applications offered. These packages require significant vendor resources to develop, sell, and support, and are big

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EXHIBIT III-7

APPLICATIONS VENDORS ARE EXPECTING A
LARGER PRICE INCREASE THAN ARE USERS

APPLICATIONS
SOFTWARE

Industry-Specific
Manufacturing

2.5%

3.3%

Cross-Industry
Accounting

2.4%

9.7%

0   2   4   6   8   10%

Expected Average Price Increase:
1985 to 1986

☐ Users
◨ Vendors

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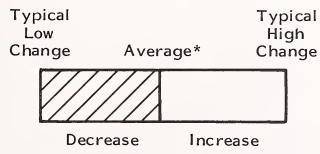
EXHIBIT III-8

PRICING VOLATILITY: 1984-1985

MARKET
SEGMENT

Manufacturing — -15, +11

Accounting — -20, +18

Applications Development Tools — -10, +10

Price Changes During Previous 12 Months (Percent)

Legend:

Typical Low Change — Average* — Typical High Change

Decrease — Increase

* INPUT estimate

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ticket items for users in terms of the licensing costs. Vendors are less ventruesome in terms of price changes and are conscious of the major impact on their business of even a 5% change for a several hundred thousand dollar product.

- Applications development tools (ADTs) show most changes falling within the +10% to -10% range. ADTs are, with the exception of DBMS packages, generally sold within the $5,000 to $30,000 range. Because they are tools (rather than solutions), their perceived value varies greatly from user to user. Price changes must be made with caution whenever a "means-to-an-end" is offered, rather than the "end" itself.

IV PRICING APPROACHES: USER ATTITUDES VERSUS VENDOR PRACTICES

IV   PRICING APPROACHES: USER ATTITUDES VERSUS VENDOR PRACTICES

A.   OVERVIEW

- The selection of a particular set of pricing approaches by vendors is a process fraught with management concern. The decision process is complex, and the available marketplace information concerning buyer preferences, competitor actions, etc. is typically very scanty.

- This chapter profiles the different approaches to pricing in terms of discounting, payment plans, bundling, and customer support. User attitudes are contrasted with vendor perceptions and practices.

B.   BUYING CRITERIA: USER VERSUS VENDOR PERCEPTIONS

- Correctly understanding user buying criteria is a cornerstone of successful software product marketing strategies. This year's pricing survey once again demonstrated that:

    - Vendors continue to misperceive the relative importance of specific user buying criteria.

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- Price as a buying criterion is much less important than numerous other factors.

• Exhibit IV-I summarizes user rankings of buying criteria for this year's survey. Performance and features rank high. This strong showing for performance and features, which are inherent capabilities of the software product itself, directly reflects the changing information systems environment that users must cope with. As systems become more on-line oriented and as externally acquired software is required to mesh closely with other systems already in place (or planned for the future), the impact of poor performance or inadequate features is more visible and far-reaching.

• Vendor rankings of the importance of user decision criteria are shown in Exhibit IV-2. A comparison of the two viewpoints (user and vendor) is shown in Exhibit IV-3.

• Vendor views reveal several significant misperceptions of the relative importance of user buying criteria.

- Performance--the criterion top-ranked by users--is bottom-ranked by vendors.

- Documentation, which is considered most important by users, is considered of only middle importance by vendors.

- Vendor financial stability is overrated by vendors. Users consider it of less importance than all other criteria mentioned, except price.

• Although distinct differences in categories of relative importance of decision criteria can be detected, as shown above, it is important to remember that the winning vendor must provide the right balance of all the criteria. Thus, price is not important; it just needs to be kept in proper perspective.

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EXHIBIT IV-1

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USER BUYING CRITERIA

GROUP	BUYING CRITERIA	RATING RANGE*
A	TOP-RANKED Performance Features Vendor Commitment Documentation Ease of Use Customer Support	7.7 to 8.3
B	MIDDLE-RANKED Vendor Reputation Ease of Implementation	6.9 to 7.7
C	BOTTOM-RANKED Vendor Financial Stability Price	5.4 to 6.9

* Based on a scale of 1 to 10, with 10 = highest

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MSPT

EXHIBIT IV-2

VENDOR PERCEPTIONS OF USER BUYING CRITERIA

GROUP	BUYING CRITERIA	RATING RANGE*
A	TOP-RANKED Vendor Reputation Ease of Use Customer Support Features Vendor Commitment	7.7 to 8.1
B	MIDDLE-RANKED Ease of Implementation Documentation Vendor Financial Stability	6.7 to 6.9
C	BOTTOM-RANKED Performance Price	5.1 to 5.9

* Based on a scale of 1 to 10, with 10 = highest

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EXHIBIT IV-3

COMPARISON OF USER AND VENDOR
RATINGS OF USER BUYING CRITERIA

BUYING CRITERIA	GROUP RANK BY TYPE OF RESPONDENT*	
	USER	VENDOR
Performance	A	C
Features	A	A
Vendor Commitment	A	A
Documentation	A	B
Ease of Use	A	A
Customer Support	A	A
Vendor Reputation	B	A
Ease of Implementation	B	B
Vendor Financial Stability	C	B
Price	C	C

* Based on a scale of A = highest importance, and C = lowest importance

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- These findings highlight the importance of vendors taking aggressive steps to stay close in touch with their ever-changing marketplace. Performance, as an example, is a product characteristic not easily changed. Decisions made concerning product changes and enhancements can lock the vendor into an offering that can take years and hundreds of thousands (or millions) of dollars to undo.
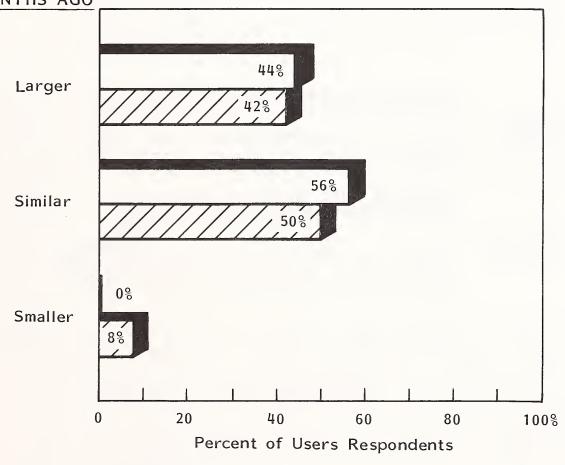
C.   DISCOUNTING

I.   EXTENT OF DISCOUNTING

- Discounting is a major issue in the software products marketplace. As shown in Exhibit IV-4, buyers feel that discounts for both systems and applications software have become larger in the past year. Over 40% of those surveyed reported deeper discounting, while less than 10% indicated smaller deductions.

- Vendors report that over one-third of all software product revenue is from discounted customers (see Exhibit IV-5). Applications software vendors have shown the greatest change in the past two years, with a jump in discounted sales from 36% to 42% of all revenues.

- The extent of discounting currently being experienced is primarily due to the following factors:

    - A higher incidence of larger contracts which often include multiple products and/or multiple CPUs or sites. More emphasis by top management on information systems planning encourages buyers to make single acquisitions which address multiple needs into the future. These contracts usually include discounts.

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EXHIBIT IV-4

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EXTENT OF DISCOUNTING

EXTENT OF
DISCOUNTS NOW
VERSUS 12
MONTHS AGO

☐ Systems Software

▨ Applications Software

INPUT
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EXHIBIT IV-5
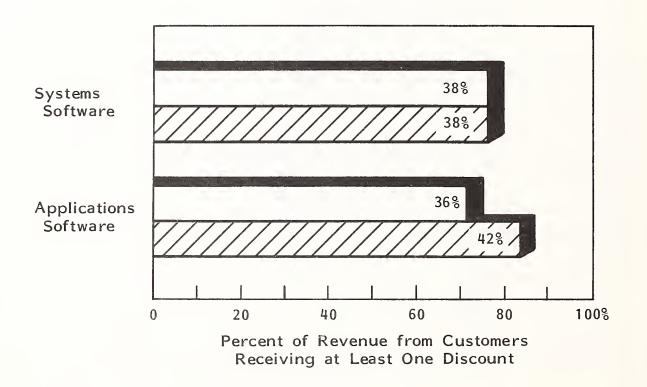
DISCOUNT-BASED REVENUE COMPARISON:

1982-1984

Systems
Software

38%

38%

Applications
Software

36%

42%

0   20   40   60   80   100%

Percent of Revenue from Customers
Receiving at Least One Discount

☐ 1982
▨ 1984

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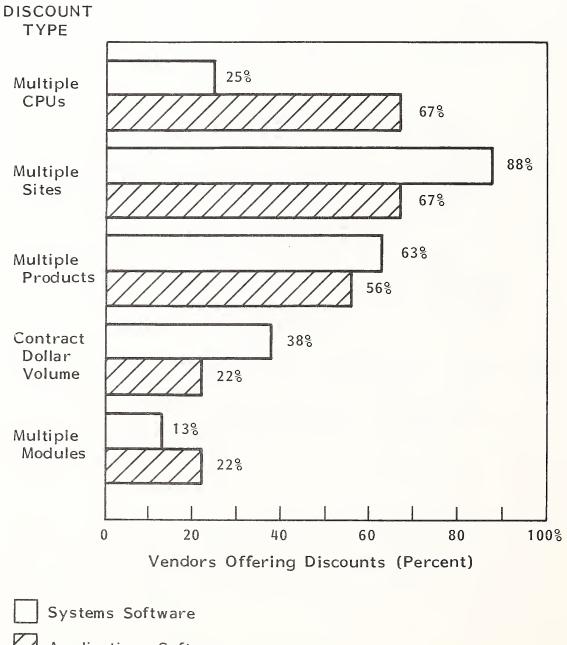
-       Vendors having a larger base of existing customers to whom they can sell additional products.

-       Heightened competition, both from vendors scrambling to maintain their cash flow and from vendors determined to enter new software product market segments.

-       A more discount-aware buyer who is also more experienced in negotiating with software product vendors. Discounting tends to feed upon itself. As discounts become more common, buyers become more insistent that they receive a discount because "all the other vendors are willing."

• Historically, systems software vendors have been slightly more immune to discounting pressures than have applications software sellers. This is because system software firms are selling primarily to full-time information systems personnel who are often less price-conscious than are end users involved in applications software acquisitions.

2.   TYPES OF DISCOUNTS

• Most software product discounts are based on the five criteria shown in Exhibit IV-6. It is interesting to note that these most popular discounts are all based on the acquisition of multiple copies. Other bases for discounting, such as time of the year, key account penetration, etc., are used less frequently and are rarely publicized in print. The lack of innovative pricing techniques is vividly reflected in these survey results.

• Exhibit IV-6 shows that of the five most common types of discounts, multiple-site discounts are most favored by systems software vendors. Applications vendors' favorite discounting approach is evenly divided between multiple-site and multiple-CPU discounts.

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EXHIBIT IV-6

FREQUENCY OF DISCOUNT USE BY
TYPE OF DISCOUNT

DISCOUNT
TYPE

Vendors Offering Discounts (Percent)

☐ Systems Software

▨ Applications Software

- 50 -

- The difference in frequency of multiple-CPU discounts between systems and applications vendors is due primarily to the tendency of the latter to license their software on a CPU basis. Because systems software tends to be of a tool nature, it can be more readily transferred from CPU to CPU within a given site. Applications software, in contrast, often involves the accumulation and manipulation of data which is part of a complex, often transaction-oriented system and which is less easily transferred from one CPU to another. The use of a second CPU for applications software is often for the purpose of increasing the volume of usage, rather than for the convenience of data center machine resource allocation. For reasons such as these, applications vendors have enjoyed greater success in obtaining additional fees from users for usage on additional CPUs.

- Vendors tend to favor discounts tied to specific software units (e.g., additional CPUs, sites, or products), rather than linked to the total dollar volume of the contracts. Thus, only one-third of the systems and about one-fifth of the applications vendors provided discounts based on total size of the contract as the discount criteria. INPUT believes many vendors may be missing an opportunity by not providing special discounts based on dollar volume. This approach would encourage users to accelerate the timing of the software acquisitions, rather than spreading them out over a longer time period.

- Not only are multiple-CPU and site discounts offered by the largest proportion of vendors, they also account for the deepest discounts, as shown in Exhibit IV-7. Multiple-CPU discounts offered by applications vendors are, on the average, the largest discounts of all categories surveyed, with 24% and 35% average minimum and maximum discounts. Multiple-site discounts are generally more than twice as large as other discounts, except for the multiple-CPU discounts mentioned above.

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EXHIBIT IV-7

DISCOUNT RANGES BY
TYPE OF DISCOUNT

DISCOUNT
TYPE

Multiple CPUs

Multiple Sites

Multiple Products

Discount From List Price
As Reported By Vendors (Percent)

| Lowest Discount | Avg. Min. | Avg. Max. | Highest Discount |

Systems Software

Applications Software

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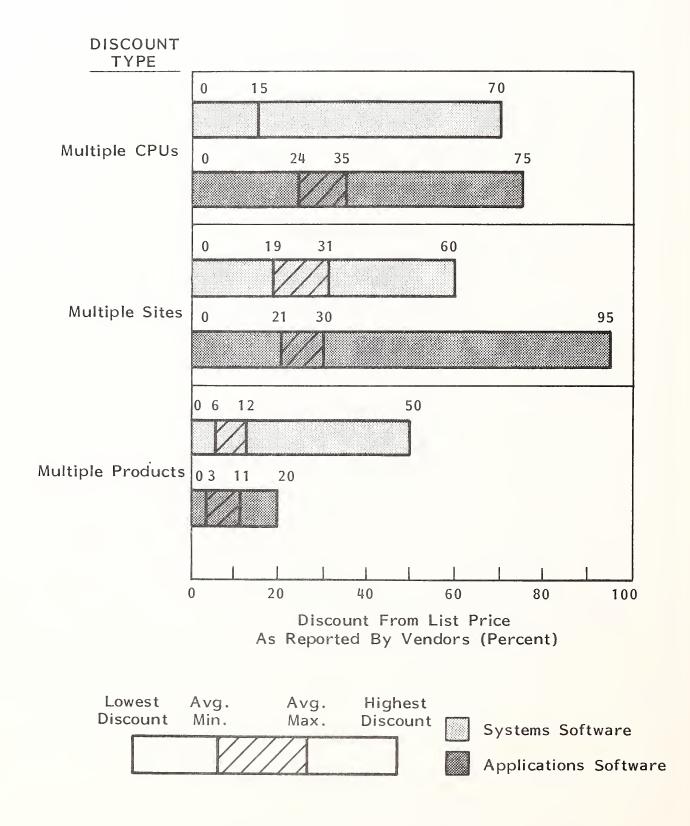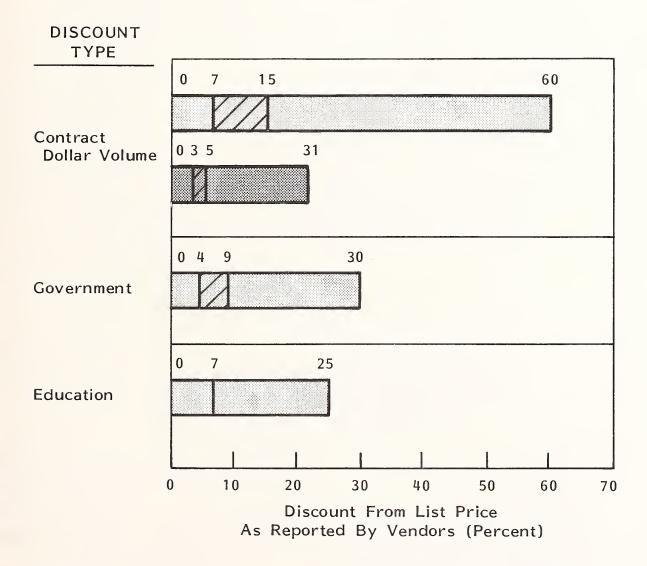
EXHIBIT IV-7 (Cont.)

DISCOUNT RANGES
BY TYPE OF DISCOUNT

DISCOUNT
TYPE

Contract
Dollar Volume

Government

Education

Discount From List Price
As Reported By Vendors (Percent)

Code:

| Lowest Discount | Avg. Min. | Avg. Max. | Highest Discount |

Systems Software

Applications Software

INPUT
MSPT

3.   INCREASING IMPORTANCE OF MULTIPLE-SITE DISCOUNTS

- Multiple-site discounts have become increasingly popular in the last two years. While 76% of all vendors participating in this year's survey offer multiple-site discounts, a similar survey by INPUT in 1983 showed only 29% with such a discount policy. However, the average minimum and average maximum site discounts provided in 1983 were 22% and 34%, respectively-- quite close to the 19% and 31% ranges reported in the present survey.

- Increasing interest in site discounts is being fueled by such factors as:

    - Heightened buyer awareness of the issue due to increased corporate- wide acquisition of microcomputer software. Because this type of software can potentially be used by hundreds (or thousands) of employees, and because the software itself is low-priced and relatively easy to copy, company buyers are putting increased pressure on micro software vendors to provide unlimited copies for a fixed price. As vendors reluctantly begin to respond, precedence is being set for similar approaches for mainframe and minicomputer software.

    - Increased interconnectivity of systems both within a single geographic data center and between remotely located centers. The need for access to identical software from multiple locations is increased.

- The multiple-site discount issue is complicated by the difficulty of defining what a site really is. Should it be, for example, a single computer room, multiple computer rooms at a single address, a node on a network, or an entire company at multiple locations? The answer is often product- and market- specific.

- Buyers push for the broadest possible definition, while vendors seek the opposite.

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- At the heart of the issue of multiple-site discounts is significant vendor concern that nonjudicious use of such pricing techniques can have major damaging effects on profit margins in future years. As one vendor respondent stated "overgenerous site discounting is the equivalent of eating our young."

- Techniques and considerations regarding establishment of multiple-site discounting are discussed in more detail in Chapter V - The Pricing Process.

4. RANGE OF DISCOUNTS

- There is far from uniformity in discount structures among software products vendors. A very wide range of discount percentages exists in the market-place. As discussed earlier, the widest ranges are found with multiple-CPU and site discounts, where the low is 0% and the high exceeds 60%. Many of the larger discount percentages reported, however, only applied when a large number of software copies were involved (typically more than five). This large variability in discount amounts reflects the entrepreneurial zeal of the software products market.

- Government and education discounts tended to be more constrained, with average minimum and maximum discounts falling between 5% and 10%. The largest discount reported in this discount category was 30%, as compared to triple that amount for other types of discounts. Vendors are, for the most part, enjoying healthy commercial markets, and therefore do not feel compelled to bow to discount pressures emanating from government and education buyers.

- A recap of the discount profiles uncovered by this survey is shown in Exhibit IV-8. Included here are the average discounts and discount ranges for those vendors reporting discounts (in contrast to the previous exhibits, which show statistics for all vendors, including those who did not provide discounts). The average multiple-CPU discount is much higher (43% to 54%) when calculated only for those vendors giving discounts. This reflects the fact that a smaller

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EXHIBIT IV-8

DISCOUNT PROFILE BY TYPE OF DISCOUNT

ITEM	TYPE OF VENDOR		
	All Software	Systems Software	Applications Software
CPU			
Average Discount (All)	20-26%	15%	24-35%
Percent Giving Any Discount	47%	25%	67%
Average Discount (Of Those Giving Discounts)	43-54%	60%	37-53%
Discount Range (Of Those Giving Discounts)	10-75%	50-70%	10-75%
SITE			
Average Discount (All)	20-30%	19-31%	21-30%
Percent Giving Any Discount	76%	88%	67%
Average Discount (Of Those Giving Discounts)	27-39%	22-35%	32-44%
Discount Range (Of Those Giving Discounts)	5-95%	10-60%	5-95%
PRODUCT			
Average Discount (All)	5-11%	6-12%	3-11%
Percent Giving Any Discount	59%	63%	56%
Average Discount (Of Those Giving Discounts)	5-11%	10-19%	6-19%
Discount Range (Of Those Giving Discounts)	5-50%	5-50%	5-20%
GOVERNMENT			
Average Discount (All)	2-4%	4-9%	0%
Percent Giving Any Discount	29%	63%	0%
Average Discount (Of Those Giving Discounts)	6-15%	6-15%	0%
Discount Range (Of Those Giving Discounts)	4-30%	4-30%	0%

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EXHIBIT IV-8 (Cont.)

DISCOUNT PROFILE BY TYPE OF DISCOUNT

	TYPE OF VENDOR		
	All Software	Systems Software	Applications Software
EDUCATION			
Average Discount (All)	3%	7%	0%
Percent Giving Any Discount	18%	38%	0%
Average Discount (Of Those Giving Discounts)	18%	18%	0%
Discount Range (Of Those Giving Discounts)	5-25%	5-25%	0%

DISCOUNT PROFILE BY TYPE OF DISCOUNT

	TYPE OF VENDOR		
	All Software	Systems Software	Applications Software
CONTRACT DOLLAR VOLUME			
Average Discount (All)	5-10%	7-15%	3-5%
Percent Giving Any Discount	29%	38%	22%
Average Discount (Of Those Giving Discounts)	17-32%	18.5-60%	15-23%
Discount Range (Of Those Giving Discounts)	10-60%	10-60%	10-31%

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proportion of vendors provide these discounts. However, those that do provide discounts are quite generous. Thus, CPU discounting reflects ambivalence among vendors.

- The least amount of discount participation by vendors was for the educational sector. Only 38% of the vendors provide discounts of any type. Applications vendors give virtually no discounts, and systems vendors hold discounts to a 7% average. The immunity of the educational sector to mainframe/mini software discounts reflects the maturity of the marketplace. Software run on these larger systems are less visible to the masses of students, having been supplanted by micro software which has greater visibility. Thus, to the vendors, the historical advantage of influencing future decision-makers in favor of their product now has less validity. In addition, the market is more saturated, so the advantage of being the first to offer software of a certain class has passed.

5. DISCOUNTING CHARACTERISTICS

- To better understand the nature and direction of discounting, it is useful to examine under what conditions vendors are providing discounts, and the extent to which these discounts are standard, published practices, as compared to ad hoc "just for you" approaches.

- Most vendors have made few recent changes to their standard, published discount rates. Survey results show that 62% of the applications vendors and a very large 87% of the systems sellers reported no changes in their standard discount structures in the past 12 months.

- This phenomenon is not necessarily good from the viewpoint of the "keep the discounts to a minimum" school. Such an entrenched approach to standard discount policy can be negative if it is reflecting vendor management ignorance of the need to keep all pricing policies up-to-date regarding market conditions.

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- Market segment determines ad hoc discounting. Applications vendors reported that the proportion of customers receiving non-standard discounts ranged from 5% to 40%, with the average being 24%. Systems vendors, on the other hand, on average reported 20% of their customers received non-standard discounts, with the overall range being from 4% to 50%.

- Ad hoc discounting must be interpreted in the proper context. Some of the non-standard discounting is reflective of management's lack of a firm policy on standard discount ranges, rather than indicative of more looseness in the marketplace per se. A vendor may have very lax discount policies and a high level of ad hoc discounting; however, the discounting that does take place may be relatively small in terms of the list price.

- A number of vendors expressed their concerns regarding the size of some discounts they had encountered. They were especially concerned that buyers would be encouraged by these large deductions to hold out for similar treatment from other vendors offering different products. Thus, the availability of "unreasonable" discounts is seen as leading to rising expectations among buyers, which many vendors view as dangerous to their future profit margins.

6. LOST REVENUE
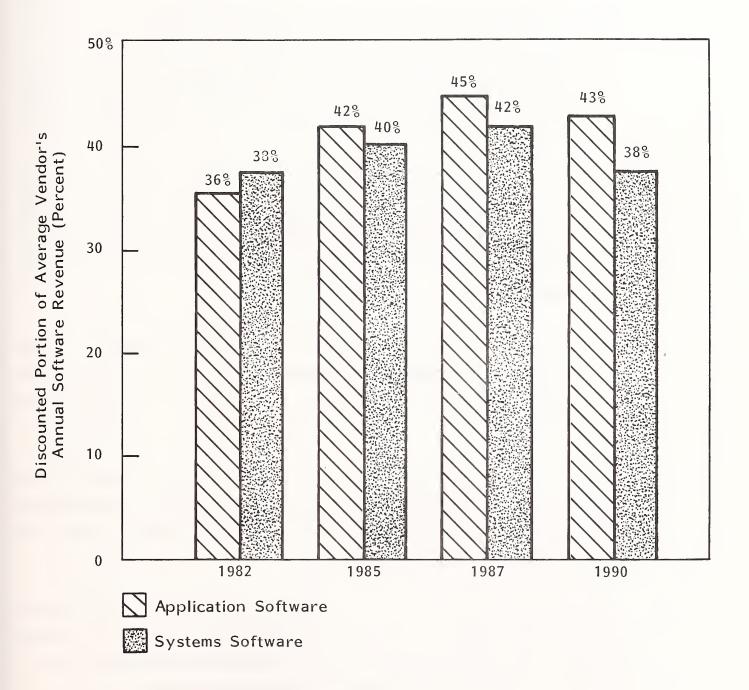
- INPUT believes vendors could improve their profit margins by as much as 10% if vendor management gave up much of the discounting taking place in the mainframe/mini software products marketplace. INPUT estimates the average discount at 20%, and that approximately one-third of that discount, or 7%, is unnecessary. If eliminated, the result would be more revenues coming to vendors at very little incremental cost. This lost revenue amounts to $700 million for the U.S. market as a whole in 1984.

- The lost revenue is primarily attributed to discounts given by vendor management overreacting to the pressures of the moment. The other 13% is due to

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factors which will always be present in the marketplace, and therefore is always "unavailable." Examples of this latter category are the psychological appeal of "getting a good deal," which motivates almost every buyer, and the need to urge the buyer to some type of action by attaching deadlines to special price offers.

7. DISCOUNT FORECASTS

- INPUT forecasts that discounting will continue to play a visible part for software products vendors during the next five years. As shown in Exhibit IV-9, the proportion of vendor revenue that is derived from discounted customers will increase slowly until around 1987, then will decline somewhat thereafter. However, for both applications and systems software vendors that proportion will continue to average above 30% for the next five years.

- Factors influencing these discount trends include:

  - Buyer expectation of discounts based on prior experience.

  - Larger customer bases for vendors to sell to, with corresponding reduced cost of sales to justify discounts to current customers.

  - No major breakthrough in terms of the basic economics of doing business for software vendors. Small changes will come into effect due to such factors as increased use of productivity tools, more streamlined distribution methods, etc.

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EXHIBIT IV-9

DISCOUNTED REVENUE TRENDS

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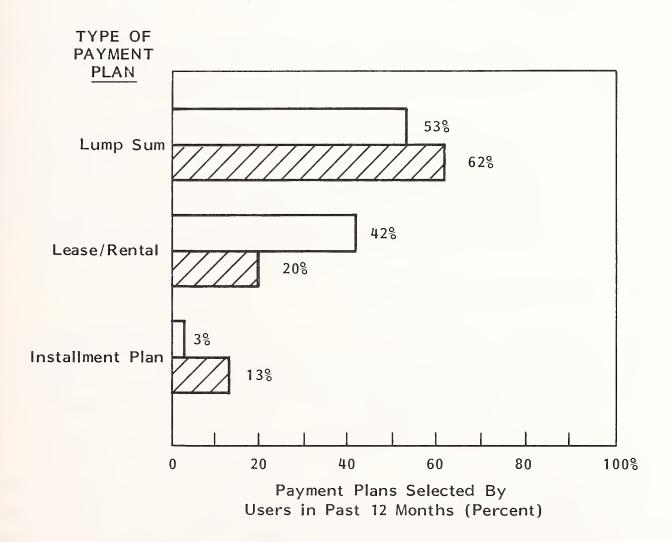
D.   PAYMENT PLANS

I.   TYPES OF PAYMENT PLANS UTILIZED

- Three primary types of payment plans are offered by vendors:

    - Lump sum (the entire license fee is paid within five months or less of the signing of the contract). The user typically has the right to use the product for up to 99 years thereafter.

    - Installment plan (the license fee is paid over a period of from six months to several years, usually not more than three years). After the payment of the final installment, the user has the right to continue to using the product without further payment, except for optional software support.

    - Lease or rental plan (the user pays a periodic license fee, usually monthly). Whenever the payments cease, the software must be returned to the vendor unless the buyer converts to a lump sum or installment plan.

- A fourth type of payment plan, known as "usage pricing," is offered by a few vendors. Under this approach the user pays for the software license based on a formula which is designed to either approximate or directly reflect the extent of usage of the product.

- As shown in Exhibit IV-10, lump sum payments are by far the most frequent payment plan chosen by users of applications software. This payment approach was selected over three times as often as the lease/rental plan and almost five times more frequently than the installment license.

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EXHIBIT IV-10

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TYPE OF PAYMENT PLANS SELECTED BY USERS

TYPE OF PAYMENT PLAN

- Lump Sum: 53% (Systems Software), 62% (Applications Software)
- Lease/Rental: 42% (Systems Software), 20% (Applications Software)
- Installment Plan: 3% (Systems Software), 13% (Applications Software)

X-axis: 0, 20, 40, 60, 80, 100%

Payment Plans Selected By
Users in Past 12 Months (Percent)

☐ Systems Software
▨ Applications Software

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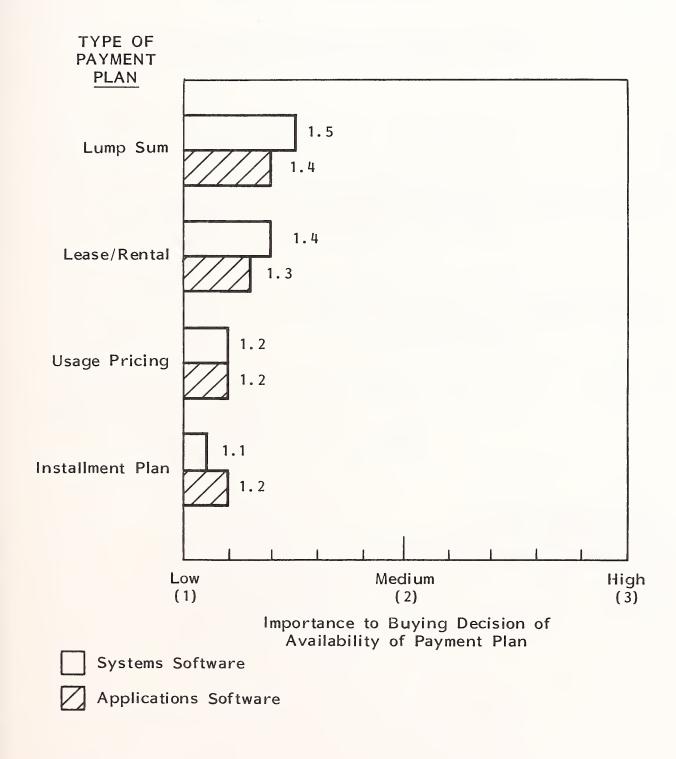
- Systems software buyers also like using the lump sum approach, although more than one-third of the purchases in the last 12 months were on the lease/rental plan.

- Although buyers show definite patterns in terms of frequency of payment plan use, Exhibit IV-11 shows that buyers do not hold strong opinions concerning the types of payment plans offered by vendors in relation to other buying criteria.

  - Lump sum plans have only a slightly higher degree of importance to the buying decisions than do lease/rental plans, for example.

  - It should be noted, however, that usage payment plans, which are currently virtually nonexistent among vendors, rate almost as well as lease/rental and installment plans. INPUT believes usage payment plans offer a significant untapped opportunity for software product vendors looking for ways to establish a unique competitive edge.

2.   CPU VERSUS SITE LICENSING
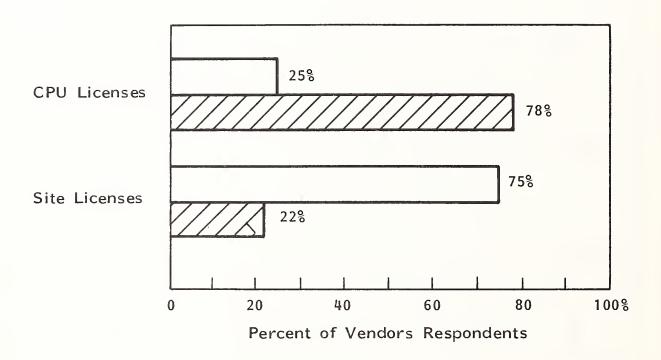
- Applications and systems software vendors show mirror-image preferences for CPU versus site licenses (see Exhibit IV-12). Applications vendors favor CPU licenses three times more often than do systems vendors; the opposite is true of systems vendors for site licenses.

- As discussed in Chapter III of this report, systems vendors, because they tend to be more oriented toward tools for the professional information systems person, historically have provided a license which enables easy transportability and/or multiple usage within a data center with more than one CPU. Applications software vendors have stuck stubbornly to the CPU license approach and have been able to enforce it primarily due to the nature of the product that they sell (i.e., they offer a complex solution which is typically tied to a CPU resource). Providing the software to a second CPU is tantamount to directly increasing transaction volume and hence "value."

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EXHIBIT IV-11

IMPORTANCE TO USERS OF TYPE OF PAYMENT PLAN
(Range for All Respondents 1-3)

TYPE OF
PAYMENT
PLAN

Lump Sum — 1.5 / 1.4

Lease/Rental — 1.4 / 1.3

Usage Pricing — 1.2 / 1.2

Installment Plan — 1.1 / 1.2

Low (1)   Medium (2)   High (3)

Importance to Buying Decision of
Availability of Payment Plan

☐ Systems Software

▨ Applications Software

- 65 -

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EXHIBIT IV-12

TYPE OF LICENSES OFFERED BY VENDORS

Percent of Vendors Respondents

☐ Systems Software

▨ Applications Software

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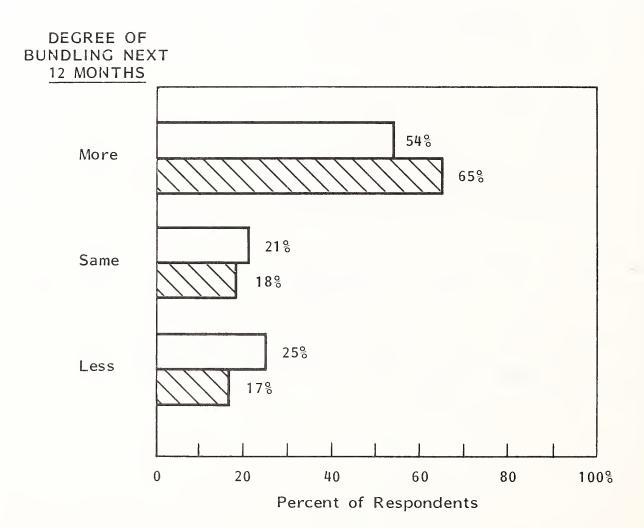
E. SOFTWARE BUNDLING
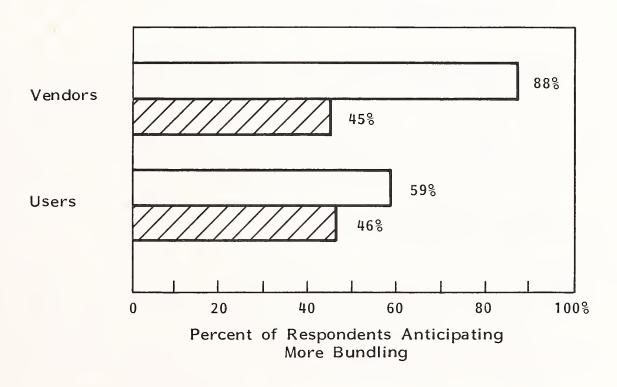
- Software bundling has become more of a critical issue as users opt increasingly for systems which are either currently highly integrated or capable of so being in the future.

- This year's survey (Exhibit IV-13) shows that more than one-half of the respondent users want more bundling in the next 12 months. Almost two-thirds of the vendors expect this phenomena.

- Some differences in attitudes do exist between systems and applications vendors. As shown in Exhibit IV-14, almost twice as many systems vendors expect more bundling as do applications vendors. Among users the difference is less, but systems buyers still have a higher frequency of bundling expectations than do applications software buyers.

- Much of this difference between systems and applications vendors is due to a "catch up" mentality of the systems vendors. Applications vendors have historically led the pack in terms of frequency of bundling. Thus, that a higher percentage of systems software buyers expect "more bundling" partially reflects the respondents' environment, where historically such bundling was less frequent.

- Driving forces for additional bundling include the following:

    - Increased integration of systems and applications software. Today's systems have a higher degree of interdependency which encourages the user to opt for systems which operate well together. (Recall that software performance was the number one buying criterion, as described earlier in this chapter.)

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EXHIBIT IV-13

SOFTWARE BUNDLING EXPECTATIONS

DEGREE OF
BUNDLING NEXT
12 MONTHS

More — 54%, 65%

Same — 21%, 18%

Less — 25%, 17%

Percent of Respondents

☐ Users Desire

▨ Vendors Expect

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EXHIBIT IV-14

SYSTEMS SOFTWARE BUNDLING ANTICIPATION

Percent of Respondents Anticipating
More Bundling

☐ Systems Software

▨ Applications Software

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- Vendor proliferation of add-on products. In an effort to reach aggressive revenue and profit goals, vendors launch related products which can be economically sold to both their current and future customer base.

- Software bundling has its own set of advantages and disadvantages, as shown in Exhibit IV-15.

- Bundling itself is primarily presented to users in two ways, best described as "real" and "virtual." In the "real" case the bundling involves tightly integrated products which rely heavily upon each other and which have greatly diminished value if acquired separately.

- "Virtual" bundling, however, is more of an illusion than a software architectural reality. In this case, the products only have small incremental advantages if operated together. It is INPUT's belief that vendors can seriously injure their hard-won reputations if they imply during the sales cycle that more integration exists than is true. Bundling as a technique for providing volume discounts should not imply to the user that significant software integration exists unless it really does.

- Some vendors are taking a "whichever way you want it" approach to bundling. They present their bundled offerings during the initial sales calls, but then are willing to unbundle if the customer clearly will not buy the entire package. Their strategy is to unbundle if it is necessary to get the customer, then hope to sell add-ons at a later time. While this strategy can be a useful approach for both the user and the vendor, it must be executed with great care. Improper handling of the approach and timing of this bundling/unbundling sequence can give the prospect an impression of trickiness and insincerity in the vendor's business approach. In an industry like software products where user-vendor trust plays such an important role, this caveat is significant.

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EXHIBIT IV-15

SOFTWARE BUNDLING:
ADVANTAGES AND DISADVANTAGES

VENDOR'S PERSPECTIVE

ADVANTAGES	DISADVANTAGES
• Helps Sell Product Family • Eliminates Confusing Options • Customer Will Buy More • Helps Boost Sales of Weak Products When Bundled With Strong Ones	• Puts Long Term Pressure on Profit Margins Due to Bundling Discounts • May Slow Down Sales Cycle Due to Magnitude of Dollar Commitment

USER'S PERSPECTIVE

ADVANTAGES	DISADVANTAGES
• Appeals to User's Desire for a Total Integrated Solution • Simplifies Buying • Provides Better Prices	• Don't Want to Pay for What Is Not Used • May Not Get The Best Product for Each Component

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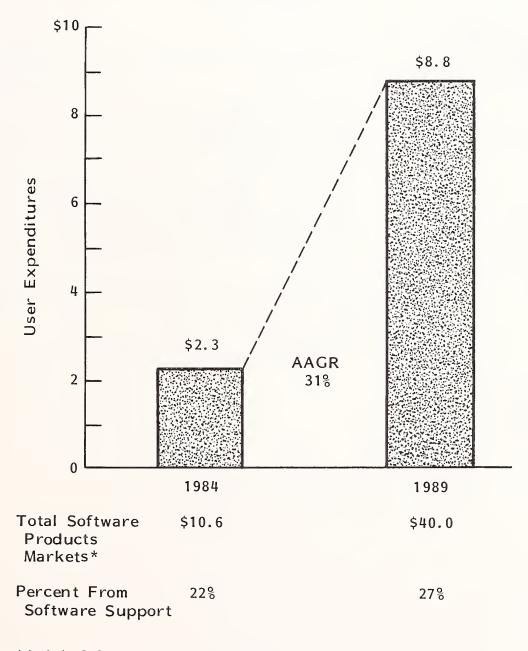
F.   SOFTWARE SUPPORT PRICING

- Software product maintenance and support services (hereafter called software support) have become a major revenue source for many software product vendors.   Software support revenues in excess of 25% of total software product sales are not unusual for established vendors.   Total industry-wide user expenditures for this type of service will almost quadruple, to $8.8 billion annually, by the end of the decade (see Exhibit IV-16).

1.   PRICE RANGES AND SERVICES

- Price ranges for software support are inevitably expressed by vendors as an annual fee based on a percent of the equivalent lump sum price for the software product.   These annual fees generally vary from 5% to 20% of the equivalent lump sum payment (see Exhibit IV-17).

- Systems software vendors have been more aggressive than applications software vendors in raising their software support prices during the past 12 months (see Exhibit IV-18).   However, even with these increases, systems software vendors have a slightly narrower spread in prices than do applications vendors.   This difference is largely due to the nature of the products licensed.   Systems software vendors generally have a smaller number of non-data processing skilled people to support, and often are not forced into the magnitude of upgrades required of applications vendors, who sell more lines of code to larger numbers of people with wide variations in computer literacy.

- It is interesting to note that less than one-half the users of hardware vendor-supplied systems software are satisfied with their service (see Exhibits IV-19 and IV-20).

- Exhibit IV-21 shows that while maintenance and upgrades are universal services falling within the purview of software support, the approach to

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EXHIBIT IV-16

USER EXPENDITURES FOR SOFTWARE MAINTENANCE
AND SUPPORT SERVICES
($ Billions)

	1984	1989
Total Software Products Markets*	$10.6	$40.0
Percent From Software Support	22%	27%
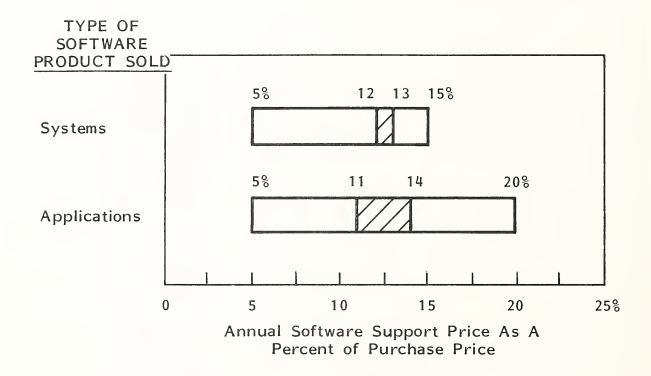
* Includes Software for all Sizes of Computers

Source: U.S. Software Products and Professional Services Markets, 1984-1989

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EXHIBIT IV-17

PRICE RANGES FOR SOFTWARE SUPPORT

TYPE OF
SOFTWARE
PRODUCT SOLD

Systems

5%   12   13   15%

Applications

5%   11   14   20%

Annual Software Support Price As A
Percent of Purchase Price

0   5   10   15   20   25%

Legend:

        Avg.   Avg.
Low   Min.   Max.   High

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EXHIBIT IV-18
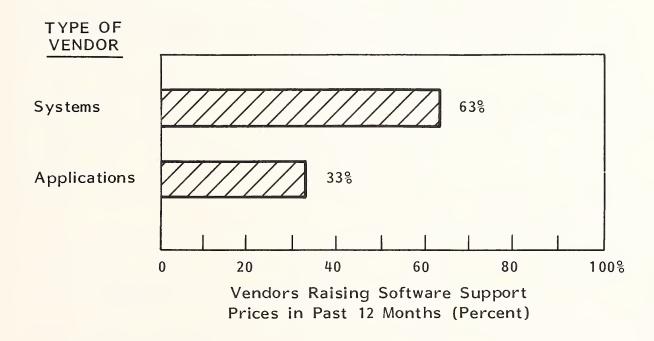
FREQUENCY OF SOFTWARE SUPPORT
PRICE INCREASES

TYPE OF
VENDOR

Systems 63%

Applications 33%

0   20   40   60   80   100%

Vendors Raising Software Support
Prices in Past 12 Months (Percent)

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EXHIBIT IV-19
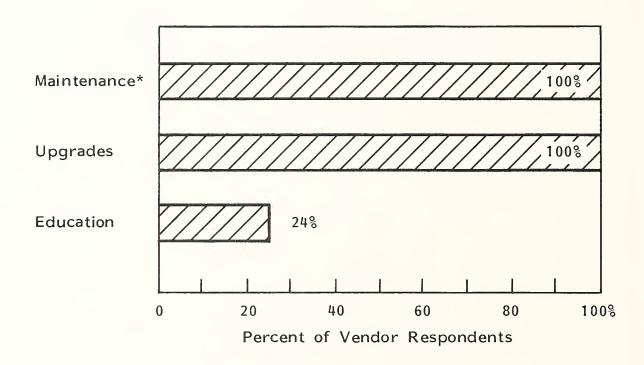
MAINFRAME USER SATISFACTION WITH
SYSTEMS SOFTWARE SUPPORT

SOFTWARE SERVICE	SATISFIED		DISSATISFIED	
	PERCENT	NUMBER	PERCENT	NUMBER
Consulting	62%	135	38%	83
Training	59	142	41	97
SE Skill Level	53	133	47	117
Escalation	44	80	56	100
Documentation	36	96	64	173
Maintenance Overall	(48)	98	52	106

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EXHIBIT IV-20

MINICOMPUTER USER SATISFACTION WITH
SYSTEMS SOFTWARE SUPPORT

SOFTWARE SERVICES	PERCENT SATISFIED	DIFFERENCE BETWEEN REQUIRED AND RECEIVED
Consulting	54.2%	-0.3
SE Skill Level	47.6	-1.1
Training	44.9	-0.8
Escalation	43.8	-1.3
Documentation	28.9	-1.6
Overall Maintenance	(41.1)	-1.2

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EXHIBIT IV-21

TYPE OF SERVICES INCLUDED
IN SOFTWARE SUPPORT

* Includes bug-fixing, usage questions

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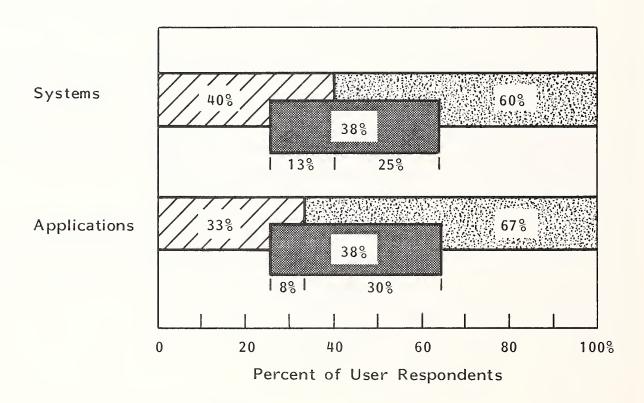
educational services is more varied. While some vendors offer either educational services or credits toward education as a bundled software support service, INPUT believes the movement is toward charging separately for such services. The trend is to offer more educational services, but as an extra cost option.

2.   USER ATTITUDES

- Most users are satisfied with the pricing of their vendor's software support services. As shown in Exhibit IV-22, 60% of the systems software users and 67% of the applications software users felt the prices were fine.

- It is important to note that 38% of the users indicated they would pay more for software support if they got more service. This group of enthusiasts included one-fourth of the people who indicated that prices were too high. This willingness to pay a premium for extended support services has also been uncovered in other INPUT research recently completed.

- Thus, vendors have a significant opportunity to increase revenues as well as customer satisfaction by implementing expanded software support services that address current user needs. Chapter VI of this report provides suggestions concerning possible approaches.

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EXHIBIT IV-22

USER ATTITUDES CONCERNING
SOFTWARE SUPPORT PRICES

Percent of User Respondents

- ▨ Prices are too High
- ▨ Prices are Just Right
- ▧ Would Pay More

Prices are Too Low = 0%

- 80 -

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V THE PRICING PROCESS
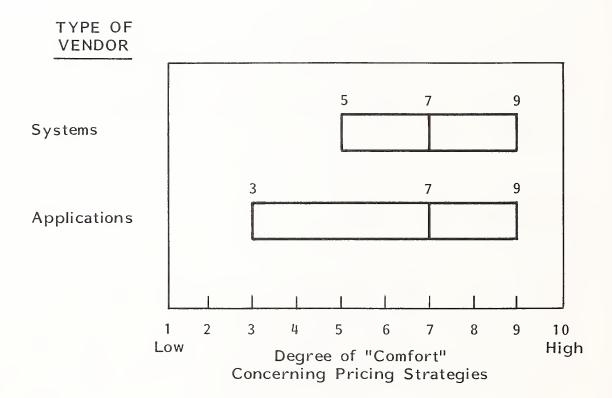
V   THE PRICING PROCESS

- Vendors readily acknowledge the importance of proper pricing to their overall market success and economic health. At the same time, many expressed their desire to improve the methods they use for price setting and implementation. This chapter profiles vendors attitudes concerning pricing as well as their approaches to it.

A.   DEGREE OF SATISFACTION

- When vendor respondents (all of whom were pricing decision-makers or strong recommenders) were asked how "comfortable" they were regarding their current pricing strategies, many indicated that room for improvement exists (see Exhibit V-I). With an average rating of seven on a scale of ten, both systems and applications vendors acknowledged that better approaches were both needed and possible.

- When questioned specifically on why their comfort level was not higher, many respondents indicated their frustration with the pricing rigidity imbedded in the philosophies of top management. They felt that in many cases management was unwilling to implement more innovative pricing approaches, such as more attractive lease/rental terms and/or usage pricing.

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EXHIBIT V-1

VENDOR "COMFORT" LEVEL CONCERNING
CURRENT PRICING STRATEGIES

TYPE OF
VENDOR
_____

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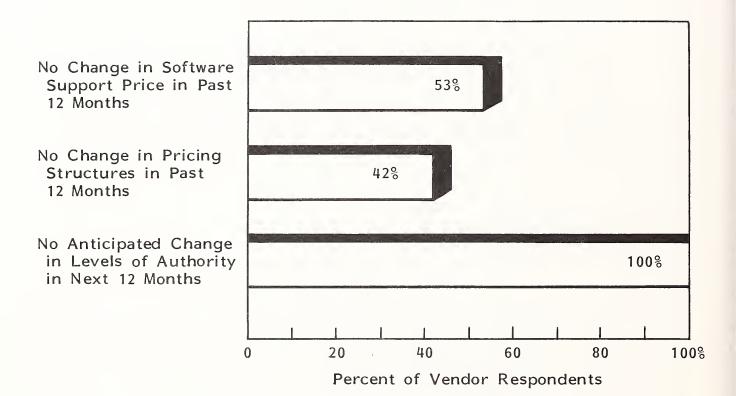
B. FREQUENCY OF CHANGE

- Further evidence of a static, almost bureaucratic approach to pricing can be seen in the "frequency of pricing revisions" data presented in Exhibit V-2. Close to one-half of the respondents indicated no change in either pricing structures or software support price levels in the past 12 months. The entire survey population planned no changes concerning who gets involved in price setting within the corporation in the next 12 months.

- Because of the rapid and often dramatic marketplace changes taking place related to user needs, buying criteria, and competitive activities, INPUT urges vendors to review their pricing policies thoroughly at least semi-annually, in addition to whenever a major event threatens to change the marketplace structure.

C. PRICING INVOLVEMENT
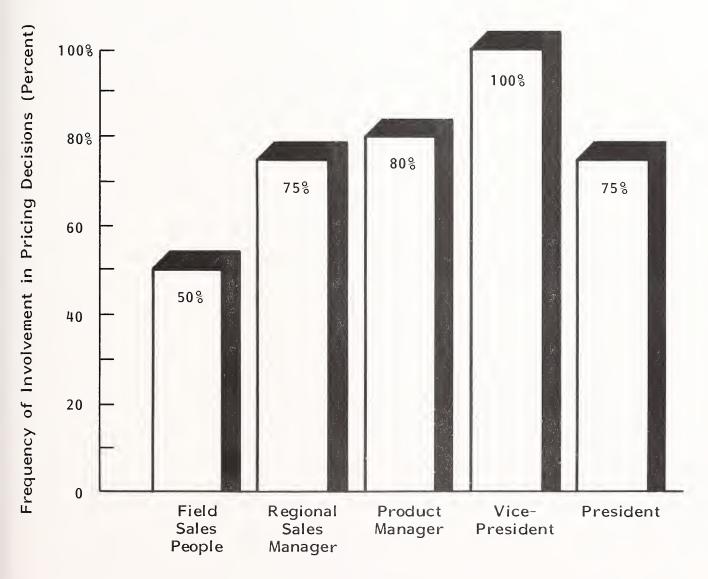
- Most vendors have numerous people with various job functions involved in the pricing process, as shown in Exhibit V-3. Most of the pricing finalization is done at the vice-presidential level. Given the strategic business implications of pricing decisions, it is not surprising to see the firm's president involved in a majority of companies.

- The lack of involvement in pricing by field sales personnel at 50% of the vendors is, in INPUT's opinion, an oversight that should be remedied immediately. Accurately gauging prospect sensitivity to both pricing levels as well as pricing structure is a difficult challenge at best. It is dangerous to the maintenance of accurate perceptions to filter them through one or more levels of management before they reach the pricing decision-makers.

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EXHIBIT V-2

EXTENT OF REVISIONS TO PRICING STRATEGIES

No Change in Software
Support Price in Past
12 Months — 53%

No Change in Pricing
Structures in Past
12 Months — 42%

No Anticipated Change
in Levels of Authority
in Next 12 Months — 100%

Percent of Vendor Respondents

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EXHIBIT V-3

PRICING INVOLVEMENT BY JOB TITLE

VI RECOMMENDATIONS

VI   RECOMMENDATIONS

A.   OVERVIEW

- Pricing strategy is one of the most under-utilized components of market strategy. Vendors have the opportunity to enhance their competitive edge and improve their profit margins by taking a more strategic and aggressive approach to pricing levels and pricing structures.

- INPUT recommends management actions in four areas:

    - Pricing role.

    - Pricing process.

    - Pricing policies.

    - Pricing implementation.

- Specific suggestions are outlined in more detail in the remainder of this chapter.

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B.   ROLE OF PRICING

I.   THE PROPER ROLE OF PRICING STRATEGY

- Indicators that pricing may be underrated as a critical aspect of marketing strategy are the following:

    - Full pricing reviews are only conducted annually, usually at the same time each year.

    - Pricing analysis and decisions are accomplished with limited involvement of middle- and first-level marketing and sales personnel.

    - Pricing is primarily based on a "me too" reaction to policies of leading competitors.

- INPUT urges vendors to use the following approaches to increase the role of pricing in their organization:

    - Remind key managers of the positive financial aspects of a 5% or 10% increase in revenues which can come, with little direct cost, from a more carefully tuned pricing strategy development and implementation program.

    - Point out the lack of software industry pricing innovations as an opportunity for market leadership.

    - Get more people in the organization involved in market data collection and analysis so that they feel their contribution can make a difference.

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2.   IMPACT OF FINANCIAL STRATEGY ON PRICING

●   Software product vendors must, of course, live within the economic realities of their environment. Cash is not an unlimited resource. However, an organization cannot call itself truly market-driven if it is preventing itself from implementing pricing options desired by users solely because vendor financial management is concerned about short-term threats to cash and/or revenue growth rates. Pricing is a strategic set of business decisions which are central to the long-term prosperity of the entire enterprise. It must be responsive to prospect needs and to potential or actual competitive movements.

C.   THE PRICING PROCESS

1.   PRICING POLICY REVIEWS

●   Because of the complexity and volatility of the software products marketplace, INPUT recommends that vendors establish a policy of reviewing their entire pricing structure at least once every four months or whenever a dramatic market event occurs. To accomplish this effectively, vendor organizations should emphasize the systematic identification and collection of marketing intelligence so that information needed for a productive pricing review is readily at hand.

2.   ANTICIPATION OF COMPETITOR PRICING MOVES

●   Because most vendors only review prices annually, and then usually in conjunction with their planning cycle for their next fiscal year, it is relatively easy to forecast when they are most likely to change prices. By keeping tabs on competitor financial progress during the year, it is possible to identify high probability times when they are likely to initiate new discounting. By studying the implications of such possible competitor moves in advance, there

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is an increased likelihood that your pricing can be sufficiently thought out so your market position is enhanced when the competitor implements a predictable price change.

3.   CRUCIAL ROLE OF FIELD SALES PEOPLE

●   In most organizations there is usually no one who is better attuned to the subtle changes in prospect attitudes concerning price than the field sales force. If field sales people feel that management values and encourages their input, they will increase their alertness to this issue, thereby benefiting the entire corporation. INPUT urges vendors to formally include the field sales force in the pricing process to enhance the quality of the marketplace feedback. This approach has the added advantage of increasing the likelihood that the field sales staff will actively support future pricing changes, regardless of what they are.

D.   PRICING POLICIES

1.   OPPORTUNITIES FOR PRICING INNOVATIONS

●   The software products industry is notoriously tradition-bound concerning pricing. A major opportunity exists for determined vendors to strengthen their market position via adopting more creative pricing approaches.

●   Areas where INPUT believes important opportunities lie include:

        -      More attractive lease/rental terms.

        -      More usage-based pricing.

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2. PRODUCT PRICE ADJUSTMENTS

• Users expect product price increases in 1985 in the 3% to 6% range. These increases can be made in most market situations relatively easily, without a great deal of justification to prospects (this rate of increase is little more than anticipated inflation). By careful analysis of competitor strengths and weaknesses plus up-to-date knowledge of changes in user buying criteria priorities, many vendors will find they can justify additional increases, especially if the products will have increased functionality.

3. SOFTWARE SUPPORT PRICE ADJUSTMENTS

• As discussed earlier in this report, most users do not consider current software support prices to be too high. Almost 50% of those who are satisfied with these prices and 25% of those who thought prices were too high are willing to consider higher support prices if they can receive more services.

• INPUT suggests vendors consider raising annual software support prices to at least the average of 12% of annual lump sum price (1% per month), if current support prices are now less than that amount (assuming support quality is competitive).

• If current support prices are more than 12%, vendors are urged to evaluate seriously additional services which could be added in order to increase prices. Services to consider include:

    - Implementation audits to help customers assess if they are using the software in the most effective way.

    - More education alternatives, such as computer-assisted training.

    - More missionary education tools (i.e., tools to help educate users in the business function that the software product addresses--for example, training on the use of MRP principles for users of MRP software).

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4.   PRICING STRUCTURE SIMPLICITY

- People are fearful of things they don't understand. If buyers are presented with too many pricing options or with formulas which are too complicated to use, they will hesitate to buy. In addition, complex pricing can confuse the sales people, thereby decreasing their productivity. Vendors should take pains to stay alert to pricing structures which fall into this trap.

5.   DISCOUNT POLICY

- Hastily implemented discounts usually hurt vendors in several ways:

    - They establish a "discounter" image. Expectations of discounting lead to additional demands for discounting, which tends to feed on itself well into the future.

    - Competitors usually counter with their own discounts which then results in several vendors being still undifferentiated, but now locked into a lower price level.

    - Discounts threaten profit margins if they are not based on real changes in the economies of doing business.

- Vendors are urged to establish discounts based on a careful analysis of long-term goals, economics, and the implications of competitor response.

6.   TIMING OF PRICE CHANGES

- Times for price change announcements which are often advantageous include:

    - When a product feature, option, or version with increased functionality is released.

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- January of a calendar year (everyone is psychologically prepared to adjust to a new environment at the beginning of a new year).

- Summertime (if it is a price increase, people may be preoccupied with vacation-induced priorities and often will pay less attention to it).

E.   PRICING POLICY IMPLEMENTATION

I.   PRICING AUTHORITY GUIDELINES

- Because setting an optimum pricing policy is a complex, challenging, and strategically critical activity, it should be very clear to all concerned just who is allowed to change what aspects of pricing, and under what conditions. This approach avoids the problem of the organization evolving a de facto pricing policy that is the result of dozens, if not hundreds, of independent, uncoordinated decisions.

2.   SELLING THE SALES FORCE

- The sales force should be both a key input source and the primary implementor of new pricing policies. It is vital that they feel comfortable concerning the reasons price changes were made and what types of reactions they should expect from prospects so they can be more convincing in their sales work and more motivated to help make the new pricing work.

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APPENDIX A: DEFINITIONS

APPENDIX A: DEFINITIONS

- <u>INFORMATION SERVICES</u>—Computer-related services involving one or more of the following:

    - Processing of computer-based applications using vendor computers (called "processing services").

    - Services that assist users in performing functions on their own computers or vendor computers (called "software products" and/or "professional services").

    - Services that utilize a combination of hardware and software, integrated into a total system (called "turnkey systems").

A.   USER EXPENDITURES

- All market data (unless specifically excepted) are given in terms of user expenditures.

- All user expenditures reported are "available" (i.e., noncaptive, as defined below).

- <u>NONCAPTIVE INFORMATION SERVICES USER EXPENDITURES</u> - Expenditures paid for information services provided by a vendor that is not part of the same parent corporation as the user.

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- CAPTIVE INFORMATION SERVICES USER EXPENDITURES - Expenditures paid for information services provided by a vendor who is part of the same parent corporation as the user.

B.   DELIVERY MODES

- PROCESSING SERVICES - This category includes remote computing services, batch services, processing facilities management, and value-added networks (VANs).

    - REMOTE COMPUTING SERVICES (RCS) - Providing computer processing to a user by means of terminal(s) at the user's site(s) connected by a data communications network to the vendor's central computer. There are four submodes of RCS, including:

        - Interactive - Characterized by the interaction of the user with the system for the purpose of problem-solving, data entry, and/or transaction processing. The user is on-line to the program/files. Computer response is usually measured in seconds or fractions of a second.

        - Remote Batch - A service in which the user hands over control of a job to the vendor's computer, which schedules job execution according to priorities and resource requirements. Computer response is usually measured in minutes or hours.

        - Data Base - Characterized by the retrieval and processing of information from a vendor-provided data base. The data base may be owned by the vendor or a third party.

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- **User Site Hardware Services (USHS)** - Offerings provided by RCS vendors that place programmable hardware on the user's site (rather than in the vendor's computer center). USHS offers access to a communications network, access through the network to the RCS vendor's larger computers, and significant software as part of the service.

- **BATCH SERVICES** - This includes computer processing performed at vendors' sites of user programs and/or data that are physically transported (as opposed to electronically by telecommunication media) to and/or 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.

- **PROCESSING FACILITIES MANAGEMENT (PFM)** (also referred to as "resource management" or "systems management") - The management of all or a major part of a user's data processing functions under a long-term contract (more than one year). This would include both remote computing and batch services. To qualify as PFM, the contractor must directly plan, control, operate, and own the facility provided to the user, either on-site, through communications lines, or in a mixed mode.

- **VALUE-ADDED NETWORKS (VANs)** - VANs typically involve common carrier network transmission facilities that are augmented with computerized switching. These networks have become associated with packet-switching technology because the public VANs that have received the most attention (e.g., Telenet and TYMNET) employ packet-switching techniques. However, other added data service features such as store-and-forward message switching, terminal interfacing, error detection and correction, and host computer interfacing are of equal importance.

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- Processing services are further differentiated as follows:

  - Cross-industry services involve the processing of applications that are targeted to specific user departments (e.g., finance, personnel, sales) but that cut across industry lines. Most general ledger, accounts receivable, payroll, and personnel applications fall into this category. Cross-industry data base services, for which the vendor supplies the data base and controls access to it (although it may be owned by a third party), are included in this category. General-purpose tools such as financial planning systems, linear regression packages, and other statistical routines are also included. However, when the application, tool, or data base is designed for specific industry use, then the service is industry-specific (see below).

  - Industry-specific services provide processing for particular functions or problems unique to an industry or industry group. Specialty applications can be either business or scientific in orientation. Industry-specific data base services, for which the vendor supplies the data base and controls access to it (although it may be owned by a third party), are also included under this category. Examples of industry specialty applications are seismic data processing, numerically controlled machine tool software development, and demand deposit accounting.

  - Utility services are those for which the vendor provides access to a computer and/or communications network with basic software that enables users to develop and/or process their own systems. These basic tools often include terminal-handling software, sorts, language compilers, data base management systems, information retrieval software, scientific library routines, and other systems software.

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- <u>SOFTWARE PRODUCTS</u> - This category includes users' purchases of applications and/or systems software that is sold by vendors as standard products intended for use by different organizations. Included as user expenditures are lease and purchase expenditures, as well as fees for work performed by the vendor to implement and maintain the package (when such fees are either bundled as part of the product price or offered on an annual subscription basis). Fees for work related to education, consulting, and/or custom modification of software products are counted as professional services, provided such fees are charged separately from the price of the software product itself. There are several subcategories of software products, including:

  - <u>APPLICATIONS SOFTWARE PRODUCTS</u> - Software that performs a specific function directly related to solving a business or organizational need. Applications software provides information directly for use by the end user. Applications software products classifications are:

    - <u>Cross-Industry Products</u> - Used in multiple-user industry sectors. Examples are payroll, inventory control, and financial planning.

    - <u>Industry-Specific Products</u> - Used in a specific industry sector such as banking and finance, transportation, or discrete manufacturing. Examples are demand deposit accounting, airline scheduling, and materials resource planning.

  - <u>SYSTEMS SOFTWARE PRODUCTS</u> - Software that enables the computer/communications system to perform basic functions, which are interim steps to providing the end user with "answers" sought. Systems software product classifications are:

    - <u>Systems Control Products</u> - These products function during applications program execution to manage the computer system

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resource. Examples include operating systems, communication monitors, and emulators.

- Data Center Management Products - These products are used by operations personnel to manage the computer system resources and personnel more effectively. Examples include performance measurement, job accounting, computer operations scheduling, and utilities.

- Application Development Products - These products are used to prepare applications for execution by assisting in design, programming, testing, and related functions. Examples include languages, sorts, productivity aids, data dictionaries, data base management systems, report writers, and retrieval systems.

- PROFESSIONAL SERVICES - This category is made up of services in the following categories:

  - SOFTWARE DEVELOPMENT - This service develops a software system on a custom basis. It includes one or more of the following: user requirements, system design, contract, and programming.

  - EDUCATION AND TRAINING SERVICES - These services help people acquire new skills, techniques, or knowledge related to computers. This definition does not include services to educational institutions. (This latter market is included in the education (industry-specific) segment.)

  - CONSULTING SERVICES - Consultants advise clients on computer-related issues that are usually management oriented. Feasibility studies and computer audits are examples of services provided.

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- <u>PROFESSIONAL SERVICES FACILITIES MANAGEMENT (PSFM)</u> - This is the counterpart to processing facilities management, except that in this case the computers are owned by the client, not the vendor; the vendor provides human resources to operate and manage the client facility.

- <u>TURNKEY SYSTEMS</u> (also known as Integrated Systems) - A turnkey system is 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 turnkey systems. This does not include specialized hardware systems such as word processors, cash registers, or process control systems. Nor does it include Embedded Computer Resources for military applications. Turnkey systems are available either as custom or packaged systems.

  - Turnkey systems revenue is divided into two categories.

    - <u>Industry-Specific</u> systems--that is, systems that serve a specific function for a given industry sector such as automobile dealer parts inventory, CAD/CAM systems, or discrete manufacturing control systems.

    - <u>Cross-Industry</u> systems--that is, systems that provide a specific function that is applicable to a wide range of industry sectors such as financial planning systems, payroll systems, or personnel management systems.

  - Revenue includes hardware, software, and support functions.

- <u>SYSTEMS INTEGRATION</u> - Services associated with systems design, integration of computing components, installation, and acceptance of computer/communication systems. Systems integration can include one or more of the major information services delivery modes--professional services, turnkey

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systems, and software products. System components may be furnished by separate vendors (not as an integrated system by one vendor, called the prime contractor); services may be furnished by a vendor or by a not-for-profit organization. Integration services may be provided with related engineering activities, such as SE&I (Systems Engineering and Integration) or SETA (Systems Engineering and Technical Assistance).

C.   HARDWARE/HARDWARE SYSTEMS

- HARDWARE - Includes all computer communications equipment that can be separatedly acquired, with or without installation by the vendor, and not acquired as part of a system.

    - PERIPHERALS - Includes all input, output, communications, and storage devices, other than main memory, that can be locally connected to the main processor and generally cannot be included in other categories, such as terminals.

    - INPUT DEVICES - Includes keyboards, numeric pads, card records, barcode readers, lightpens and trackballs, tape readers, position and motion sensors, and A-to-D (analog-to-dialog) converters.

    - OUTPUT DEVICES - Includes printers, CRTs, projection television screens, microfilm processors, digital graphics, and plotters.

    - COMMUNICATION DEVICES - Includes modems, encryption equipment, special interfaces, and error control.

    - STORAGE DEVICES - Includes magnetic tape (reel, cartridge, and cassette), floppy and hard disks, solid state (integrated circuits), and bubble and optical memories.

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- **TERMINALS** - There are three types of terminals:

    - **USER PROGRAMMABLE** (also called "intelligent terminals"):

        . Single-station or standalone.

        . Multistation-shared processor.

        . Teleprinter.

        . Remote batch.

    - **USER NONPROGRAMMABLE**:

        . Single-station.

        . Multistation-shared processor.

        . Teleprinter.

    - **LIMITED FUNCTION** - Originally developed for specific needs, such as POS (point of sale), inventory data collection, controlled access, etc.

- **HARDWARE SYSTEMS** - Includes all processors, from microcomputers to super (scientific) computers. Hardware systems require type- or model-unique operating software to be functional, but the category excludes applications software and peripheral devices, other than main memory and processor or CPUs not provided as part of an integrated (turnkey) system.

    - **MICROCOMPUTER** (or personal computer or PC) - Combines all of the CPU, memory, and peripheral functions of an 8- or 16-bit computer on a chip, in the form of:

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- Integrated circuit package.

- Plug-in board with more memory and peripheral circuits.

- Console--including keyboard and interfacing connectors.

- Personal computer with at least one external storage device directly addressable by CPU.

- MINICOMPUTER - Usually a 12-, 16- or 32-bit computer, which may be provided with limited applications software and support, and may represent a portion of a complete large system.

    - Personal business computer.

    - Small laboratory computer.

    - Nodal computer in a distributed data network, remote data collection network, connected to remote microcomputers.

- MAINFRAME - Typically a 32- or 64-bit computer, with extensive applications software and a number of peripherals in standalone or multiple CPU configurations for business (administrative, personnel, and logistics) applications, also called a General-Purpose Computer.

    - Large computer mainframes are presently centered around storage controllers, but are likely to become bus-oriented and to consist of multiple processors (CPUs) or parallel processors; they are intended for structured mathematical and signal processing, and are generally used with general-purpose von-Newmann-type processors for system control.

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- Supercomputer mainframes are high-powered processors with numerical processing throughout that is significantly greater than the largest general-purpose computers, with capacities in the 10-50 MFLOPS (million floating point operations per second) range, in two categories:

- REAL TIME - Generally used for signal processing.

- NONREAL TIME - For scientific use, with maximum burst-mode (but sustained speed) capacities of up to 100 MFLOPS, in one of three configurations:

  - Parallel processors.

  - Pipeline processors.

  - Vector processors.

- Newer supercomputers--with burst modes approaching 300 MFLOPS, main storage size up to 10 million words, and on-line storage in the one-to-three gigabyte class--are also becoming more common.

- EMBEDDED COMPUTER - Dedicated computer system designed and implemented as an integral part of a weapon or weapon system, or platform, that is critical to a military or intelligence mission, such as command and control, cryptological activities, or intelligence activities. Characterized by MIL SPEC (military specification) appearance and operation, limited but reprogrammable applications software, and permanent or semipermanent interfaces. May vary in capacity from microcomputers to parallel-processor computer systems. Information services forecasts in this report do not include applications for this type of computer.

INPUT

D.   OTHER CONSIDERATIONS

- When questions arise about the proper place to count certain user expenditures, INPUT addresses them from the user viewpoint. Expenditures are then categorized according to what users perceive they are buying.

- The standard industrial classification (SIC) codes are used to define the economic activity contained in generic sectors such as process manufacturing, insurance, or transportation.

- The specific industries (and their SIC codes) included under these generic industry sectors are detailed in Exhibit A-1.

INPUT

INDUSTRY SECTOR DEFINITIONS

INDUSTRY SECTOR	INDUSTRY SIC	INDUSTRY NAME
Discrete Manufacturing	23	Apparel
	25	Furniture
	27	Printing
	31	Leather
	34	Metal
	35	Machinery
	36	Electronics
	37	Transportation
	38	Scientific and Control Instruments
	39	Miscellaneous Manufacturing
Process Manufacturing	10	Metal Mining
	11	Anthracite Mining
	12	Coal Mining
	13	Oil and Gas Extraction
	14	Mining/Quarying of Non-Metallic Minerals, except Fuels
	20	Food Products
	21	Tobacco
	22	Textile Products
	24	Lumber and Wood Products
	26	Paper Products
	28	Chemicals
	29	Petroleum
	30	Rubber and Plastics
	32	Stone, Glass, Clay
	33	Primary Metals

INPUT
MMAR-AV

INDUSTRY SECTOR DEFINITIONS

INDUSTRY SECTOR	INDUSTRY SIC	INDUSTRY NAME
Transportation	40	Railroads
	41	Local Transit
	42	Motor Freight
	43	U.S. Postal Service
	44	Water Transportation
	45	Air
	46	Pipelines
	47	Transportation Services
Utilities	49	Electric, Gas, and Sanitary
Telecommunications	48	Communications
Wholesale Distribution	50	Durable Goods
	51	Nondurable Goods
Retail Distribution	52	Building Materials, Hardware
	53	General Merchandise
	54	Food
	55	Automotive and Gas Stations
	56	Apparel
	57	Furniture
	58	Eating and Drinking
	59	Miscellaneous Retail

INDUSTRY SECTOR DEFINITIONS

INDUSTRY SECTOR	INDUSTRY SIC	INDUSTRY NAME
Banking and Finance	60	Banks
	61	Credit Agencies
	62	Security and Commodity Brokers
	67	Holding and Investment Offices
Insurance	63	Insurance (Life, Health, Etc.)
	64	Insurance Agents
Medical	80	Health Services
Education	82	Educational Services
Services	73	Business Services (excluding information services companies themselves)
	89	Miscellaneous Services
Federal Government	N/A	As Appropriate
State and Local Government	N/A	As Appropriate

INPUT
MMAR-AV

INDUSTRY SECTOR DEFINITIONS
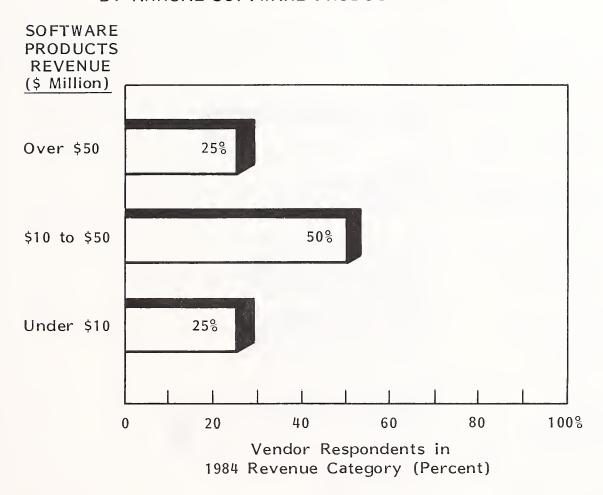
INDUSTRY SECTOR	INDUSTRY SIC	INDUSTRY NAME
Other Industries	01-09	Agriculture, Forestry, and Fishing
	15-17	Construction
	65	Real Estate
	66	Combinations of Real Estate, Insurance, Loans, Law Offices
	70	Hotels, Rooming Houses, Camps, and Other Lodging Places
	72	Personal Services
	75	Automotive Repair, Services, and Garages
	76	Miscellaneous Repair Services
	78	Motion Pictures
	79	Amusement and Recreation Services, Except Motion Pictures
	81	Legal Services
	83	Social Services
	84	Museums, Art Galleries, Botanical and Zoological Gardens
	86	Membership Organizations

APPENDIX B: RESPONDENT PROFILE

INPUT
MSPT

VENDOR RESPONDENT PROFILE
BY ANNUAL SOFTWARE PRODUCT REVENUES

SOFTWARE
PRODUCTS
REVENUE
($ Million)

Over $50   25%

$10 to $50   50%

Under $10   25%

0   20   40   60   80   100%

Vendor Respondents in
1984 Revenue Category (Percent)
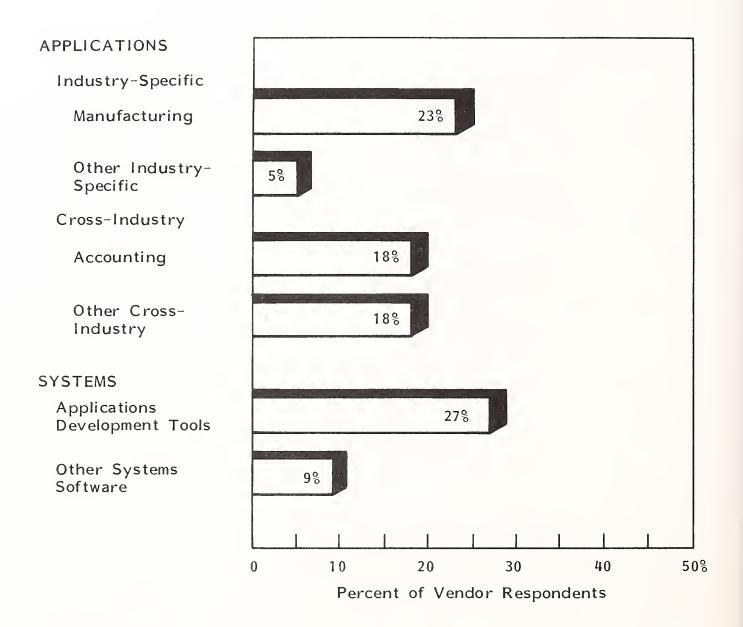
Range:

Low = $5 Million
High = $190 Million
Average = $52 Million

INPUT
MSPT
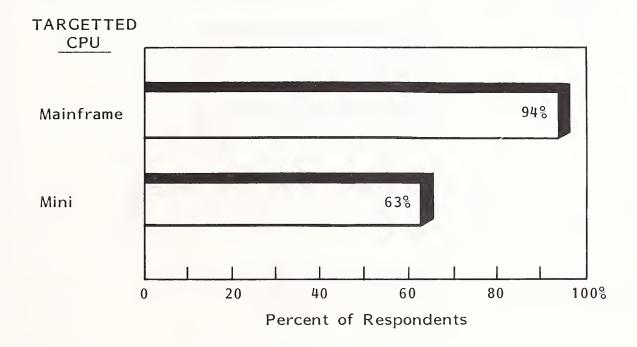
VENDOR RESPONDENT PROFILE
BY TYPE OF MARKET SERVED

APPLICATIONS

Industry-Specific

Manufacturing — 23%

Other Industry-
Specific — 5%

Cross-Industry

Accounting — 18%

Other Cross-
Industry — 18%

SYSTEMS

Applications
Development Tools — 27%

Other Systems
Software — 9%

0   10   20   30   40   50%

Percent of Vendor Respondents

INPU
MSPT
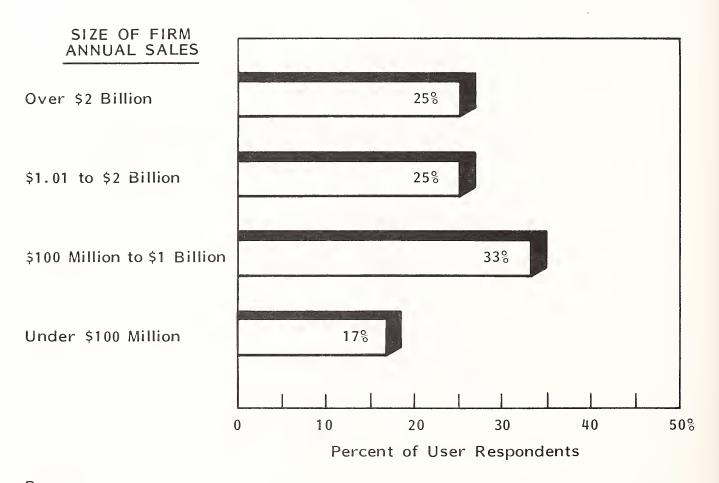
TARGET CPU SIZE FOR VENDORS' LEADING PRODUCTS

TARGETTED
CPU

Mainframe   94%

Mini   63%

| 0 | 20 | 40 | 60 | 80 | 100% |

Percent of Respondents

INPUT
MSPT

USER RESPONDENT PROFILE
BY SIZE OF FIRM

SIZE OF FIRM
ANNUAL SALES

Over $2 Billion   25%

$1.01 to $2 Billion   25%

$100 Million to $1 Billion   33%

Under $100 Million   17%

| 0 | 10 | 20 | 30 | 40 | 50% |

Percent of User Respondents
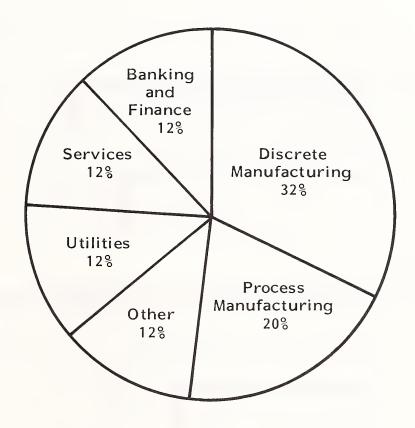
Range:

Low = $35 Million
High = $23.5 Billion
Average = $2.8 Billion

INPU
MSPT
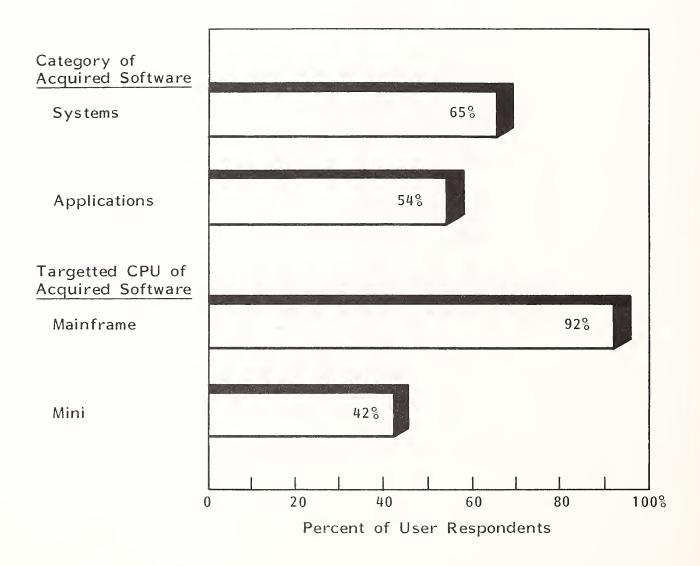
USER RESPONDENT PROFILE
BY INDUSTRY SERVED

Banking
and
Finance
12%

Services
12%

Discrete
Manufacturing
32%

Utilities
12%

Other
12%

Process
Manufacturing
20%

Percent of User Respondents

INPUT
MSPT

EXHIBIT B-6
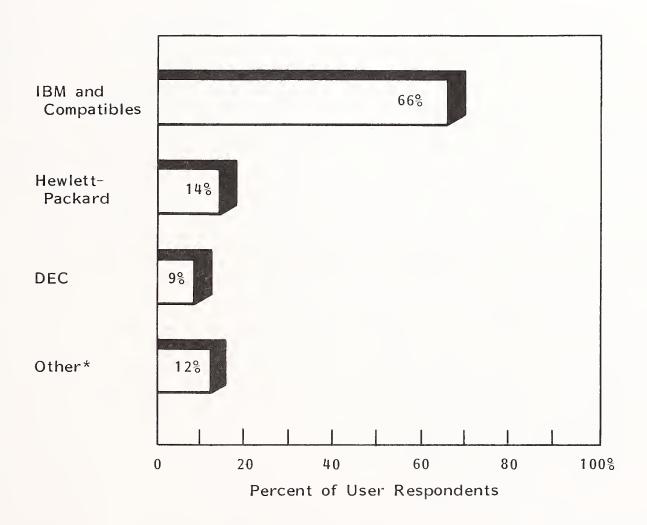
USER RESPONDENT PROFILE
BY TYPE OF SOFTWARE ACQUIRED

Category of
Acquired Software

Systems — 65%

Applications — 54%

Targetted CPU of
Acquired Software

Mainframe — 92%

Mini — 42%

0   20   40   60   80   100%

Percent of User Respondents

INPUT
MSPT
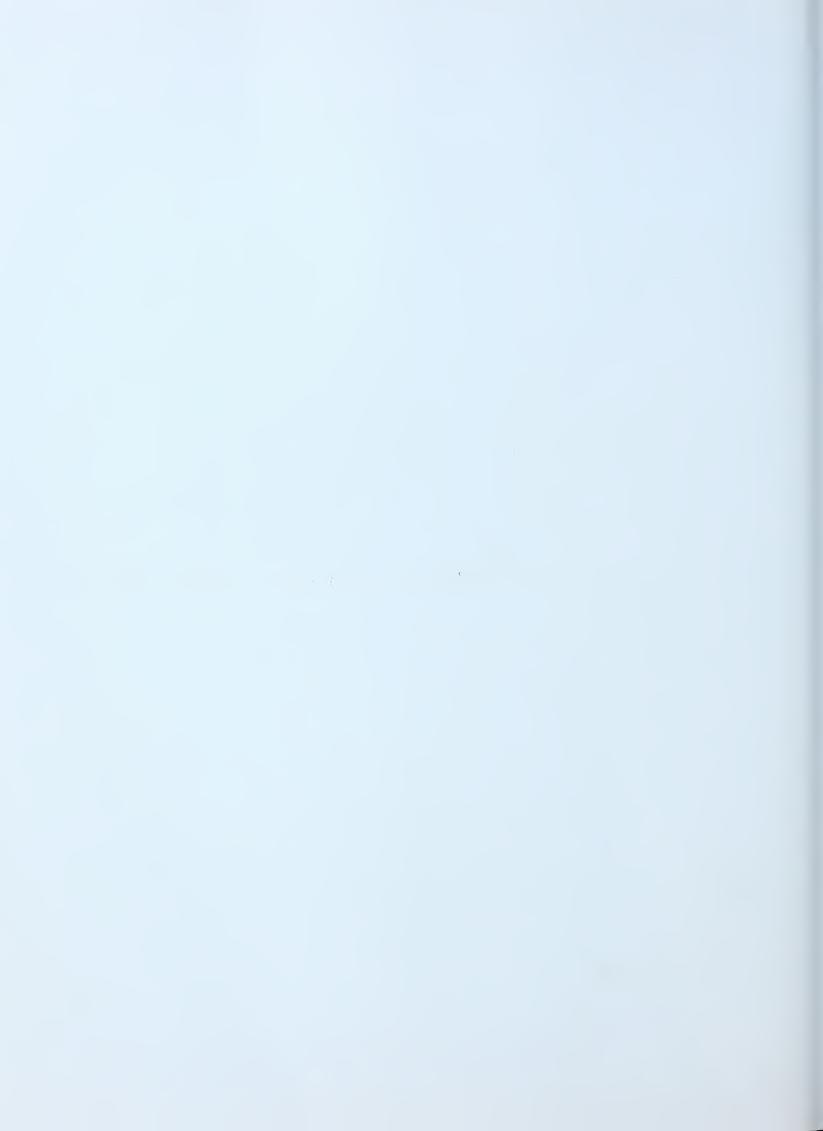
USER RESPONDENT PROFILE BY
PRIMARY TYPE OF HARDWARE USED

IBM and Compatibles	66%
Hewlett-Packard	14%
DEC	9%
Other*	12%

0   20   40   60   80   100%

Percent of User Respondents

* Includes one mention each for Burroughs, Honeywell, Sperry, and Wang.

APPENDIX C: RELATED INPUT REPORTS

APPENDIX C: RELATED INPUT REPORTS

- U.S. Software Products and Professional Services Markets, 1984-1989 (M-SAR).

- Information Services Pricing, Volume II, Software Products and Professional Services (M-SP3).

- User Service Requirements--Small Systems (F-SS5).

- Integrated DBMS-Application Software (M-SIN).

- User Service Requirements--Large Systems (F-UA1).

- User Service Requirements--Small Systems (F-UA2).

INPUT

APPENDIX D: USER QUESTIONNAIRE

SOFTWARE PRODUCT PRICING TRENDS AND OPPORTUNITIES
USER QUESTIONNAIRE

INPUT's research has indicated that the issue of pricing of software products is a subject of great interest to both buyers and sellers. We would like to interview your organization concerning your attitudes and reactions to various types of pricing levels, terms, and conditions currently offered by software product vendors.

The purpose of this research is to develop a report profiling current practices as well as future directions of software products pricing. This report should be useful in helping your organization obtain the best possible pricing from future software acquisitions. In exchange for the interview INPUT will send you a complimentary special summary of the results of the survey.

1.   Which, if any, of the following roles do you have in the software products selection process? (Check all that apply)

Decision-maker   _____

Recommendor   _____

Evaluator   _____

(If respondent is not a Decision-maker or Strong Recommendor, find out who is, and attempt to interview them for the remainder of the questions.)

2.   What is the approximate annual dollar volume of software products which you approve for acquisition by your company?

$_____

3.   Which of the following categories of mainframe or mini-based software products do you approve?

Price Range

a. Applications Software ____   _____

b. Systems Software   ____   _____

4.   (If both 3a. and 3b. were selected, ask. . .) which of the two types of software are you most directly involved with?

a. Applications _____   b.   Systems _____

INPUT

All of the software questions which follow in the interview should be answered only in reference to this type of software.

5. Examples of software products approved by you within the past 12 months?

		PRODUCT NO. 1	PRODUCT NO. 2
a.	Vendor	_____	_____
b.	Product Name	_____	_____
c.	Approx. Price	_____	_____
d.	Mainframe or Mini-based?	_____	_____

6. What size hardware do you buy mainframe and mini-based software for?

	HARDWARE TYPE NO. 1	HARDWARE TYPE NO. 2
Vendor	_____	_____
Model Number	_____	_____

7. a. How much can you spend on software products without higher level authority? $_____

    b. Has this level changed as compared to a year ago?

        Yes _____   No _____

    c. If Yes, what was the prior amount? $_____

    d. What caused the change? _____

        _____

8. What is the next level of software products approval authority above you? (Give title or position and spending limit).

    Title: _____   Spending Limit: $_____

- 122 -

INPUT

9. What were your company's expenditures during 1984 for software
    products, maintenance and support?

    $_____

10. Please rate the following factors in terms of their importance to your firm's
    software product selection process. Use a scale of 1-10 where 10 is
    "very high importance" and 1 is "very low importance".

    <u>FACTOR</u>   <u>RATING</u>

    a. Ease of Implementation   _____

    b. Documentation   _____

    c. Software Features   _____

    d. Vendor Reputation   _____

    e. Customer Support   _____

    f. Software Performance   _____

    g. Price   _____

    h. Source Code Availability   _____

    i. Ease of Modification   _____

    j. Vendor's Financial Stability   _____

    k. Vendor's Committment to Product   _____

    l. Ease of Use   _____

    m. Other (specify)_____   _____

- 123 -

INPUT

11. What payment plans were selected for the software products acquired by your firm during the past 12 months?

<div align="right">

PERCENT OF TOTAL
PRODUCTS ACQUIRED

</div>

a. Lump Sum (One-time) Payment   _____

b. Installment Plan   _____

c. Lease   _____

d. Rental   _____

e. Usage Pricing   _____

f. Other (Specify)_____ _____

12. How important to your final selection decision is the availability of payment plans such as the following?

	VERY IMPORTANT	SOMEWHAT IMPORTANT	LITTLE IMPORTANCE
a. Lump Sum (One-time) Payment	_____	_____	_____
b. Installment Plan	_____	_____	_____
c. Lease	_____	_____	_____
d. Rental	_____	_____	_____
e. Usage Pricing	_____	_____	_____
f. Other (specify)			
_____	_____	_____	_____

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INPU

13. For the major software products acquired by your company during the past 12 months, what discount percentages from list prices did you receive?

TYPE OF DISCOUNT	MINIMUM RECEIVED (PERCENT)	MAXIMUM RECEIVED (PERCENT)
a. Additional Sites	_____	_____
b. Additional Computers	_____	_____
c. Dollar Volume	_____	_____
d. Optional Modules	_____	_____
e. Additional Products	_____	_____
f. Government Sector	_____	_____
g. Education Sector	_____	_____
h. Other (Specify)		
_____	_____	_____

14. a. What percent of the software products acquired were at less than list price during the past 12 months?

   _____ %

   b. During the year prior to that? _____ %

   (If more than five percentage points difference in the two answers above, ask. . .)

   c. What accounted for the change in the percentages from one year to the next?

   _____

   _____

15. In your opinion, are software products vendors in general providing larger, smaller, or similar discounts now, as compared to a year ago?

   Larger _____   Similar to _____   Less Than _____

INPUT

16. a. Does your firm obtain software maintenance and support contracts from software products vendors for any of the software you license?

Yes _____   No _____

b. If Yes, on the average, about what percent of the equivalent purchase price of the software is your annual maintenance and support fee?

_____ % Don't Know _____

c. (If percentage is given) Do you feel that this percentage is too high, about right, or too low?

Too High _____   About Right _____   Too Low _____

d. Why? _____

_____

17. a. Are there any conditions under which you would be willing to pay more for maintenance services?

Yes _____   No _____

b. If Yes, what are those conditions? _____

_____

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INPUT

18. Next, I have some questions concerning your perceptions of software product price changes.

		PERCENTAGE CHANGE NOW VERSUS:	
TYPE		PAST 12 MO.	NEXT 12 MO.
a.	All Software Products as a Group	_____	_____
b.	Applications Software Cross-Industry (Acctg./Hr.)	_____	_____
c.	Cross-Ind. (Other)	_____	_____
d.	Ind.-Spec. (B&F)	_____	_____
e.	Ind.-Spec. (DM)	_____	_____
f.	Ind.-Spec. (Others)	_____	_____
SYSTEMS SOFTWARE			
g.	Appl. Dev. Tools	_____	_____
h.	Other	_____	_____

19. a. Has your firm changed its software products buying methods within the past year?

   Yes _____   No _____

   b. If yes, what changes were made and why?

   _____

   _____

20. What are some examples of what you consider innovative pricing? (Cite the vendor, product, and type of innovative pricing.) Does this type of approach appeal to you? Why or why not?

   _____

   _____

   _____

INPUT
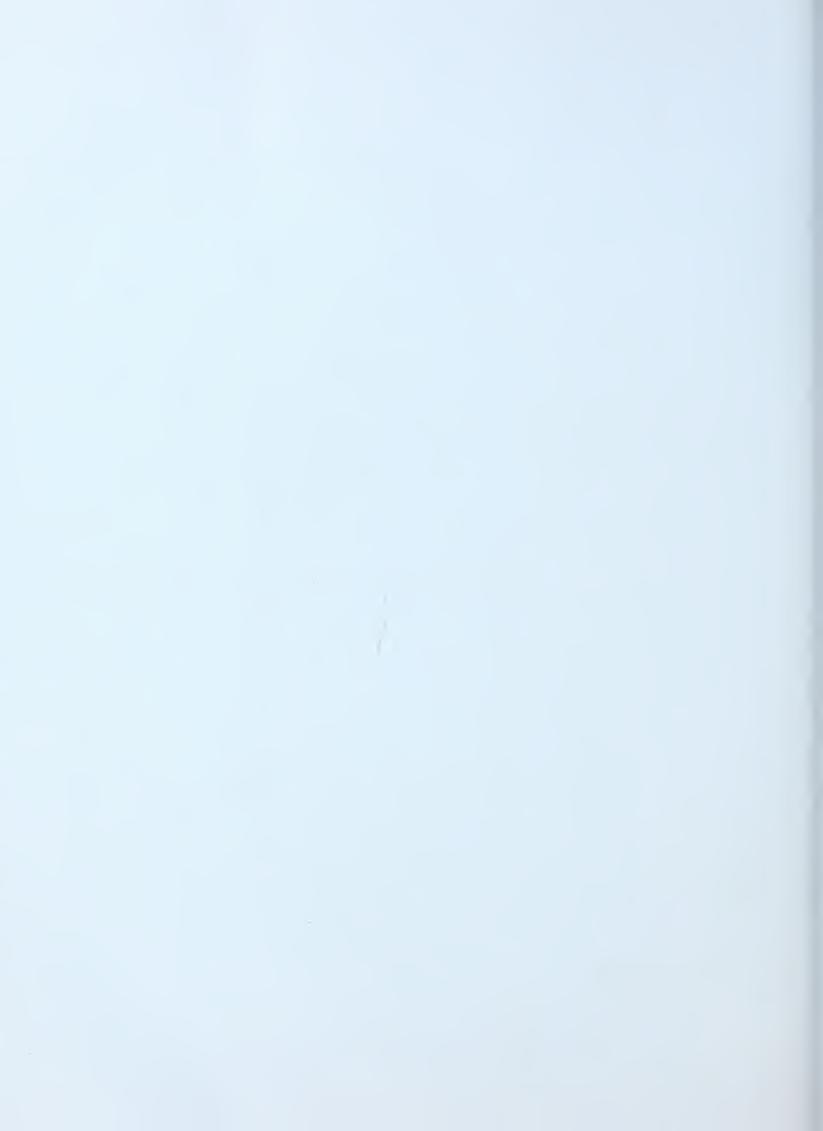
21. In your opinion, during the past 12 months are software product vendors doing more, the same, or less bundling together of multiple software products into one overall package offering?

   Doing More _____   Doing Same _____   Doing Less _____

22. Would you like to encourage vendors to do more, the same, or less bundling of their software products? Why?

   Do More _____   Do Same _____   Do Less _____

   Why? _____

   _____

23. a. Are there any types of pricing approaches by vendors which you have not seen, but which you wish were available?

      Yes _____   No _____

   b. If Yes, what type of pricing approaches would you like to see?

      _____

24. What other comments do you have concerning software product practices and trends?

   _____

   _____

   _____

THANK YOU VERY MUCH FOR YOUR TIME

INPUT

APPENDIX E: VENDOR QUESTIONNAIRE

SOFTWARE PRODUCT PRICING TRENDS AND OPPORTUNITIES
VENDOR QUESTIONNAIRE

INPUT's research has indicated that the issue of pricing of software products is a subject of great interest to both buyers and sellers.

We would like to interview your organization concerning your experiences and expectations concerning pricing levels, terms, and conditions related to mainframe and mini-based software products.

The purpose of this research is to develop a report profiling current practices as well as future directions of software products pricing. This report should be useful in helping your organization assess your own pricing practices in comparison with industry trends.

In exchange for the interview INPUT will send you a complimentary special summary of the results of the survey.

1. Which of the following best describes your role in the pricing of your firm's software products:

    Decision-Maker   _____

    Recommendor   _____

    Researcher   _____

    (If respondent is not either a Decision-Maker or a Recommendor, find out who is and attempt to interview them for the remainder of the questions.)

2. What were your firm's software products revenues for 1984?

    $_____

3. What percent change did that represent from 1983? _____%

4. What percent of your 1984 software products revenue came from each of the following categories?

    Applications Software   _____%

    Systems Software   _____%
                             _____
    Total   =   100%

INPUT

5. What product is the largest revenue producer for each of the following market categories? (Note to interviewer: for each product mentioned, obtain information requested.)

	SYSTEMS SOFTWARE		APPLICATIONS SOFTWARE	
	Applications Development	Tools, Other	Banking/ Finance	Discrete Manufacturing
Product Name	_____	_____	_____	_____
Price Range	_____	_____	_____	_____
Annual Sales	_____	_____	_____	_____
Size of Target CPU	_____	_____	_____	_____

6. a. What percent of the software products your firm licensed in 1984 were for the following types of payment plans.

	Applications Software	Systems Software
Lump Sum (One-time) Payment	_____ %	_____ %
Installment Plan	_____ %	_____ %
Lease	_____ %	_____ %
Rental	_____ %	_____ %
Usage Pricing	_____ %	_____ %
Other (specify) _____	_____ %	_____ %
Total	_____ %	_____ %

INPUT

If you offer "usage" terms, please answer the following questions.

6. b.   What product(s) have usage pricing? _____

    _____

    c.   What is the formula used? _____

    _____

    d.   When was this usage pricing first introduced? _____

    _____

    e.   How successful has it been? Why? _____

    _____

    f.   What are its advantages and disadvantages? _____

    _____

    _____

    g.   Do you anticipate extending it to other products? Why or Why not?

    _____

    _____

INPUT

7. What discount percentages from list price do you offer? (If the discount percentages are different for applications than for systems software, identify them separately.)

Discounts below are for (check which type)

Applications Software

    Industry-Specific   _____

    Cross-Industry   _____

Systems Software

    Applications Deve-
    lopment Tools   _____

    Other   _____

TYPE OF DISCOUNT	MINIMUM PERCENT	MAXIMUM PERCENT	PERCENT CUSTOMER RECEIVED IN 1984
a. Additional Sites	_____	_____	_____
b. Additional Computers	_____	_____	_____
c. Dollar Volume	_____	_____	_____
d. Additional Modules	_____	_____	_____
e. Additional Products	_____	_____	_____
f. Government Sector	_____	_____	_____
g. Education Sector	_____	_____	_____
h. Other (specify)			
_____	_____	_____	_____

INPUT

8. a. Have any of your discount ranges changed in the past 6 months?

    Yes _____   No _____

    b. If Yes, which discounts changed and why? _____

    _____

    _____

9. What percentage of your software products revenue in 1984 was from customers who received one or more discounts?

    _____%

10. a. Was this a change from the percentage of customers receiving discounts in 1983?

    Yes _____   No _____

    b. If Yes, what percent received discounts in 1983? _____%

    c. What was the cause of the change? _____

    _____

11. a. Does your firm price maintenance and support fees separately from the payment for the software product itself?

    Yes _____   No _____

    If yes, answer the following questions for the software product with the largest 1984 annual sales. (Note this product must be the same as specified in Question #5 above.)

    b. Name of largest selling software product. _____

INPUT

11. c. Type of software of this product?

      Applications (Ind.-Spec./Bank and Fin.) _____

      Applications (Ind.-Spec./Disc. Mfg.) _____

      Applications (Ind.-Spec./Other) _____

      Applications (Cross-Ind./Acctg./Hr.) _____

      Applications (Cross-Ind./Other) _____

      Systems Software (App. Dev. Tool) _____

      Systems Software (Other) _____

d. If Yes, what price do you charge? _____

_____

e. What types of services are included? _____

Maintenance _____ Education _____ Upgrades _____

Other (specify) _____

f. What percent of the equivalent purchase price is your maintenance and support fee? _____%

g. If this percentage has changed in the past year, what was it previously? _____% What caused the change? _____

_____

h. Do you bundle maintenance and support fees within any payment plans?

Yes _____ No _____

g. If Yes, under which plans? Lease _____, Rental _____,

Lump Sum _____, Installment _____, Other (specify) _____

_____

INPUT

12   a.   Do you expect to see more, the same or less bundling of software products during the next 12 months?

       More _____   Same _____   Less _____

   b.   If More or Less, why? _____

_____

13.   What examples of innovative pricing approaches have you seen in the marketplace?

EXAMPLE #	VENDOR	PRODUCT	INNOVATION
1.	_____	_____	_____
	_____	_____	_____
2.	_____	_____	_____
	_____	_____	_____
3.	_____	_____	_____
	_____	_____	_____

14.   Do you feel these approaches will be successful?   Why or Why not?

_____

_____

_____

INPUT

15. Next, I have some questions concerning your perceptions of price changes. For each category that I will mention, please indicate the percentage change, if any, which you feel is relevant.

PERCENT CHANGE
NOW VERSUS:

TYPE	PAST 12 MONTHS	NEXT 12 MONTHS
Price Changes – All Categories	_____	_____
By Type Appl. Software Cross-Ind./Acctg./Hr.	_____	_____
Cross-Ind./Other	_____	_____
Ind.Spec./B&F Only	_____	_____
Ind.Spec./Disc.Mfg.Only	_____	_____
Ind. Spec./Other	_____	_____
Systems Software App. Dev. Tools.	_____	_____
Other	_____	_____

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INPUT

16. Your prospects are motivated by a number of factors when they consider buying your product. Please rate the following factors in importance to your prospect's selection process. Use a scale of 1 to 10 where 10 is high and 1 is low.

TYPE	RATING	ANY DIFFERENT FOR DIFFERENT PRODUCT?	
a. Software Features	_____	Yes_____	No_____
b. Ease of Implementation	_____	Yes_____	No_____
c. Documentation	_____	Yes_____	No_____
d. Customer Support	_____	Yes_____	No_____
e. Vendor Reputation	_____	Yes_____	No_____
f. Software Performance	_____	Yes_____	No_____
g. Price	_____	Yes_____	No_____
h. Vendor's Fin. Stability	_____	Yes_____	No_____
i. Committment to Product	_____	Yes_____	No_____
j. Ease of Use	_____	Yes_____	No_____
k. Other (Specify)	_____	Yes_____	No_____

_____

IF YES, SPECIFY DIFFERENCES

a. Software Features _____

b. Ease of Implementation _____

c. Documentation _____

d. Customer Support _____

e. Vendor Reputation _____

f. Software Performance _____

g. Price _____

h. Vendor's Fin. Stability _____

i. Commitment to Product _____

j. Ease of Use _____

k. Other (specify) _____

_____

INPUT

17. a. Does your company have a conscious policy of maintaining your prices in some type of consistent relationship to certain of your competitors?

Yes_____   No_____

b. If Yes, what is that relationship?_____

_____

c. Who are the competitors to whom you maintain this relationship?

_____

d. Why has this approach taken?_____

_____

e. Is this relative pricing level likely to change within the next 12 months? Why or why not?

Yes _____   No _____   _____

_____

18. a. Have you changed pricing structures or levels within the past 6 months?

Yes _____   No_____

b. If Yes, what was changed and why? _____

_____

INPUT

19. Which of the following types of individuals sets prices for your firm?

ISSUE	SALES PERSON	SALES MANAGEMENT	PRODUCT MGT.
a. Setting Price Levels	_____	_____	_____
b. Setting Price Terms and Conditions	_____	_____	_____
c. Pricing Concessions to Individual Prospects	_____	_____	_____

ISSUE	VP LEVEL	PRESIDENT	OTHER
a. Setting Price Levels	_____	_____	_____
b. Setting Price Terms and Conditions	_____	_____	_____
c. Pricing Concessions to Individual Prospects	_____	_____	_____

20. a. Do you anticipate any changes to these levels of authority in the next 12 months?

Yes _____   No _____

b. If Yes, Which ones? Why? _____

_____

_____

21. a. How comfortable are your that your company's pricing strategies are well conceived and executed? (Rate on a scale of 1-10, 10 = High)

_____

b. If answer is 5 or less, what contributes to your discomfort?

_____

_____

INPUT

22. What differences, if any, do you see in pricing trends between the mainframe versus mini marketplaces?

_____

_____

23. What market segments do you consider to be the:

a. Most price sensitive? Why? _____

b. Least price sensitive? Why? _____

24. What do you consider to be the toughest aspects of pricing now facing your firm?

_____

_____

_____

25. What types of solutions to these problems might be applied?

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26. What other aspects of pricing structure, directions, or trends would you like to comment on?

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THANK YOU VERY MUCH FOR YOUR TIME

INPUT