
Customer Service Pricing

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CUSTOMER SERVICE PRICING

ABSTRACT

Customer service pricing is becoming a more critical factor, both to users and to vendors of service. Users are becoming increasingly price sensitive, partly as a result of the increased competition for their service dollar. At the same time, vendors are faced with a dilemma of how to increase service revenues while still satisfying their users' desire for stable, if not lower, service prices.

This report looks at pricing of customer service through the eyes of both users and service vendors. Important issues to users are explored, such as the effect of service price on the purchase decision, user attitudes toward premiums, and users' willingness to increase their own participation in actual maintenance activities.

Vendor issues, such as pricing strategy, historical trends in service pricing, and discounting practices, are examined with particular attention given to effectiveness.

The objective of this report is to analyze current customer service pricing, and from this analysis, recommendations are made in order to maintain user satisfaction with service and increase the "marketability" of service.

This report contains 82 pages, including 24 exhibits.

CUSTOMER SERVICE PRICING

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CUSTOMER SERVICE PRICING

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I INTRODUCTION

A. SCOPE

- This report, Customer Service Pricing, is produced by INPUT as part of the 1985 Customer Services Program in the United States for clients of that program.
- The object of this report is to identify and analyze trends in customer services pricing, as seen by both the user and the vendor. Key areas such as discounting, premiums, and pricing strategy are discussed, with emphasis on how these factors will affect both current and future service delivery.
- The report is divided into four main sections.
 - An Executive Summary designed to quickly summarize the key findings of this report in presentation format.
 - An analysis of user attitudes concerning current service pricing, broken out by product type. Key issues such as user willingness to pay premiums, user attitudes toward discounts, and the overall importance of price in the purchase decision are analyzed.
 - A discussion of vendor pricing topics such as pricing strategies, pricing trends, and discounting policies follows.

- A presentation of short-term objectives and long-term goals concerning pricing strategies concludes the report.

B. METHODOLOGY

- The information found in this report is the result of over 1,100 user interviews performed in 1985 in addition to over 130 vendor interviews performed throughout the year with leading manufacturers and third-party maintenance organizations.
- A short description of the service coverages available from vendors whose prices have been listed in this report has been included in Appendix A. In addition, a short list of service definitions used in the report has been included in Appendix B.

II EXECUTIVE SUMMARY

- This Executive Summary is designed in presentation format in order to provide key research findings and observations in a quick and orderly format. The summary is organized in presentation format with exhibits placed on the right-hand page and the corresponding text on the facing page.
- Service has gone through a dramatic evolution since the mid 1960s. Initially, maintenance activities were billed strictly as a percentage of purchase, rarely with any true analysis of profit involved. Service was not publicized, in part for fear of hurting product sales by implying the fallibility of the equipment. Gradually, service became recognized as a product in itself that could be sold profitably if priced and performed correctly.

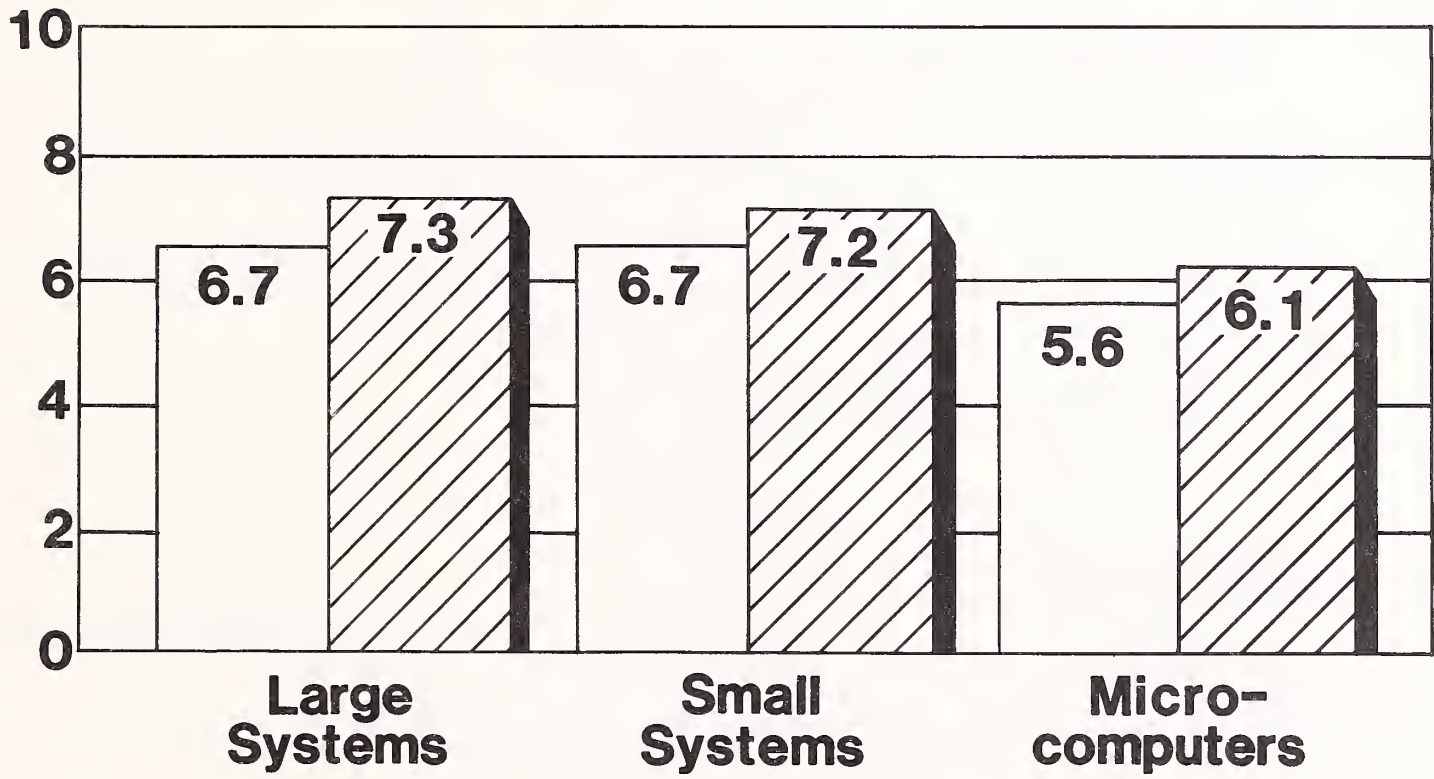
A. SERVICE PRICE GROWING IN IMPORTANCE

- As shown in Exhibit II-1, price of service has grown significantly in importance as a factor in the purchase decision of all three major computer product types. Of course, price of service is not the most critical factor, since quality of service, as measured by traditional vendor performance criteria such as response time, repair time, and (most importantly) system availability, consistently rank as most important by all users. However, users are becoming more aware of the increased competition for their service dollar, hence more concerned that they receive the best service available for that dollar.

- A number of factors have contributed to the increased importance of service pricing.
 - Increased competition between manufacturers who, in recognition of the tremendous profit potential of service, have become increasingly active in marketing and selling service to their end users and the general public. Where service at one time was considered a hindrance to new product sales (and as such often "downplayed"), service is now advertised in popular print ads and television commercials.

 - Increased competition from third-party maintenance vendors, who are growing at an even faster rate than the customer services industry as a whole. Users are becoming much more aware of TPM vendors and much more accepting of TPM as a viable alternative.

GROWTH OF SERVICE PRICE AS A FACTOR IN PURCHASE DECISION



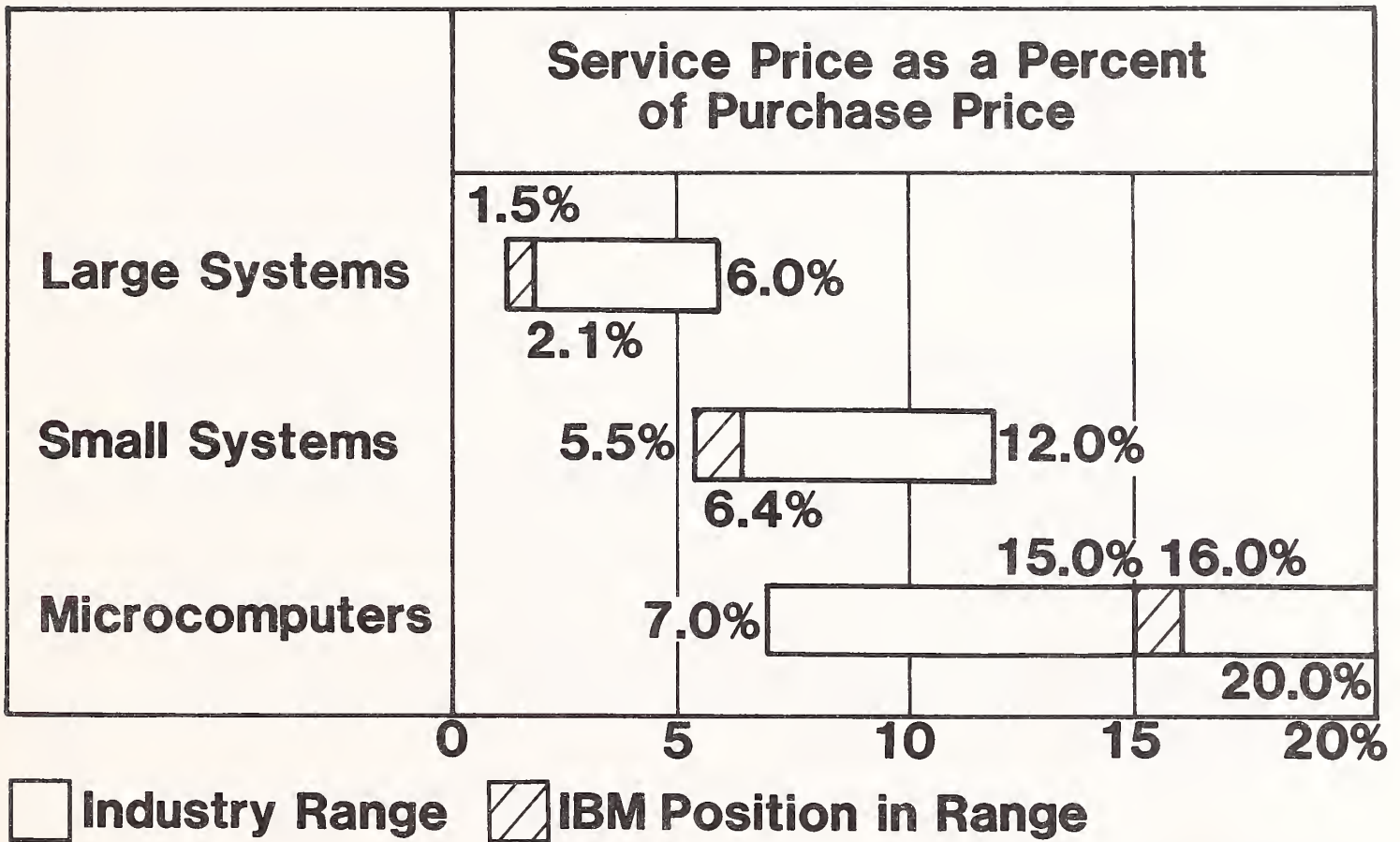
□ 1984 ▨ 1985

Scale: 1 = Least Important
10 = Most Important

B. INDUSTRY SERVICE PRICE RANGES

- It is not surprising that there is a wide variation in service prices between product types. Large systems service pricing, for example, is much more focused on the industry leader (IBM) than in the small systems and micro-computer markets. In part, this is a result of the maturity and stability of the large systems market where competing vendors have extremely efficient service organizations.
- The small systems market, on the other hand, is a much more diverse collection of products ranging from sophisticated superminicomputers to small business systems, each with vastly different service requirements. In addition, the small systems market itself is attracting a large number of new startup ventures, particularly in the multi-processor, super minicomputer segment. Most of these vendors do not have the service mechanisms of older, more established small systems vendors.
- The microcomputer service market exhibits the most confusion in the area of pricing, which is as much a reflection of the confusion in sales distribution as anything else. Initially, microcomputer service prices were set at an artificially high level (as a result of the tremendous costs involved in supporting such a fast growing and dispersed product base) that discouraged service contract selection. Now, as the product base becomes much more stable and dense, service prices are dropping to more realistic levels. Also, increased competition for microcomputer service, particularly from the manufacturers, should further reduce and stabilize microcomputer service pricing.
- It is important to note the position of IBM in each industry service price range, as shown in Exhibit II-2. IBM is traditionally at the low end of the service price range, more a result of its advanced service mechanism and ability to identify and deliver service efficiently than just its sheer size.

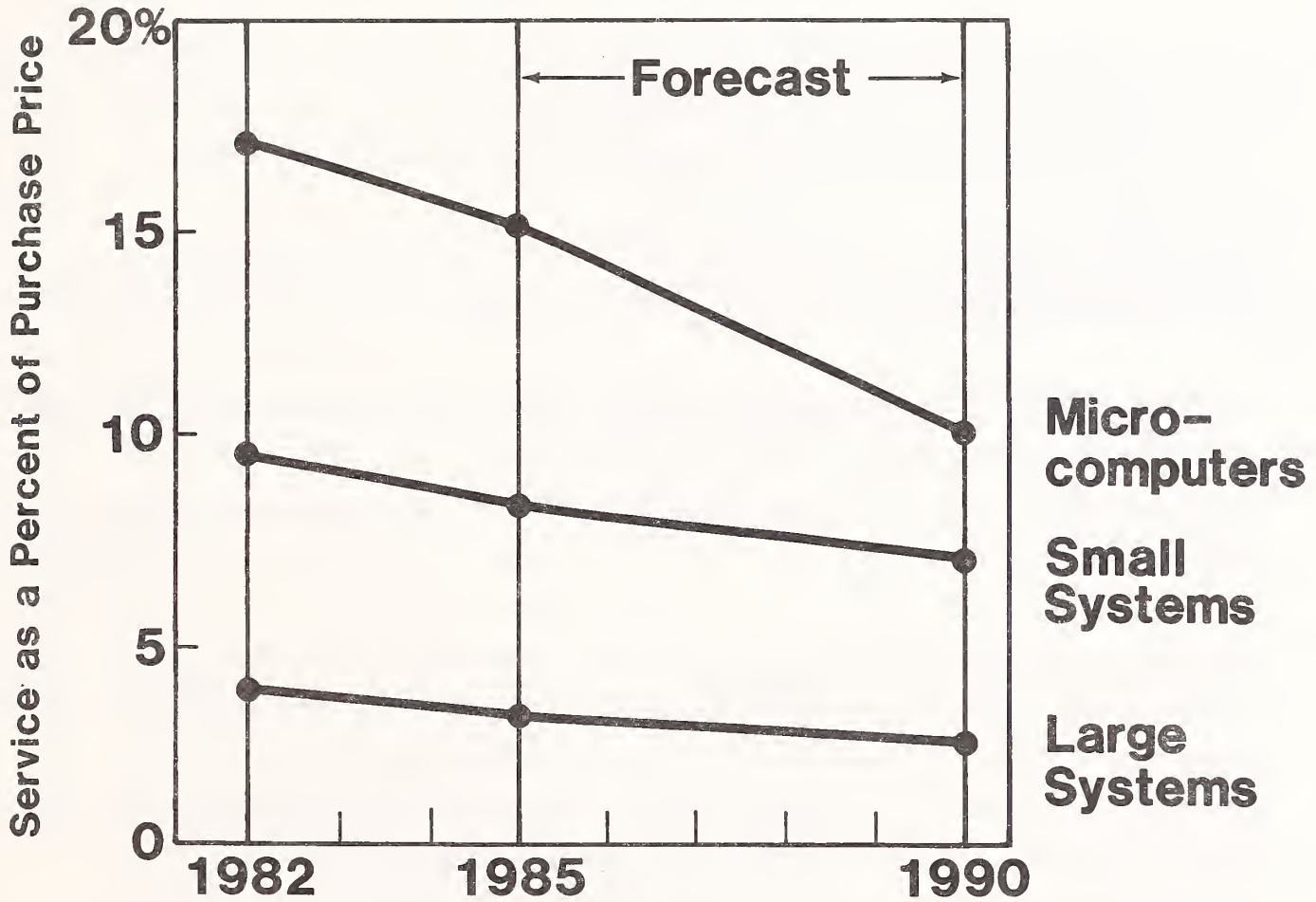
CURRENT INDUSTRY PRICE RANGES



C. DECLINE IN SERVICE PRICES WILL CONTINUE

- Exhibit II-3 demonstrates the drop in service prices that has occurred in the last two years for all three product types. A number of factors have contributed to lower prices.
 - Increased competition between manufacturers and between manufacturers/third-party maintenance vendors.
 - Improved equipment which is designed and manufactured to be more reliable, but also with more concern for serviceability. Increasingly, new products are relying on built-in diagnostics and even repair capabilities.
 - Improved performance by the service organizations as measured by improved response and repair times.
- This trend should continue, spurred by increasing pressure from users who will require more system availability yet stable prices. Some vendors have already addressed this dilemma by "unbundling" or separating previously gratis services and charging for them individually. Not coincidentally, these vendors have realized both increased customer satisfaction and further revenue growth as a result of "unbundling."

GRADUAL DECLINE IN STANDARD SERVICE PRICING



D. USER ACCEPTANCE OF PREMIUMS MAY PROVIDE NEW REVENUE

- One way of dealing with the increased need to provide lower service prices to increasingly price-sensitive users is to "unbundle" hardware maintenance activities that often were provided free of charge. Unbundling the standard maintenance offerings benefits the service vendor in two ways.
 - It makes it possible for the service vendor to provide a low-cost standard service offering, easing user demand for lower prices while encouraging new price-sensitive users to purchase service contracts.
 - It still provides extended service coverage to users who are less price-sensitive and/or require higher levels of service.
- A further benefit of unbundling and charging separately for extended services is that by assigning specific charges to services previously "thrown in," each additional service's value is increased, which in turn increases that service's effect on user satisfaction.
- Exhibit II-4 suggests that standby coverage (the availability of an engineer to respond at any time during the coverage period) is most attractive to systems users, a reflection of the growing system availability requirements of most users. This service is attractive enough to warrant significant premium charges (12-13% of the basic monthly maintenance charge). The exhibit also demonstrates that a small, yet significant number of users would be willing to pay a considerable premium (9-10% of BMMC) to receive additional software support.

USER ACCEPTANCE OF PREMIUM SERVICES

Extended Service	Percent of Users that Require Service	Acceptable Premium as a Percent Over BMMC
Standby Coverage	26-50%	12-13%
Increased Software Support	26-30%	9-10%
PM, Non-Prime Hours	50-85%	5-7%
On-Site Spares	22-61%	4-5%

E. VENDORS SHOULD AVOID OVERUSE OF DISCOUNTS

- Discounts are typically used by service vendors to close new business or to increase penetration into existing accounts. While certain vendors have been successful in introducing standardized discount practices, most discounts for service are negotiated at contract time.
- INPUT has found that vendor use of service discounting has been inconsistent, at best. Vendors currently utilize a number of criteria in establishing discount levels, either singularly or in combination. Most often, vendors base discounts on one or more of these factors.
 - Service revenue or account size, also known as quantity discounts.
 - Contract type, in particular pre-paid, long-term contracts.
 - Increased user participation in maintenance ranging from depot-style maintenance to the user performing diagnostics and/or actual repairs.
- While it is obvious that judicious use of discounting is necessary in an increasingly competitive marketplace, service vendors should not use service discounts as a way of addressing an increasing user need for more flexible service offerings. Discounts can work to "devalue" service, making users even more price-sensitive. Furthermore, the act of discounting service results in money left on the table.
- Instead, service vendors should consider providing a lower-priced, "unbundled" service offering with additional service packages at higher levels. The lower-priced service offering attracts price-sensitive customers, while additional offerings give all users more flexibility to choose the level of service that they require.

VENDOR SERVICE DISCOUNTING

- **Used to Close New Business or Increase Penetration Into Existing Accounts**
 - **Most Negotiate Service Price at Contract Time**
 - **Multiple System Site Discounts Are Common, Based on Dollar Volume**
 - **Prepayment Discounts Are Becoming Fashionable, in 5% to 18% Range**
-

III USERS AS A FORCE IN VENDOR PRICING

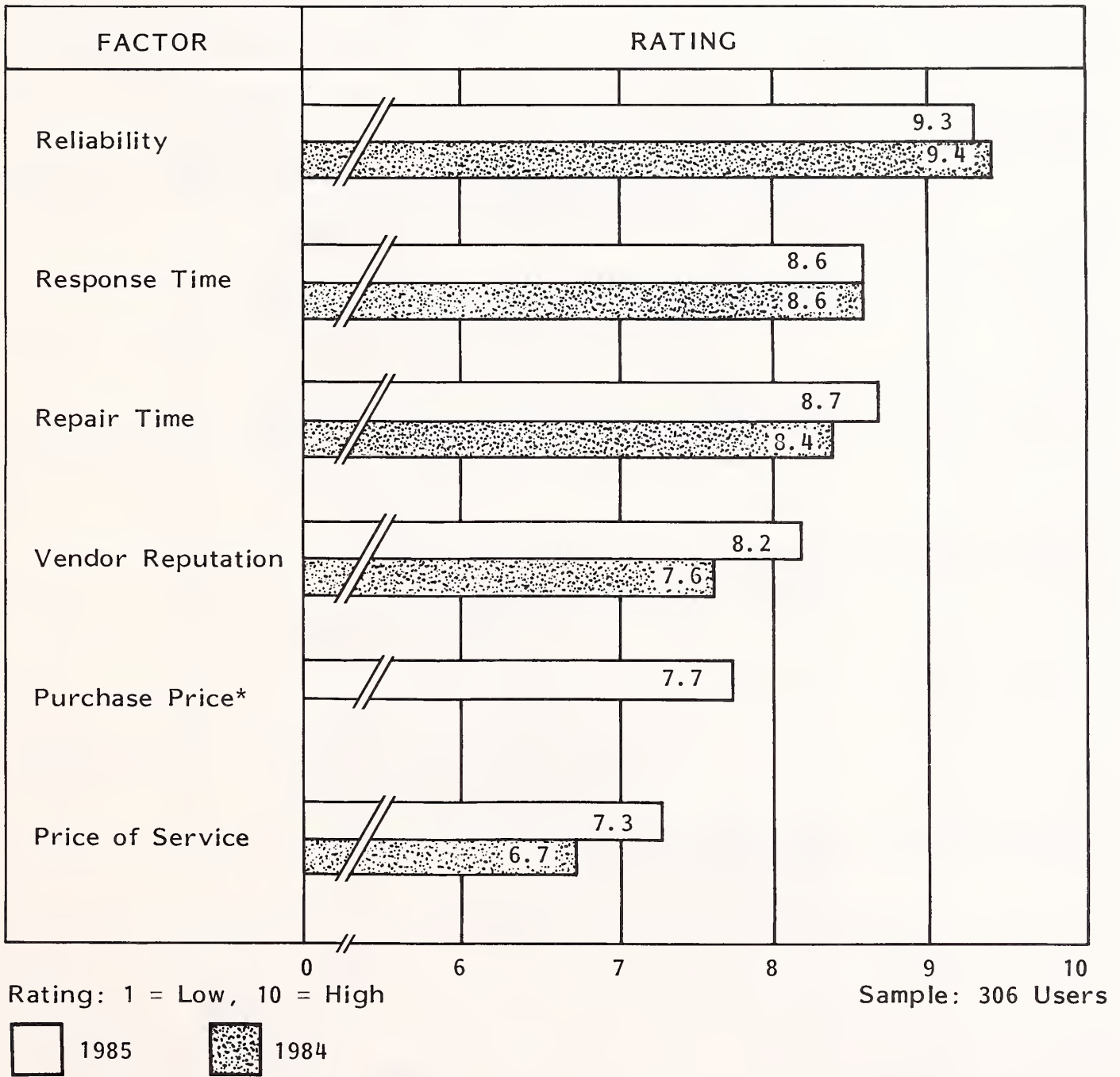
A. IMPORTANCE OF SERVICE PRICE IN USERS' PURCHASE DECISION

- In the past, it was accepted that maintenance and support was a standard offering provided to users out of necessity and that vendors in most situations would set prices at reasonable levels that would cover their expenses. Gradually, service in itself became a product with its own "marketability," "salesability," and, most importantly, "profitability." A number of factors contributed to this transition.
 - Increased user pressure for more and better service extended the concept of service from simply "fixing the machine" to improving total use, including maintenance, training, and consulting.
 - Service, driven by users' increased needs, became a competitive force between vendors, prompting service organizations to develop more efficient, and therefore profitable, ways of delivering services.
- The transition of service has not been lost on users who recognize the growing importance of service, both in terms of optimizing data processing usage and also in terms of total cost of operations. Users are placing much more weight on the quality of service available when making their purchase decision. In addition, users are much more aware of the increased competition for their service dollars as a result of the growth in third-party maintenance.

- Exhibits III-1 through III-3 demonstrate the growing importance of service price in the initial computer purchase decision for large systems, small systems, and microcomputer users. Note that in all product types, maintenance price is a relatively unimportant decision criteria; however, the importance of service price is growing quickly for all product types. As reliability, as measured by system availability, peaks (and becomes almost standard), service price will become even more important in the purchase decision.
- One of the most successful companies in recognizing the value of service has been IBM, which has been very competitive in service pricing, particularly in the pivotal large systems (mainframe) market. For example, IBM has dropped the service price on selected 308X mainframes by 35% in less than two years.
- Of course, IBM is aided by a number of factors in service pricing, including improved economies of scale and higher product densities. However, IBM has also been very astute in identifying their own users' needs for service. The company has effectively repackaged their service offerings in order to satisfy both the price-sensitive end of their product base and customers who require a higher level of service and are typically price-insensitive.
- Of concern to manufacturer-supplied service vendors, in light of the growing importance of service to users, should be the relative dissatisfaction users report with the price of service, as shown in Exhibit III-4. Of course, cost of service is an issue where users will always express a certain level of dissatisfaction, but it would be unwise for any service vendor to dismiss the low satisfaction ratings shown in the exhibit. User dissatisfaction with service pricing is fairly constant between product categories, which reinforces the concern that users express about service pricing.
- It would be simplistic (and in the long run, disastrous) to conclude from this exhibit that users' primary goal is lower service prices. The previous exhibits, and in fact all of INPUT's research, clearly demonstrate that quality of

EXHIBIT III-1

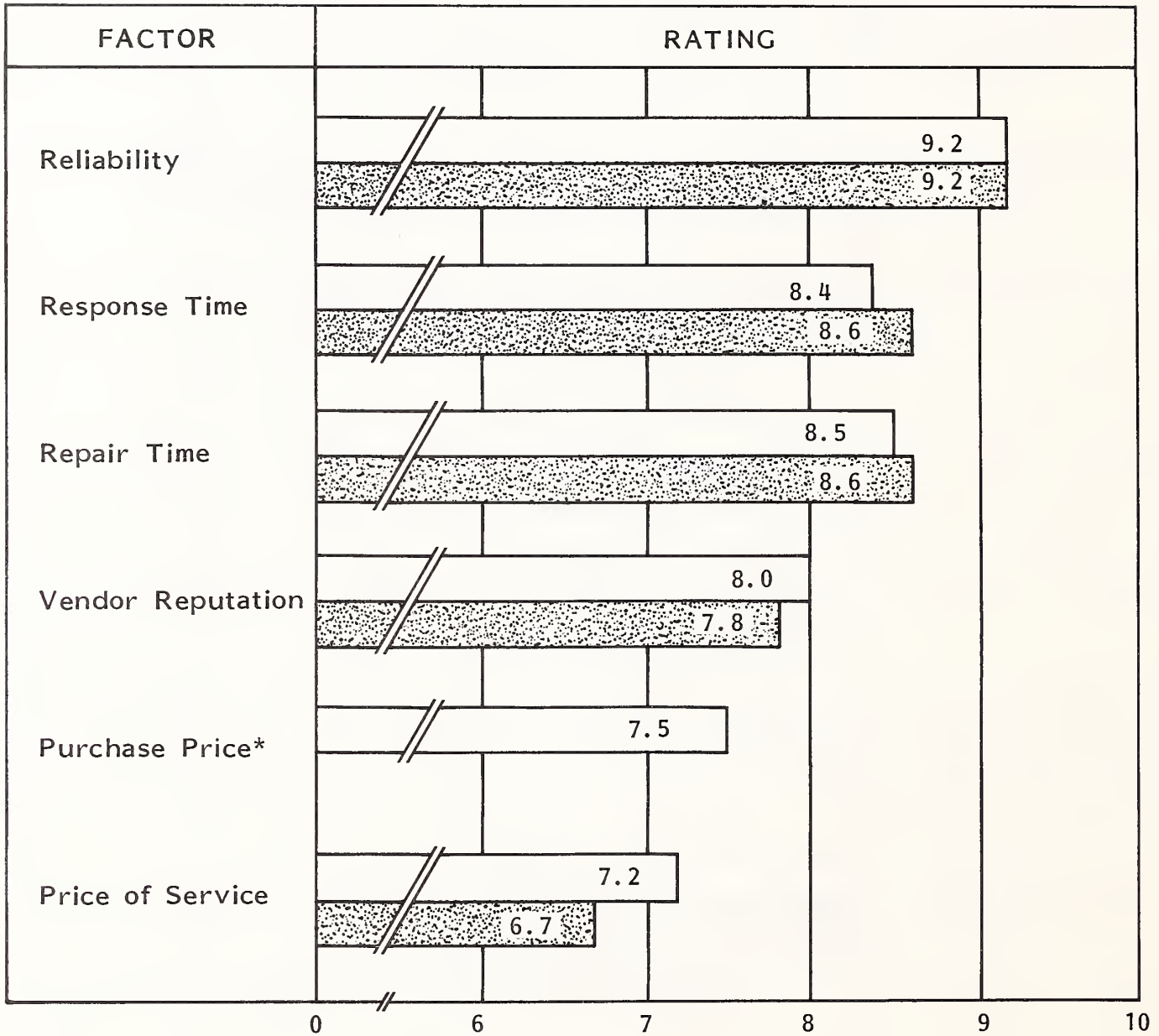
IMPORTANCE OF SERVICE PRICE IN PURCHASE DECISION
LARGE SYSTEMS



*Figures not available for 1984.

EXHIBIT III-2

IMPORTANCE OF SERVICE PRICE IN PURCHASE DECISION
SMALL SYSTEMS



Rating: 1 = Low, 10 = High

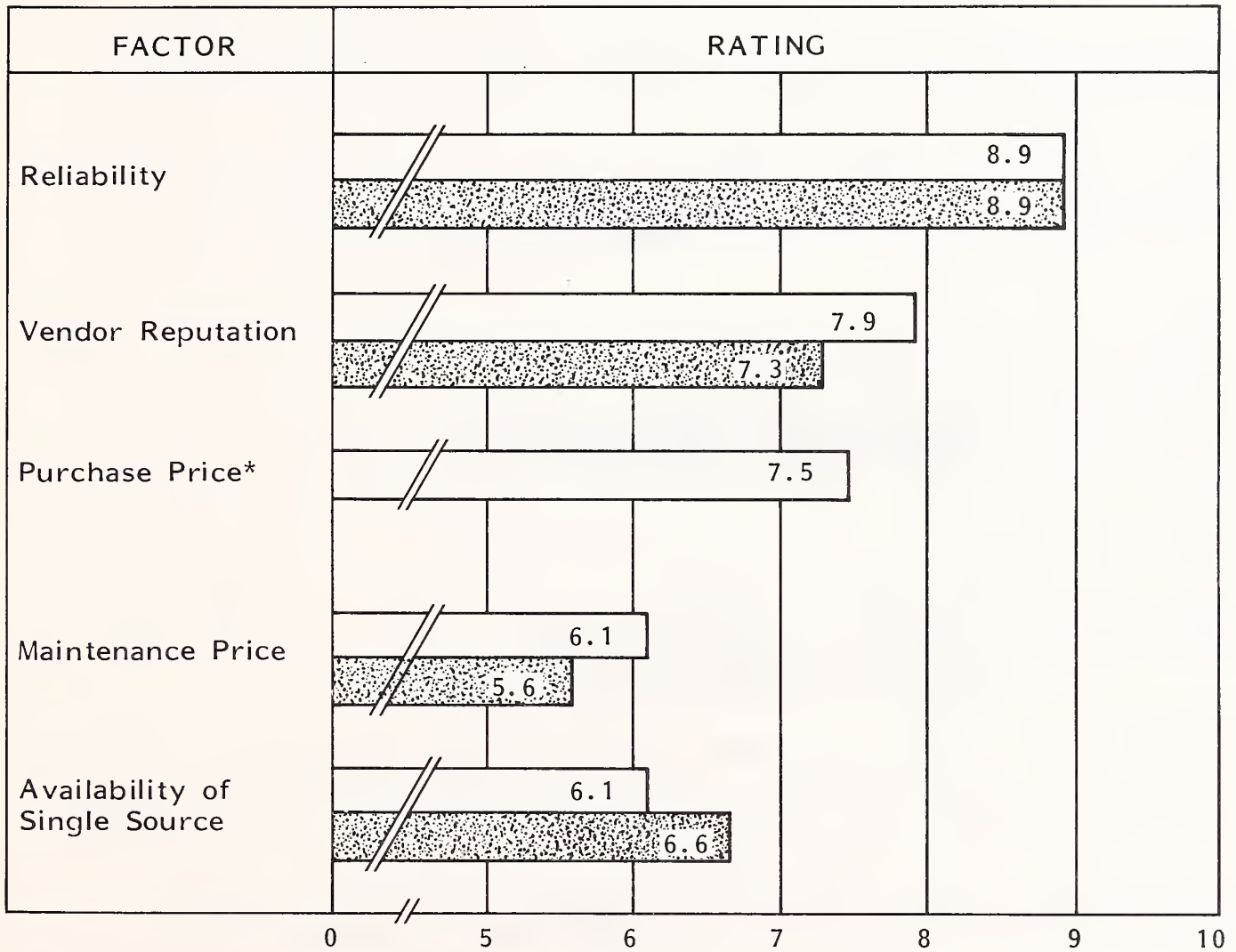
Sample: 372 Users

□ 1985 ■ 1984

*Figures not available for 1984.

EXHIBIT III-3

IMPORTANCE OF SERVICE PRICE IN PURCHASE DECISION
MICROCOMPUTERS



Rating: 1 = Low, 10 = High

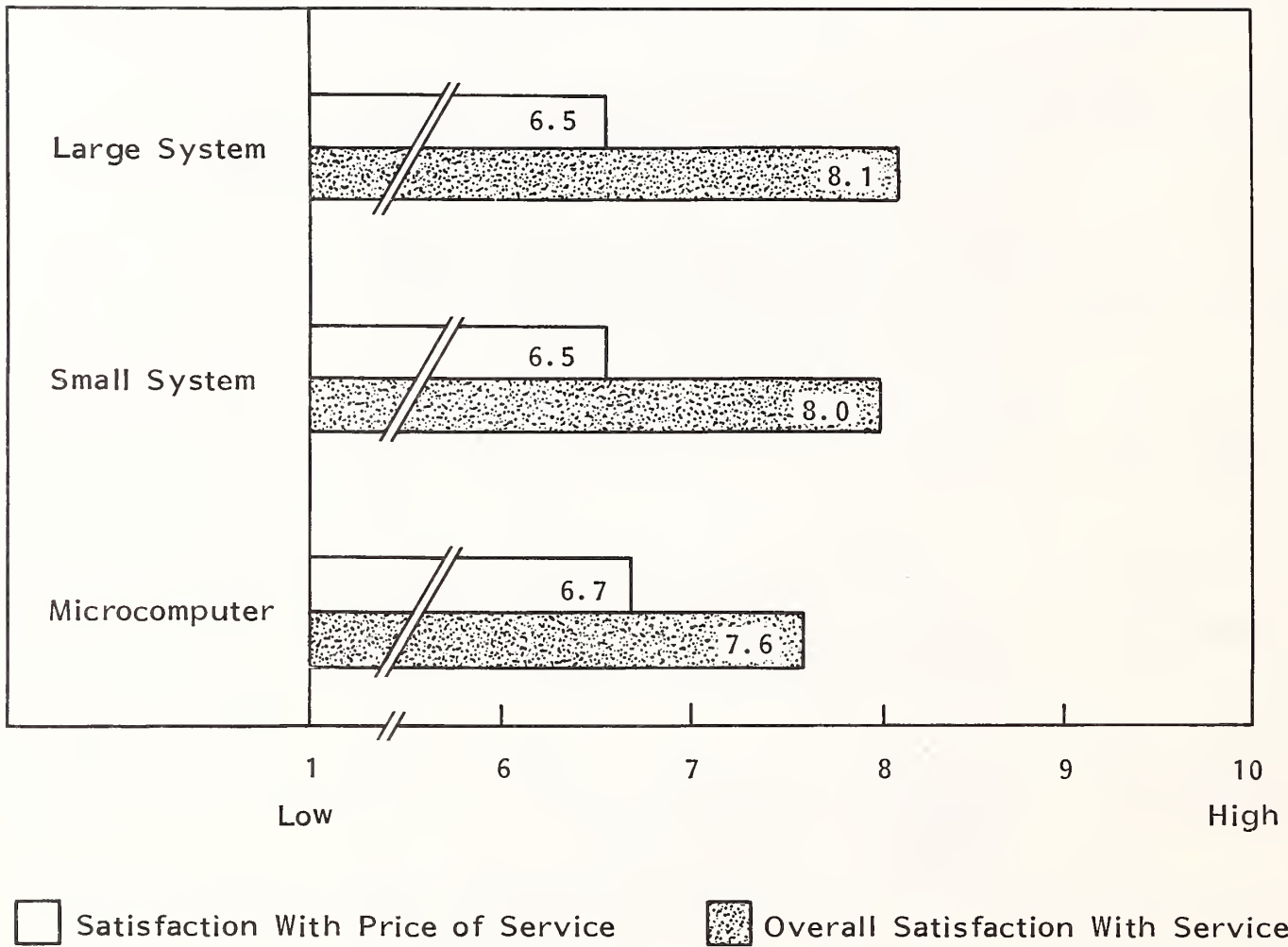
Sample: 222 Users

□ 1985 ■ 1984

*Figures not available for 1984.

EXHIBIT III-4

COMPARISON OF SATISFACTION WITH
PRICE OF SERVICE AND OVERALL SERVICE QUALITY



Sample: 900 Users

service as represented by actual performance (response time, repair time, etc.) and, more importantly, system availability are foremost in the user's mind. However, all service vendors are aware of increasing user pressure to if not lower service prices, at least control them.

- Service organizations not only experience pressure from users to keep prices stable, but also from the larger corporation to increase their own profitability. Service vendors can satisfy this internal goal by either of the following: reducing internal costs (e.g., improving efficiency) or increasing revenues (e.g., raising prices). Both of these individual strategies have serious drawbacks; service organizations must realize that by cutting costs, users often perceive an effect on service and customer satisfaction is reduced. We have already seen that users are pressuring for stable, even lowered, prices.
- A solution to the dilemma is a combination of the two strategies. By offering a base level service to users with the option of choosing additional services with appropriate premiums attached, the service organization can satisfy both internal and external requirements. By establishing a (lower priced) base level service offering, the vendor satisfies the user demand for low-priced service. In addition, the vendor satisfies the corporate goal of increased profitability by maximizing service coverage by offering a low-priced (to users), low-cost (to the vendor) service.
- A second benefit is the availability of premium service levels to those users who require them. These users with high service requirements are less price-sensitive as a group than most computer users, and as a result are realistically accepting of paying the premiums to get the service levels that they require (shown in the next section of this report).
- A number of large system vendors have successfully "unbundled" their service offerings, providing base level service and offering additional services for additional charges; however, most manufacturers admit that they still "give away" too many free services by bundling them into the base offering.

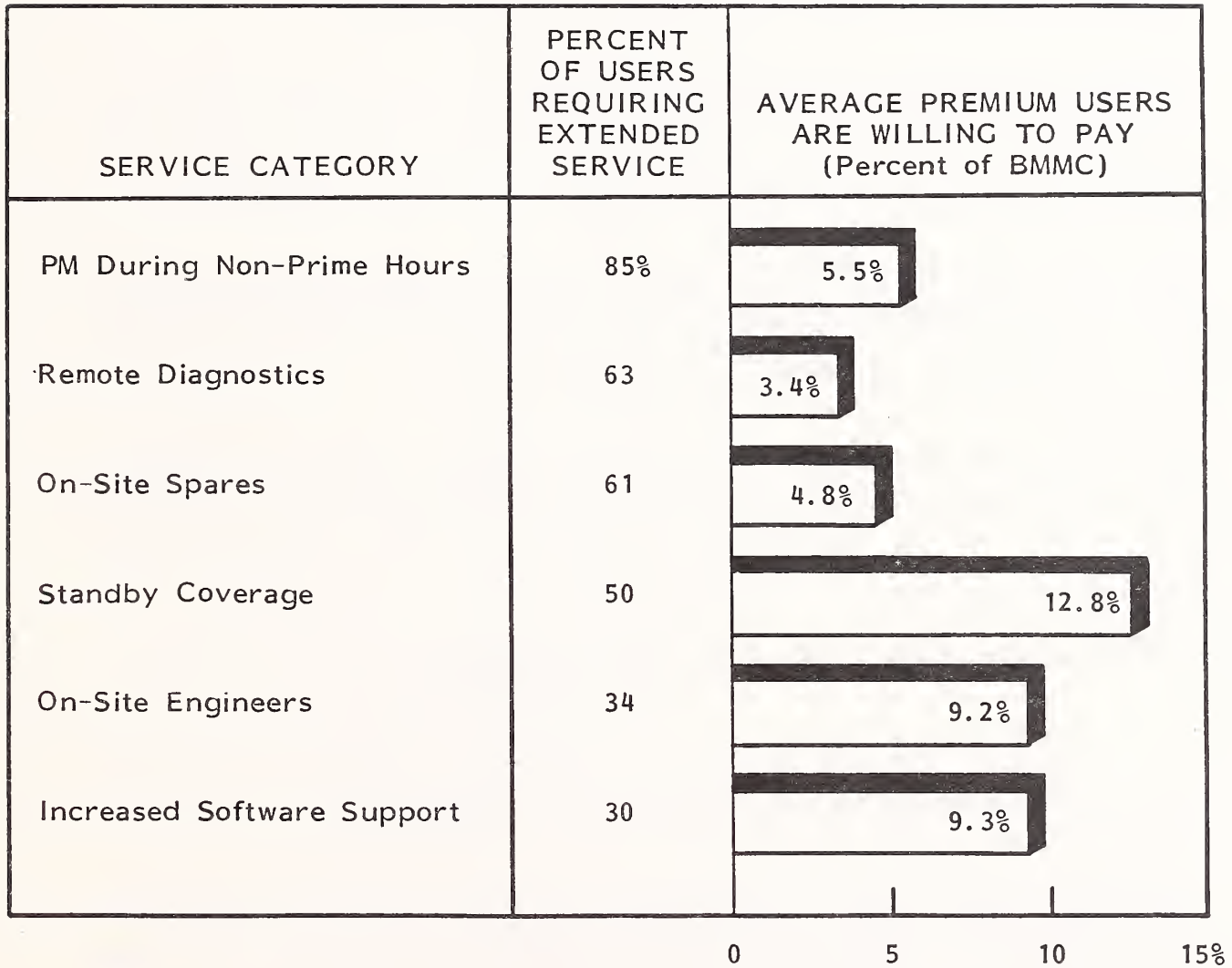
- INPUT believes that by unbundling and individually pricing each service product, the vendor better communicates the value of each service to the user, thus increasing the importance of that service to users. And as a result, by increasing the value of each individual service performed by the vendor, overall user satisfaction actually increases.
 - The increased value of each additional service tends to counteract user overemphasis on specific, labor-intensive services, such as response and repair time.
 - A number of these additional services such as planning, training, and consulting are more usage oriented, improving customer satisfaction with total product performance in addition to reducing the need for service.
- The next section of this report will demonstrate user requirements for selected premium service levels and how these additional services can increase revenue potential.

B. USER PRICE SENSITIVITY TO PREMIUM OFFERINGS

- Not surprisingly, large systems users report the greatest requirement for extended or premium services of all product types (as shown in Exhibit III-5). A number of factors have contributed to this:
 - Large systems users have made the largest investment, both in terms of initial purchase and, more importantly, in terms of overall investment (calculating service costs, programming costs, etc.).

EXHIBIT III-5

LARGE SYSTEMS USER REQUIREMENTS FOR EXTENDED SERVICES
ALL VENDORS



Sample: 306 Users

- Downtime has a much greater impact on the user organization, both in terms of number of people and in actual value of processing performed.
- As a result, large systems users typically have greater service requirements and as a by-product are much less price-sensitive in relationship to their total service value. In previous reports, INPUT has demonstrated that large systems users rate service issues such as response and repair times as being equally important as system capabilities or performance.
- It is not surprising that a much greater proportion of large systems users responded that they require the premium services shown in Exhibit III-5. These additional services required by 50% or more of the sample include:
 - Preventive maintenance (PM) performed during non-prime hours (prime is classified as 8:00 a.m. - 5:00 p.m., Monday through Friday). Eighty-five percent of the sample required this service.
 - Remote diagnostics, demonstrating increased acceptance with 63% of the sample reporting that they require the service (up from 56% in 1984 and 48% in 1983).
 - On-site spares, required by 61% of the sample.
 - Standby coverage with only one-half of the sample requiring this service (yet carries the largest acceptable premium).
- Of greater significance, at least to large systems service organizations, should be what levels of additional revenue potential are available from these additional service offerings. Exhibit III-5 presents the average premium level as a percent of the basic monthly maintenance charge (BMMC) deemed reasonable by those users who required each service.

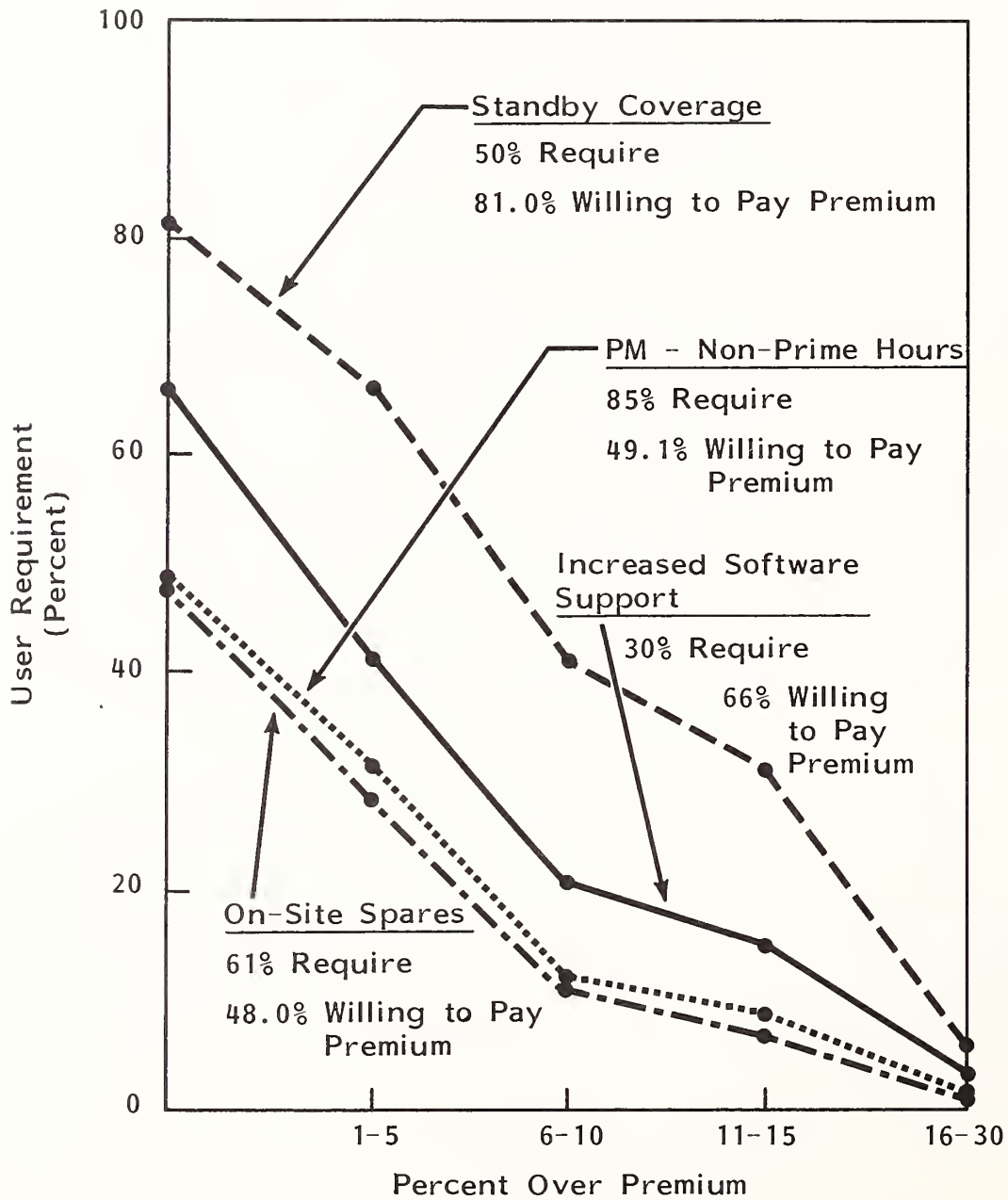
- From the exhibit, two overall observations can be made concerning large systems user attitudes toward premiums.
 - Large systems users have a realistic sense of high-cost services, such as (dedicated) on-site engineers and increased software support, and, at least at this point in time, do not require these services (as premium offerings).
 - Large systems users have higher requirements for other premium services, particularly PM (non-prime hours), standby coverage, and on-site spares, as demonstrated by a greater willingness to pay appropriate premiums.

- Exhibit III-6 graphically supports the latter conclusion, adding in the additional key factors of who would be willing to pay (of those requiring each service) and at what premium level. Taking these factors into account, it is clear that standby coverage as a premium service is most attractive, both to users as an additional service and to vendors as a source of additional revenues. While only 50% of the users responded that they require this service, over 80% of these users would be willing to pay a premium (an average of 12.8% as shown in Exhibit III-5). Furthermore, the exhibit demonstrates that a large percentage of users are willing to pay premiums of up to 15% of the BMMC for this service.

- Exhibit III-6 also demonstrates that although the largest percentage of large systems users require non-prime PM visits, less than one-half of these users would be willing to pay a premium for receiving this service. Large systems users recognize the importance of preventive maintenance; however, the inconvenience of a prime-shift PM visit and whatever impact that visit would have on operations is not great enough to warrant additional money. To a small degree, this might suggest that users equate PM visits as a contractual obligation of the service vendor. A more significant conclusion, however, may be the desire of large systems IS managers to be present for the PM visit.

EXHIBIT III-6

CUMULATIVE DISTRIBUTION OF ACCEPTABLE PREMIUMS
LARGE SYSTEMS



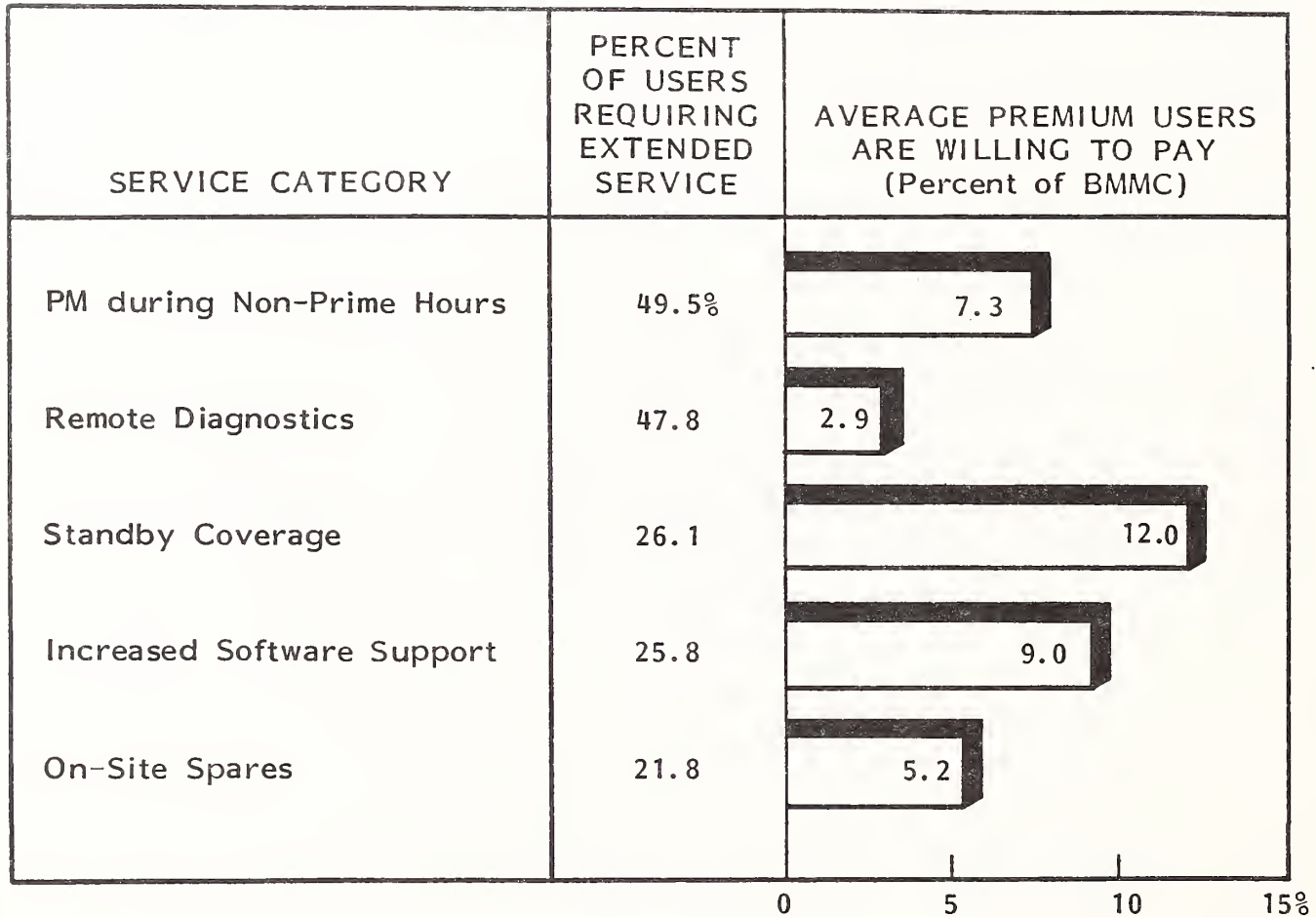
- Standby Coverage
- Increased Software Support
- PM - Non-Prime
- . - . - . On-Site Spares

Sample: 306 Users

- Large systems users do not report a significant requirement for on-site spares. This is surprising considering the high level of requirement that large systems users place upon the availability of spares. This requirement is amplified by the same users reporting overall dissatisfaction with parts availability (in fact, 62% of all large systems users were dissatisfied with parts availability). Clearly, large systems users are looking for improved access to spares; however, it is apparent that most of these users are interested in vendor-supplied, localized spares versus the costs (and headaches) involved with on-site spares.
- A fourth service, increased operating system software support, has been added to this exhibit's analysis. Even though a low percentage of users (30% of the large systems users) reported that they require this premium service, a large percentage of those who do require the service indicated that they would be willing to pay relatively significant premiums to receive it. A rather large percentage of large systems users reported dissatisfaction with their OS software support in INPUT's Large Systems User Requirements report, obviously contributing heavily to this small group of users who would be willing to pay premiums of 10% of BMCC to receive improved support.
- A similar analysis is performed on small systems users' requirements for additional services and their willingness to pay for appropriate premiums attached to these services. Exhibit III-7 shows that small systems users, like their large systems counterparts, report the greatest requirement (as an outright percentage of the group) for non-prime hour PM visits and the largest acceptable premium for standby coverage. Not surprisingly, there is less overall requirement for any individual premium service offering since small systems users have lower overall requirements for service and support.
- Exhibit III-8 provides greater detail of small systems users' attitudes toward premium service levels. Again, standby coverage receives the highest percentage of users who require the service and are willing to pay realistically

EXHIBIT III-7

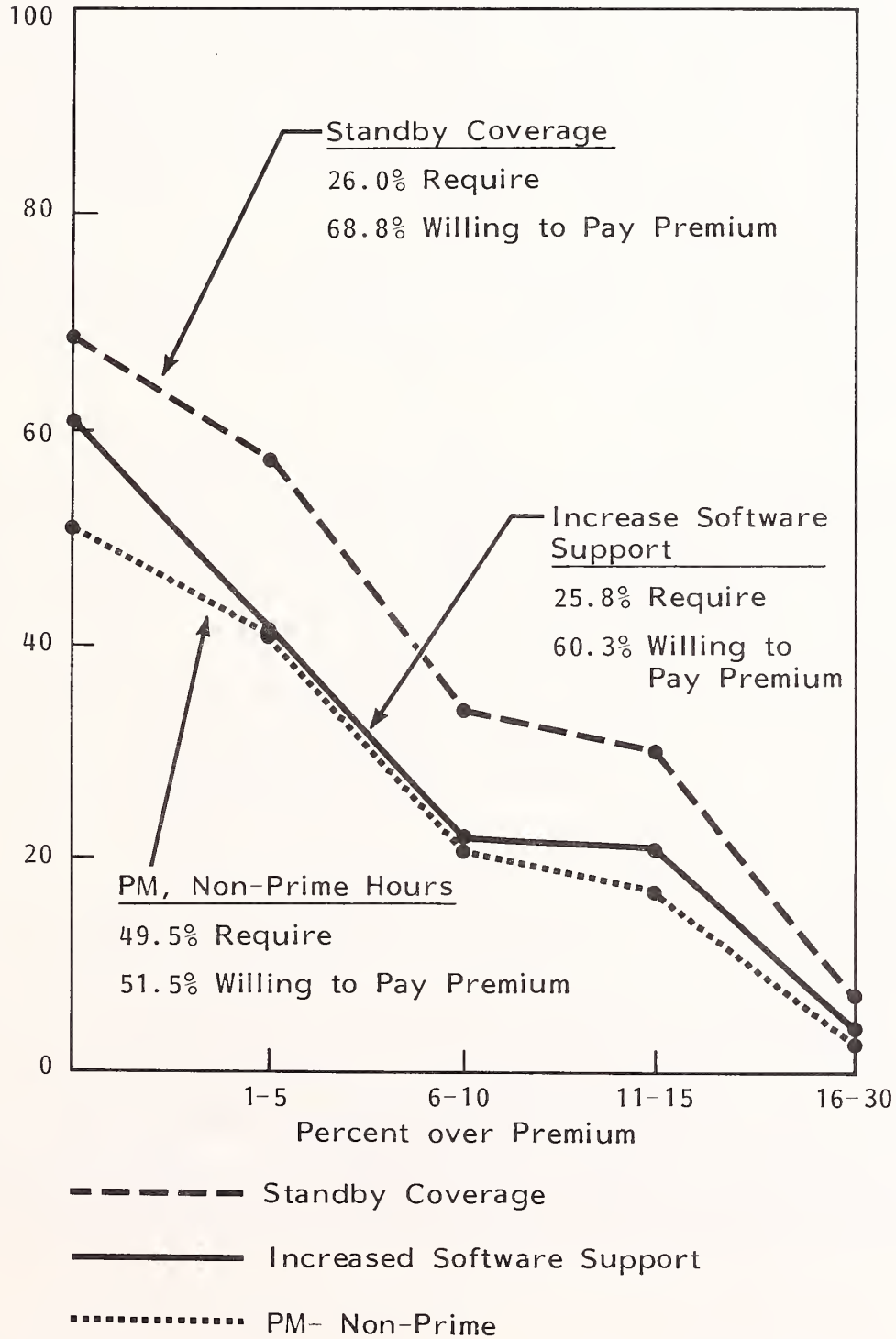
SMALL SYSTEMS USER REQUIREMENTS FOR EXTENDED SERVICES
ALL VENDORS



Sample: 372 Users

EXHIBIT III-8

CUMULATIVE DISTRIBUTION OF ACCEPTABLE PREMIUMS
SMALL SYSTEMS



Sample: 372 Users

high premiums for receiving it. On the other hand, since such a small percentage of users (26%) require such a service, the revenue potential of such an offering is diminished.

- This is not the case for PM visits performed during non-prime hours, which attracted just under 50% of the small systems users. Over one-half of these users are willing to pay a premium (averaging 7.3% of BMMC) to receive this additional service. This suggests that small systems users whose system availability requirements have been rising dramatically in the past two years are placing an emphasis on "prime time" processing, preferring that any interruption, even for a scheduled PM visit, occur at less "critical" times.
- The exhibit also demonstrates that there is a small core of small systems users who, similar to their large systems counterparts, recognize a tremendous need for increased and improved software support and are quite willing to pay for it.
- In general, small systems users' system availability requirements are growing at an accelerated rate while the ability of most vendors to satisfy these requirements is limited by resources. Two potential remedies to this problem are increased remote support capabilities and redundant systems architecture. However, both are expensive to implement. It is not surprising that a significant number of small systems users are willing to pay for premium services in the hope of minimizing the effects of any system interruption, if not preventing such occurrences.
- The significance of both large and small systems user willingness to pay premiums for additional services can be accounted for in financial terms, since a successful premium service offering not only increases user satisfaction with service, but also contributes revenues that previously were left on the table. One method for estimating the revenue potential of any single additional service offering would be to multiply the number of users who require that service by the level of the premium. By performing this analysis

at each premium (or uplift) level, vendors can also determine an optimum premium level for each additional service.

- For example, by applying this formula to large systems users' attitudes toward standby coverage, the optimum premium level can be established at the 10% (of the BMMC) level since:

	306.0	(total large systems users)
multiplied by	50.0%	(requiring service)
multiplied by	41.0%	(willing to pay a premium of 10%)
multiplied by	<u>10.0%</u>	(premium over BMMC)
equals	6.3%	(additional revenues per month)

- If a 5% premium level is substantial, the equation appears as such:

	306.0	(total large systems users)
multiplied by	50.0%	(requiring service)
multiplied by	66.0%	(willing to pay a premium of 5%)
multiplied by	<u>5.0%</u>	(premium over BMMC)
equals	5.0%	(additional revenues)

- Additional operating system software support, using this formula, does not appear to offer the same additional revenue potential due to the fact that only 30% of the large systems users felt that they required the software service. Thus, even though a relatively large percentage of these users would be willing to pay a premium for this service, the revenue boost resulting from a 5% premium (the optimum premium level) is only 1.9% more per month.
- In the small systems market, the same analysis indicates that the increased revenue potential available from standby coverage is rather limited at a 5% premium level with only 2.7% additional revenue per month, but optimizes at the 15% premium level bringing in an additional 4.4% revenue per month. Beyond the 15% premium level, the revenue potential falls away quickly.

- Preventive maintenance performed during non-prime hours appears to provide the largest additional revenue potential in the small systems market, bringing 3.7% more revenue per month at the 5% premium level, 3.9% more revenue at the 10% premium level, and 4.7% more revenue per month at the 15% level.

- An interesting side observation that results from this analysis of user attitudes concerning additional services is the increasing requirement that both large and small systems users report for remote diagnostics. Historically, service organizations have faced dogged resistance from a surprisingly large percentage of users concerning remote diagnostics. This resistance usually resulted from any (and all) of the following:
 - Concerns over data security, even in systems that perform diagnostics only to the controller level.

 - Confusion over pricing, or more specifically who pays for what, since some vendors provide RSS for free, others provide discounts as incentives, and still others charge premiums for the service (or at least require the user to purchase additional items that in a sense act as premiums).

 - A less tangible, yet still significant, fear of users is that they would lose the important personal attention of an FE.

- It is surprising that, in light of these concerns and confusion, there are still users who are willing to pay premiums for a service that almost all users recognize as a cost saving feature for both the user and the vendor. Users must recognize the tremendous initial costs in setting up and integrating remote capabilities into their systems, and appear to be willing, at least in part, to help defray these costs. Considering the importance of remote support in satisfying ever-increasing system availability requirements of systems users of all categories, vendors should continue to work to overcome user concern and confusion about remote support services.

- A final observation concerning the importance of providing premium service offerings, even if user acceptance is relatively limited. Users are becoming increasingly segmented in their service and support needs, and as a result, "blanket" service programs that bundle services into a single support coverage will be decreasingly effective in satisfying user service needs. Instead, vendors should develop service "menus" that allow users of widely differing service needs to choose support programs that fit their specific requirements. This will be discussed further in Chapter V.

C. USER ATTITUDES TOWARD SELF-MAINTENANCE

- Customer service organizations are currently faced with the following dilemma--how to maintain a high level of customer satisfaction when user service requirements are rising and at the same time users expect service prices to remain stable. This report has already suggested that "unbundling" services and re-introducing previously "free" services as premium offerings is one method of satisfying users with higher service expectations. However, that strategy only partially addresses the question concerning those users on the other end of the spectrum, particularly those who are increasingly price-sensitive to premium services yet have unmet service needs.
- One method that a number of service organizations have turned to is the introduction of service offerings that increase users' participation in the maintenance and support of their own equipment and provide an acceptable discount for such participation. This is by no means an innovative strategy. Service organizations have historically offered service levels that require increased user participation in the service process for reduced service rates, often in the form of depot service. However, the majority of systems users (excluding microcomputer and selected telecommunications users) appear to be ambivalent toward most forms of depot maintenance.

- Instead, a number of service organizations are looking at ways to increase user participation in the actual maintenance and support of equipment. This strategy offers a number of advantages.
 - It provides a low-cost service option for those users who are extremely price-sensitive and/or have developed their own internal support capabilities.
 - It extends the range of service offerings which limits the opportunities for competitors to move in at the low end of the service range. This is particularly effective when dealing with third-party maintenance vendors who rely on price as a competitive sales criteria. This advantage, of course, assumes that the service "menu" also includes premium service levels at the other end.
 - It acts as a "loss leader," attracting in new customers who then may opt for other higher-priced service options (see Chapter IV for a description of "loss leader" pricing).
 - It increases user awareness of the importance of service, leading to lowered overall service price sensitivity.
- It should be emphasized that service organizations need to introduce such discounted offerings in conjunction with other, higher premium service offerings. While users are becoming more price-sensitive, particularly in the area of hardware maintenance, price is not the most important factor to the vast majority of users. The goal of the service organization is to increase the value of service in addition to increasing the potential population of service customers. To do this, service organizations must provide both low-cost options and extended service availability.

- Service organizations can especially benefit by using increased user-participation service offerings in areas where user service requirements are rising at a faster rate than the service organization can profitably address. Two such areas analyzed for this report are software support and microcomputer maintenance.
- Software support, particularly for large and small systems, has been a traditional area where users express concern (as demonstrated in INPUT's User Service Requirements reports). In fact, only 48% of the large systems users and 41% of the small systems users interviewed were satisfied with the level of software support that they received from their vendors. Moreover, both groups of users' software support requirements are growing at a significant rate. The previous section demonstrated that only a small percentage of users currently require additional software support when faced with a premium for that support (although this percentage will undoubtedly grow in the near future as software support requirements continue to increase). However, a large percentage of both large and small users would be interested in increasing their own activity in software support if presented with a discount.
- Exhibit III-9 shows that eight out of ten of the large systems users would be willing to increase their own activities in working with telephone support centers and installing their own patches, modifications, and new releases for relatively low (15-17%) discounts involved.
- Exhibit III-10 shows that small systems users demonstrate slightly less willingness (as can be expected) to perform similar functions, with a larger discount (approximately 22%) attached. Surprisingly, just over 50% of these users would expect to receive a discount to perform these functions.
- The fact that large and small systems users appear to be willing to assume increased responsibility for selected software support activities is encouraging, considering the increasing pressure on vendors to develop software support vehicles that, at least currently, are very costly to implement (e.g., remote support).

EXHIBIT III-9

LARGE SYSTEMS USER ATTITUDES TOWARD
INCREASED PARTICIPATION IN SOFTWARE SUPPORT

LEVEL OF PARTICIPATION	PERCENT YES	EXPECTED DISCOUNT (Percent)
Working with Support Centers	80%	16.7%
Install Patches, Modifications, New Releases	79	15.3

EXHIBIT III-10

SMALL SYSTEMS USER ATTITUDES TOWARD
INCREASED PARTICIPATION IN SOFTWARE SUPPORT

LEVEL OF PARTICIPATION	WILLINGNESS (1-10)
Working with Support Center	7.3
Install Patches, Modifications	6.8
Install New Releases	7.0

DEMOGRAPHICS	(Percent)
Percent Users Who Expect Discount	54.7%
Percent Discount Expected	21.7%

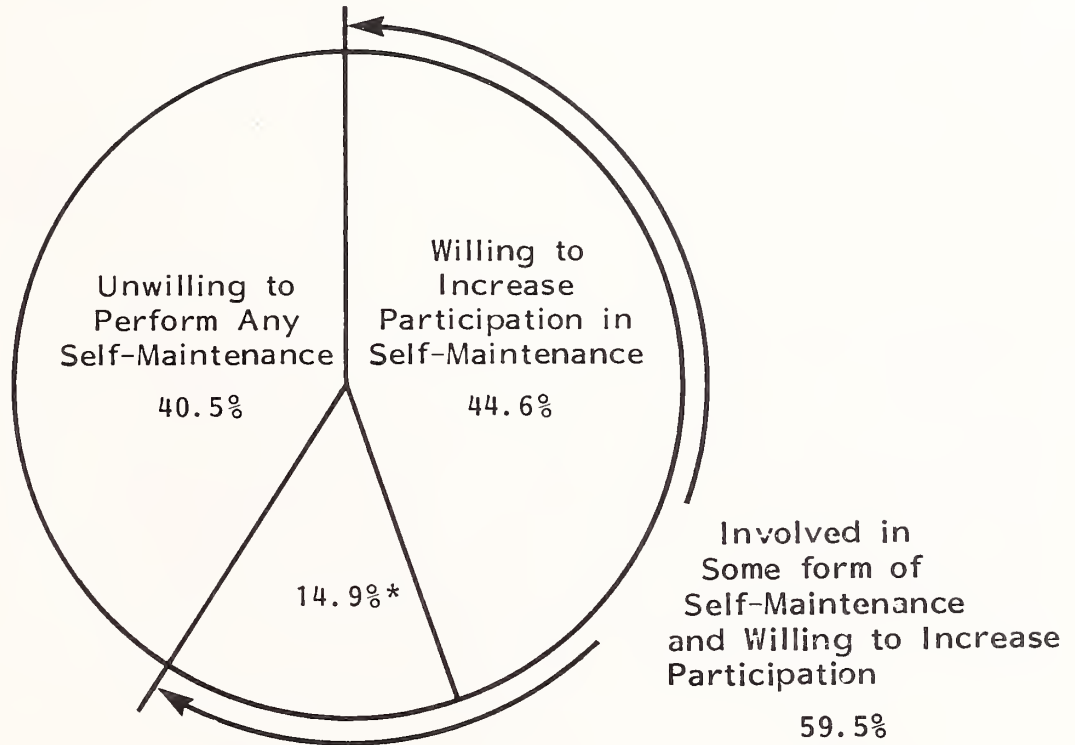
- Exhibit III-11 shows that the majority of microcomputer users are willing to increase their involvement in self-maintenance. In fact, over 62% of these users are willing to participate at the board level, which is not surprising considering that a significant number of microcomputer users have some level of experience installing memory boards and peripheral cards. Of course, these users expect to pay considerably less than the standard maintenance contract; however, the 40% discount that users expect to pay is not unrealistic considering the current service offerings available.

- Again, service vendors who provide such a service offering benefit in two ways:
 - They attract previously untapped users who require at least some level of service (typically access to parts and expertise) but are price-sensitive enough to not want to pay full price.

 - They extend the range of services available, creating in effect a "loss leader" which resists competitive threats that emphasize low prices.

EXHIBIT III-11

MICROCOMPUTER USER INVOLVEMENT IN SELF-MAINTENANCE



*Consider Themselves the Primary Source of Maintenance

Level Willing to Maintain
(In Increasing Order of Difficulty)

Component Level	9.7%
Board Level	62.4
Chip Level	11.8
All Levels	16.1%

IV VENDOR PRICING ANALYSIS

A. PRICING STRATEGIES

- The development of service as a tangible product was spurred by the increased recognition of the profitability of service. Contrary to the past handling of service which often resulted in service being bundled into the products' purchase price, service in itself became an actual product to be marketed and sold. This development has increased vendor perception and concern over the effects of service pricing and also the competitiveness of service as vendors attempt to improve the profitability of their service organizations.
- When service organizations operated as cost centers, a desired but not necessary goal in setting service prices was that service prices cover the labor costs (parts, FE labor, salary, etc.) incurred by the service process. The overriding concern was that service prices would not inhibit the sales of new products, which often caused a conflict between sales and service with sales usually winning out.
- Service moved toward profitability as service performance became efficient, products became more reliable, and both vendors and users became increasingly aware of the value of service. Service organizations became more focused on efficiently (profitably) satisfying users requirements for service and, as a result, service became an important criteria in the selection of equipment. Thus, service became an important "product," which required effective marketing and sales activities.

- This created new demands on service prices since they now had to not only cover the traditional costs of service (labor, salaries, parts, etc.) but also the new costs of marketing and selling service, as well as accommodate profitability margins. In addition, increased emphasis was placed on the competitiveness of prices since service users as consumers were becoming increasingly influential in service pricing.

- Service organizations have used numerous methodologies in setting service prices. While each varies to some degree in actual implementation, most fall into three main categories: those that emphasize costs, those that emphasize competition, and those that combine a number of market factors.

- The oldest strategy, used almost exclusively during cost center days, is cost recovery pricing. This strategy attempts to recover costs involved in providing service, possibly with a notional profit margin added. The principal feature of cost recovery pricing is that it attempts to make service "self-financing"; however, profit is not an overriding goal. A potential danger of cost recovery pricing is that cost inefficiencies can be passed to users, leading to higher maintenance costs and loss of business to competitors who can be more efficient, price their service lower, and, as a result, steal customers.

- An extension of the cost-recovery service pricing strategy is the return-on-investment (ROI) pricing method which sets prices at a level which will yield a target rate of return. ROI pricing requires an analysis be performed on the following conditions:
 - Product life cycle.
 - Period that ROI will be measured.
 - Total investment measured.
 - Inflation, residual value factors.

- Another commonly used methodology for establishing service prices is the sales-value strategy where service prices are set as a straight percentage of the purchase price. The advantages of this method are:
 - Sales-value pricing does not require a detailed analysis of the market, either as a measure of what the customer would pay or what the competition is charging. For this reason, some form of this strategy is frequently utilized by startup companies in establishing their service prices.
 - Sales-value pricing also assists in the product sales process since it is easier to communicate the value of service as a relationship to the cost of replacing the product. The salesperson can simply say, "Service is 20% more."
- Sales-value pricing has a number of disadvantages. First of all, it is a gamble whether the initial percentage selected will cover all the service costs. On the other hand, the percentage selected could prove to be way out of line of what the competition is charging, thus repelling customers. And if the purchase price fluctuates dramatically, so will service prices, which in the case of a dramatic purchase price drop could prevent the service revenues from covering service costs. Finally, sales-value pricing requires determination of whether to use list prices versus purchase price, since the latter will be affected by any discounts that might be involved.
- A major factor in establishing service pricing has always been what the competition is charging. Competitive pricing can be either a proactive or (most often) a reactive reflection of the current market. There are many dangers inherent in overemphasizing competition-based pricing methodologies.
 - Competitive price wars often lead to lower profit margins which almost always hurt smaller vendors.

- There is usually insufficient volume of business during market entry, further impacting smaller, startup ventures.
 - Overemphasis on competition often corners service vendors by providing a lack of maneuvering space to raise prices to more realistic levels.
 - Most importantly, INPUT's user surveys indicate that service price is not the most important criteria in selecting a service vendor.
- An extension of the competitive pricing strategy is opportunity pricing, which utilizes aggressive price levels in order to identify and exploit market opportunities. Although most commonly associated with one service vendor "undercutting" existing suppliers with aggressively low prices, this methodology might also call for the premium prices offered for unique and attractive new service products. Both extremes carry potential dangers.
 - Undercutting usually triggers an aggressive price war.
 - Unique service products remain unique for only so long, after which competitors counter with similar (and often lower-priced) equivalents.
- As service becomes better associated as a product, more innovative methodologies for establishing, or at least guiding, service price can be considered. The first, differential pricing, attempts to "guide" customers into choosing the most profitable product (to the service vendor) by carefully manipulating prices of all possible service product options. In a sense, this strategy attempts to build a scale (or "menu") of service products not graduated by the actual costs of providing service at each level, but on the customer's perceived value of each service level. As the perceived value of each premium level is increased, the user becomes more accepting of that premium's associated price.

- Another service pricing strategy more commonly associated with retail product pricing is known as loss-leader pricing. Under this methodology, customers are initially attracted to a supplier by one specific low-priced product (known as the loss leader). The supplier may also offer, and successfully sell, other service offerings that are actually priced higher than similar products from competitors. The key difference between "loss leader" and "bait-and-switch" tactics is that the supplier actually offers and sells the "loss leader" product.
- As a service pricing strategy, the loss leader technique makes it possible to offer a basic service level at an aggressively low price and then sell additional value by encouraging users to select higher levels of service with the appropriate premiums attached.

B. HISTORICAL PRICING TRENDS

- Over the past few years service organizations have been faced with pressure from three major groups:
 - Users who want improved quality (particularly increased system availability) with at least stable, if not reduced, prices.
 - Sales who want service to lower prices in order to improve the "salesability" of equipment, particularly in the recent industry slowdown.
 - The overall corporate group who want service to continue providing profitability (in some companies the only profit available) while still assisting sales in moving new equipment.
- Those pressures have increased the importance given to service pricing, both in providing satisfactory service levels at acceptable prices that still provide

a targeted margin and in packaging service (and service pricing) in such a manner that it not only satisfies current users but also attracts potential customers.

- Of course, service pricing has been affected by the many advances in service delivery; improved dispatching, parts tracking, and resource management; increased use of remote diagnostics and fixed, improved training (both of engineers and end users); and increased use of modularization in system design. However, whatever improvements that service organizations have made in their own efficiency in providing service have been countered by the increased requirement for service that all systems users have reported.
- Instead, service organizations have turned toward service packaging as a way of providing service levels at prices that users find acceptable. Rather than providing a "bundled" service offering that provides a wide range of services for free but carries a relatively high price tag, some vendors are "unbundling" their service, providing inexpensive "base level" service and charging premiums for additional services that were once free.
- "Unbundling" of services provides three main benefits:
 - A stable, even lower-priced service offering that includes all requisite maintenance activities at a price that users find acceptable.
 - A direct revenue source for additional services performed, many of which are relatively expensive. In addition, the fact that separate and identifiable charges are attached to these additional services makes the users more aware of each service's value.
 - An extended service "menu," which creates the impression of greater service flexibility to a much more effective degree than by offering discounts.

- Manufacturers such as NAS and Amdahl have successfully introduced unbundled service plans. In the small systems market, Digital Equipment Corporation and Hewlett-Packard have led the way in providing extensive service menus designed to allow users to pick a service level that matches their specific service requirement and budget.
- It is significant to note that IBM has confined the bulk of its price decreases in the hardware maintenance area. IBM has developed its own support structure in the areas of software support, professional services (such as consulting and planning), and educational services to a much greater extent than most of its competitors. Thus, hardware maintenance activities represent the majority of most of IBM's competitors' revenue (and profit) growth. By selectively targeting hardware maintenance for price reductions, it will be relatively difficult for many of IBM's competition to be able to match "Big Blue's" pricing. Therefore, a key service objective will be to further develop non-hardware maintenance activities, particularly software support, where there are increasing user service requirements and greater potential for revenue and profit growth.
- Exhibit IV-1 demonstrates the downward trend in large systems service pricing for four major large systems vendors from 1981 to 1985. There is a high level of conformity in pricing in the large systems market as hardware maintenance pricing in particular becomes much more competitive. With the increased emphasis on software support and other services, prices should stabilize and perhaps even reverse the trend. In addition, increasing user expectations for service should continue to "de-sensitize" users to additional services (and their associated premiums), adding to acceptable service prices.
- The small systems market, as shown in Exhibit IV-2, shows less uniformity in pricing trends. While the general trend appears to demonstrate a decline in service prices, some vendors have actually increased the percentage of service price to purchase price in the last three years.

EXHIBIT IV-1

LARGE SYSTEMS PRICING TRENDS, 1981-1985

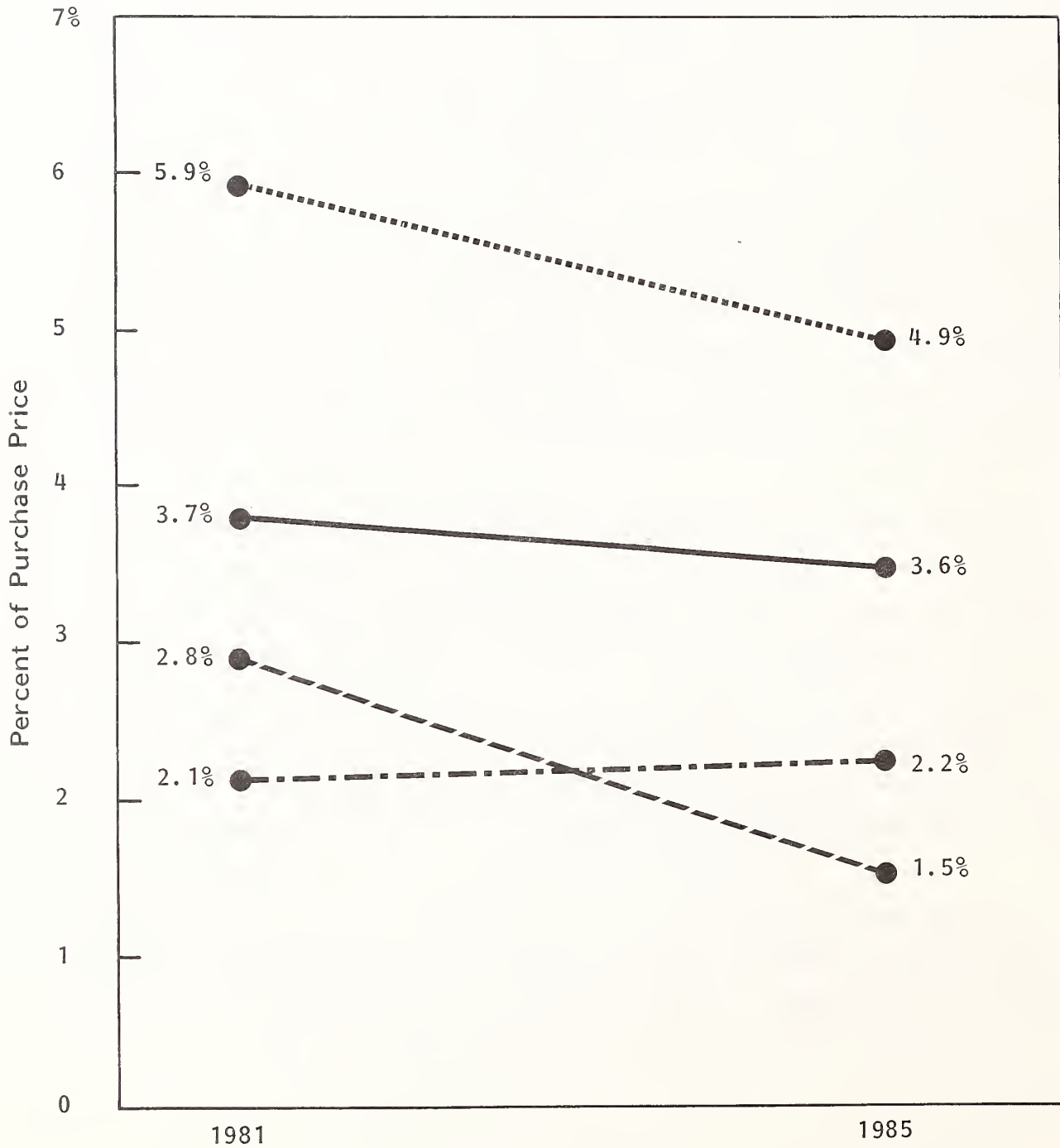
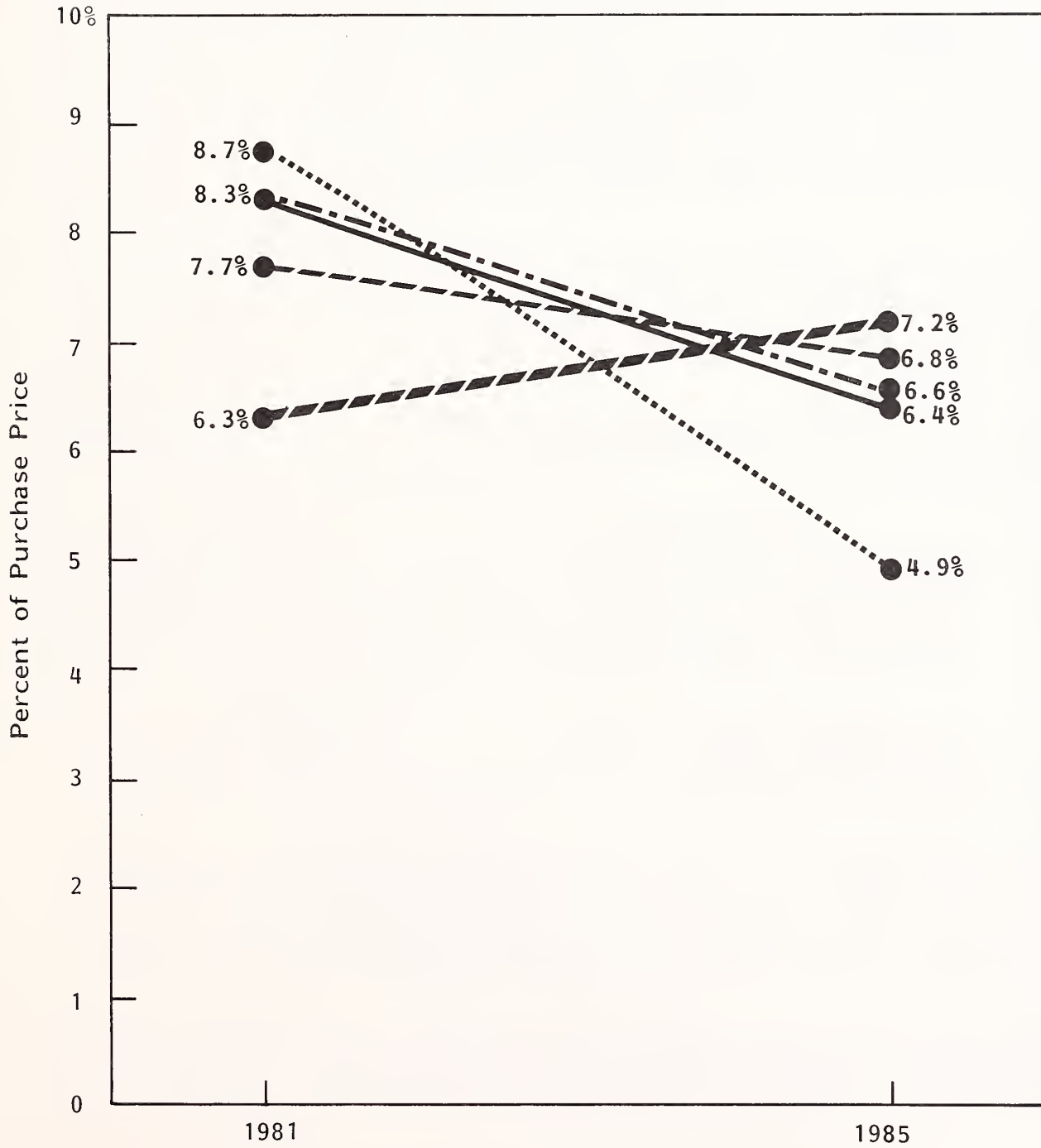


EXHIBIT IV-2

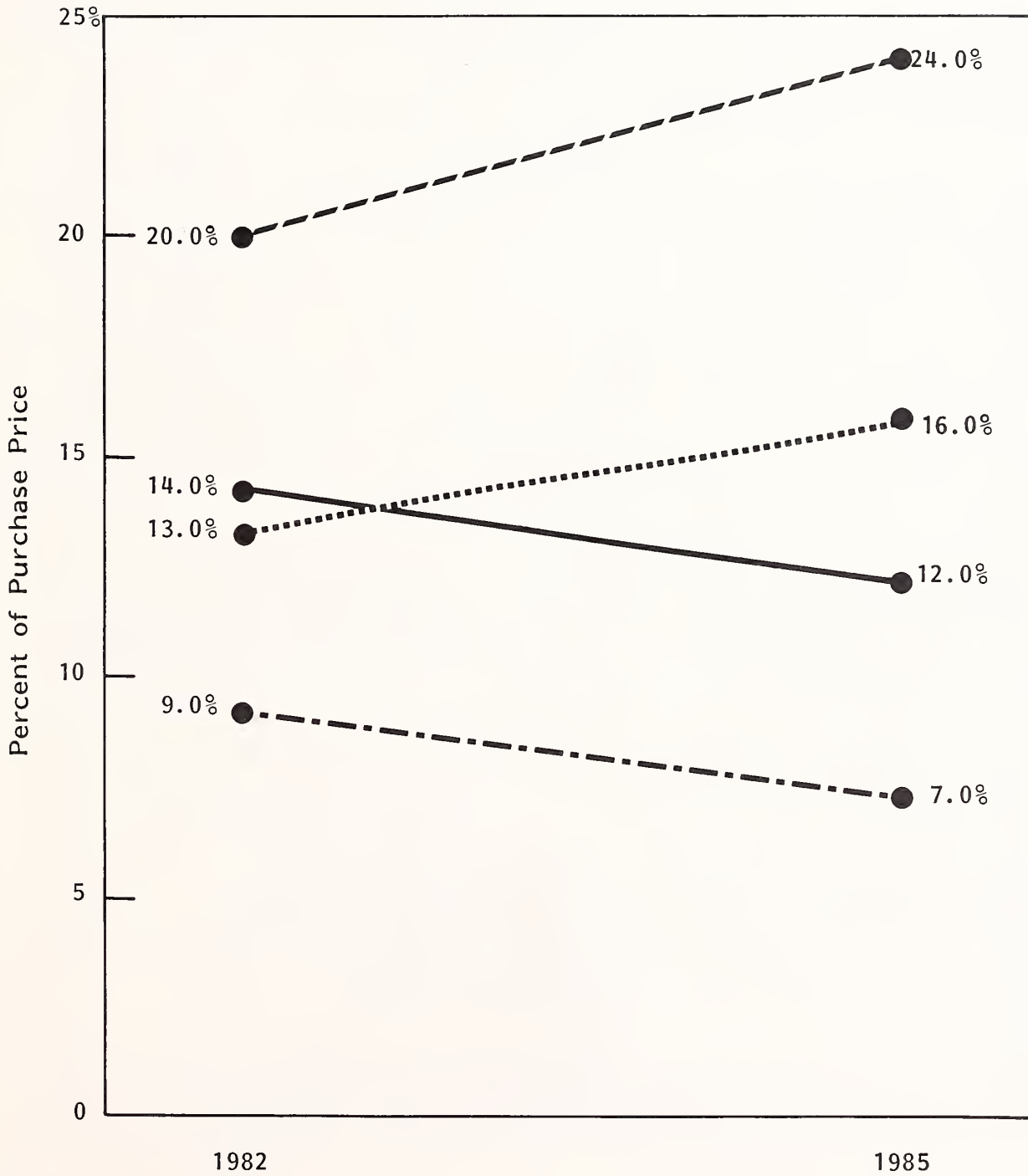
SMALL SYSTEMS PRICING TRENDS, 1981-1985



- This fragmentation in the small systems market can be expected. First, the small systems market is unique in that it encompasses such a wide range of markets and processing needs, ranging from (usually) price-sensitive applications such as small retail inventory control to larger, less price-sensitive applications involving powerful super minicomputers.
- Of greater influence is the fact that small systems vendors are less developed in the non-hardware maintenance activities such as software support, professional services, and educational services, thus support much higher cost structures than large systems manufacturers. A number of vendors have already moved toward increasing their activity in these non-hardware maintenance activities, most notably HP, DEC, and Data General.
- Small systems vendors will need to de-emphasize hardware maintenance activities, not only to increase the stability of service prices, but also to increase the overall service satisfaction of their users.
- Two general conclusions could be made from the 1985 small systems user requirements study:
 - Small systems user requirements for service, particularly overall system availability and software support, are rising at a much faster rate than their vendors have been able to provide.
 - Small systems users, as a group, are much more price-sensitive than large systems users, partially as a result of their unmet service needs.
- The market demonstrating the least consistency in service pricing has been the microcomputer service market, as shown in Exhibit IV-3. This is not surprising, considering that the microcomputer market is by far the youngest.
- Initially, microcomputer service prices were set at an artificially high level, in hopes of covering the expense of supporting a dispersed product base. As the

EXHIBIT IV-3

MICROCOMPUTER PRICING TRENDS, 1982-1985



product base grew, both terms of total numbers and, more significantly, in terms of product density, service prices fell.

- The initial confusion in service pricing was as much a result of the confusion in product distribution as the confusion in service distribution. The only early vendor who gave the perception of direct sales and support was Tandy, who sold their Radio Shack microcomputers through company-owned and operator-owned stores. On the other hand, the other major player, Apple, relied on computer specialty stores to sell (and support) their micros and RCA to support their corporate users.
- IBM's entrance into the market was expected to legitimize the PC market and stabilize both product and service pricing. Instead, IBM followed the conventional route, depending to a large degree on retail dealers and TPMs to provide the bulk of both sales and service distribution. While IBM's entrance did legitimize the (business) microcomputer market, confusion over pricing continued. This confusion in pricing is illustrated in Exhibit IV-4, which shows that on-site maintenance for an identically configured IBM PC varied in price as much as \$386 from various IBM service vendors in 1982.
- Prices are becoming more stabilized as a result of a number of factors, including increased and more clearly defined user requirements for service, improved product densities (which have greatly reduced the costs of providing service), and dramatically increased competition in the microcomputer service market. Contributing significantly to this stabilization is the increased activity, most notably by manufacturers, in providing direct sales and support to corporate users. Exhibit IV-4 shows that by 1984, when IBM became significantly more involved in supporting its own users (with a number of on-site service announcements, telephone hotlines, and training programs), service pricing on PCs became much more consistent.
- With an increase of activity by larger systems manufacturers such as AT&T, Sperry, and NCR in the microcomputer market, microcomputer service

EXHIBIT IV-4

INCREASING CONFORMITY IN MICROCOMPUTER PRICING

	ANNUAL ON-SITE PRICE	
	1982	1984
Sorbus	\$646	\$408
IBM	546	375
Computerland	260	N/A

IBM PC Configuration: CPU, Keyboard, Monitor, 2 320KB Floppies.

pricing should become more stabilized as users with higher service requirements (corporations, small to medium business) opt for vendors with strong service organizations and offerings.

C. IMPACT OF SERVICE PRICE ON COST OF OWNERSHIP

- Service has already become an important decision criteria in the selection of data processing equipment, not only for the quantity and quality of service available, but, to an increasing extent, for the price of maintenance. Users of all systems evaluate systems purchases not just on initial purchase cost, but also on the total cost of the system when service and support costs have been added in.
- For example, four popular large systems data processing systems have been listed in Exhibit IV-5, providing purchase price, annual maintenance charge (as a percentage of purchase price), the total maintenance costs (over a five-year life of the machine), and the total costs of ownership (derived from the non-warranty maintenance charges over five years added to the initial purchase).
- Of course, this analysis does not take into account the effects of taxes or residual value calculations; however, it does indicate the tremendous effect that service costs have over a product's life cycle.
- For example, Honeywell and IBM users spend less for service than users of NAS and Amdahl systems over their product's life cycle even though the initial product purchase price is higher. These users receive less coverage (IBM and Honeywell contracts for 5-day, 11 hour coverage versus Amdahl and NAS contracts for 7-day, 24 hour coverage). However, on similar contract coverages, Amdahl users pay significantly more than NAS users for service, as graphically represented in Exhibit IV-6.

EXHIBIT IV-5

EFFECT OF SERVICE PRICE ON COST OF OWNERSHIP
LARGE SYSTEMS

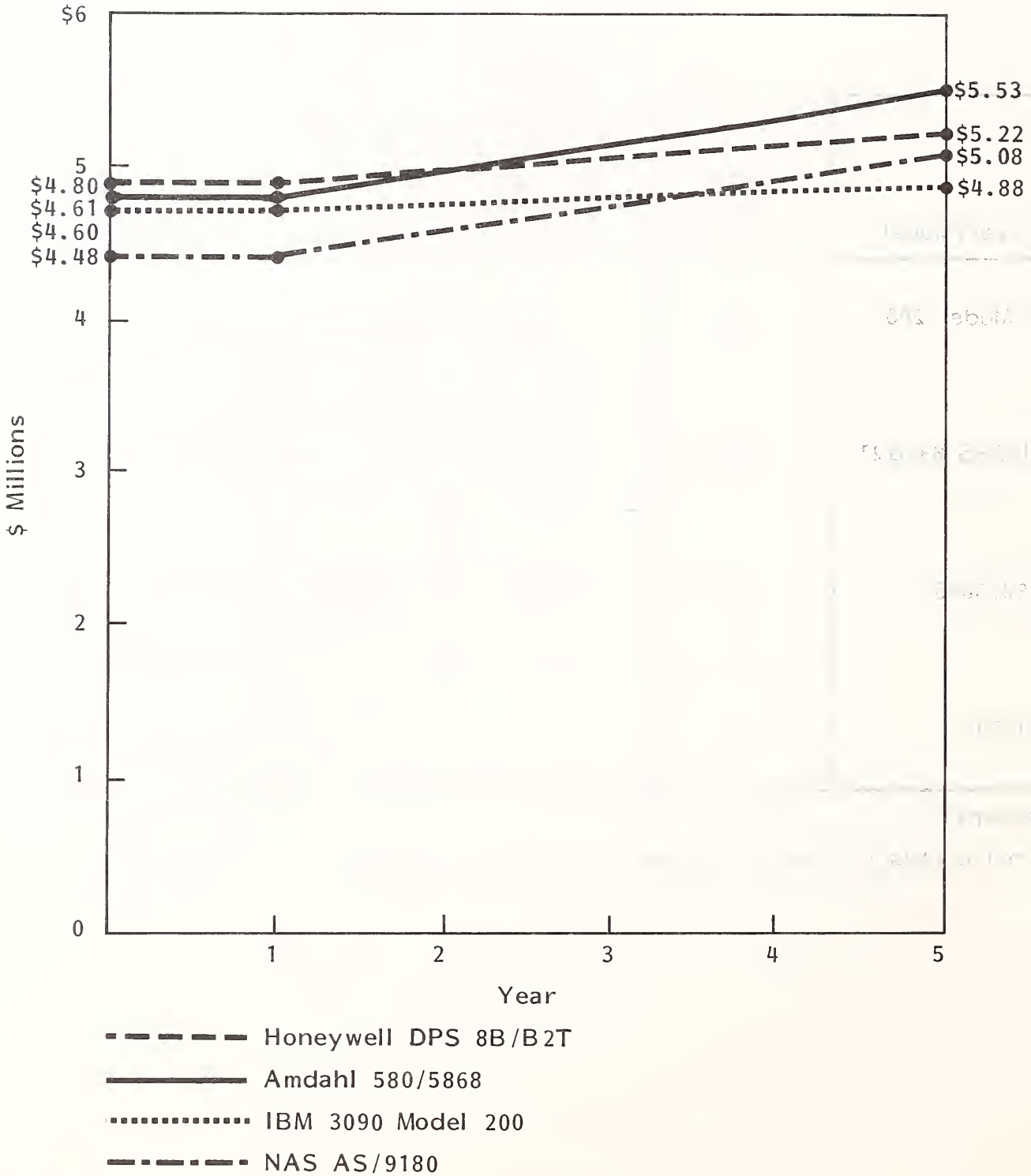
Manufacturer/Model	Purchase Price (\$ Millions)	Annual Maintenance Charge as Percent of Purchase	Maintenance Cost Over 5 Year Life* of Machine	Total Cost** (\$ Millions)
IBM 3090 Model 200	\$4.60	1.5%	\$283,200	\$4.88
Honeywell DPS 88/B2T	4.80	2.2	415,200	5.22
Amdahl 580/5868	4.61	4.9	919,200	5.53
NAS AS/9180	4.48	3.3	596,688	5.08

*1 year warranty

**Purchase price plus 4 years of Annual Maintenance Charge

EXHIBIT IV-6

EXPECTED COSTS OF OWNERSHIP
LARGE SYSTEMS



- Exhibits IV-7 through IV-10 show the similar effect on the total cost of ownership that various service prices have. Note the first group of small systems users (Exhibit IV-7 and IV-8) have significantly lower total service costs than the second set (Exhibits IV-9 and IV-10), due in part to the "unbundling" of service offerings in non-hardware maintenance areas (software support, professional services, and educational services).
- This demonstrates the attraction of "unbundled" services, with relatively low prices for standard service levels and premium service levels available to users with higher service requirements.

D. DISCOUNTING AS A TOOL

- Discounting, or the reduction of an original listed price for a product or service performed, is commonly used in customer service practices to close new business or increase penetration into an existing account. In limited situations, discounting is used to "manage" an account by encouraging users to upgrade to a different product.
- Discounts are usually negotiated at the initial contract discussions or during contract renewal time. In addition to negotiated discounts, some companies, most notably IBM, have been successful at offering standardized (non-negotiated) discount schedules.
- While discounting practices may be considered necessary to attract and maintain a high level of service volume, care should be taken in the implementation of and reliance on discounting as a sales tool. Overuse of discounting can cause long-term problems, particularly at contract renewal time since negotiated discounts usually create unique contract clauses and stipulations.

EXHIBIT IV-7

EFFECT OF SERVICE PRICE ON COST OF OWNERSHIP
SMALL SYSTEMS: IBM, DEC, DATA GENERAL

Manufacturer	Model	Purchase Price (\$ Thousands)	Annual Maintenance Charge As a Percent of Purchase	Maintenance Cost Over 5-Year Life of Machine	Total Cost* (\$ Thousands)
IBM	System/38 Model 40 (CNG)	\$303	6.4%	\$ 90,281	\$393.3
DEC	VAX 11/782 [782XA- AE(AJ)]	320	6.8	101,769	421.8
Data General	MV/10000 (90401-M)	285	6.6	88,151	373.2

*Purchase price plus Annual Maintenance Charge.

EXHIBIT IV-8

EXPECTED COSTS OF OWNERSHIP - SMALL SYSTEMS
IBM, DEC, DATA GENERAL

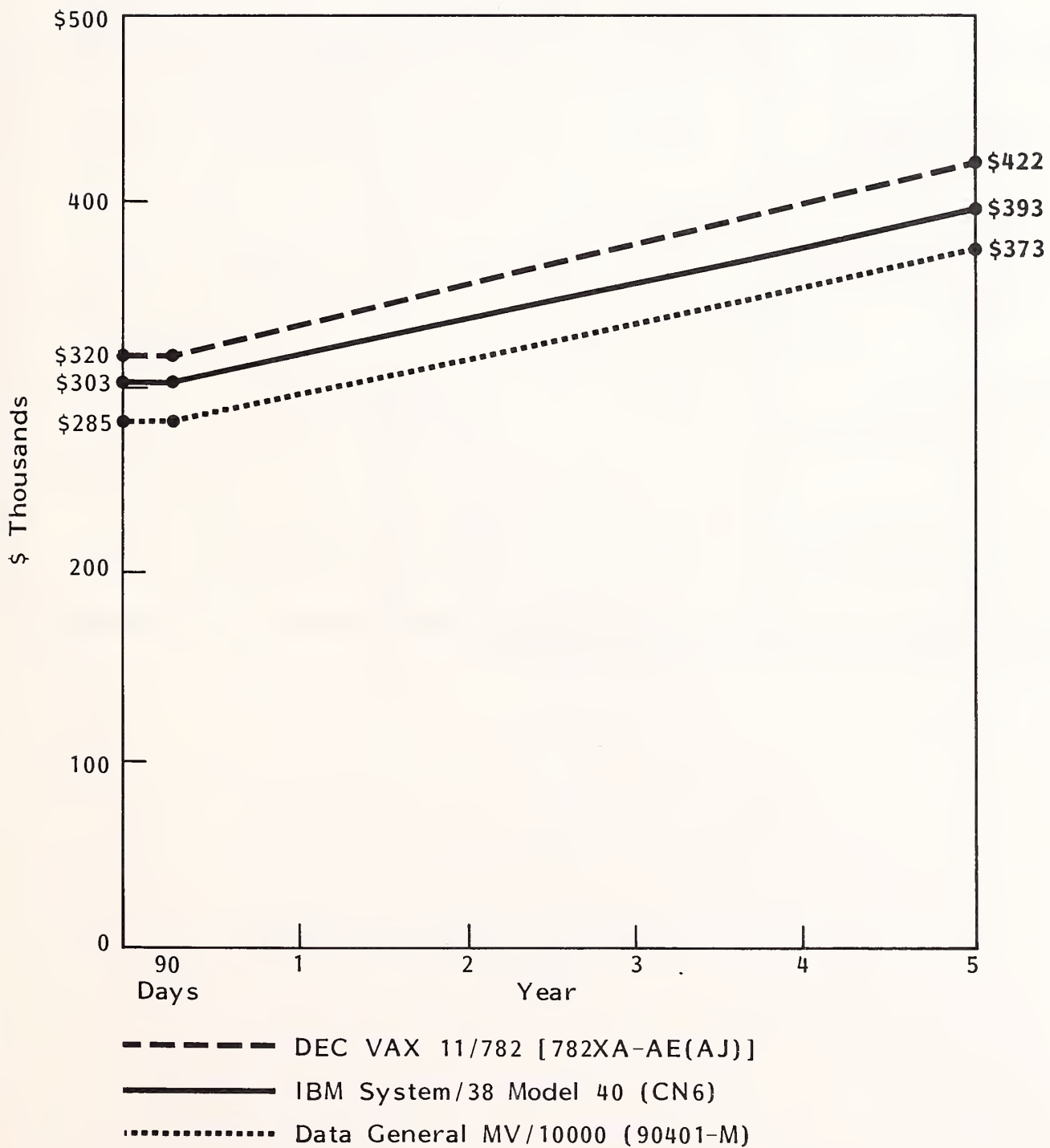


EXHIBIT IV-9

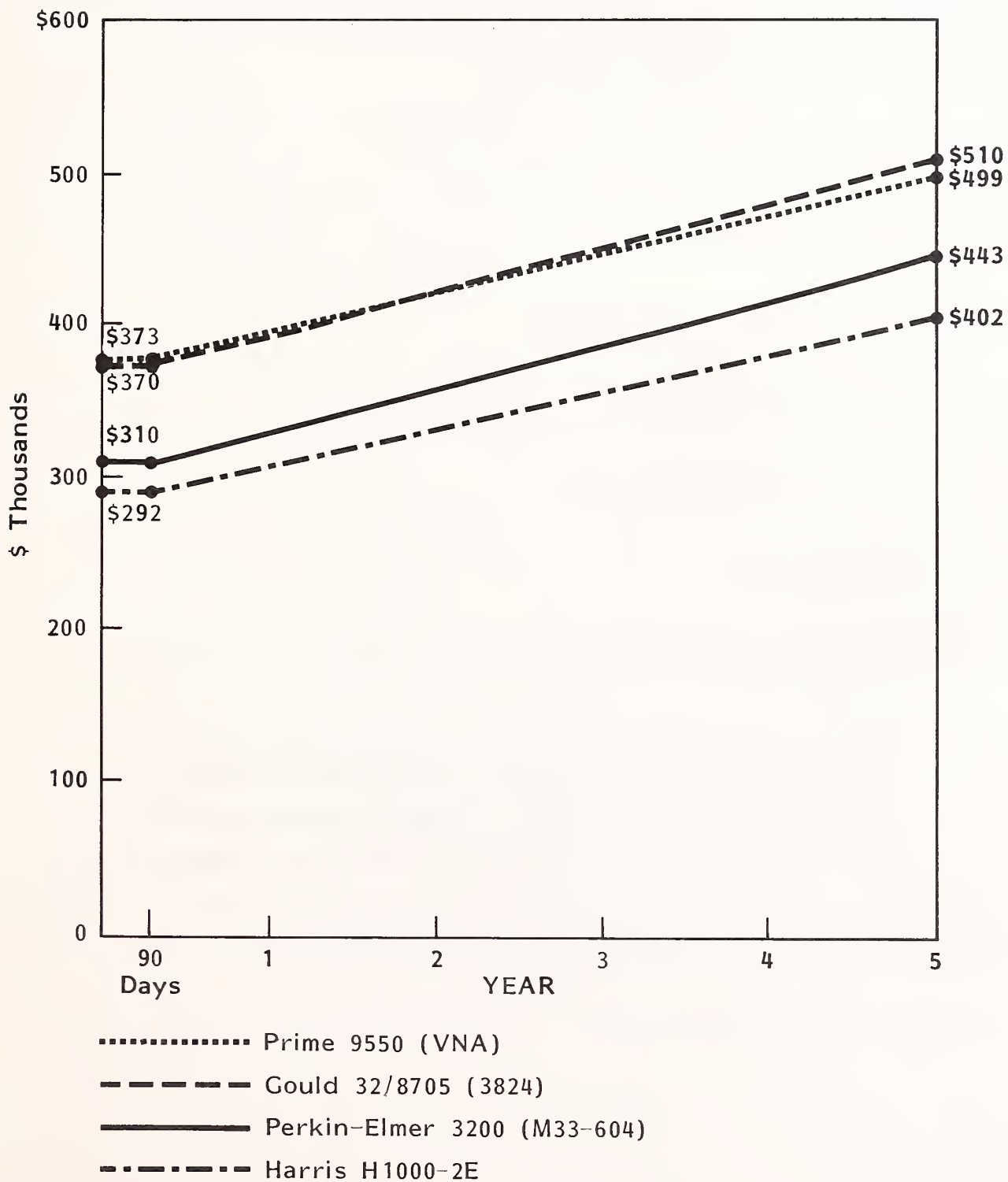
EFFECT OF SERVICE PRICE ON COST OF OWNERSHIP - SMALL SYSTEMS:
GOULD, HARRIS, PERKIN-ELMER, PRIME

Manufacturer	Model	Purchase Price (\$ Thousands)	Annual Maintenance as a Percent of Purchase	Maintenance Cost Over 5 Year Life of Machine (\$)	Total Cost* (\$ Thousands)
Gould	32/8705 (3824)	\$370	8.1%	\$139,819	\$509.8
Harris	H1000-2E	292	8.1	110,903	402.9
Perkin-Elmer	3200 (M33-604)	310	9.2	133,039	443.0
Prime	9550 (VNA)	373	7.2	125,698	498.7

*Purchase price plus Annual Maintenance Charge.

EXHIBIT IV-10

EXPECTED COSTS OF OWNERSHIP - SMALL SYSTEMS:
GOULD, HARRIS, PERKIN-ELMER, PRIME



- Moreover, vendors should avoid allowing discounting to drive the market. First of all, users place a higher premium on service quality, not service price, in choosing a vendor. An unfortunate by-product of unguarded discounting practices is the creation of sub-standard service performance as whatever margin associated with service begins to get "squeezed" by overuse of discounting.

- Currently, there appears to be confusion in the marketplace relative to how to use discounting as a growth tool. Vendors are utilizing any and all of the following criteria in establishing discounts.
 - Product type.

 - Market segment.

 - Service revenue or account size.

 - Market factors (such as a competitive threat).

 - Geographic boundaries.

 - Contract type.

 - Increased user participation in service.

- The effect of product type is most unclear. Surely, increased competitiveness in the minicomputer and microcomputer markets have increased discounting activities in these particular markets. However, there are few if any discounting practices that are product specific. The closest to discounts based upon product type is the use of extended warranties in the microcomputer market, which in effect is a discounted annual service contract.

- Market segment is also not a major factor in service discounting. The exceptions are in the government sector where GSA pricing encourages discounting and in the educational market where products are almost always discounted, but service is usually performed at full price.
- Discounting is often used more as a product sales inducement in connection with service revenue or account revenue size. The only variance in this area may be between customers who are single- or multi-location. Single location contracts of a varying minimum size almost always result in a discount.
- Discounts are sometimes based on solely an account size. As is true with service revenue size-based decisions, account size discounts are almost always driven by sales strategy versus marketing. As a result, these discounts do not always reflect the true needs of the users and, as such, are often not necessary in the sales process.
- Discounts are often used as reactionary tactics to perceived market conditions, particularly when faced with a competitive threat. Since service pricing is often driven by competitive forces, it is not surprising that discounting is also driven by the competition. While service, as is true of any other product, should reflect the existing competitive environment, many competitive threats could be better handled by better products (in this case, better service) and by more flexible offerings rather than the reliance on discounting. Again, it should be stressed that service quality factors rank much higher in the selection of vendors than pricing factors.
- Geographic boundaries are not so much a discounting factor as a factor in setting premiums since servicing of remote locations usually involves either (or both) mileage charges or zone charges.
- Many vendors offer discounts regarding contract administration, more as an inducement to reduce costs associated with contract administration than an inducement to purchase service. In most of these cases, the type of contract

is not so much a factor as the actual conditions of the contract. Such conditions covered by discounts range from negotiation of long-term (greater than one year) contracts to pre-payment of single-year contracts (paying a one-time charge versus quarterly or monthly payments) and centralized billing. In addition, some vendors provide discounts to customers who carry inventory or even provide office space for non-dedicated field engineers.

- Lastly, a number of service vendors provide discounts to users who increase their involvement in maintaining their own equipment. This involvement may range from assuming responsibility for transporting the defective equipment to the vendor when service is required (the basis of depot repair) up to and including the user performing actual maintenance activities (e.g., user-run diagnostics, user-performed board swaps). Used less as a sales inducement for the user than as a cost-reducing benefit for the vendor, discounts in this area run dangerously close to "devaluing" service (the secondary definition of discount is to minimize the importance of the service).
- Exhibit IV-11 demonstrates three different strategies employed by service vendors in order to increase business. The most common strategy using service discounts as a way of increasing total business is employed by Prime and Memorex in this exhibit. By offering graduated levels of service discounts to users with specific minimum installation size, most typically on a straight-dollar basis, service discounts are being used to reward (and in a sense encourage) users who have larger systems.
- CDC employs another competitive use of discounting by targeting specific markets (in this exhibit's case, IBM and DEC system users) and setting an aggressively discounted price. Although this example demonstrates how discounting is used by a TPM vendor versus a manufacturer, this strategy is also commonly used by manufacturers in offering discounts to the government and education industries.

MULTIPLE SYSTEM SITE SERVICE DISCOUNTS

VENDOR	LOW END		HIGH END	
	\$ M	%	\$ M	%
Amdahl	ES	40%	ES	40%
CDC*	DEC	15	IBM	20
Prime	3K	6	45K	20
Memorex	15K	7.5	25K	12.5

*** TPM Only; ES - Extended Services Only**

- The most market-driven use of service discounting is exhibited by Amdahl who offers significant discounts to users who opt for extended service levels. By doing this, Amdahl is using service discounting as an incentive for their users to increase service coverage and as a result, reliance on Amdahl.

V CONCLUSIONS

- This report has looked at the trends in customer services pricing through the eyes of both users and vendors. Users indicated that service pricing, while not foremost in importance (relative to other factors such as system availability, response time, etc.), is becoming increasingly important in the computer purchase decision. As service price becomes more important, users will expect stable, if not lower, service prices. At the same time, users will expect increased and improved service levels, especially as system availability requirements approach 100% uptime.
- Fortunately (at least for vendors), users are relatively accepting of premium services (with appropriate premium charges), particularly those that address system availability requirements. Similarly, users are also agreeable to increasing their own involvement in the maintenance process if appropriate discounts are attached and if the area of service is not being effectively addressed by current service offerings.
- Vendors have reacted in either of two fashions:
 - Lower prices (often arbitrary) through discounts that usually do not address the user's need for more flexible service.
 - Increased number of services "thrown in" for free.

- A few vendors have correctly identified and addressed this growing demand for stable prices, increased contract flexibility, and accessibility to increased service levels (if necessary). These vendors have found that by "unbundling" the standard (formerly all-inclusive) maintenance offering and charging for previously free additional services, they could offer a lower-priced yet acceptable basic maintenance offering to price-sensitive users. In addition, users with higher service requirements could choose premium service levels that suited their needs.
- These "unbundled" service offerings benefit the vendors in two ways:
 - Provide a low-cost service offering that acts as a "loss leader," attracting new service customers or protecting old customers from price-competitive service vendors while allowing access to higher levels of services as necessary.
 - Provide a new source of revenue from the previously free services without having to raise the price of the basic service package.
- "Unbundling" standard service offerings helps extend the potential service menu, providing users with the flexibility so often desired. By providing a wide range of service offerings that address various levels of service needs, the vendor improves user satisfaction at each service requirement level. Not coincidentally, vendors with such extended service menus receive the highest satisfaction levels as reported by their users.
- Extending the number of service options will require increased efforts in the marketing and selling of service. Successful service organizations have already utilized a wide range of media advertisements, including brochures, print advertisements, and even television commercials. Other marketing devices such as direct mail campaigns and telemarketing will improve the success of extended service menus. Most importantly, creating and supporting a direct sales staff within the service organization will allow the service

organization to maximize the revenue potential from these new extended service offerings.

APPENDIX A: SELECTED SERVICE COVERAGES

A. AMDAHL

- Maintenance coverage: Basic maintenance service agreement.
 - Service hours, days covered: Monday through Sunday, 24 hours.
 - Billing period: Monthly.
 - Period of contract: One year, renewed automatically, 90-day written notice of termination.
 - Response time: No specified response time.
 - Exclusions: External electrical work and damage resulting from transportation or neglect.
 - T&M rate: Prime--\$165.00/hour, two-hour minimum; non-prime--\$190.00/hour.

B. GOULD

- Maintenance coverage: Total system support agreement (on-site hardware and remote software support).
 - Service hours, days covered: Monday through Friday, 8:00 a.m. to 5:00 p.m.
 - Billing period: Monthly (in advance).
 - Period of contract: One year, renewed automatically.
 - Response time: "Best effort."
 - Exclusions: Abuse or misuse, external electrical work, accessories, and supplies.
 - T&M rate: Prime--\$85.00/hour; non-prime--\$125.00/hour.

C. CONCURRENT COMPUTER CORPORATION (FORMERLY PERKIN-ELMER)

- Maintenance coverage: Primary service.
 - Service hours, days covered: Monday through Friday, 8:00 a.m. to 5:00 p.m.
 - Billing period: Monthly (in advance).
 - Period of contract: One year, renewed after 30-day notice from user, 30-day written notice of termination.

- Response time: Within 24 hours.
- Exclusions: Misuse, modification, mishandling, acts of God, power surges or failures, transportation, and foreign equipment.
- T&M rate: Prime--\$100.00/hour, three hour minimum; non-prime--\$120.00/hour.

D. DATA GENERAL CORPORATION

- Maintenance coverage: On-call service.
 - Service hours, days covered: Monday through Friday, and nine consecutive hours between 8:00 a.m. and 6:00 p.m.
 - Billing period: Monthly.
 - Period of contract: Not less than three months, renewed indefinitely, 60-day written notice of termination.
 - Response time: Normally four hours (within 50 mile radius).
 - Exclusions: Unapproved alterations, subject to unusual physical or electrical stress, supplies, accessories, external electrical work, etc.
 - T&M rate: Prime--\$95.00/hour; non-prime--\$110.00/hour.

E. DIGITAL EQUIPMENT CORPORATION

- Maintenance coverage: Basic service agreement.
 - Service hours, days covered: Monday through Friday, 8:00 a.m. to 5:00 p.m.
 - Billing period: Monthly (in advance).
 - Period of contract: One year, 90-day written notice of termination.
 - Response time: No specified response time.
 - Exclusions: Outside normal wear and tear, supplies and accessories, operator error, misuse, transportation, and environment.
 - T&M rate: Prime--\$90.00/hour; non-prime--\$107.00/hour.

F. HARRIS CORPORATION

- Maintenance coverage: Standard service.
 - Service hours, days covered: Monday through Friday, 8:00 a.m. to 5:00 p.m.
 - Billing period: Monthly.
 - Period of contract: One year, 30-day written notice of termination.
 - Response time: Four-hour response (within 50 mile radius).

- Exclusions: Supplies, accessories, refurbishment, external electrical work, installation, deinstallation, moves, and relocations.
- T&M rate: Prime--\$90.00/hour, two-hour minimum; non-prime--\$110/hour.

G. HONEYWELL INFORMATION SYSTEMS, INC.

- Maintenance coverage: Basic hardware maintenance.
 - Service hours, days covered: Monday through Friday, 7:00 a.m. to 6:00 p.m.
 - Billing period: Monthly.
 - Period of contract: 90-day written notice of termination.
 - Response time: Two-hour response.
 - Exclusions: Supplies, accessories, refinishing, changes, and relocations (including installations and deinstallations).
 - T&M rate: Contract--\$159.00/hour; non-contract--\$185.00/hour. Non-prime price unavailable.

H. INTERNATIONAL BUSINESS MACHINES CORPORATION

- Maintenance coverage: IBM maintenance agreement.
 - Service hours, days covered: Monday through Friday, nine consecutive hours between 7:00 a.m. and 6:00 p.m.
 - Billing period: Monthly (in advance).
 - Period of contract: One month written notice of termination.
 - Response time: No specified response time.
 - Exclusions: Damage caused by failure to provide proper installation, environment, improper use, accident, disaster, transportation, neglect, alterations, and external electric work.
 - T&M rate: Prime--\$88.00/hour (one hour minimum) Class I, \$120.00/hour (two hour minimum) Class II, \$165.00/hour (two hour minimum) Class III; non-prime--\$101.00/hour (one hour minimum) Class I, \$138.00/hour (two hour minimum) Class II, \$190.00/hour (two hour minimum) Class III.

I. NATIONAL ADVANCED SYSTEMS

- Maintenance coverage: Basic maintenance service agreement.
 - Service hours, days covered: Monday through Sunday, 24 hours.
 - Billing period: Monthly.

- Period of contract: One year, renewed automatically, 90-day written notice of termination.
- Response time: Not specified.
- Exclusions: External electrical work, non-NAS equipment, accidents, environmental damages, and alterations.
- T&M rate: Prime--\$165.00/hour; non-prime--\$190.00/hour.

J. PRIME COMPUTER CORPORATION

- Maintenance coverage:
 - Service hours, days covered: Monday through Friday, eight hours.
 - Billing period: Monthly (in advance).
 - Period of contract: One year, renewed automatically, 90-day written notice of termination.
 - Response time: Next day response.
 - Exclusions: Supplies and accessories, specification changes, relocations, installations and deinstallations, external electrical work.
 - T&M rate: Prime--\$90.00/hour; non-prime--\$130.00/hour.

APPENDIX B: DEFINITIONS

- APPLICATIONS SOFTWARE - Software that performs processing to service user functions.
- CONSULTING - Includes analysis of user requirements and the development of a specific action plan to meet user service and support needs.
- DISPATCHING - The process of allocating service resources to solve a support-related problem.
- DOCUMENTATION - All manuals, newsletters, and text designed to serve as reference material for the ongoing operation or repair of hardware or software.
- END USER - May buy a system from the hardware supplier(s) and do own programming, interfacing, and installation. Alternatively, may buy a turnkey system from a systems house or hardware integrator.
- ENGINEERING CHANGE NOTICE (ECN) - Product changes to improve the product after it has been released to production.
- ENGINEERING CHANGE ORDER (ECO) - The follow-up to ECNs which include parts and a bill of material to effect the change in hardware.

- ESCALATION - The process of increasing the level of support when and if the field engineer cannot correct a hardware or software problem within a prescribed amount of time, usually two to four hours for hardware.
- FIELD ENGINEER (FE) - For the purpose of this study, field engineer, customer engineer, serviceperson, and maintenance person were used interchangeably and refer to the individual who responds to a user's service call to repair a device or system.
- HARDWARE INTEGRATOR - Develops system interface electronics and controllers for the CPU, sensors, peripherals, and all other ancillary hardware components. May also develop control system software in addition to installing the entire system at the end-user site.
- LARGE SYSTEM - Refers to traditional mainframes including at the low end IBM 4300-like machines and at the high end IBM 308X-like machines. Large systems have a maximum word length of 32 bits and a standard configuration price of \$350,000 and higher.
- MEAN TIME BETWEEN FAILURES (MTBF) - The elapsed time between hardware failures on a device or a system.
- MEAN TIME TO REPAIR - The elapsed time from the arrival of the field engineer on the user's site until the device is repaired and returned to the user for his utilization.
- MEAN TIME TO RESPOND - The elapsed time between the user placement of a service call and the arrival of a field engineer at the user's location.
- MICROCOMPUTER - A microprocessor-based single- or multi-user computer system typically priced less than \$15,000. A typical configuration includes an 8- or 16-bit CPU, monitor, keyboard, two floppy disk drives, and all required cards and cables.

- MINICOMPUTER - See Small Systems.
- OPERATING SYSTEM SOFTWARE (SYSTEMS SOFTWARE) - Software that enables the computer system to perform basic functions. Systems software, for the purposes of this report, does not include utilities or program development tools.
- PERIPHERALS - Includes all input, output, and storage devices, other than main memory, which are locally connected to the main processor and are not generally included in other categories, such as terminals.
- PLANNING - Includes the development of procedures, distribution, organization, and configuration of support services. For example, capacity planning, "installation" planning.
- PLUG-COMPATIBLE MAINFRAME (PCM) - Mainframe computers that are compatible with and can execute programs on an equivalent IBM mainframe. The two major PCM vendors at this time are Amdahl and National Advanced Systems.
- SMALL BUSINESS COMPUTER - For the purpose of this study, a system which is built around a Central Processing Unit (CPU), has the ability to utilize at least 20M bytes of disk capacity, provides multiple CRT workstations, and offers business-oriented systems software support.
- SMALL SYSTEM - Refers to traditional minicomputer and superminicomputer systems ranging from a small multi-user, 16-bit system at the low end to sophisticated 32-bit machine at the high end.
- SOFTWARE ENGINEER (SE) - The individual that responds (either on-site or via remote support) to a user's service call to repair or patch operating systems and/or applications software.

- SOFTWARE PRODUCTS - Systems and applications packages which are sold to computer users by equipment manufacturers, independent vendors, and others. Also included are fees for work performed by the vendor to implement a package at the user's site.
- SUPERMINICOMPUTER - See Small System.
- SYSTEM INTERRUPTION - Any system downtime requiring an Initial Program Load (IPL).
- SYSTEMS HOUSE - Integrates hardware and software into a total turnkey system to satisfy the data processing requirements of the end user. May also develop systems software products for license to end users.
- THIRD-PARTY MAINTENANCE (TPM) - Any service provider other than the original equipment vendor.
- TRAINING - All audio, visual, and computer-based documentation, materials, and live instruction designed to educate users and support personnel in the ongoing operation or repair of hardware and software.
- TURNKEY SYSTEM - Composed of hardware and software integrated into a total system designed to fulfill the processing requirements of a single application completely.

