Market
Analysis
Program
(MAP)

Cross-Industry Markets 1991-1996

Other Cross-Industry Sector

Forecast Update

INPUT®

1280 Villa Street, Mountain View, CA 94041, (415) 961-3300

DECEMBER 1991

CROSS-INDUSTRY MARKETS 1991-1996

OTHER CROSS-INDUSTRY SECTOR

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I

Introduction

I

Introduction

The "Other" cross-industry sector report is written each year by INPUT as one of seven reports on cross-industry sectors of the U.S. information services industry. Other includes sales and marketing, and electronic publishing information services. The seven cross-industry sectors are:

1. Engineering and Scientific
2. Accounting
3. Human Resources
4. Planning and Analysis
5. Education and Training
6. Office Systems
7. Other Cross-Industry

These reports are included as part of INPUT's Market Analysis Program (MAP), a planning service for information services vendors.

A
Purpose and Organization

1. Purpose

The objectives of this forecast update are to:

- Identify the business and technological issues and trends that are driving the use of information services within this cross-industry sector.

- Forecast user expenditures during the next five years on information services for this cross-industry sector.

- Discuss the competitive environment and profile the leading vendors in sales and marketing and electronic publishing information services.

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Emphasis is placed on updating INPUT's 1990 forecasts and forecast assumptions for the Other cross-industry sector, and indicating any changes that have occurred in the forces impacting this market. A discussion of recent competitive events, such as significant product announcements and/or acquisitions, is also included.

The report provides readers with insights and information that will help them:

- Review the forces shaping the market
- Develop internal corporate financial projections
- Identify new markets and product and services opportunities
- Assess the competitive trends
- Determine potential market directions
- Assist in prioritizing investments

2. Organization

This report consists of three chapters and one appendix. The report is organized as follows:

- Chapter I - Introduction—Introduces and defines the Other cross-industry sector and the information services delivery modes to be forecasted.

- Chapter II - Information Services Market—Presents information services user expenditure forecasts by delivery mode and submode for the Other cross-industry sector.

- Chapter III - Competitive Environment—Provides a synopsis of competitive events occurring over the last 12 months and vendor profiles.

- Appendix A - Forecast Data Base—Detailed forecast by delivery mode and submode for the Other cross-industry sector. Contains a reconciliation to the previous year's forecast.

- Appendix B - Definitions—Definitions of cross-industry and delivery mode terms used in this report are provided. For a comprehensive set of information services industry definitions, the reader is referred to INPUT's *Definition of Terms* found in the overview binder of the Market Analysis Program.

- Appendix C - Related Reports—A list of related reports of potential interest to the reader is provided.

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B
Description of Other Cross-Industry Sector

The Other cross-industry sector comprises two application areas: marketing and sales, and electronic publishing.

1. Marketing and Sales

Marketing and sales information services involves the following:

- List processing, form letters, contact management, tracking and forwarding leads, ranking prospects, prompting scripts for telemarketing.

- Sales analysis—monthly history and sales summary files; details of each invoice; tracking of sales month-to-date or year-to-date; and sales by branch, sales territory, customer and product.

- Marketing management—reports tailored to management requirements. These include marketing, sales and product strategies; designing and managing sales territories; and analyzing marketing and sales programs by market, territory, product, customer type, price, and channel. Sales and marketing management software is often closely integrated with financial planning and decision support functions.

- Demographic market planning models for selecting geographic location of stores, outlets, and companies. The basic model cuts across multiple industries but requires customization for industries such as petroleum, banking, government services, restaurants, general merchandise, and supermarkets.

Unlike some of the other cross-industry sectors—such as human resources—from a functional standpoint, all marketing and sales systems are not alike. Except for the basic functions of storing data for mailings and list processing, additional functions and features vary widely. This dispersity reflects the relative immaturity of marketing and sales application solutions. Marketing and sales application solutions are typically closely integrated with accounting, inventory control, purchasing and order entry software. Products range from standalone personal productivity tools, to LAN-based multiuser systems, to host-based systems.

The majority of marketing and sales software is industry-specific and is therefore not considered in user expenditure forecasts for this cross-industry sector. Vertical industry sectors with emphasis on the selling and distribution functions—such as wholesale distribution, retail distribution and manufacturing industries—are where most of the marketing and sales software resides.

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2. Electronic Publishing

Electronic publishing includes composition, printing, and editing software for documents containing multiple typefaces and graphics—including charts, diagrams, computer-aided design (CAD) drawings, line art, and photographs. Electronic publishing products may also have different data formats such as text, graphs, images, voice and video.

Electronic publishing software and turnkey systems automate the document creating process and allow the user to carry out tasks otherwise performed by graphic artists, typesetters and printers. Products run on mainframes, midrange systems and workstations.

The fundamental difference between electronic publishing and desktop publishing is that electronic publishing encompasses a method of document management and control from a single point—regardless of how many authors/locations work on a document. Desktop publishing (DTP) on the other hand, is considered a personal productivity tool and is generally a lower-end product residing on a personal computer. The distinction is becoming blurred, however. DTP vendors are looking at the sort of shared document production facilities that electronic publishing packages have always had. They are also attempting to automate more of the design process.

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II

Information Services Market

II

Information Services Market

This chapter presents user expenditure forecasts for other cross-industry information services by delivery mode. Assumptions driving the forecasts are provided.

Note that these forecasts do not include industry-specific application solutions. The markets for these types of information services are presented in "industry-specific" MAP reports rather than the cross-industry reports.

- Section A—Overview—discusses the overall size and growth rate of user expenditures for other cross-industry information services.
- Section B—Delivery Mode Analysis—breaks out this same forecast into INPUT's delivery modes. The delivery modes that are applicable to cross-industry sectors are:
  - Applications software products
  - Transaction processing services
  - Turnkey systems

The following five delivery modes are not included in this cross-industry report:

- Network services
- Systems software products
- Systems integration
- Systems operations
- Professional services

In addition, utility processing services and other processing services are excluded. These seven areas are discussed in several of INPUT's delivery mode reports.

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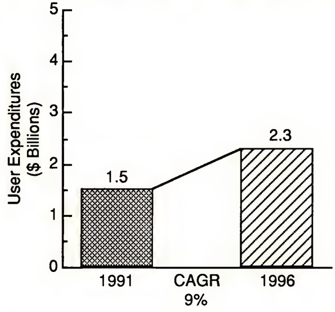
A

Overview

The other cross-industry sector is expected to grow at 9% compounded annually over the next five years, reaching $2.3 billion in 1996 (Exhibit II-1). User expenditures on other turnkey systems and applications software products are forecast to grow at the industry averages for those delivery modes; expenditures on other processing services, however, is forecast to grow at half the rate of the industry average (Exhibit II-2).

EXHIBIT II-1

Other Cross-Industry Sector Information Services Market, 1991-1996



About 80%, or $1.2 billion of the total spent on “other” in 1991 will be for marketing and sales information services. The market for this application area is potentially very large as every business has a marketing and sales function.

Another reason marketing and sales information services has high potential for growth is because it is one of the last functional areas to be automated. Corporations are beginning to realize the importance of improving the productivity of their sales forces through automating the sales process.

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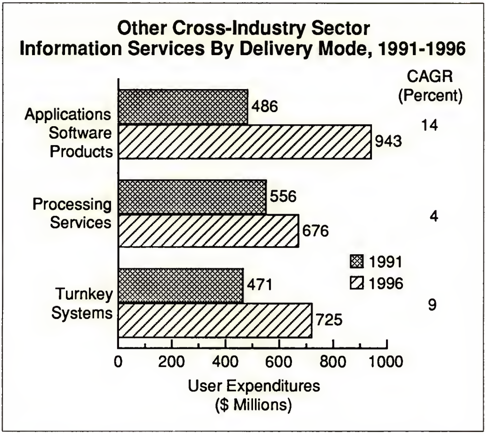
EXHIBIT II-2



Even so, growth for cross-industry marketing and sales IS will be inhibited by the following:

- Most marketing and sales applications are sold to specific industries—especially retail and wholesale consumer goods industries.

- Marketing and sales software will be increasingly integrated with industry-specific packages and/or other more dominant cross-industry packages such as accounting, integrated office systems and executive information systems.

- Productivity gains are difficult to prove/demonstate.

The market for electronic publishing is limited to companies with ongoing complex publishing and technical documentation needs. Other, less sophisticated, publishing needs are met by desktop publishing and word processing products.

Expenditures on electronic publishing information services are growing at a healthy rate due primarily to the availability of low-cost, powerful desktop computers and affordable laser printers. Lower cost makes electronic publishing appealing to a broader audience. A stronger growth

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promoter over the long term will be the expanded role electronic publishing will play in document management and distribution.

Document management and distribution addresses the coordination of the entire documentation process including storing, searching, retrieving, routing, linking and distributing documents anywhere on the corporate network. Document management also addresses the problem of the timeliness and accuracy of document information.

Frame Technology and Interleaf both have "view-only" products for document distribution and viewing. However, interoperability and integration are ongoing challenges.

Because of the enormity of these challenges—as well as the potential for big payoffs—providing a document management solution will by no means be limited to electronic publishing vendors. Systems vendors with IOS products have an enormous amount to gain if they can devise a enterprise-wide document management strategy. Electronic publishing will play a valuable role but it will have make its presence strongly felt.

B

Delivery Mode Analysis

Following is a discussion of each of the individual delivery mode forecasts.

1. Applications Software Products

"Other" is the smallest cross-industry sector for applications software products, user expenditures totaling $486 million in 1991. INPUT's estimate of the 1991 applications software products market by hardware platform for the other cross-industry sector is presented in Exhibit II-3.

New hardware and systems software technologies will drive new applications software products, which will fuel user expenditures. However, customer confusion—due to the increasing number of choices of hardware, systems software, and applications software technologies—will inhibit growth overall for applications software products and turnkey systems.

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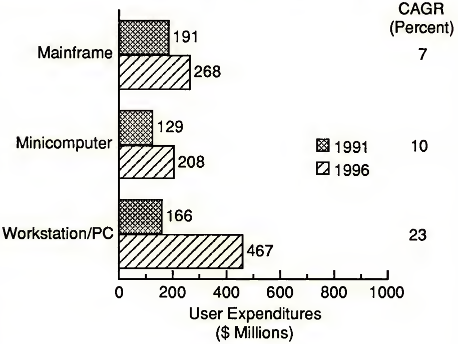
EXHIBIT II-3

Other Cross-Industry Sector Applications Software Products Market, 1991-1996



- The majority of marketing and sales software—applications that consolidate and analyze data collected from sales—currently resides on mainframes and minicomputers.

- Electronic publishing software residing on the mainframe is still in use but there are few new sales. The typical application is data base publishing using data that resides on the mainframe. But strides are being made to create desktop electronic publishing packages that extract data from multiple data bases.

- The mainframe world does not enjoy the same rich variety of electronic publishing software available now for desktop computers.

- Lower-cost workstations and widespread availability of executive information systems (EISs), graphical user interfaces (GUIs), and relational data base management systems (RDBMSs) all serve to promote the use of department-level applications software products including marketing and sales and electronic publishing.

- Up until now, standard PCs and Macs have been underpowered for editing large, complex documents and color images. Now, with -386, -486 and UNIX platforms at a reasonable price the market is expanding.

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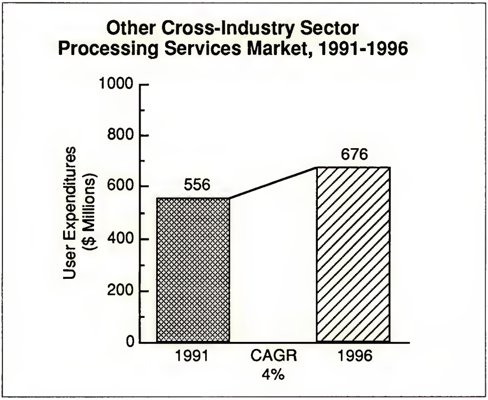
- Growth of low-end marketing and sales applications software products is tied to the market growth of laptops and, recently, pen-based computers. Growth is expected to continue to be strong for these products.

- Healthy growth (14% CAGR) of user expenditures on marketing and sales systems is dependent on vendors' systems integration capabilities or their close involvement with independent systems integrators.

2. Processing Services

Exhibit II-4 presents INPUT's other cross-industry processing services forecast. "Other" is the second largest cross-industry sector for processing services—human resources (payroll processing) is first. 1991 expenditures on other cross-industry processing services are greater than for either applications software products or turnkey systems. By 1996, however, both applications software products and turnkey systems expenditures will have surpassed processing services.

EXHIBIT II-4



User expenditures on "other" cross-industry processing services are predominantly for list processing and customer demographic data. Many small regional list processing organizations compete in this delivery mode. Marketing and sales systems have only recently begun to capture the interest of corporate America as critical enough to be brought in-house. The fact that marketing and sales services software is enhanced if it is

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closely integrated with other aspects of a company's business is a compelling reason to take on the task of internal installation and integration.

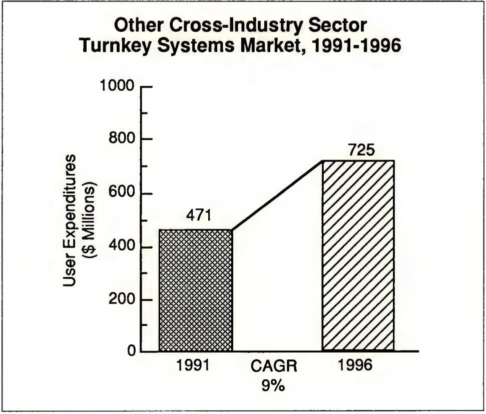
Other growth inhibitors are:

- As vendors provide additional applications software products that are easy to integrate and customize, less will be spent on outside processing services.
- Many large companies view customer lists as proprietary and are reluctant to give them to an outside firm because of concerns about security. As workstation-based solutions become more plentiful, more firms will eventually opt to bring this function in-house.
- Lists and data bases are becoming more prolific and more accessible both within a company and through external purchase.

3. Turnkey Systems

Turnkey systems for the other cross-industry sector are forecast to grow at the rate for turnkey systems as a whole (Exhibit II-5).

EXHIBIT II-5



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INPUT estimates that about 35% of electronic publishing software and 35% of marketing and sales software—the larger application area—is sold as turnkey systems or through cross-industry VARs.

Turnkey growth is slowing for electronic publishing. One reason is that the market for electronic publishing is simply not large enough to sustain a large number of VARs. Interleaf's exit from the turnkey business in 1990 was a signal of curtailment of VAR activity. Low profit margins on hardware, increased importance of standard hardware and multiplatform software left little incentive for many turnkey vendors/VARs to sell the hardware portion of a turnkey system. Therefore, turnkey vendors and VARs that sell electronic publishing applications software products are likely to be industry-specific VARs that can provide other vertical applications software products as well.

On the other hand, even though a substantial number of VARs provide integrated marketing and sales systems to specific industries such as wholesale and retail distribution, there are also a substantial number that provide cross-industry integrated marketing and sales systems. These VARs must be able to afford the inventory carrying costs of multiple hardware platforms and they must also be well versed in customization and integration.

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III

Competitive Environment

III

Competitive Environment

This section discusses the competitive environment for information services within the other cross-industry sector. Key trends and vendor reactions to these trends are discussed. Leading and emerging vendors are identified and profiled.

A
Vendor Characteristics and Trends

Marketing and sales applications are a natural complement to other cross industry packages such as accounting and office systems. They are also a natural addition to vertical packages such as inventory control and purchasing which are used predominantly in the manufacturing, retail and wholesale distribution, and packaged consumer goods industries.

Thus, sales and marketing is often incorporated into another cross-industry application software product as an add-on module. For example, Armor Systems' Customer Information/Data Base Management software is one of fifteen modules within its overall Excalibur+ Premier Business Management System.

Also, unlike electronic publishing—from a functional standpoint—all marketing and sales systems are not alike. Except for the basic functions of storing data for mailings and list processing, additional functions and features vary widely. This variety reflects not only the multifaceted nature of marketing and sales but also the relative immaturity of this cross-industry sector.

The electronic publishing market is becoming more competitive as desktop publishing and word processing applications software products continue to grow in sophistication. As a result, electronic publishing software vendors are not only strengthening their flagship product offerings but are also seeking ways to broaden their businesses. Strategies being pursued include expansion of view-only product development efforts and document management and distribution technology development efforts. Selling directly to commercial publishers and printers in addition to corporate end-users may ultimately be another strategy.

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For both marketing and sales and electronic publishing information services, ease of customization is particularly important to accommodate user variation in methods of managing and tracking data and company-specific forms and documents. Ease of integration with other applications as well as data bases will continue to be an important selling point for both application areas.

B

Leading and Emerging Vendors

The applications software products market players in sales and marketing are:

- The largest independent software vendors—such as Computer Associates, Dun & Bradstreet Software, and Lotus—as well as the largest systems vendors— such as Control Data, Digital Equipment, Hewlett-Packard and IBM. Many of them have host/DBMS-based client tracking/list processing products.

- Hundreds of small niche vendors sell marketing and sales software, primarily for personal computer platforms. Examples of vendors are Sales Technologies, Modatech, Phoenix and Epsilon.

- Independent DBMS companies have extended their product lines to include marketing and sales software. For example, Computer Corporation of America's MarketPulse product is an extension of its original data base product, Model 204.

- Companies whose main product is an EIS or decision support tool. For example, Information Resources, Inc. has a Sales Management System that works in conjunction with its decision support software product, EXPRESS. The Sales Management System is used by sales managers to track and analyze sales performance for territory management. The system can perform rankings, draw comparisons, highlight exceptions and identify trends. EXPRESS is available to end users on a timesharing or direct license basis.

- Numerous, largely regional companies offer computerized lettershop operations and direct mail processing services.

- Although there are some VARs and turnkey vendors focused exclusively on sales and marketing, the majority of VARs and turnkey vendors sell marketing and sales software as one of several bundled products for industry-specific markets.

In comparison to sales and marketing, there are only a handful of electronic publishing software vendors.

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- The two leading workstation/PC electronic publishing vendors are Frame Technology and Interleaf Inc.
- Other smaller vendors are ArborText, Compugraphic and Island Graphics
- Xyvision is a leading minicomputer-based electronic publishing vendor; although it sells into some business environments much of its sales are to the commercial and professional publishing market.

C
Vendor Profiles

This section contains profiles of a sampling of leading marketing and sales or electronic publishing information services vendors to show the diversity of types of companies and approaches.

1. Acxiom, 301 Industrial Boulevard, Conway, Arkansas, 72032-7103, (501) 450-1440

Acxiom provides processing services and products to traditional direct marketing organizations, and marketing departments of large corporations. The company serves all phases of the marketing process from planning and project design, to list production and lettershop services, to fulfillment and consumer response analysis. In addition, the company has positioned itself to provide subscription fulfillment and subscription fulfillment services to the publishing industry.

The company's primary vehicle for these services is its data communications network through which direct marketing customers receive authorized access to lists and databases housed in the company's corporate headquarters data center. Customers are connected to the network through either company-owned terminals leased to the customer or through customer-owned equipment.

In early 1990, five companies merged with Acxiom. These five companies are BSA, Inc., CCX Network, Modern Mailers, Marketlead Services, and Southwark Computer Services, Ltd. With this consolidation, Acxiom considers itself the leading marketing services company.

Recently Acxiom has begun to place more emphasis on service and consulting, as well as providing advice and access to specifically targeted groups. In addition it has begun to offer systems operations services to its customers.

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In October of this year Acxiom and Advo-System, Inc. formed a joint venture, Info-base Services, to develop direct marketing data bases and technology to extract data from directories and other printed materials by optical scanning. The companies will be equal partners in the venture. Advo is a direct-mail company that distributes coupons and flyers to households.

Revenue for the fiscal year ending March 1991 was $97.7 million.

2. Early, Cloud & Co., Aquidneck Industrial Park, Newport, RI 02840, (401) 849-0500

Early Cloud & Company (ECC) provides software that automates telephone business functions such as customer service, account management and teleservicing. The Telephone Delivery System (TDS) supports both inbound and outbound calling, and can handle them concurrently. TDS is also suitable for environments that are not telephone oriented but require workflow and connectivity support. For example, an application such as loan approval, which is characterized by the need to process a customer file in multiple steps through a number of departments, can be automated with TDS.

TDS runs on IBM MVS, VSE and AS/400 platforms. ECC recently announced enhancements of its TDS products to embrace a client/server model. The TDS architecture will be expanded to allow message-based processing which provides the framework for TDS to function as a host-based server. ECC will look to identify beta opportunities for its client/server products in the second quarter of 1992.

ECC also recently announced availability of an interface between TDS software and Tandem Call Applications Manager (CAM) software in the AT&T and Northern Telecom environments. CAM is an application enabler which allows TDS software to receive data from private branch exchanges or automatic call distribution.

ECC, founded in 1981, was the first company to provide call center automation in support of telemarketing.

3. Frame Technology, 1010 Rincon Circle, San Jose, CA 95131, (408) 433-3311

Frame Technology, a privately held corporation founded in 1986, had fiscal 1990 revenues of $26.5 million; projected 1991 revenues are $42 million. Its original FrameMaker product was UNIX-based and addressed the needs of technical users who produce documents and must integrate into other applications—such as MCAD, CAE and CASE.

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Now, however, FrameMaker is available for multiple-user interfaces and more than 25 different computers. With all the platforms that Frame supports, it seems likely it will also introduce DOS and Windows-based products in the near future. FrameMaker International is available in 13 languages.

In addition to electronic publishing, Frame's product strategy includes a view-only version called FrameViewer (for UNIX) and FrameReader (for the Macintosh).

Licenses are sold to universities, corporations, research and government institutions, software development professionals, and publications groups.

Frame is working on development of tools to integrate FrameMaker with other applications. To this end, FrameMaker can be integrated with SoftBench, a software development integrated framework from Hewlett-Packard. The integration of FrameMaker into the SoftBench framework allows users to create and edit FrameMaker documents directly from other software applications, saving time and enhancing quality in the documentation process.

4. Interleaf, Inc., Ten Canal Park, Cambridge, MA 01241, (617) 577-9800

Interleaf, founded in 1981, develops and markets electronic publishing applications software and provides systems integration and customization services. In November 1989, Interleaf announced a major restructuring that removed the company from the turnkey systems part of its business and refocused Interleaf on its major growth and value-added business of software and services.

Interleaf has broadened its strategy by adding value products that manage the process of distributing documents electronically.

Since its exit from the turnkey business, Interleaf is pursuing the following:

- A multiplatform strategy; Interleaf products can now run on 386-based machines.

- Customizing its electronic publishing products for specific customers as well as for industry-specific markets through solutions that include access to multiple applications and data bases. Its "active document technology" enables authors to build a document that is very specific to their needs.

- Broadening its product line to include document management tools such as its Document Manager product which competes with products such as those from Odesta.

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- Placing more emphasis on a view-only version of its electronic publishing product.

In August, Interleaf announced that it will integrate its electronic publishing system with Hewlett-Packard's SoftBench software development environment.

Revenues for 1991 were $84.3 million compared with $88.8 million for fiscal 1990; the company attributes the decrease in revenues to its move away from hardware sales. In July 1991 Interleaf acquired its German distributor, Interleaf GmbH for $8.4 million.

5. Sales Technologies, Inc., 3399 Peachtree Road N.E., Atlanta, GA 30326, (404) 841-4000

Sales Technologies (ST) designs, develops and integrates tailored software applications to help companies maximize national/international sales activities. ST systems meet the needs of mobile sales forces.

ST's software product consists of five core application modules: Territory Management, Electronic Mail, Electronic Forms, Electronic Reports Distribution and Spreadsheets. All are DOS-based.

Although it sells its products across all industries, much of the company's success has been in the consumer goods, pharmaceutical, and oil and gas industries.

It recently introduced three new sales force productivity system enhancements designed for pharmaceutical sales representatives to improve sample inventory management and simplify call reporting.

Development efforts underway include:

- Bar code optical storage system for sampling
- Pen-based signature capture
- Windows-based products

In 1991, Sales Technologies merged with Compumark which provides a coordinated approach to field sales, services, and marketing information systems.

Founded in 1983, Sales Technologies was acquired in 1989 by, and is a wholly owned subsidiary of, The Dun & Bradstreet Corporation.

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Appendixes

A

Definition of Terms

1. Cross-Industry Sector Definitions

INPUT has identified seven cross-industry or horizontal market sectors. These sectors or markets involve multi-industry applications such as human resource systems, accounting systems, etc. In order to be included in an industry sector, the service or product delivered must be specific to that sector only. If a service or product is used in more than one industry sector, it is counted as cross industry.

These seven cross-industry markets are:

- Human resources
- Education and Training
- Office Systems
- Accounting
- Engineering and Scientific
- Planning and Analysis
- Other (includes sales and marketing, and electronic publishing)

2. Delivery Mode Definitions

Cross-industry application solutions are delivered via applications software products, turnkey systems and transaction processing services. Management support information services such as systems operations, systems integration and professional services, information delivery services and systems software are excluded from cross-industry consideration.

a. Applications Software Products

Applications software products enable a user or group of users to support an operational or administrative process within an organization. Examples include accounts payable, order entry, project management and office systems. INPUT categorizes applications software products into two submodes.

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- *Industry-Specific Applications Software Products* - Software products that perform functions related to fulfilling business or organizational needs unique to a specific industry (vertical) market and sold to that market only. Examples include demand deposit accounting, MRPII, medical record keeping, automobile dealer parts inventory, etc.

- *Cross-Industry Applications Software Products* - Software products that perform a specific function that is applicable to a wide range of industry sectors. Examples include payroll and human resource systems, accounting systems, word processing and graphics systems, spreadsheets, etc.

INPUT also forecasts the applications software products delivery mode by platform level: mainframe, minicomputer and workstation/PC.

b. Turnkey Systems

A turnkey system is an integration of equipment (CPU, peripherals, etc.), systems software, and packaged or custom application software into a single product developed to meet a specific set of user requirements. Value added by the turnkey system vendor is primarily in the software and support services provided. Many CAD/CAM systems and many small business systems are turnkey systems. Turnkey systems utilize standard computers and do not include specialized hardware such as word processors, cash registers, process control systems, or embedded computer systems for military applications.

Computer manufacturers (e.g., IBM or DEC) that combine software with their own general-purpose hardware are not classified by INPUT as turnkey vendors. Their software revenues are included in the appropriate software category.

Most turnkey systems are sold through channels known as value-added resellers.

- *Value-Added Reseller (VAR):* A VAR adds value to computer hardware and/or software and then resells it to an end user. The major value added is usually applications software for a vertical or cross-industry market, but also includes many of the other components of a turnkey systems solution, such as professional services.

Turnkey systems have three components:

- *Equipment* - Computer hardware supplied as part of the turnkey system

- *Software products* - Prepackaged systems and applications software products

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- *Professional services* - Services to install or customize the system or train the user, provided as part of the turnkey system sale

c. Processing Services

This delivery mode includes three submodes: transaction processing, utility processing, and "other" processing services.

- *Transaction Processing* - Client uses vendor-provided information systems-including hardware, software and/or data networks-at the vendor site or customer site to process transactions and update client data bases. Transactions may be entered in one of four modes:
  - *Interactive* - Characterized by the interaction of the user with the system for data entry, transaction processing, problem solving and report preparation; the user is on-line to the programs/files stored on the vendor's system.
  - *Remote Batch* - Where the user transmits batches of transaction data to the vendor's system, allowing the vendor to schedule job execution according to overall client priorities and resource requirements.
  - *Distributed Services* - Where users maintain portions of an application data base and enter or process some transaction data at their own site, while also being connected through communications networks to the vendor's central systems for processing other parts of the application.
  - *Carry-in Batch* - Where users physically deliver work to a processing services vendor.
- *Utility Processing* - Vendor provides basic software tools (language compilers, assemblers, DBMSs, graphics packages, mathematical models, scientific library routines, etc.), generic applications programs and/or data bases, enabling clients to develop their own programs or process data on the vendor's system.
- *Other Processing Services* - Vendor provides service-usually at the vendor site-such as scanning and other data entry services, laser printing, computer output microfilm (COM), CD preparation and other data output services, backup and disaster recovery, etc.

For a more complete discussion of INPUT's information services industry structure and market sector definitions please refer to INPUT's *Definition of Terms* found in the overview binder of the Market Analysis Program.

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B

Forecast Data Base

Exhibit B-1 presents INPUT's user expenditure forecast for information services sold to the other cross-industry sector.

EXHIBIT B-1

Other Cross-Industry Sector
User Expenditure Forecast by Delivery Mode, 1990-1996
($ Millions)

Delivery Modes	1990 ($M)	Growth 90-91 (%)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 (M)	1996 ($M)	CAGR 91-96 (%)
Sector Total	1,399	8	1,513	1,635	1,785	1,960	2,163	2,344	9
Processing Services	525	6	556	575	601	625	650	676	4
- Transaction Processing	525	6	556	575	601	625	650	676	4
Turnkey Systems	437	8	471	512	561	619	687	725	9
Applications Software	437	11	486	548	623	716	826	943	14
- Mainframe	182	5	191	204	219	234	250	268	7
- Minicomputer	117	10	129	142	156	171	188	208	10
- Workstation/PC	138	20	166	202	248	311	388	467	23

Exhibit B-2—Other Cross-Industry Sector 1991 Data Base Reconciliation—reconciles INPUT's 1990 forecast with this year's forecast. INPUT has adjusted its processing services and applications software products forecasts downward this year to reflect more conservative assumptions about these delivery modes in general.

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EXHIBIT B-2

Other Cross-Industry Sector
1991 MAP Data Base Reconciliation
($ Millions)

Delivery Modes	1990 Market				1995 Market				90-95 CAGR per data 90 Rpt (%)	90-95 CAGR per data 91 Rpt (%)
	1990 Report (Fcst) ($M)	1991 Report (Actual) ($M)	Variance from 1990 Report ($M)	Variance from 1990 Report (%)	1990 Report (Fcst) ($M)	1991 Report (Fcst) ($M)	Variance from 1990 Report ($M)	Variance from 1990 Report (%)		
Total	1,408	1,399	9	1	2,359	2,163	196	-8	11	9
Processing Services	525	525	-	-	749	650	99	-13	7	4
Turnkey Systems	437	437	-	-	687	687	-	-	9	9
Applications Software	446	437	9	2	923	826	97	-11	16	14

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Related Reports

Related reports of possible interest to the reader include:

1. U.S. Markets

- *Cross-Industry Market Reports*
  - Accounting Sector, 1991-1996
  - Human Resources Sector, 1991-1996
  - Engineering and Scientific Sector, 1991-1996
  - Planning and Analysis Sector, 1991-1996
  - Education and Traning Sector, 1991-1996
  - Office Systems Cross-Industry Sector, 1991-1996
- *U.S. Application Solutions Market Analysis Report, 1991-1996*
- *U.S. Processing Services Market Analysis Report, 1991-1996*
- *U.S. Industry Sector Markets, 1991-1996* (15 reports on all major industry sectors, e.g., insurance)

2. European Markets

- *The Western European Market for Computer Software and Services, 1991-1996*
- *Trends in Processing Services-Western Europe, 1991-1996*

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