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## Marketing Customer Service within the Information Movement and Management Industry

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MARKETING CUSTOMER SERVICE  
WITHIN THE  
INFORMATION MOVEMENT AND MANAGEMENT INDUSTRY



BY  
MARK JONES, A.S., B.S.

A Digest Presented to the faculty of the Graduate  
School of the Lindenwood Colleges in Partial  
Fulfillment of the Requirements for the  
Degree of Master of Arts

1986

Marketing Customer Service  
Within The  
Information Movement and Management Industry

The goal of this project is to determine what characteristics of service firms are considered critical to the success of vendors within the information movement and management industry.

The first task undertaken was to determine a definition for the information movement and management industry and which firms were major competitors within the industry. The size of the industry in terms of employees and revenues was then estimated. Some of the characteristics of the major competitors were then expanded.

The next activity involved the determination of what factors the information movement and management market members used to select a vendor of choice. The theories espoused by leading marketing theorists were first used to describe the general characteristics of service vendors. Next, recent articles and publications, along with the results of consultant surveys, were used to identify the characteristics of

service vendors which are considered most important to members of this information movement and management market. Finally, discussions with a major member of this market, Anheuser-Busch Companies, were used to test the appropriateness of the factors previously determined to be important selection criteria.

Through this process of defining the industry and determining the selection criteria employed by members of this market, the marketing theories advanced in marketing textbooks were determined to be valid. The members of this market view the concept of a service as an intangible offering and therefore consider the selection of a service vendor to be a high risk process. They attempt to reduce the risk through an evaluation of the vendor's employees, buildings, tools and maintenance spare equipment. These tangible elements give the customer some sense of verification of the promises made by the vendor. Customers in this market consider a personal relationship with the vendor's employees to be an essential factor in determining the credibility of the vendor.

In essence, a competitor within the information movement and management industry must realize that customers view promises of service as risky and therefore are searching for some characteristics which will verify the quality of the service offering and

thus reduce the perceived risk. The qualities generally employed in the selection process are the people, equipment and other physical attributes of the vendor along with the depth of commitment exhibited through personal relationships with the vendor's employees.

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Marketing Customer Service  
Within The  
Information Movement and Management Industry

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Marketing Customer Service  
Within The  
Information Movement and Management Industry

INTRODUCTION

The information movement and management industry consists of those firms supplying equipment and services which store, alter or transport information, whether in digital or analog format. The term information is defined to be knowledge, facts, data or intelligence acquired in any manner. Movement means to change the place or position of; to go in any manner or direction from one place or part of space to another. Management is the act, art or manner of handling, controlling or directing. Therefore the information movement and management industry is in the business of handling and controlling the change in position of knowledge, facts, data and other intelligence.

The United States has been declared the world's first service-based economy by most, if not all, economists and business leaders. Some 73 percent of

all non-agricultural employment in the United States is provided by industries classified as service oriented.<sup>1</sup> While the vast majority of Americans are employed in service industries, only 29 percent of the national GNP is derived from these service industries. Evidently the methods of production employed within the traditional manufacturing industries have not been successfully employed within the service industries. Since the majority of Americans are employed within service industries and the growth in employment is projected to lie within the service industries, productivity by such firms will become the competitive weapon for survival. Therefore the study of successful competitive methods of production and marketing within the information movement and management industry is useful and appropriate.

A second major trend within American industry is the movement from the Industrial Age toward the Information Age. This broad trend has been heralded by corporate management as the age in which the possession of and effective manipulation of information will mean more to the success of the firm than the increase in productivity normally associated with industrial manufacturing. This argument at first seems opposed to the need to increase the productivity of service firms

mentioned in the previous paragraph, however the productivity of a service firm is closely related to the possession of information regarding the activities of competitors, needs of customers and volume of demand. The manager of a service firm has much greater need of the information regarding the demands of existing and potential customers than the manager of a traditional manufacturing firm. Later discussions will explain the increased need for information regarding the quality of service within service industries compared to manufacturing firms. In general the trend toward the increased importance of information, its possession and manipulation, is a result of the trend toward services-based activity and the two cannot be separated.

In summary, the economy of the United States is now classified as a service industry. The possession of information and the effective manipulation of that information will be of increasing strategic importance as the volume of activity within service-based industries increases. The macro trends of movement from the Industrial Age toward the Information Age and the movement toward service industries are compatible and reinforce the need to study methods of marketing services within the Information Movement and Management Industry.

The purpose of this introduction is to provide an overall appreciation of the macro trends toward service industries within the United States and toward information movement and management as the strategic weapon employed to achieve corporate goals. The objective of this study is to determine what characteristics of service firms are considered essential in the success of service vendors within the information movement and management industry. The study will begin with an identification of the information movement and management industry and the major competitors within this industry. The study will then progress toward the determination of the characteristics critical to the success of a competitor within this industry. These characteristics will be determined through successive examination of the teachings of major marketing theorists, the market surveys of industry consultants and the statements from a major member of the information movement and management market.

Endnotes

<sup>1</sup> Philip Kotler, Principles of Marketing (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1983), p. 591.

## DESIGNATION OF INDUSTRY

The Information Movement and Management industry consists of numerous corporations supplying one or more of the entities involved in the movement and management of information. Typically, no firm is involved in one line of business and some firms are so diversified as to be classified as conglomerates. Every firm has some activity from which the preponderance of revenue is derived. The U. S. Office of Management and Budget Standard Industrial Classification Manual, 1972, classifies corporations by Standard Industrial Classification codes (SIC) designating the primary and secondary activities of the firm. Within each SIC code, firms are classified according to volume of revenue or number of employees. For manufacturing firms, the volume of revenue is defined to be the value of production, the cost of goods sold. For firms primarily involved in the provision of a service, the volume of revenue is the total sales receipts.

No specific group dictates what constitutes the information movement and management industry. For purposes of exploring this subject, the firms classified as primarily involved in the provision of radio transmission equipment and apparatus, electronic

computing equipment, telephone and telegraph communications or computer and data processing equipment repair and maintenance will be considered the information movement and management industry. This definition conforms to SICs 3661, 3662, 3573, 4811, 4821 and 7379.

SIC 3573, Electronic Computing Equipment, consists of establishments primarily engaged in the manufacture of electronic computers and peripheral equipment and/or major logical components. Such firms might manufacture analog computers, digital computers, military and ruggedized computers. These computers might be used in data processing, control equipment for industry, weapons, transport or space exploration. Peripherals include magnetic drums, magnetic tapes, magnetic disks, core memories, film memories. The operation and maintenance of these systems are included within this classification. Rebuilt units of such equipment are also included. The value of production is the unit of measure for firms classified within this SIC. This group does not include manufacturers of calculators, electrical equipment, industrial controllers nor process instruments.

SIC 3661, Telephone and Telegraph Apparatus, is composed of those firms primarily involved in the



manufacture of wire telephone and telegraph equipment and parts for telephone and telegraph apparatus. Telephone equipment is primarily composed of apparatus and systems employed in the encoding, transmission and decoding of analog signals. This equipment includes the basic telephone, the central switching systems and the transmission equipment such as microwave. The term telegraph is an antiquated term which today is usually referred to as "data" equipment. This telegraph equipment consists of the data sets, modems, controllers and transmission systems employed in encoding, transmission and decoding of digital signals. This classification is based upon the value of production.

SIC 3662, Radio and Television Transmission, Signaling and Detection Equipment and Apparatus, includes those firms primarily engaged in the manufacture of (1) radio and television broadcast equipment, (2) electronic communications equipment and parts, (3) electronic field detection equipment, (4) high energy particle accelerator systems, and (5) other electronic communication and signaling products not elsewhere classified. Although high energy particle acceleration does not fit the definition of information movement and management, the other components of this

classification are considerable. The communications equipment included within this classification typically is based upon wireless transmission of analog or digital information, particularly radio transmission. Since this is a classification of manufacturing, the value of production is used as the measure of size and output.

SIC 4811, Telephone Communications (Wire or Radio), consists of those firms which primarily furnish telephone communications service by placing two or more parties in vocal conversation. This classification includes domestic, international, mobile and aeronautical communications. This classification does not include firms primarily engaged in paging or answering services nor radio and television transmission. Since this classification is a service versus a manufactured product, the value of receipts or revenues is the basis for establishing size of output.

SIC 4821, Telegraph Communications (Wire or Radio), designates those companies which engage in furnishing telegraphic communication service by transmitting non-vocal record communications intended for receipt by designated persons. This group includes domestic, international, marine and aeronautical transmission. It does not include radio or television

broadcast corporations. Again, this classification is based upon the provision of a service and therefore the value of receipts or revenues is the gauge of the volume of output.

SIC 7379, Computer and Data Processing Equipment Repair and Maintenance, consists of those corporations involved with the supply of computer and data processing services, such as rental, leasing, repair and maintenance of computers and related equipment. This classification does not include firms which primarily furnish financing services for lease or purchase arrangements.

Although the definition of which corporations are classified as participants within the information movement and management industry is subject to debate, the firms classified by the Office of Management and Budget as primarily engaged in areas designated by SIC codes 3573, 3661, 3662, 4811, 4821 and 7379 are certainly well within our definition of information movement and management.

## MAJOR VENDORS OF SERVICES WITHIN THE IM&M INDUSTRY

The previous section defined the classification of firms within the information movement and management industry. This section will provide a listing of the American firms primarily engaged in those activities classified under SIC codes 3573, 3661, 3662, 4811, 4821 and 7379. The top competitors within each classification will be discussed in some detail. It is important to note that the firms so classified are limited to those companies incorporated under the laws of the United States. There are several major vendors operating within the United States information movement and management industry which are subsidiaries of large foreign-based corporations. The financial reporting requirements of foreign countries is often less extensive and subject to misinterpretation and therefore such firms are not included in this listing.

The first task is to identify the number of vendors operating within the U.S. IM&M industry. Table 1 provides a listing of the number of vendors by number of employees, within the previously defined SIC codes. Note the classification "Other" which includes

those firms for which no information regarding the employee body is available to the source.

The second overall task is to define the volume of production within each classification. The measure of volume is based upon dollar value of production for manufacturing firms and is based upon revenue and sales dollars for pure service firms. Table 2 lists the number of firms within each SIC code, by revenue valuation. The classification "Other" includes firms which do not release revenue figures to the general public, such as privately held corporations. Excluding the 17 percent of firms classified as "Other", the volume of business within the information movement and management industry is between \$20,651,096,000 and \$246,768,438,000. The firms classified as reporting revenue in excess of \$5,000,000 are considerably larger than that amount, as will be seen in the section detailing the major competitors.

Table 3 lists the largest vendors of electronic computing equipment. Tables 4 and 5 list the major manufacturers of telephone and telegraph apparatus and radio and television transmission equipment. Table 6 lists the major firms supplying wire or radio telephone communications, while Table 7 lists the major suppliers of telegraphic communications. Finally, Table 8 lists

the prominent vendors of repair and maintenance services associated with computer and data processing equipment. In each exhibit, the reader must remember that the firms listed are only those firms incorporated under the laws of the United States and which report such information to the public.

International Business Machines (IBM) is the largest manufacturer of electronic computer equipment and information processing equipment. IBM manufactures every size system from microprocessors to mainframe computers plus the peripheral storage devices, input devices and display systems. As of July 30, 1986, IBM derived 23 percent of total revenues, \$11,512,880,000, from the provision of services.<sup>1</sup> Sixty-five percent of revenue came from sales of equipment while the remaining 14 percent came from equipment leases or rentals. IBM receives some 55 percent of income from operations in foreign countries. The firm provides customer services for IBM equipment only.

The second largest manufacturer of information processing equipment is Honeywell Corporation. Honeywell is a diversified corporation manufacturing control systems; heating, ventilation, and air conditioning systems; computer systems and the related

TABLE 1  
EMPLOYEE SIZE OF FIRMS BY SIC CODE

<u>SIC</u>	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-49</u>	<u>50-99</u>	<u>100</u>	<u>Other</u>	<u>Total</u>
3573	795	662	383	207	669	408	733	329	4186
3661	210	178	91	54	156	86	230	76	1081
3662	1275	900	492	276	787	425	885	272	5312
4811	790	919	493	251	632	312	598	672	4667
4821	236	86	33	20	38	14	45	43	515
7379	6339	2944	1083	561	996	328	251	760	13262
Total	9645	5689	2575	1369	3278	1573	2742	2152	29023

Source: Dun's Business Ranking - 1986

TABLE 2  
SALES REVENUE BY SIC CODE

<u>SIC</u>	<u>1K-49K</u>	<u>50K-99K</u>	<u>100K- 249K</u>	<u>250K- 499K</u>	<u>500K- 999K</u>	<u>1M- 49M</u>	<u>5M</u>	<u>Other</u>	<u>Total</u>
3573	54	57	256	291	279	872	743	476	3028
3661	18	23	66	57	89	196	196	139	784
3662	142	229	416	420	561	1172	825	514	4279
4811	59	60	194	493	410	688	389	587	2880
4821	70	44	48	22	12	11	13	116	336
7379	653	1389	2050	2225	1375	1713	507	2057	11969
Total	996	1802	3030	3508	2726	4652	2673	3889	23276

Source: Dun's Business Ranking - 1986



TABLE 3  
MANUFACTURERS OF ELECTRONIC COMPUTING EQUIPMENT

COMPANY	SALES (000)	RANK	EMPLOYEES	RANK
International Business Machines	45,900,000	1	394,000	1
Honeywell Incorporated	6,070,000	2	94,200	2
Digital Equipment Corp.	5,580,000	3	85,600	3
Sperry Corporation	4,910,000	4	73,400	4
Litton Industries, Inc.	4,600,000	5	65,500	5
Burroughs Corp.	4,290,000	6	62,000	6
Wang Laboratories Inc.	2,180,000	7	30,000	8
Harris Corporation	1,990,000	8	30,500	7
Honeywell Information Systems	1,800,000	9	25,000	9
Gould Incorporated	1,390,000	10	19,600	10

Source: Dun's Business Ranking - 1986

TABLE 4

MANUFACTURERS OF TELEPHONE AND TELEGRAPH APPARATUS

COMPANY	SALES (000)	RANK	EMPLOYEES	RANK
AT&T Technologies Inc.	11,800,000	1	142,000	1
GTE Communication Systems	1,330,000	2	14,500	3
GTE International Inc.	803,000	3	20,800	2
TIE/Communications Inc.	501,000	4	1,850	7
ITT Telecom Products Corp.	413,000	5	8,000	4
Conrac Corporation	154,000	6	1,600	8
Comdial Corporation	150,000	7	2,600	5
Stromberg-Carlson Corp.	150,000	7	1,600	8
General Datacomm	147,000	8	2,460	6
Industries				
Electrospace Systems Inc.	107,000	9	1,600	8

Source: Dun's Business Ranking - 1986

TABLE 5  
MANUFACTURERS OF RADIO AND TELEVISION TRANSMISSION EQUIPMENT

COMPANY	SALES (000)	RANK	EMPLOYEES	RANK
ITT Corporation	12,700,000	1	252,000	1
Westinghouse Electric Corporation	9,530,000	2	133,000	2
Raytheon Company	5,990,000	3	76,100	5
Motorola Incorporated	5,530,000	4	88,800	5
International Standard Electric Corporation	4,640,000	5	109,000	3
Hughes Aircraft Company	3,300,000	6	69,400	6
Lear Siegler Inc.	2,370,000	7	30,000	7
Ford Aerospace Communications	1,350,000	8	14,300	8
E-Systems Incorporated	819,000	9	12,500	9
Sanders Associates Inc.	746,000	10	11,200	10

Source: Dun's Business Ranking - 1986

TABLE 6  
SUPPLIERS OF TELEPHONE COMMUNICATIONS

COMPANY	SALES (000)	RANK	EMPLOYEES	RANK
AT&T Communications	23,056,000	1	223,000	1
BellSouth Corporation	9,510,000	2	97,600	3
NYNEX Corporation	9,500,000	3	98,200	2
American Info Tech Corp.	8,340,000	4	77,500	6
Bell Atlantic Corp.	8,090,000	5	79,500	5
Southwestern Bell Corp.	7,900,000	6	96,000	4
Pacific Telesis Group	7,820,000	7	77,000	7
U S West Incorporated	7,270,000	8	70,600	8
United Telecommunica- tions Inc.	2,850,000	9	27,200	9

Source: Dun's Business Ranking - 1986

TABLE 7

SUPPLIERS OF TELEGRAPHIC COMMUNICATIONS

COMPANY	SALES (000)	RANK	EMPLOYEES	RANK
Western Union Corp.	1,130,000	1	13,800	1
RCA Global Communications Incorporated	194,000	2	2,000	2

Source: Dun's Business Ranking - 1986

TABLE 8  
SUPPLIERS OF COMPUTER AND DATA PROCESSING EQUIPMENT  
REPAIR AND MAINTENANCE SERVICES

COMPANY	SALES (000)	RANK	EMPLOYEES	RANK
Comdisco Incorporated	558,000	1	500	1
Greyhound Computer Corp.	161,000	2	240	4
ASK Computer Systems Inc.	65,000	3	200	5
Howell Management Inc.	47,100	4	500	1
M/A-COM Alanthus Data Inc.	45,000	5	350	2
Computer Sales Intl. Inc.	43,400	6	50	6
Computone Systems Inc.	36,000	7	325	3

Source: Dun's Business Ranking - 1986

peripherals. Honeywell provides installation and maintenance service for Honeywell manufactured systems as well as some equipment manufactured by other corporations. The Information Systems group within Honeywell manufactures computer and peripheral equipment and provides services associated with such components. Twenty-nine percent of all Honeywell revenue, \$1,921,250,000, was generated by this group.<sup>2</sup> No information is available regarding the revenue associated with only services within the Honeywell Information Systems Group.

Digital Equipment Corporation (DEC) is the third largest manufacturer of computers and related hardware. DEC sells and services DEC equipment and on a limited basis services other vendors' equipment supporting DEC equipment. Additionally, DEC provides applications software and computer supplies. In 1985, the revenues from all lines of business at DEC amounted to \$6,686,000,000.<sup>3</sup> Thirty-two percent of these revenues were from the provision of services. DEC also produces a 39 percent of income outside the United States.

American Telephone and Telegraph (AT&T) is the largest manufacturer of telephone and telegraph apparatus. This amounted to 49 percent of all revenues.<sup>4</sup> AT&T Technologies reported \$12,179,500,000

in revenue from the sale of such equipment. Service for such equipment is provided by AT&T units. AT&T reported \$34,909,500,000 in revenues from the provision of equipment and services, during the most recent operating period. This amount includes revenues from other lines of business within the corporation and therefore should not be construed as solely from the services associated with the sale of equipment.

GTE Communications Systems and GTE International Incorporated, respectively, are the second and third largest manufacturers of telephone and data transmission equipment. Both organizations are subsidiaries of the GTE Corporation. GTE Communications is also a partner with United Telecommunications in the U. S. Sprint Corporation, providing inter-LATA voice and data transmission services. GTE International is a joint venture between GTE Corporation and Siemens, A.G. of West Germany, operating in the United States, Europe and Taiwan. The GTE Communications Products group produced \$2.6 billion of revenue and \$98 million income during 1985.

The TIE/Communications Corporation is the fourth largest manufacturer of telephone and telegraph apparatus. This corporation began operations in 1971 as a direct result of efforts by the Federal



Communications Commission to introduce competition within the industry. TIE manufactures and markets a complete line of digital telephone communications equipment from single office telephones to large Private Branch Exchanges (PBXs). The company sells the majority of its production to the seven regional Bell telephone holding companies. The corporation does not provide a nationwide service force but some sales branches do retain service vendors on a contract basis. No estimate of revenues from the provision of services is available.

The world's largest provider of radio and television transmission equipment is International Telephone and Telegraph Corporation (ITT). This firm is correctly designated the world's largest conglomerate since subsidiaries range from building supplies to bakery products to high technology electronics equipment. The corporation began a continuing consolidation effort three years ago, in which business lines outside the high technology electronics efforts are being gradually sold. The firm is the fifth largest manufacturer of telecommunications equipment with the majority of sales outside the U.S. The sale of telecommunications equipment amounted to 39 percent of revenues, \$4,629,690,000.<sup>5</sup> The corporation

provides services associated with its equipment and equipment manufactured by other firms through its Federal Electric Corporation and International Standard Electronics Corporation subsidiaries.

Westinghouse Corporation is the second largest manufacturer of such equipment. The company is more concentrated in the nuclear power and electrical equipment production. Westinghouse recently sold Group W Cable Systems in an effort to consolidate operations around the electrical industry and therefore may withdraw from the information movement and management industry. The company provides maintenance and industrial services through its Industries and International Group, which accounted for 34 percent of sales.

The Raytheon Corporation is the third largest manufacturer of radio and television broadcast equipment, concentrating its business within the government sector, particularly the Department of Defense. The corporation manufactures, sells and services communications terminals through satellites. The Electronics Group provides communications systems, mobile systems, radar systems and microwave systems, producing 59 percent of revenues and 88 percent of profits.<sup>6</sup> No information regarding the portion of

revenues associated with the provision of services within this industry is available.

Within the classification Telephone Communications, AT&T is by far the largest provider of service. Within the corporate mission statement, AT&T claims to be engaged in electronic information movement and management. The corporation is approximately equally divided between the regulated AT&T Communications Group and the unregulated AT&T Technologies Group. Operations within the AT&T Communications Group consist primarily of interexchange and international communications services, which is categorized under SIC code 4811. AT&T's 1985 revenues from the provision of interexchange and international calling service and installation and maintenance services amounted to \$17,267,600,000.

BellSouth Corporation is a telephone communications company providing service to approximately 14 million customer access lines in the states of Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee. The company was formed from the breakup of the Bell System in 1984 and is a holding company for subsidiaries including mobile telephone systems and directory publications. Approximately 89 percent of

corporate revenues are derived from the provision of services. The corporation maintains its services and does not provide service for products sold by other corporations.

The third largest provider of telephone communications is the NYNEX Corporation which was also formed from the breakup of the Bell System in 1984. The corporation services 13.6 million customer access lines in New Jersey, New York and New England. According to the latest corporate annual report, NYNEX derived 88 percent of revenues from the provision of information movement and management services. The corporation bought controlling interest in the Datago Corporation. The NYNEX Corporation has established ventures in software development.

The Western Union Corporation is the largest provider of telegraph communications services, with over 116,140 lines in service. The corporation is a holding company with the predominant subsidiary being Western Union Telegraph Corporation. The company provides electronic mail service, money transfer, mailgram and telegram service. The corporation is almost completely service oriented.

The second largest provider of telegraph communications services is RCA Global Communications

Corporation. This subsidiary of RCA Corporation is a licensed international common carrier for record transmission. The majority of operations center upon the world-wide RCA satellite network. This subsidiary contributed 4 percent of 1985 revenues, \$404,480,000, yet produced 17 percent of profits, \$13,260,000. No information is available to determine the amount of revenue from the provision of services, but the majority of revenue is service related. The RCA Corporation and its subsidiaries were recently purchased by the General Electric Corporation.

The world's largest provider of repair and maintenance services for computer and data processing equipment is the Comdisco Corporation. This company is primarily involved in buying, selling and leasing used IBM equipment and other computer hardware. The company does provide similar services of PBX equipment and satellite communications systems. Installation and maintenance services are provided by Comdisco personnel and sometimes IBM employees under a second-party contract. The corporation emphasizes the larger IBM computer systems such as the 3090 and 308X series mainframes. This company also provides both hot and cold computer backup services for disaster recovery. No information is available to determine the break-down of revenue into lease revenues and services revenues.

The second largest provider of computer maintenance services is Greyhound Computer Corporation, a wholly owned subsidiary of the Greyhound Corporation. Greyhound Computer provides leasing and maintenance services for computer systems and the related peripheral devices. This group produced 20 percent of the 1985 Greyhound Corporation revenues, \$712,400,000.<sup>7</sup>

ASK Computer Systems Incorporated is the third largest provider of computer and data processing equipment services. ASK develops, markets and services minicomputer-based management information systems designed primarily for manufacturers and financial services. The majority of ASK installations are turnkey operations. Service revenues constituted approximately one-fourth of ASK's total 1985 sales of \$54,200,000.<sup>8</sup>

In general the largest providers of service within the information movement and management industry are very large corporations, far exceeding the \$5,000,000 in revenue listed in the original estimate of the the size of the industry. If the revenues reported by the three largest vendors in each of the six SIC codes are individually counted, the estimated value of business within the information movement and management industry is between \$141,691,096,000 and \$367,808,438,000.

Endnotes

- <sup>1</sup> Standard NYSE Stock Reports (New York: Standard & Poor's Corp., July 30 1986), vol. 53, p. 1210.
- <sup>2</sup> Standard NYSE Stock Reports (New York: Standard & Poor's Corp., October 7, 1986), vol. 53, p. 1154.
- <sup>3</sup> Standard NYSE Stock Reports (New York: Standard & Poor's Corp., September 30, 1986), vol. 53, p. 754E
- <sup>4</sup> AT&T 1985 Annual Report (New York: AT&T, Inc., 1986), p. 17.
- <sup>5</sup> Standard NYSE Stock Reports (New York: Standard & Poor's Corp., September 5, 1986), vol. 53, p. 1181.
- <sup>6</sup> Standard NYSE Stock Reports (New York: Standard & Poor's Corp., July 28, 1986), vol. 53, p. 1900.
- <sup>7</sup> Standard NYSE Stock Reports (New York: Standard & Poor's Corp., May 15, 1986), vol. 53, p. 1064.
- <sup>8</sup> Standard OTC Stock Reports (New York: Standard & Poor's Corp., June 11, 1986), vol. 52, p. 3165.

## GENERAL CHARACTERISTICS OF SERVICE CORPORATIONS

This section will discuss the characteristics of service organizations, what constitutes services, what are the challenges of marketing services and recommendations for promoting service provisioning.

According to Kotler, service denotes any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything.<sup>1</sup> Its production may or may not be tied to a physical product. Stanton expands the definition of services to include those separately identifiable, essentially intangible activities that provide want-satisfaction and that are not necessarily tied to the sale of a product or another service. The provision of a service does not include the transfer of title of ownership. There is no exchange of tangible goods when a service is provided, according to Semenik.

Services then are essentially intangible offerings, a key differentiation from the more traditional product management theories. In providing a service, no exchange of title takes place. A service is rendered and the recipient of the service can only experience the service. There is no exchange of physical goods when a service is rendered. Although



physical products may be used extensively in the provision of a service, the ownership of such units remains the same throughout the process. This intangible nature of services leads to a higher perceived risk on the part of the customer. The user of a service can only evaluate the service firm upon intangible factors such as reputation, image, years in service and guarantees of the service provider. Since human beings are less capable of processing abstractions than tangibles, this trait of services leads to much greater difficulty in the marketing of service versus the marketing of physical entities.

Services are usually inseparable from the provider of the service. Services cannot be separated from the seller of the service. Services are created and dispensed simultaneously by the provider. This characteristic implies that direct sales is often the only channel for distribution of services. Service vendors may sell service in advance through contractual arrangements. This is still a direct sales channel effort. Such vendors may also arrange for the sale of such services through franchise offices and other third parties, but such sales are merely an alteration of the direct sales channel of distribution. This inability of service vendors to separate themselves from the

service limits the capacity for providing such service. Since the service cannot be provided through other channels of distribution, the service vendor must always utilize resources to provide such service.

Services are also subject to a wide variability of quality. The quality is inconsistent from vendor to vendor. Employees within service firms vary in ability, experience, training, motivation and numerous other factors, producing a variability of quality within the vendor. Finally, since many environmental and emotional factors influence the motivation and performance of an individual, the quality of service provided by the individual employee can vary day to day or from job to job. This heterogeneity of production constitutes a major problem for service providers, more so than quality involved in the manufacture of physical entities. Service vendors must devote attention to the quality of service since often the perception of quality is the only basis of differentiation from other providers of similar services.

Another characteristic of services is perishability. Service cannot be stored in inventory for later consumption. Once a service opportunity is missed, it is gone forever.

Services tend to be more labor intensive compared to the production of physical entities. This characteristic creates one of the fundamental difficulties associated with providing services versus physical products. The service vendor must have sufficient resources in labor available at the moment the service is demanded. Yet the service demand cannot be predicted since the user is unaware of the need until the actual demand is placed. If users could predict the demand for service, there would be no need for service. Therefore, service providers must manage and control the coordination between supply of service and demand for service much more closely than managers within physical product supply industries. The demand side may be controlled using contractual service agreements stipulating the time and speed of services or through off-peak pricing to encourage smooth demand for service. The supply side of service may be managed using part-time employees or peak period efficiency routines which designate only critical routines be performed during peak demand periods and other less critical functions be performed during less demanding periods. The more personnel and capital involved in providing the service, the greater the opportunity costs involved, and the greater the impact upon the service corporation.

When a firm attempts to market services, it is really asking the user to purchase promises. The service vendor is forced to provide metaphorical reassurances of quality. Although the development of a service offering is very similar to the traditional physical product development, there is a greater sensitivity to changes in environment. Service firms must therefore study the environment much more closely. Such firms may then modify existing services or formulate entirely new service offerings. These ideas for service must be tested in appropriate markets and if successful, the firm must arrange for widespread distribution and promotion. In developing the service offering, the service marketer must determine an acceptable range of service levels. The traditional product manager must determine whether a factor or feature is desired or not. This variability of ranges of features makes the service marketer's task more difficult than the task of the traditional product manager.

Service firms must standardize the provision of services to stabilize the quality and increase the productivity of resources. By stabilizing the quality, the promise made to the user is less variable and therefore more credible. At the same time the

productivity of service firms can only be improved through the standardization of production more familiarly known as the industrialization process. The output of the service vendor is typically very labor intensive, meaning the employee effort is the output. Therefore, if the service vendor is to standardize the production of service, the vendor must standardize the efforts of the employees. In the manufacturing process the firm may assign production and manufacturing engineers to the task of increasing production through task and product redesign. The service firm on the other hand must redesign the employee. This becomes the eternal management problem of motivation of employees. Some of the obvious methods of "standardizing" the employee are consistent employee training, a participative team management approach and financial incentives to perform, such as employee stock options based upon performance. Although the subject of employee motivation is a very complicated subject discussed in other literature, the service marketer and service vendor must recognize the need to stabilize quality and increase production. These two apparently separate goals can only be achieved by standardizing the employee output through appropriate employee training and motivation.

Tootelian endorses a slightly different approach to marketing service, which he refers to as a molecular approach.<sup>2</sup> Actually, no product or service is entirely of one nature. Every physical product has some intangible qualities associated with it. Kotler implies as much when he states that a product is composed of the physical product and some core intangibles.<sup>3</sup> These core intangibles are what the purchaser really desires, as opposed to the physical unit. Therefore all offerings to the market can be displayed upon a continuum from pure product to pure service. Tootelian's molecular structure describes the tangible and intangible natures of each offering as tied together into a structure which displays some dominant nature or form. If the offering displays more of the tangible nature, then the marketer must present the less tangible qualities to the user as the means of differentiation. Likewise, the more intangible the offering, the more the marketer must present the tangible qualities to the user. The key question associated with intangible services then becomes what is the reality of this offering to its market? Service marketers must determine how the reality, the tangible natures, of the offering vary from segment to segment, using "soft" data. This "soft" qualitative data is

collected using the tools of psychology and sociology. Such market research is much more difficult than traditional techniques employed in product development. The reality of a service offering must not be confused with the concept of image employed in traditional product development. Reality is the service of the entity offered, whereas image is not the product but a method of differentiating and representing the offered entity to the target market. This reality of the offering is arrived at mainly through deduction based upon the total impression that the available evidence creates. The available evidence is the environment, people, buildings and equipment.

The service marketer must focus upon the tangible evidence. People are always perceived as the evidence. This fact underlies the famous IBM white shirt policy and the McDonalds young face policy. The buildings and other environmental factors are evidence of the corporation as well. The type and condition of the equipment employed in providing an intangible service are tangible means of deducing the quality of service provided. The user of a service must make a deduction based upon the evidence at hand and therefore the service marketer must center efforts upon enhancing this evidence in order to successfully present an offering to the target market segment.

The fluctuation of demand mentioned earlier along with the perishable nature of services causes price to be more sensitive than product marketing. The elasticity of demand must be of greater concern to service marketers than typical product managers. Unfortunately, all too often the service is priced using a cost-plus formula, which is totally inappropriate to elastic demand.

Services must be promoted using the tangible qualities associated with the offering, such as form, color, corporate logo and others. To differentiate an offering from competing offerings, the service marketer must emphasize the good reputation of the firm, the dependability of the firm, the quality of the output and the courteous, efficient personnel. To successfully market a service, the service developer must establish a strategic program which addresses the issue of whether the service should be marketed separate from a physical product. Once this question is answered the service marketer must begin a detailed market analysis to answer the questions discussed above. The amount of research is often overwhelming which may be partially to blame for the lack of theoretical research into methods for marketing services. Tootelian states that the successful marketing of an intangible service makes new product development look like child's play.<sup>4</sup>



Endnotes

<sup>1</sup> Philip Kotler, Principles of Marketing (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1983), p. 592.

<sup>2</sup> Dennis Tootelian and Ralph Gaedeke, Cases and Classics in Marketing Management (New York: Harcourt, Brace, Jovanovich, 1986), p. 195.

<sup>3</sup> Philip Kotler, Principles of Marketing (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1983), p. 247.

<sup>4</sup> Dennis Tootelian and Ralph Gaedeke, Cases and Classics in Marketing Management (New York: Harcourt, Brace, Jovanovich, 1986), p. 198.

## DESIRES OF CUSTOMERS WITHIN THE IM&M MARKET

Up to this point the discussion has centered upon what constitutes the information movement and management industry, what firms compete within this industry and what theories are espoused in the marketing of services. This section will describe some of the traits desired by users of these services. The desires of industry consultants and their clients who purchase such services are of paramount importance to the industry. A comparison of the demands of the market to the offerings of the industry will then be possible.

Eastern Airlines claims that one minute of computer down-time is valued at \$20,000 in lost ticket sales. Numerous other firms claim similar lost revenues associated with the lack of service. The request for proposals (RFPs) issued by the federal government and some state governments routinely specify the amount of liquidated damages to be recovered in the event of a system failure. Obviously, such claims underscore the value which these customers place upon the availability of services classified as information movement and management.

This criticalness of service and the estimated losses associated with the lack of service have led some customers to endorse the addition of backup systems. This approach has even resulted in the development of systems classified as "fault-tolerant". Such duplication of equipment or components is rarely cost-effective, but in those instances where availability of service is absolutely required, the cost is of little importance. An example of such a need is the communications associated with the President of the United States, which cannot be priced in terms of the costs to the population should the president be unable to communicate. Some firms have tended to concentrate upon designing and building the system correctly, not necessarily using redundant components or subsystems. One such firm is Honeywell, which concentrates upon engineering the systems to be totally reliable. Whether the firm provides redundant subsystems or relies upon better engineering, the point is that customers within this market use equipment reliability as an important gauge of the service provided. Reliability has become a chief point in the purchase decision.

Harry Newton, a respected advisor and consultant in the industry, advises his clients to always issue an RFP specifying seven major considerations.<sup>1</sup> Four of the seven points concern service as compared to the

physical product. Warranties are of major importance. Warranties are another means of requiring reliability. A description of the maintenance service available including hours of operation, availability of out-of-hours service and a history of the vendor service levels is required. Finally, a letter from the manufacturer guaranteeing service is required. This guarantee must cover the availability of spare parts, the location of the spare parts close to the customer, response time to calls for service, the number of service personnel assigned to the client, years of experience of the service representatives, the availability of remote diagnosis, preventative maintenance routines and the availability of disaster recovery. The key points of these requirements are reliability of equipment, availability of spare parts, technical expertise of service technicians and timely response to the request for assistance.

The discussion in this section so far has revolved around the service provided by the manufacturer of a product, but what about firms which supply service only. Such firms are referred to as second-or third-party maintenance firms. Second-party firms are contracted to perform some service as a subcontractor to the prime contractor. Third-party service vendors,

sometimes referred to as independent service vendors, are contracted by the customer to perform service for equipment manufactured by another firm. International Data Corporation conducted a survey of 150 directors of management information systems (MIS) within Fortune 500 companies. In general, independent service vendors ranked higher than manufacturer's service divisions in terms of price of service, technicians' knowledge and quality of service. Manufacturer's service divisions held the lead in response time. The MIS directors determined the critical service performance indicators to be prompt arrival, ability to reach the correct service person on the first call, the availability of spare parts, the ability of the service representative to repair the unit without technical assistance, the ability to repair the unit without spare parts and the time required to produce spare parts. These managers ranked the independent service vendors superior to manufacturer's service division overall.

A similar study conducted by Business Development International of Franklin Lakes, New Jersey found that eighty percent of the 2000 MIS directors surveyed felt that independent third-party service organizations provided better response time, had technicians with greater skill and priced their service approximately

twenty percent below the comparable manufacturers.<sup>2</sup> Again, response time, skill level of technicians and price of service were the major determining factors of what constituted the "reality" of service.

Despite the results of these surveys, there has been no noticeable defection of MIS directors from service divisions of manufacturers toward independent service vendors. MIS directors have often worked with the same manufacturers for ten or more years and therefore have formed personal bonds to the manufacturer's service personnel. The world of the MIS director and the Telecommunications Manager (TCM) was typically a tightly controlled environment in which all purchase decisions had to be approved in advance. With the introduction of such information management tools as the personal computer, the departmental minicomputer and the digital telephone systems, the purchase decision is no longer controlled by the TCM or the MIS Director. The nontechnical employees often make such decisions regarding equipment purchases and subsequently make the decision regarding the vendor of services. Such nontechnical personnel seem to be more prone to retain independent service vendors, not so much due to lower prices, but due to the increasing complex nature of business. No longer does one vendor

supply all the equipment required to move and manage information within a corporation. Many firms are trying to settle upon a handful of suppliers simply due to the administrative costs associated with managing service vendors. The nontechnical personnel by definition are less able to determine the cause of a problem when more than one vendor supplies a portion of the system components. Therefore such personnel increasingly turn to independent service organizations to determine the cause of malfunction and make the necessary repairs. These employees are looking to call one organization and be assured that the problem will be resolved quickly.

In summary, the users within the information movement and management market are interested in the reliability of the equipment, the response time of the service personnel when problems arise, the availability and proximity of spare parts and the skill level of the service representative. Industry consultants and governmental agencies demand that vendor responses to RFPs include extensive documentation of the service capabilities of the firm. Most importantly, in an environment composed of equipment from more than one vendor, users are looking to a service firm to be objective in evaluating the cause of the malfunction

and desire one firm to perform maintenance on several vendor's products. These factors constitute the reality of services as defined by the user market. Any firm attempting to market and eventually sell products or services in this market must aggressively answer these customer demands and prominently document the firm's service characteristics.



Endnotes

<sup>1</sup> Harry Newton, "There's Much Involved in the Business of Buying a Telephone System," Office, May 1981, p. 161.

<sup>2</sup> Jeffery Beeler, "Third-Party Surge/Independent Maintenance Market: Small Fish, Big Pond," Computerworld, June 10, 1985, p. 1.

## ANHEUSER-BUSCH EVALUATES IM&M SERVICE VENDORS

Anheuser-Busch Companies is a diversified corporation with subsidiaries including the world's largest brewing organization and the second largest producer of fresh baked goods. Other subsidiaries include container manufacturing, malt and rice production, label production, family entertainment, real estate development, major league baseball, cable television sports programming and rail car repair and maintenance.

Anheuser-Busch, Incorporated is the company's principal subsidiary. This subsidiary is the world's largest brewer, producing eight nationally distributed products. Budweiser, Michelob, Busch, Bud Light, Michelob Light, Natural Light, Michelob Classic Dark and LA Brand are produced at eleven breweries with a combined capacity of 66.0 million barrels. A twelfth brewery is planned to begin operations in the near future.

Anheuser-Busch, Incorporated distributes the production of the eleven breweries through 960 independent beer wholesalers and ten company owned wholesale operations centers. Approximately 8 percent of total beer production is distributed through these



wholly owned centers known as the Wholesale Operations Division.

Being a major American corporation and the beverage industry leader, Anheuser-Busch is a major member of the information movement and management market. The Anheuser-Busch Management Systems Group is responsible for the analysis and determination of user requirements, selection of vendors, implementation management and continuing supervision of vendor service and contract compliance. This organization provides these services to all subsidiaries of the Anheuser-Busch Companies and therefore contracts with a very wide spectrum of the information movement and management industry. Some of the selected vendors include AT&T, IBM, MCI, DEC, U S Sprint, Mitel, Southwestern Bell Telecom plus many smaller vendors within each SIC specified previously. Services contracted by the Management Systems Group include intra- and inter-LATA data and voice communication; computers and associated peripheral devices; telephone switching systems; and the necessary installation and maintenance services required to operate such equipment and services.

Anheuser-Busch Wholesale Operations Division decided to fully automate the ten wholesale centers

during the 1980's. This automation project included the replacement of existing data processing equipment and peripherals with state-of-the-art technology along with an extensive software development. The Management Systems Group was charged with the task of systems analysis, software development, equipment vendor selection, implementation and maintenance. Systems development began in 1982. AT&T Information Systems was awarded the contract for supplying and maintaining the computer processors and operating system software. Other vendors were selected to supply printers, modems, applications software and other specialized equipment and software. Installation of the AT&T line of 3B processors began in 1984 and is scheduled to conclude in April, 1987. AT&T will provide continuing maintenance of the 3B processors and operating system software under the terms of annual maintenance contracts.

During the installation of the earlier scheduled processors, Anheuser-Busch Management Systems Group management expressed dissatisfaction with the results of the AT&T installations. As a result, AT&T appointed a project manager to plan, coordinate and control the service activities required to satisfy the Anheuser-Busch Wholesale Operation Division needs. The AT&T project manager's first task was to clearly define the

requirements from the perspective of the Anheuser-Busch Management Systems Group and Wholesale Operations Division through discussions with the management of each of these organizations.

The Director of the Anheuser-Busch Management Systems Group is the key decision maker on all matters concerning selection of service vendors for Anheuser-Busch users. The director expects quick, decisive action from any vendor supplying service to Anheuser-Busch. He particularly expects a vendor to meet its delivery schedules and to stock any maintenance equipment at a location near the Anheuser-Busch facilities. He believes a vendor should perform any task necessary to reduce the risk born by the Anheuser-Busch user community.

The Anheuser-Busch MSG project director is responsible for the implementation of the Wholesale Operations Division automation plan. The project director is a key influencer in the service vendor selection process. He views the ability of the vendor to meet the scheduled installation of service as a critical measure of performance. He also measures a vendor based upon the technical expertise demonstrated by the vendor's installation and maintenance technicians. He also recognizes that the equipment

employed in supplying any service is bound to fail and therefore judges a vendor's maintenance activities by the spare equipment maintained in locations in close proximity to Anheuser-Busch facilities as well as the length of time required for the vendor to return a failed piece of equipment to service. He measures a service vendor by the ease with which an Anheuser-Busch employee can contact the correct vendor employee to begin the repair process when a service has failed. In essence, the project director expects a service vendor to implement the service on time and to maintain that service in such a manner that Anheuser-Busch does not suffer any downtime in operations.

The Anheuser-Busch Wholesale Operations Division Administrative Manager is responsible for representing the interests of the user community to the Management Systems Group. The Administrative Manager therefore is more a user of the system than a member of the development organization. He measures the performance of service vendors based upon the reliability of the service. He expects the service vendor to maintain the service in such a manner that it is always available when an Anheuser-Busch user requires. He also views the technical expertise exhibited by the vendor's service force as a critical indication of the risk in

selecting the vendor. He also expects the vendor service force to maintain a personal relationship with the Anheuser-Busch employees they serve.

These three individuals and their bases for evaluating a service vendor within the information movement and management industry represent the selection process employed at Anheuser-Busch. Any vendor expecting to sell information management services to Anheuser-Busch must satisfy the criteria specified by these individuals in order to be considered.

The Anheuser-Busch Management Systems Group is composed of highly technical individuals comfortable with managing several service vendors involved in complex systems. This group does not consider the ability of a service vendor to maintain all system components from several manufacturers a critical factor in the decision to retain the service vendor.

Thus the selection criteria employed by the Anheuser-Busch Management Systems Group when selecting a service vendor includes technical knowledge and expertise, availability and proximity of maintenance spare equipment, ability to install the service as scheduled, reliability of the service and equipment, ease of contact with the vendor maintenance

organization , and the personal commitment to the local Anheuser-Busch employees demonstrated by the vendor's employees. The ability to service all components within a system is not a critical selection criteria. To be selected, the vendor must demonstrate superior performance in one or more of the areas considered while maintaining approximate price parity with the other vendors under consideration.



## CONCLUSIONS

This section will discuss the conclusions which can be made regarding the wants and needs of customers within the information movement and management market and what vendors in the industry serving this market must present to these customers in order to be successful.

As the marketing theorists concluded and the evidence from consultant surveys and discussions with a major vendor verified, the customers within this market view the selection of a service vendor as a risk which must be evaluated by some tangible evidence. No matter what the vendor may say, the customer has only words upon which to base an evaluation. Therefore the vendor must present tangible evidence to increase the customer confidence and reduce the perceived risk.

The tangible evidence must answer questions of quality and reliability of the service. Customers apparently judge vendor quality upon the vendor employee experience level and appearance, the availability of spare equipment near the customer location, and the ability of the vendor to respond

quickly to calls for assistance. Reliability may be evaluated upon the specification of warranties and personal promises from the local employees of the vendor. The ability of the vendor to install the service within the agreed upon schedule is of major concern to customers and determines the perceived quality and reliability of the vendor.

In summary, in order to be successful in the market, the information movement and management vendors must stress the vendor reputation for quality service and the reduced risk to the customer. The vendor must validate such claims by presenting the vendor employees as personable and capable and by demonstrating the ability to meet schedule deadlines. The customer must be shown spare equipment is stocked locally, that calls for assistance are quickly handled and that quality, personal service is provided. The vendor must demonstrate clean, attractive buildings and equipment. All presentations to a customer must demonstrate a commitment to quality and reduction in customer risk.

## SUMMARY

The information movement and management industry consists of those firms providing equipment and services associated with the collection, storage, manipulation and transport of information in all its possible forms. The firms providing such equipment and services are broadly classified under the U.S. Office of Management and Budget Standard Industrial Classification codes of 3573, 3661, 3662, 4811, 4821 and 7379. This classification results in a minimum industry income of \$141.7 billion with the actual amount probably closer to \$370 billion.

The general characteristics of services which must be addressed in any marketing plan are the intangibility of services, the inability to separate the service from the provider of the service, the growth in complexity and diversity of business services and the inconsistency in the quality of services provided. Services cannot be stored and therefore present a greater challenge to efficient coordination of the supply of services and the demand for services. This greater need for management and control is

indicative of the heightened financial risk involved in supplying services.

All products and services are actually compositions of tangible and intangible aspects of the offered entity. Some collections of such qualities exhibit more of a tangible nature and are usually classified as products while other offerings are more intangible and therefore are classified as services. The greater the intangible nature of the offering, the greater the need to stress tangible evidence of the nature of the offering. This evidence is typically embodied within the people, environment, buildings, and equipment employed in the provision of service. This collective evidence of the nature of the service offering is accumulated by the user market and constitutes the reality of the service to that segment.

The members of the information movement and management market typically rate service providers based upon several factors which constitute the critical measures of the reality of the offering. These factors include the reliability of the equipment, the skill level of the service representative, the availability and proximity of replacement parts and the relative independence of the service firm from a particular physical element.

The methods typically employed in the development of physical product offerings are still valid in the development of service offerings, however the service marketer must conduct much greater market research using techniques of qualitative analysis common to psychological and sociological research. The data collected by these methods is often referred to as "soft" data and is used to determine an acceptable range of service to offer the market. The decision to offer service separate from a physical entity is a strategic decision for any corporation. The vast body of literature encompassing product management is typically concerned with the development and management of physical offerings, yet the majority of Americans are employed in the supply of services. The lack of research into the theories and methods appropriate to the marketing of services displaying a more intangible nature constitutes a major challenge to marketing theorists. This area of marketing management must be explored in much greater detail.

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