Chapter 3

OVERVIEW
ORGANIZATION, PLANNING, OPERATING RESULTS, AND FINANCIAL HISTORY

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Chapter 3

OVERIVIEW ORGANIZATION, PLANNING, OPERATING RESULTS, AND FINANCIAL HISTORY

3.0 INTRODUCTION

One of the most important aspects in the life of any busness enterprise is the development of its management and the improvement of its financial performance as it matures. So too with Informatics. This chapter will discuss the evolution of the company's organizational structure, the development of its administative, financial and marketing support functions, the growth of its facilities and locations, changes in its business strategy and long-range plans, and its overall financial history. The reader should note that Informatics efforts pertaining to subsidiary formations, acquisitions, mergers, and major external financial investments are discussed separately in Chapter 4 which follows.

3.1 ORGANIZATIONAL STRUCTURE AND MANAGEMENT

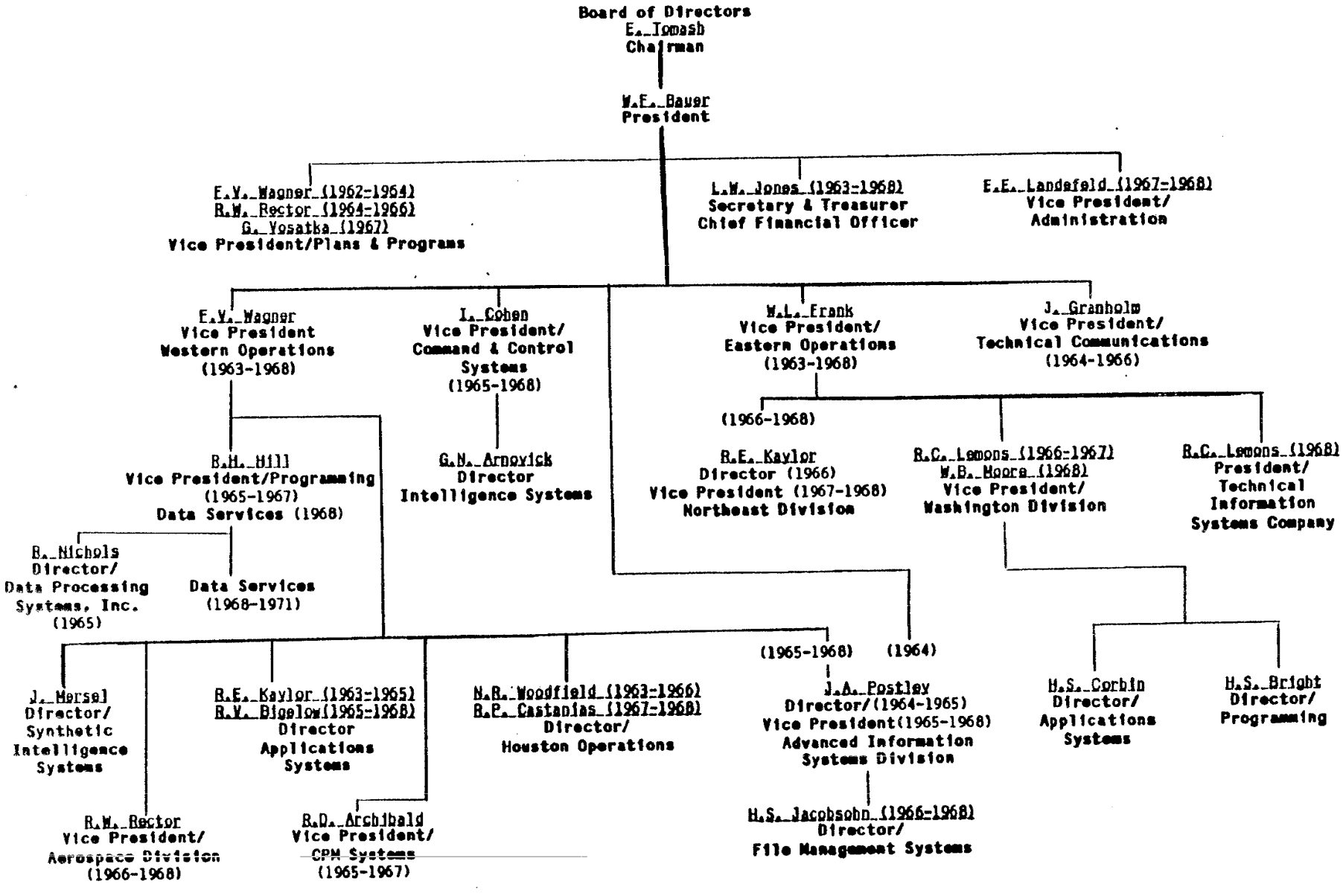
Through their organizational structures, corporations poise themselves to seize market opportunitites, adapt to economic conditions, and carry out their strategic and long-range plans. Harvard University Professor Alfred Chandler, in his study of the evolution of the largest corporations of early twentieth century American (**Strategies and Structures**), has pointed out that those which have survived intact and have been successful over the years altered their organizations (in terms of chain of command and operating activities) in accordance with marketplace conditions and their long-term goals. In short, "structure follows strategy."(1) By explaining the evolution of Informatics organizational structure first, the development of its strategy can be more adequately discussed.

The organization of Informatics has gone through three major phases. The first is the period of 1962 through 1968 when the company was divided into Eastern and Western operations. A transition phase during 1969 and 1970 led to the second major phase from 1971 through 1975 when business activities were decentralized into semi-autonomous "companies." The third phase, beginning in mid-1975, rearranged these companies into groups of similar or related business services and markets and lasted until 1982. The transition between phases was never distinct. Rather, an evolutionary process occurred where functions and operations would be restructured over a period of three to more than a year which, taken as a whole, can be considered a major organizational change, beginning a new phase. Frequently new organization names and accounting structures became effective at the beginning of a year, but de-facto operations and responsibilities were effective several months previously. Also, within each phase there were occasional minor shifts in organizational structure as well, but these were inconsequential to the company's development. Many of these are described in the subsequent applicable chapters. The three major phases of Informatics organization are discussed below.

3.1.1 Organization 1962 Through 1968

During its first year, Informatics management only consisted of four people (Bauer, Frank, Wagner, and Hill) entirely located in the Los Angeles area, working out of the headquarters of Dataproducts, its parent corporation. This quickly changed after 11 months when the company was awarded major contracts from the Rome Air Development Center, the National Military Command Systems Support Center, NASA's Jet Propulsion Laboratory, and IBM Federal Systems Division for programming support to NASA's Manned Space Craft Center in Houston. Since these contracts were in different parts of the country and caused the company to grow rapidly in size, and because Informatics was still very much of a fledgling opportunistic enterprise, Walter Bauer merely divided activities into Western and Eastern Operations under the general supervision of Frank Wagner and Werner Frank, respectively, who were elected as vice presidents of the corporation and elected to the board of directors. Additionally, Frank was later relocated to the East Coast where he opened an office in Washington, D.C., to serve as Eastern Operations headquarters. Bauer himself directed functions in the corporate office (established in Sherman Oaks, California, during 1964) which affected the entire company and which were consolidated to support both Eastern and Western activities. As the company grew, entered new market areas and acquired other businesses, separate divisions were formed and placed under either the Eastern or Western umbrellas except when the business operation concerned was particularly unique or of special interest to Bauer, such as Command and Control Systems and Advanced Information Systems. In these cases the activity initially was kept separate reporting directly to Bauer. The sensitivity of a newly recruited executive was often a factor.(2)

The Western--Eastern structure was not, however, strictly based on geography (or geographic assignment of markets) nor rigidly fixed on a foundation of different sets of business activities located in two separate places. It was instead rather ambiguously based on a preponderance of similar or related software service activities and markets more or less located in the same region of the country due, not to deliberate design, but to whether the marketing activity that resulted in a contract was directed by Frank or Wagner. The majority of Eastern Operations services were for the federal government, particularly for the Department of Defense, which happened to be located in Washington. Western Operations primarily provided commercial services to customers, often in the aerospace industry in the Southwest. Neither operational group was restricted to these geographical or market areas. Thus Western Operations could do business in the East and also serve military and government agencies, which it did by providing System/360 programming and documentation support to IBM/Poughkeepsie and by performing systems design and analysis for the Navy's Pacific Missile Range in Pt. Mugu, California. Eastern Operations likewise could offer commercial services, which it did with Honeywell in Boston and Dean Witter in New York, or move its efforts west by working on the Air Force's PACER and PADDAC projects in Nebraska; Hawaii; and Saigon, Viet Nam. Both groups even pursued business in Europe. Where necessary they cooperated with and assisted each other. For instance, early projects for the Air Force's Rome Air Development Center located in New York were performed initially by Western Operations, then for a time simultaneously by both Eastern and Western Operations until taken over by the Northeast Region (which reported to Eastern Operations) after its establishment.



CORPORATE ORGANIZATION 1962--1968

Source: Informatics, Inc., Briefing Charts for J. Lewis of Mitchum, Jones & Templeton, 1965; An Introduction to Informatics, Inc., (circa 1969); and Dataproducts Corporation, Annual Reports, Fiscal Years 1964 through 1966.

FIGURE 3-1

Bauer described this organizational structure in 1966 with the following:

> I prefer to think of Bauer, Wagner and Frank as representing the top management of the company irrespective of location. The titles, "Western Operations" and "Eastern Operations" only imply a closeness of the individual to certain projects and customers. [Vice Presidents who report to Wagner and Frank are divisional vice presidents.] It is important to realize that these divisions need not have a strong geographical identification; that is, parts of the division may be in the East as well as the West, and the division vice president may report to East or West, depending on the historical development of the division and the current needs.

Under this system the only division vice president to ever have a distinct geographical organization was Richard Kaylor who was assigned, in 1965, the job of establishing the Northeast Region (later division) in order to penetrate the commercial financial market of Wall Street. By 1965 the organizational structure of Informatics appeared as illustrated in Figure 3-1.(3) The existence of various units and persons in specific positions over limited periods of time is shown by noting the years of existence or service within parenthesis under the person or unit's name. This practice is followed where appropriate in subsequent charts.

Figure 3-1 reflects the company's early concentration on providing systems analysis, design and programming services to the military and aerospace fields. Advanced Information Systems (the beginning of MARK IV and software products) and the Northeast Region were the only operations of Informatics not selling services to these customers during the period of 1962 through 1967. Because the company was still fairly small in size, the corporate office contained a group of centralized support functions such as Administration & Finance, Plans & Programs (essentially marketing) and Technical Communications which prepared documentation, technical manuals, and educational materials in support of the contracts and projects conducted by the operational divisions. Each operational group and division was responsible for its own sales and the marketing of its products and services.

This loose form of corporate organization was encouraged and copied downward through the company. For instance, when Werner Frank designated a Northeast Division and a Washington, D.C. Division based on geographic grounds, he hastened to add the qualification that:

> There is no implicit or explicit constraint or bond to a region. . . . Thus a satellite operation (Omaha or Boston) could someday emerge as a region. A specialized function may be singled out as a division because of its nature--for example, if we suddenly were to develop a particular proprietary item it may be organized as a separate entity.

Each division was responsible for its own marketing and local administration while Frank's office or Eastern Operations headquarters dealt with long-range planning and directed a common set of shared functions (similar to some of those in the corporate office) such as policy administration, contract negotiation,

and some personnel matters due to the limited resources among the divisions to provide their own support activities in these areas.(4)

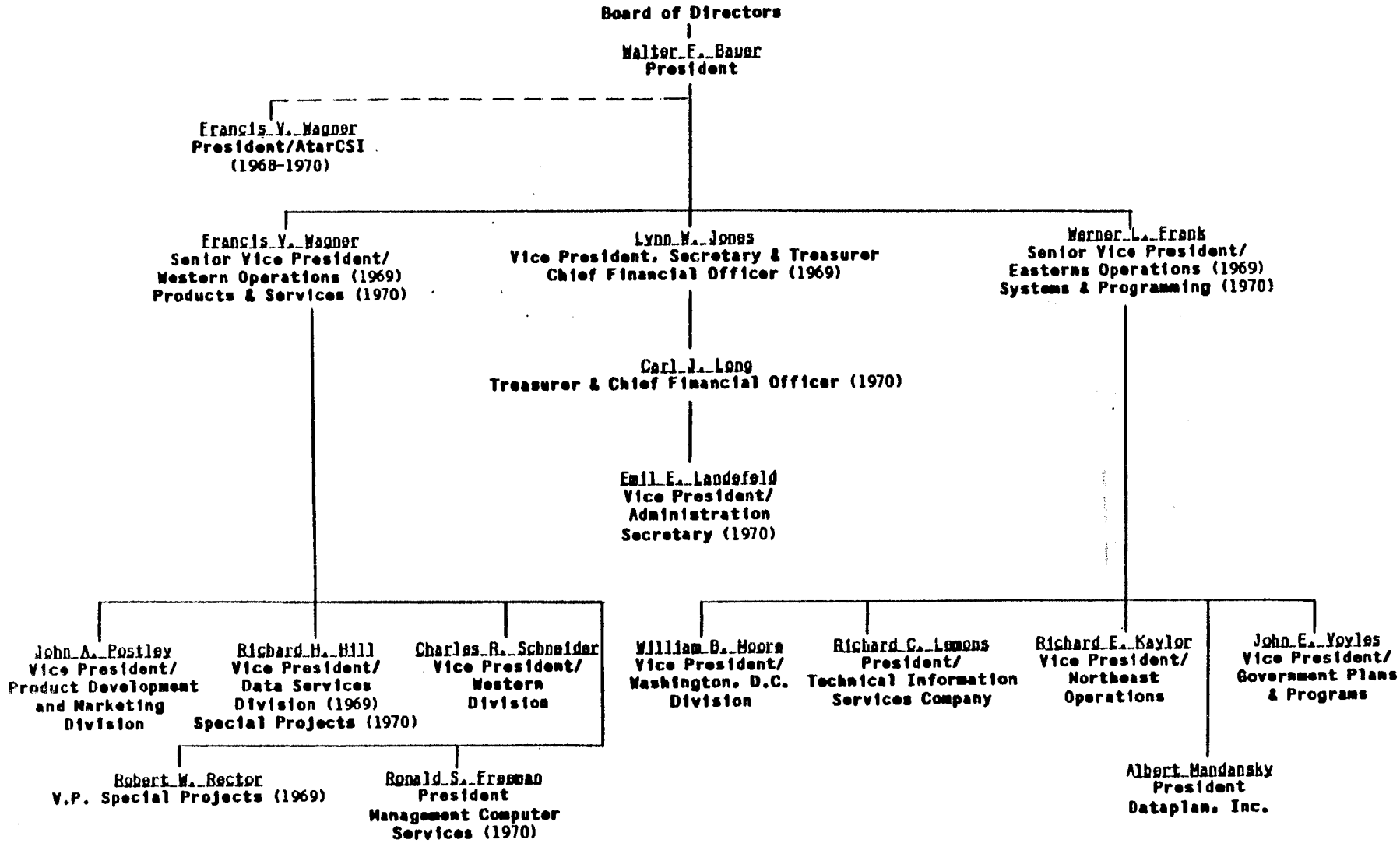
3.1.2 Organization 1969 Through 1975

By 1969 Informatics had expanded to the point that it was able to initiate the formation of a Data Services Division (by the acquisition of the Rucker Data Centers in California) and acquire Computing Technology, Inc., a custom programming and systems design business offering software services to the New York financial community, which was merged with Eastern Operations Northeast Division. The second phase of Informatics organization began with the addition of these two predominately business-oriented commercial service organizations. This was a transition stage which existed during 1969 and 1970. During 1970 the geographical names of Eastern and Western Operations were dropped in favor of two major parts of the company, Products & Services (for standard software products and computer support services) and Systems & Programming (for custom programming and systems design services), but their geographical character remained, as shown in Figure 3-2.

Beginning in 1971, as shown in Figure 3-3, the corporation evolved into a set of four semi-autonomous "companies." These were <u>not</u> legal subsidiary corporations; the term "company" was chosen to give stature (for marketing purposes) to an organizational unit specializing in its own distinct market, product, or service. However, each was headed by its own "president," (who was a vice president of Informatics) and had "company vice presidents" who were not officers of any corporation.

By 1973 Informatics had locations scattered throughout the country and in Europe, but these locations were offices of the individual companies, not corporate-wide sales offices. The former Data Services Division headed by Richard Hill quickly became extinct but sizeable growth occurred in what was formerly TISCO to result in the multi-division Information Systems & Services Company. Also, the great success of MARK IV as a software product resulted in the transformation of the Software Products Division into the MARK IV Systems Company which concentrated primarily on sales and development of just this very successful product, resulting in the opening of many of sales offices all over the world. Two of Informatics founders and senior vice presidents, Frank Wagner and Werner Frank, also did stints outside of the corporate structure serving as presidents of affiliated companies, ATAR Computer Systems Company, Inc. (AtarCSI) and Equimatics, Inc., respectively, which were efforts to expand the corporation through joint ventures into the air travel and insurance industries. In these assignments Wagner remained as an employee and officer of Informatics (with part-time duties), but Frank resigned from Informatics to become a full-time employee of Equimatics. After the demise of AtarCSI and Frank's resignation, Wagner was elected executive vice president of Informatics.(5)

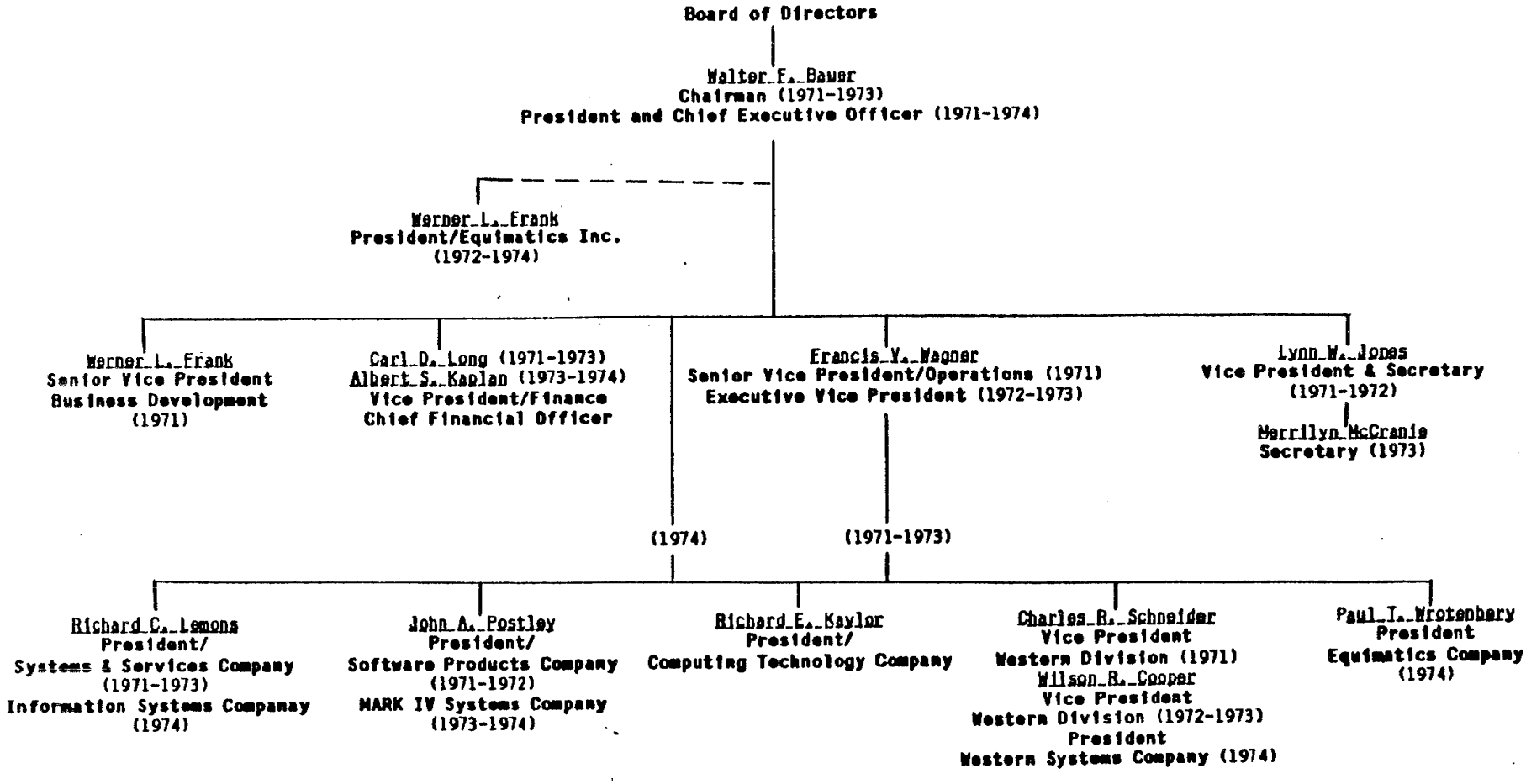
To support the greatly enlarged structure of Informatics, the corporate office itself became enlarged with a greater number of executives devoted to specialized functions. By 1974 the consolidated support functions such as technical communications and proposal writing, previously provided to operations as a shared resource, disappeared. Instead corporate functions were devoted to long range strategic planning, new product and acquisition analysis, shareholder and corporate relations, and financial review and monitoring of operations. All



CORPORATE ORGANIZATION, 1969--1970

Source: Informatics, Inc., An Introduction to Informatics Inc., (circa 1969).

FIGURE 3-2



CORPORATE ORGANIZATION 1971--1974

Source: Informatics, Inc., Informatics Inc. . . .An Overview (circa 1971), and A Presentation on Informatics Inc. for the Board of Directors of Equimatics, Inc., November 28, 1973.

FIGURE 3-3

Walter F. Bauer
President

Final Approvals: Investments; Acquisitions; Profit Plans; Strategy; Organization; Contracts; Proposals; etc.

Advertising & Public Relations

Board Relationships

Executive Compensation

Corporate Posture & Orientation

Management Development

Werner L. Frank
Executive Vice President

Operational: Executive Performance; Inter-organizational Factors; Overall Corporate Performance

Business Area Analysis & Development

New Products/Services Analysis & Development

Corporate Strategy Development

Equitable Operational Relationships

Acquisition Coordination

Special Responsibility: Data & Network Services

Frank V. Wagner
Senior Vice President/ Operations

Quarterly & Annual Profit Plan Development

Major Contract Monitoring

Major Proposal Analysis

Profit Performance Monitoring

Business Plan Analysis

Operating Policy Compliance

Customer Relations

Management Incentive Plan

Special Responsibilities: PRODUCTION IV & GROUP/3, Inc.

Albert S. Kaplan
Vice President/ Administration & Finance

Financial Reporting

Management Information Systems

Accounting & Auditing

Financial Policies & Procedures

Personnel

Administration & Finance for Operating Units

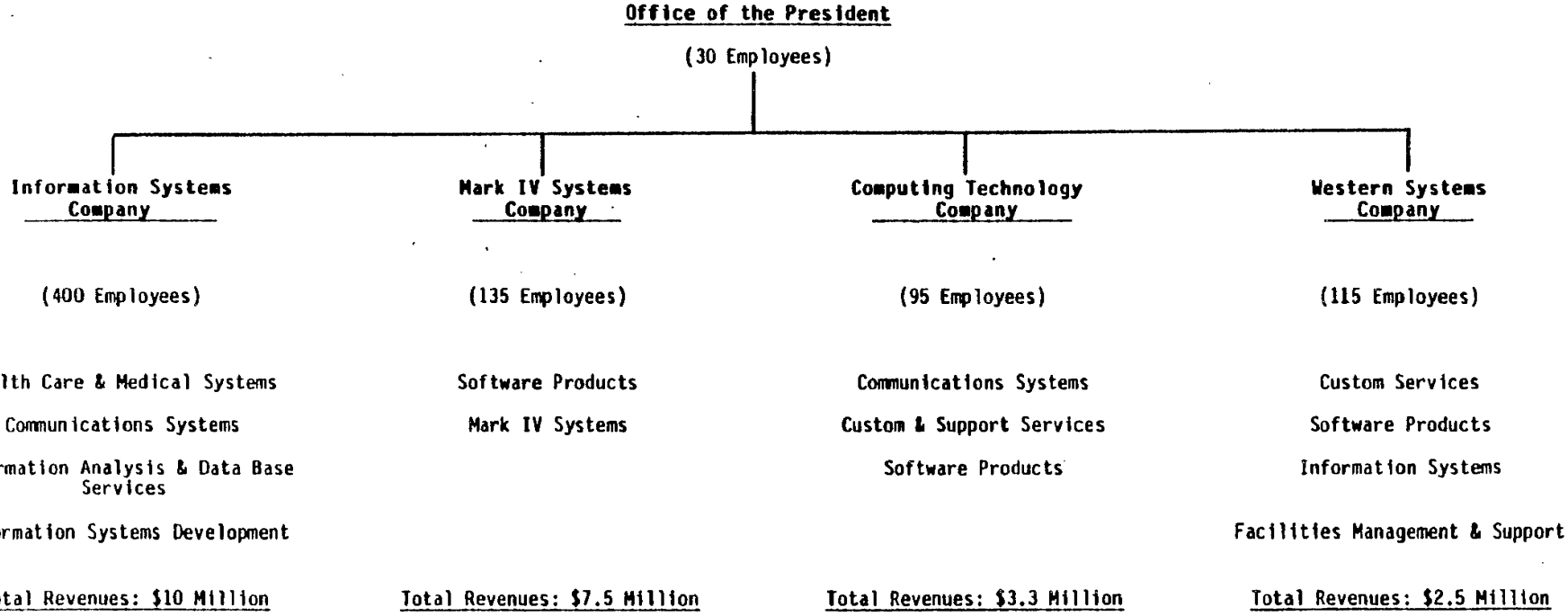
Corporate Office Services

Secretarial & Legal

THE PRESIDENT'S OFFICE

Source: Walter F. Bauer, President's Office Duties and Responsibilities, February 6, 1974.

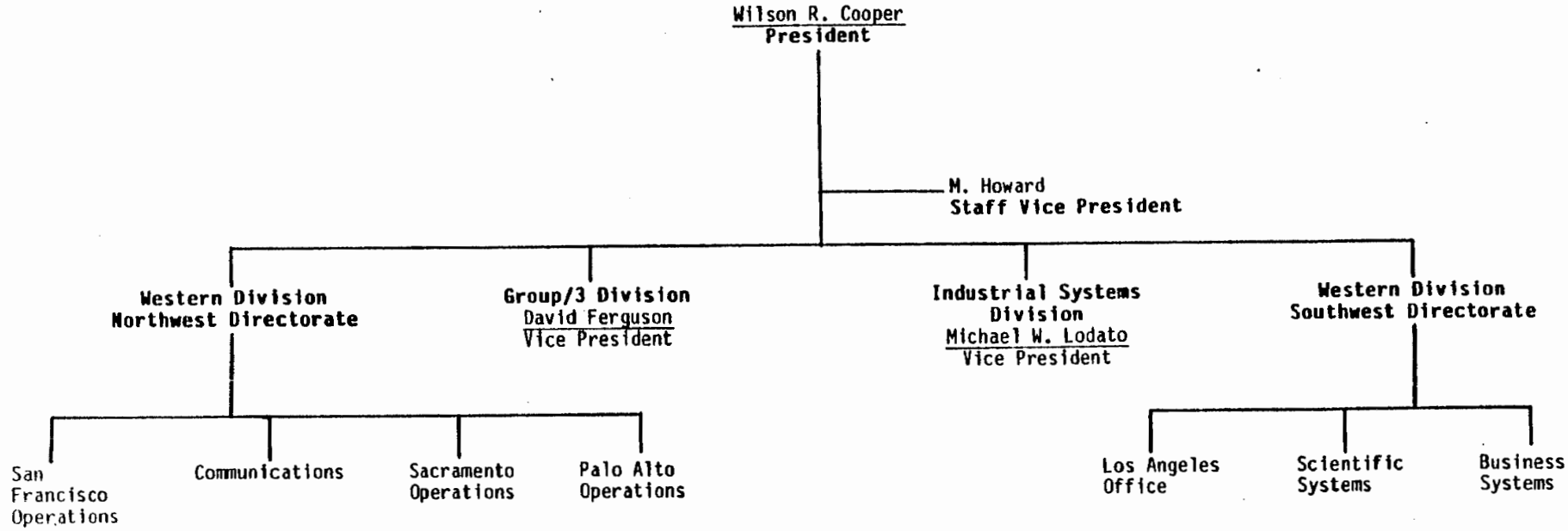
FIGURE 3-4



CORPORATE ORGANIZATION, BUSINESS AREAS OF CONCENTRATION & CHARACTERISTICS OF COMPANIES 1973

Source: Informatics, Inc., **A Presentation on Informatics Inc. for the Board of Directors of Equimatics, Inc.**, November 28, 1973.

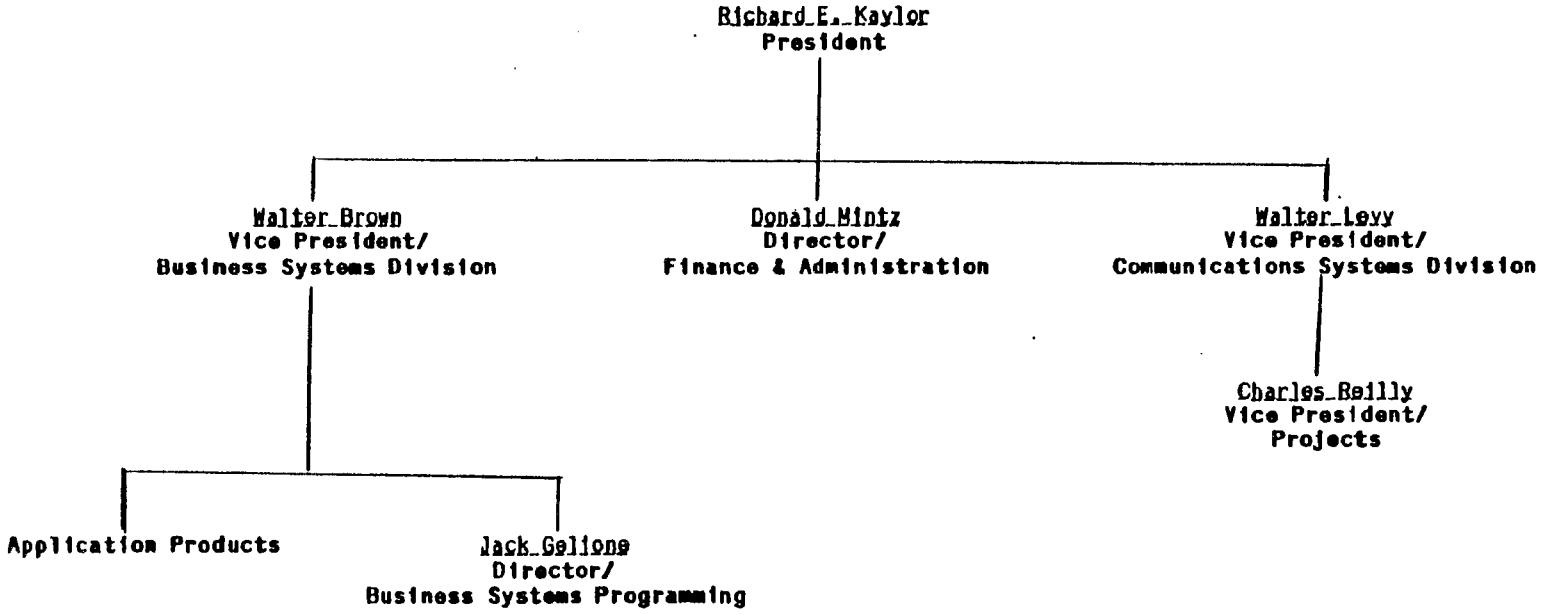
FIGURE 3-5



WESTERN SYSTEMS COMPANY, 1974

Source: Informatics, Inc., **Informatics Organizational Structure**, S. Wrigley, 1980.

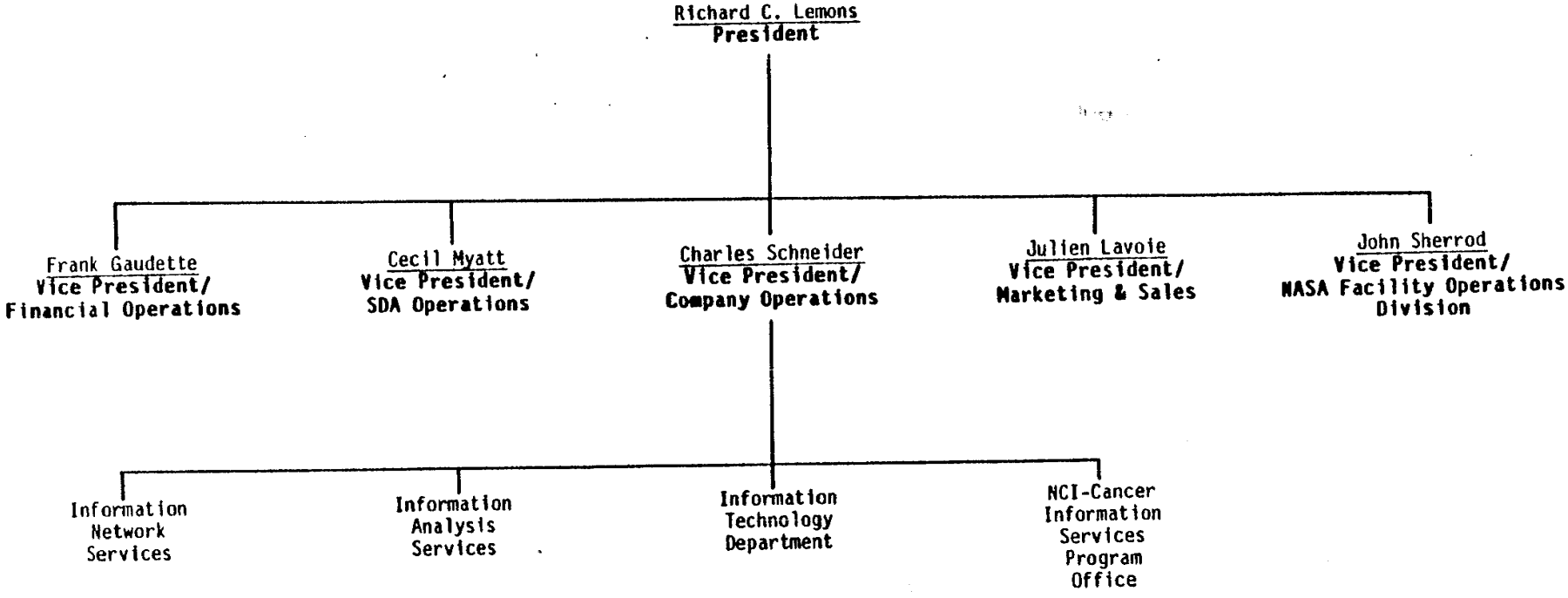
FIGURE 3-6



COMPUTING TECHNOLOGY COMPANY, 1973

Source: Informatics, Inc., A Presentation on Informatics Inc. for the Board of Directors of Equimatics, Inc., November 28, 1973.

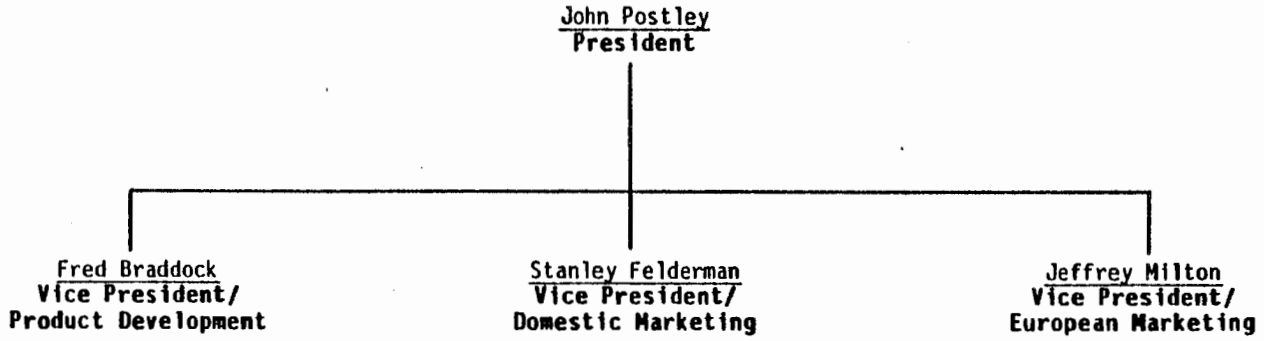
FIGURE 3-7



SYSTEMS AND SERVICES COMPANY, 1973

Source: Informatics Inc., **A Presentation on Informatics Inc. for the Board of Directors of Equimatics, Inc.**, November 28, 1973.

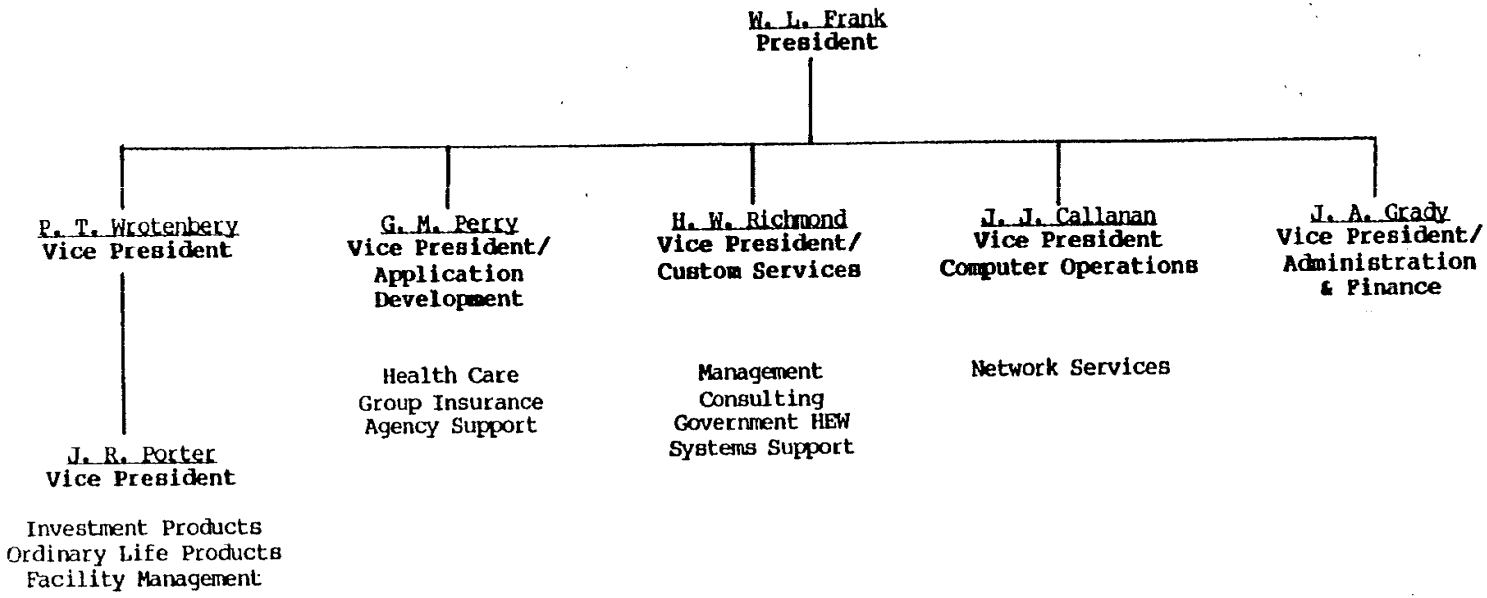
Figure 3-8



MARK IV SYSTEMS COMPANY, 1973

Source: Informatics Inc., **A Presentation on Informatics Inc. for the Board of Directors of Equimatics, Inc.**, November 28, 1973.

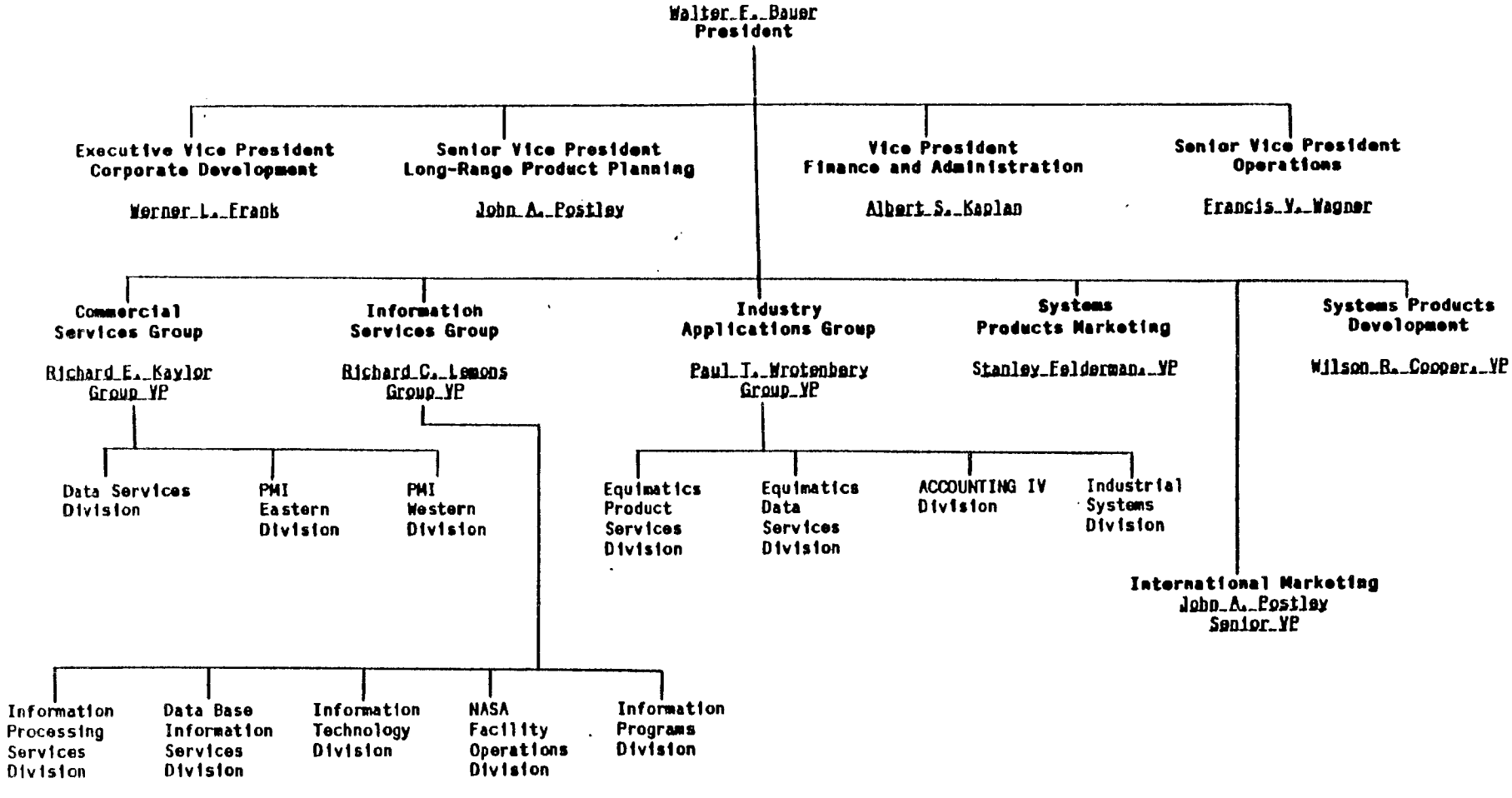
Figure 3-9



EQUIMATICS, INC., 1972

Source: Equimatics, Inc., **Business Plan for Acquisition of United Systems International, Inc.**, February 1, 1972.

FIGURE 3-10



CORPORATE ORGANIZATION, 1976

Source: Informatics Inc., Informatics Organizational Structure, S. Wrigley, 1980.

FIGURE 3-11

operations now supported themselves with their own product advertising, technical documentation, accounting, and other administrative staffs. After the merger of Equimatics and Informatics, a President's Office was established with three staff functions. Werner Frank assumed the title of Executive Vice President/Corporate Development and Frank Wagner that of Senior Vice President/Operations. The duties and responsibilities of the President's Office as divided among Walter Bauer, Werner Frank, Frank Wagner, and Albert Kaplan (who had replaced Carl Long in 1973 as chief financial officer) were as shown in Figure 3-4.

The most significant fact revealed by the corporate organization during this phase is the shift of Informatics away from concentration on military and government service and programming contracts to business oriented computer services, applications, and products as shown in Figure 3-5.(6)

In 1974 Informatics became a subsidiary of The Equitable Life Assurance Society of the United States by merging with affiliated Equimatics, Inc. The latter company's operations were split into two. The original United Systems International operation in Dallas, Texas, became the Equimatics Company, with Paul Wrotenbery as president. The data services unit in Fairfield, New Jersey, became the Data Services Division of Computing Technology Company, with John "Jay" Callanan as vice president and general manager.

Figure 3-3 only shows the outline of corporate organization between 1971 and 1974 with emphasis on corporate officers and top executives. Not shown is the detailed organizational structure within individual companies nor the names of divisional vice-presidents. Detailed organization charts of the Western Systems, Computing Technology, Information Systems, MARK IV Systems companies and Equimatics, Inc., for typical years are shown in Figures 3-6, 3-7, 3-8, 3-9, and 3-10, respectively.

3.1.3 Organization 1976 Through 1982

The second phase of Informatics organizational structure lasted through 1975. In October of that year the corporation acquired Programming Methods, Inc., which sold custom programming and systems design services to the same markets and types of customers as did Informatics Western Systems and Computing Technology companies, and sold software products in the same marketplace as did the MARK IV Systems Company. PMI was kept as a separate organization during the remainder of 1975, with its East and West Coast vice presidents--Donald Toy and Paul Connolly, respectively--reporting directly to Werner Frank. Due to the duplication among the products and services offered by PMI and the Informatics operations mentioned above and because the corporation embarked on a strategy to re-enter and re-emphasize the data services business by using the existing Equimatics data center in Fairfield, New Jersey, as a base for a national timesharing network, Informatics again reorganized itself.

This third phase of Informatics organization which began to be implemented in 1976 was, by 1977, to be comprised of four major product and service groups. As in the beginning of the previous stage, a transition period occurred. There were only three groups formed in 1976--Commercial Services, Information Services, and Industry Applications, as shown in Figure 3-11. Software product activities included responsibilities for the products acquired with PMI, but

were divided among three vice presidents for Systems Product Development, Systems Products Marketing, and International Marketing who reported directly to Bauer. Of the three groups formed, the biggest change was the Commercial Services Group which was formed from the Data Services Division of Equimatics and the merger of the professional services part of Computing Technology Company into PMI Eastern Division, plus PMI Western Division (which by now had absorbed Western Systems Company). The Industry Applications Group consisted mainly of Equimatics, Inc., but also included the ACCOUNTING IV Division (from CTC) and the Manufacturing Systems Division. Information Services Group was essentially the former Information Systems Company.

In 1977 the group structure was fully implemented as shown in Figure 3-12. The Software Products Group was formed under Paul Wrotenbery. All software product activities, except for those in Information Services Group, were combined into one unified group regardless of the industry or market they served. The resulting Software Products Group, although including MARK IV, encompassed much more than this, including other system implementation products, the insurance products of Equimatics, all application products of the Computing Technology Company, and all products of the PMI acquisition.

The Data Services Group under Richard Kaylor was created. It included the Data Services Division plus the acquisition of Management Horizons Data Services (a Columbus, Ohio, data center) which provided a national time sharing network focused on services to vertical industries: wholesale order distribution processing for the pharmaceutical and hardware industries. Frank Wagner, in a staff role, was assigned as corporate monitor and coordinator of the data services activity of Data Services Group, Equimatics Data Services (in Dallas), and Information Systems and Services Group, which had found it necessary to establish an information processing center of its own.

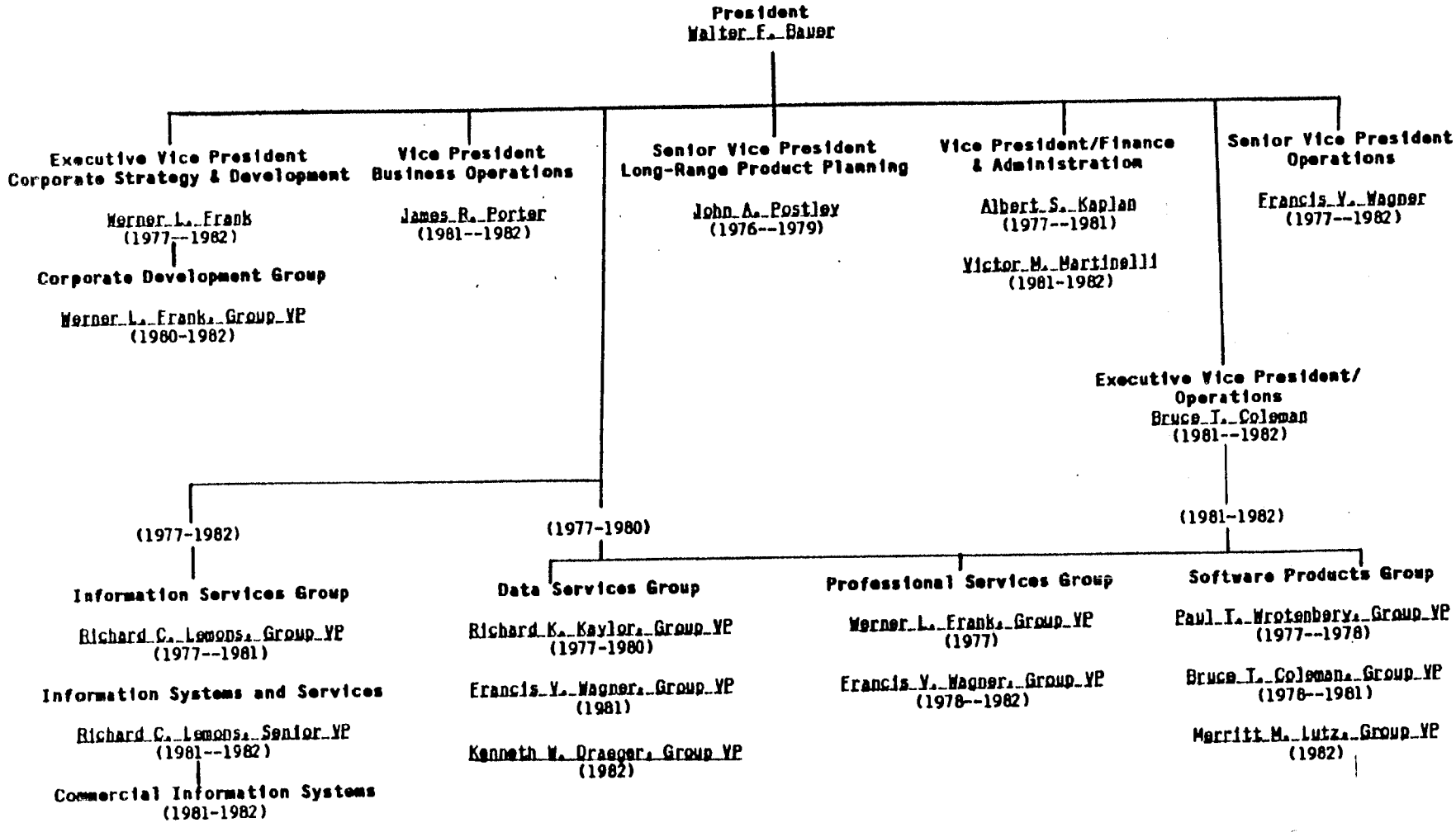
The Professional Services Group was established under Werner Frank. It included the PMI Eastern Division and the PMI Western Division. Finally, Information Systems was left intact, except for changing the name to Information Services Group.

With this organization the administrative functions of Informatics were very much decentralized. Each group has its own administrative and financial staffs. The corporate office now devoted itself to overall review of business operations, financial control, shareholder relations, long-term business planning, and corporate development.(7) More detailed organization charts are shown for each group in 1980 in Figures 3-13 through 3-16.

3.2 EXECUTIVE, ADMINISTRATIVE, AND FINANCIAL OFFICERS AND STAFF

Informatics has gone through four separate periods of differing executive and financial control over its operations even though its founders have basically remained with the company as its three top executives during its first 21 years. These separate periods represented shifts in the membership of the board of directors and also in the financial and administrative staffs of the company. These four distinct periods may be described as follows:

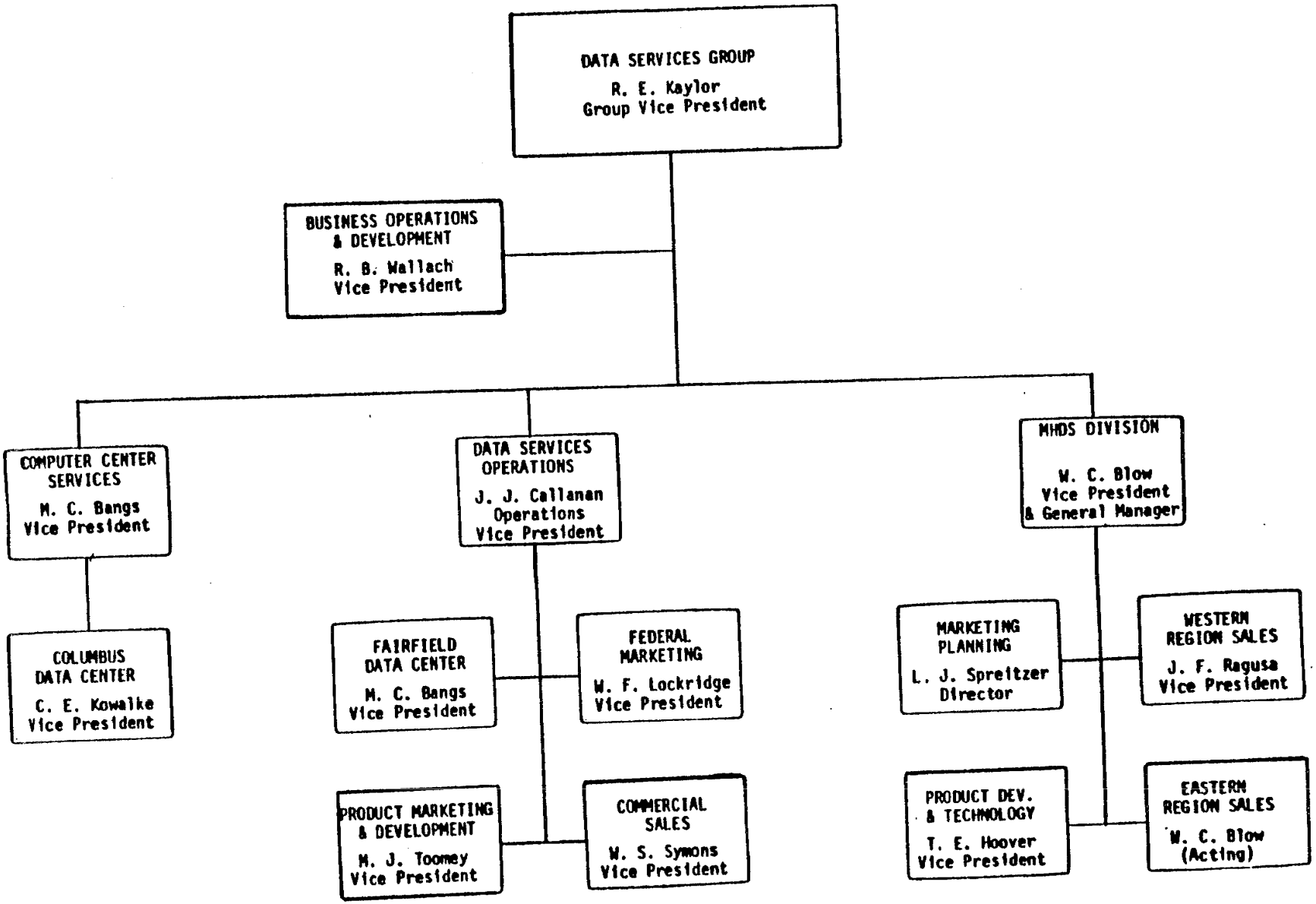
1. 1962-1968: Formative Years



CORPORATE ORGANIZATION, 1977--1982

Source: Informatics Inc., Informatics Organizational Structure, S. Wrigley, 1980

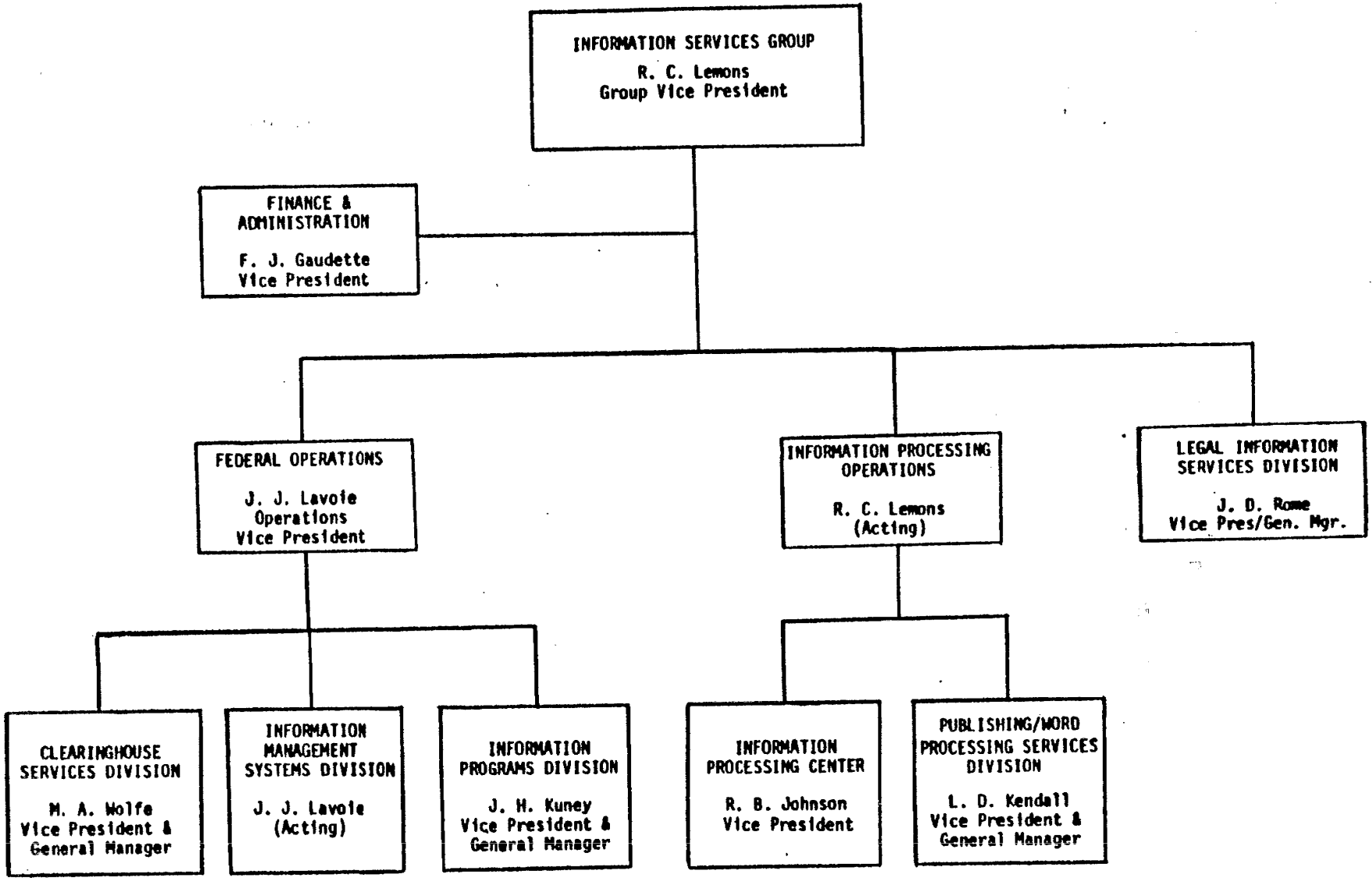
FIGURE 3-12



DATA SERVICES GROUP, 1980

Source: President's Office, August 1980

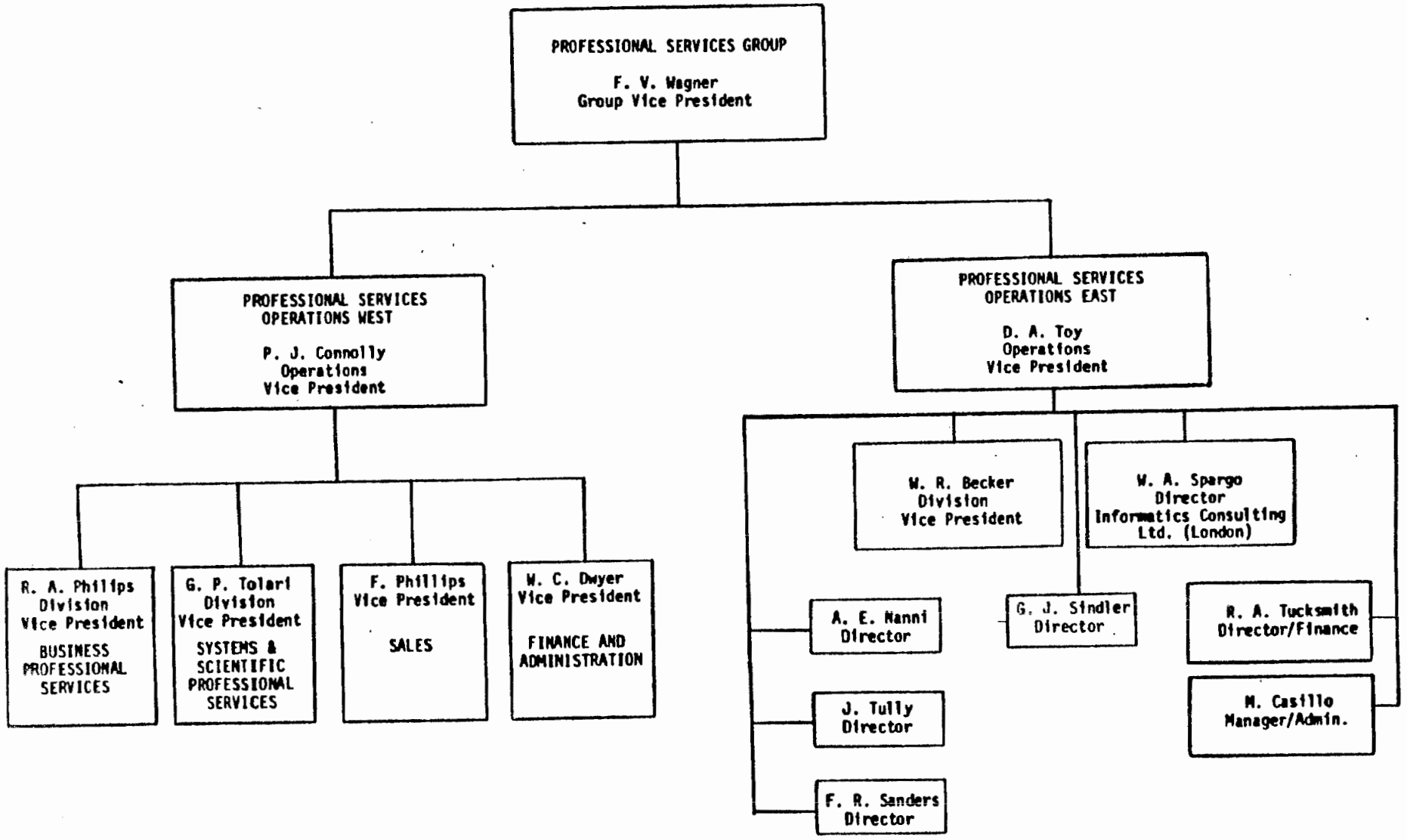
FIGURE 3-13



INFORMATION SERVICES GROUP, 1980

Source: President's Office, August 1980

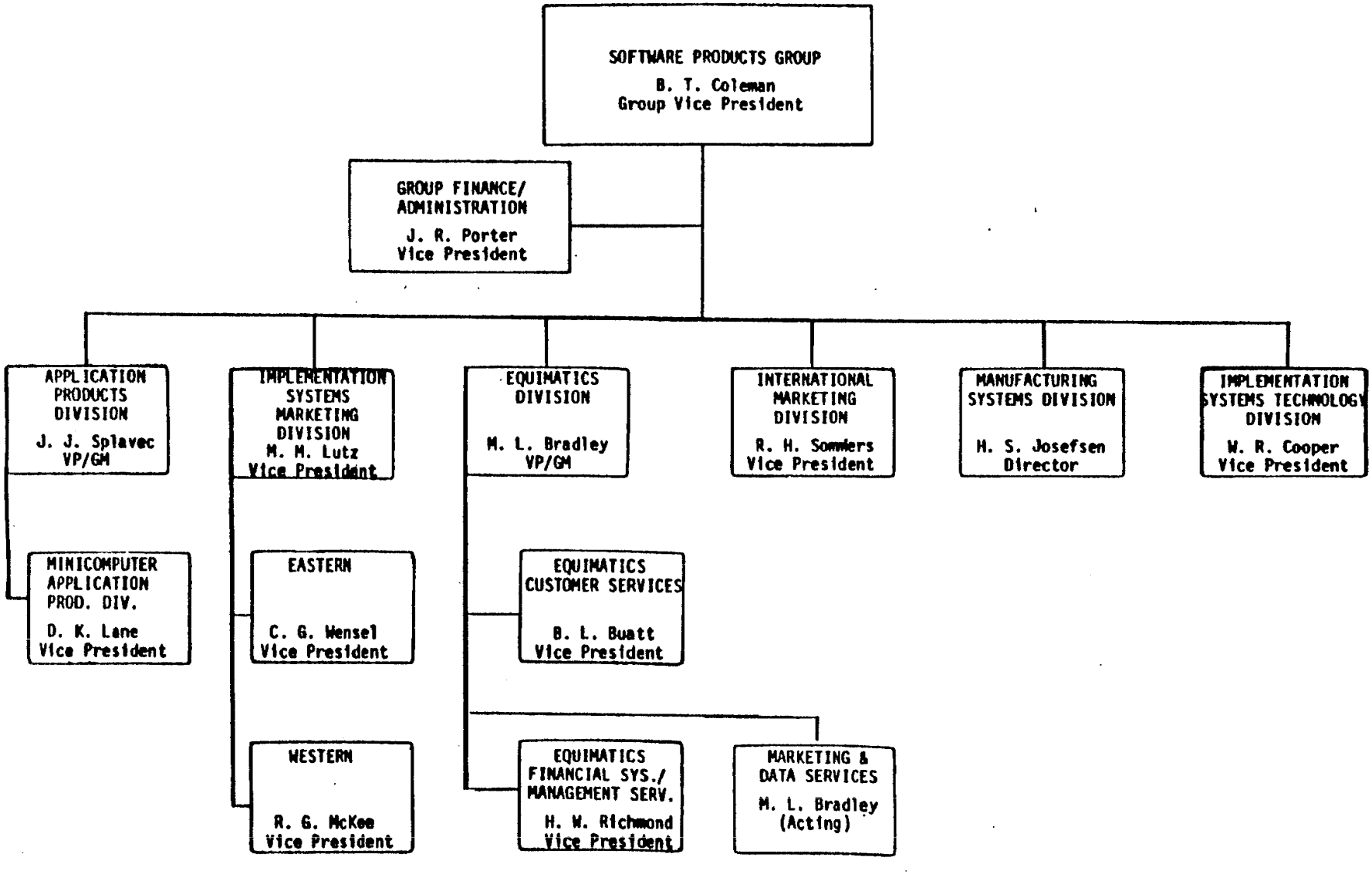
FIGURE 3-14



PROFESSIONAL SERVICES GROUP, 1980

Source: President's Office, August 1980

FIGURE 3-15



SOFTWARE PRODUCTS GROUP, 1980

SOURCE: President's Office, August 1980

FIGURE 3-16

	FROM	TO
Walter F. Bauer	3/15/62	12/31/82
Erwin Tomash	3/15/62	4/20/66
	6/22/67	7/22/69
	12/18/80	12/31/82
William N. Mozena	3/15/62	7/22/69
Thomas L. Taggart	4/15/63	12/31/82
Raymond Stuart-Williams	4/15/63	8/24/64
Francis V. Wagner	5/19/64	12/13/80
Werner L. Frank	5/19/64	12/13/80
George W. Brown	8/24/64	4/4/68
Graham Tyson	4/20/66	6/22/67
Clarence J. Woodard	5/1/69	5/12/70
Lynn W. Jones II	5/1/69	5/19/73
Richard E. Krafve	5/1/69	1/30/74
Lester L. Kilpatrick	7/30/70	1/30/74
Richard E. Kaylor	7/26/73	1/30/74
David H. Harris	4/10/74	12/17/74
Robert M. Hendrickson	4/10/74	12/17/74
James A. Attwood	4/10/74	12/17/74
Ruth S. Block	4/10/74	4/13/76
Harry D. Garber	4/10/74	4/13/76
Barry V. Smith	4/10/74	12/7/77
Paul T. Wrotenbery	4/10/74	2/8/79
Carleton D. Burtt	1/1/75	9/25/80
Raymond G. McCullough	1/1/75	4/27/78
Morton D. Miller	1/15/75	12/10/75
Donald J. Mooney	4/13/76	2/1/79
John R. Goodroe	12/7/77	12/13/79
Nelson Broms	12/7/77	9/25/80
Patricia M. Fuller	4/27/78	12/13/79
Benjamin D. Holloway	4/27/78	9/25/80
Albert G. Handschumacher	12//13/79	12/31/82
William M. Duke	12/13/79	12/31/82
George F. James	12/13/79	4/29/82
Oscar M. Ruebhausen	12/13/79	12//10/80
Vincent N. Marafino	12/16/80	12/31/82
Fred Carr	4/19/82	12/31/82

MEMBERS OF THE BOARD OF DIRECTORS

1962 -- 1982

FIGURE 3-17

	FROM	TO
CHAIRMAN OF THE BOARD		
Walter F. Bauer	3/15/62	4/10/74
	9/25/80	12/31/82
David H. Harris	4/10/74	12/17/74
Harry D. Garber	12/17/74	4/13/76
Barry V. Smith	4/13/76	12/31/77
Carleton D. Burtt	12/31/77	9/25/80
CHIEF EXECUTIVE OFFICER		
Walter F. Bauer	3/15/62	12/31/82
PRESIDENT		
Walter F. Bauer	3/15/62	12/31/82
EXECUTIVE VICE PRESIDENTS		
Francis V. Wagner	1/11/72	4/10/74
Richard E. Kaylor	3/9/72	4/10/74
Werner L. Frank	4/10/74	12/31/82
Bruce T. Coleman	9/28/81	12/31/82
SENIOR VICE PRESIDENTS		
Werner L. Frank	5/1/67	12/1/71
Francis V. Wagner	5/1/67	1/11/72
	4/10/74	12/31/82
John A. Postley	1/1/70	5/31/79
Richard E. Kaylor	1/1/70	7/17/81
Albert S. Kaplan	1/1/74	1/4/82
Paul T. Wrotenbery	4/5/76	3/30/79
Richard C. Lemons	1/1/70	12/31/82
Bruce T. Coleman	9/5/78	12/31/82
James R. Porter	9/28/81	12/31/82
Kenneth W. Draeger	9/28/81	12/31/82
Merritt M. Lutz	10/19/81	12/31/82
CHIEF FINANCIAL OFFICERS		
William N. Mozena	3/15/64	4/18/65
Lynn W. Jones II	4/18/65	10/14/69
Thomas L. Taggart	10/14/69	4/13/70
Carl D. Long	4/13/70	5/10/73
Albert S. Kaplan	5/10/73	12/16/80
Victor M. Martinelli	12/16/80	12/31/82
SECRETARIES		
William N. Mozena	3/15/62	4/18/65
Lynn W. Jones II	4/18/65	10/6/69
	6/1/70	3/9/73
Emil E. Landefeld	10/6/69	6/1/70
Merrilyn McCranie	3/9/73	4/10/74
Ralph S. Irwin	4/10/74	7/11/74
Brian E. Bamforth	7/11/74	12/13/79
E. Broox Randall	12/13/79	12/31/82

SENIOR OFFICERS OF THE CORPORATION

1962 -- 1982

FIGURE 3-18

	ELECTED
Francis V. Wagner	1963
Werner L. Frank	1963
Jackson W. Granholm	1963
Irving Cohen	1964
Robert W. Rector	1965
Richard H. Hill	1965
Russell D. Archibald	1965
John A. Postley	1965
George J. Vosatka	1966
Richard C. Lemons	1966
Lynn W. Jones II	1966
Richard E. Kaylor	1966
Emil E. Landefeld	1967
John E. Voyles	1968
William B. Moore	1968
Herbert Jacobsohn	1969
George Schussel	1969
Charles R. Schneider	1969
Carl D. Long	1970
Ronald S. Freeman	1970
Walter A. Levy	1970
Peter W. Melitz	1970
Albert Mandansky	1970
Richard Ketover	1971
Albert S. Kaplan	1974
Paul T. Wrotenbery	1974
Wilson R. Cooper	1974
Paul J. Connolly	1975
Donald A. Toy	1975
Bruce T. Coleman	1978
Vincent M. Martinelli	1980
James R. Porter	1981
Merritt M. Lutz	1981
Kenneth W. Draeger	1982
E. Broox Randall	1982
Paul K. Wilde	1982

VICE PRESIDENTS OF THE CORPORATION

FIGURE 3-19

2. 1969-1973: Independent Years

3. 1974-1979: Equitable Subsidiary Years

4. 1980-1982: Independent Maturity Years

The following sections discuss the differences among these periods and the key administrative people who participated in them. Figure 3-17 lists the members of the Board of Directors through the years, Figure 3-18 lists the senior officers of the corporation, and Figure 3-19 lists the vice presidents of the corporation. After 1970 there were many executives with the title of vice president, but these were titles within "companies" and groups; those executives were not legally officers of the Informatics corporation.

3.2.1 Corporate Officers and the Board of Directors

Although Walter F. Bauer has always served as Informatics president and chief executive officer and Werner Frank (with the exception of 1972 and 1973 when he was president of Equimatics) and Frank Wagner have always served as executive or senior vice presidents, the composition of the company's board of directors, representing the ultimate financial control of the company during these periods, changed tremendously during its various stages of growth. In the first stage mentioned above, Informatics was in its formative years during which it was defining markets, developing capabilities, seeking opportunities, and making itself known to industry via prestigious projects, advertising, and national symposia. The company was a rapidly growing start-up operation through its first five years. Its founders were learning how to manage a business. Its parent corporation, Dataproducts, provided the initial investment capital and numerous short-term loans to support its subsidiary's expansion. Since it repeatedly doubled its size between 1962 and 1965, the need for cash to pay for increased staff and expanded office space was frequent. Between 1962 and 1968 (when Dataproducts sold its remaining interest in Informatics), Dataproducts had provided (initially by direct loans and later by guarantees of loans from Bank of America) a total of $3.4 million to its software subsidiary. All but $550,000 had been repaid by June 1968.(8)

3.2.1.1 Formative Years, 1962--1968

Due to the financial support received from Dataproducts and because it was a wholly owned subsidiary until 1965, the board of directors of Informatics reflected the parent corporation's ownership. The three initial board members included only one insider, Bauer, plus Dataproducts president Erwin Tomash, and financial vice president, William Mozena. In April 1963 Dataproducts added Thomas L. Taggart (a member of the Dataproducts board, a business consultant and former vice president of Ampex), and its engineering vice president, Raymond Stuart-Williams who was soon replaced by Dr. George Brown, a computer industry pioneer and a professor at the University of California at Los Angeles. Frank Wagner and Werner Frank were elected members in 1964. All four outsiders also were members of Dataproducts board of directors as was Graham Tyson, who replaced Tomash for a year in 1966. Tomash served as chairman of the board. Mozena served as chief financial officer and corporate secretary-treasurer for both companies until 1965, when Lynn Jones was elected to these offices. Though not a member of the board, a very influential advisor was Chester Lappin, a

senior partner in the Los Angeles firm of Mitchell, Silberberg & Knupp, who served as general counsel to Dataproducts and Informatics.(9)

Even in the early years, the Dataproducts board members exercised only a limited amount of influence on Informatics and its activities. Acquistions had to be approved by the Board along with any long-term financing. Otherwise, the exercise of authority was not very strong. One exception was when Tomash refused to devote very much corporate money to the development of MARK IV, suggesting instead the alternate approach of customer sponsorship to obtain funds for the creation of Informatics first and most successful software product. The hardware engineers of Dataproducts (Tomash and Stuart-Williams) were unfamiliar with software technology and generally saw Informatics as providing a support service to computer installations rather than as a producer of specialized products which might require as much investment for research and development as computer peripherals. Nevertheless, it must be pointed out that Tomash was strongly in favor of the concept of software products and gave much encouragement to that end, at least up to the point where risky investments were required! Another execption was Taggart who soon became a consultant to Bauer and whose contributions to the company are described in Section 1.8.6.

Informatics soon had recovered the initial investment that Dataproducts made in it but its growing need for operating capital did not allow it to reinvest its profits in major projects. As the company continued to become more profitable, the influence of Dataproducts slowly declined. The Informatics founders were permitted to buy a limited amount of stock (40,000 shares) in their company and a stock option plan was adopted. This was followed by the public sale of some Informatics stock, as described in Section 3.6.3, during 1966, 1967 and 1968.(10)

With each expansion of Informatics and further sale of its stock, the goals and directions of Dataproducts and its subsidiary began to diverge. In the second half of the 1960's, Walter Bauer embarked on a strategy for Informatics to diversify. MARK IV (discussed below in Chapter 9) was his entree into the software product business. He decided to enter the data services business through the acquisition of three existing data centers owned by The Rucker Company. Tomash opposed this acquisition because he felt Informatics was unfamiliar and inexperienced with the data services business. Ultimately he was proved correct, but as a board member he did not veto the move in order to prevent antagonizing the Informatics management and to keep them motivated in their roles at Informatics. Also, since Informatics was no longer a wholly owned subsidiary and minority shareholder ownership was increasing with each public sale of stock, Tomash was no longer in a position to unilaterally impose his opinion on the management of Informatics. An opportunity arose during the same year for Dataproducts to acquire Stelma, Inc., a New England telecommunications equipment manufacturer, for a large amount of cash. Recognizing the different directions between the two companies and not wanting to inhibit the growth of Informatics because of Dataproducts particular needs, Tomash decided to have Dataproducts divest itself of its holdings in Informatics in order to obtain the funds necessary for the acquisition of Stelma. So Dataproducts sold its remaining interest in Informatics in February 1969.(11)

3.2.1.2 Independent Years, 1969--1973

Since Dataproducts had sold its interest in Informatics to the public, Informatics became an independent wholly publicly owned corporation. This event occurred at the beginning of a strategic period of expansion into new markets and services for the company (as can be seen by the organization charts of Figures 3-2 and 3-3 above). Of course with the divestiture, some of the Dataproducts board members soon resigned. Tomash and Mozena remained as members for part of the year but Thomas Taggart, who had since resigned from the Dataproducts board of directors, remained on Informatics board, since his talents and insights as a consultant has won the respect of the company's management.(12)

The Dataproducts men were replaced on the board, during 1969, by Lynn Jones, Richard Krafve, a management consultant, and Clarence Woodard, chairman of the board of The Rucker Company. In 1970 Woodard resigned and was replaced by Lester L. Kilpatrick, president of California Computer Products Inc. When Lynn Jones left the company in 1973, Richard Kaylor, president of Informatics Computing Technology Company, was elected to replace him on the board.

During this period of young independence, Bauer served as chairman of the board. Senior vice presidents Werner Frank and Frank Wagner continued as the principal operating officers. An experienced financial executive, Carl Long, was recruited as chief financial officer. Lynn Jones served as secretary, except for a year in 1970 when Emil Landefeld replaced him. In 1973 Merrilyn McCranie, who had first joined the company as Bauer's personal secretary and had worked her way up to being assistant corporate secretary, was elected secretary. This gave Informatics the distinction of being one of the early publicly owned corporations having a female executive in this position.(13)

In this second phase of its growth from 1968 to 1973, Informatics at first expanded operations into the computer services business. Other expansion efforts included the acquisition of Computing Technology, Inc., to enter the financial professional services business, the acquisition of Parsons & Williams to obtain the PRODUCTION IV software product, and the development of the Information Systems Company to provide various forms of information systems services. The period was characterized by eagerness on the part of Informatics management to expand the company, selecting their own directions and marketplaces. Such independence was facilitated by the fact that the board of directors was dominated by insiders. This independence and desire to expand freely, however, encountered an obstacle in the recession period of 1970.

The recession caused the embryonic Data Services Division to fall to unprofitable levels, resulting in the company's quick exit from this business, and the resulting recording of heavy losses at the end of fiscal 1970. It also sent the stock market tumbling, especially the stock prices of software companies (the first time in the brief ten year history of their existence). Even in the recovery period from 1971 to 1973, software stocks remained depressed. They had fallen into disfavor with financial anlaysts following massive write-offs by some companies (not including Informatics) of capitalized expenses for software development. But all were tarred with the same brush. Despite its growing profits, the unavailability of investment money from either the stock market or venture capitalists prevented the company from pursuing

additional acquisitions and new product developments, thereby severely limiting its growth.

3.2.1.3 Equitable Subsidiary Years, 1974--1979

This economic decline of the early 1970's gradually caused Informatics to seek alternate means of supporting business growth. It solved the problem in 1974, merging with Equimatics, Inc., (its joint venture with The Equitable Life Assurance Society of the United States) and becoming a wholly owned subsidiary of The Equitable. The merger allowed Informatics to commit to a five year business development plan whereby it was allowed to "plow back" or reinvest its entire profits within itself to support further growth instead of being continuously obligated to produce profits to impress financial analysts and public shareholders. The Equitable was interested in obtaining a technology and professional labor reservoir which it felt was needed to cope with the information problems of the insurance industry. This was more important than the investment, so they were willing to wait several years to realize profits from their investment.(14)

To safeguard its investment The Equitable, of course, placed six of its management members on the Informatics board in addition to the Informatics team of Bauer, Frank, Wagner, Taggart, and Paul Wrotenbery, president of Equimatics, Inc., who replaced Kaylor as a board member after the acquisition. Added to the board in 1974 were a number of executives of The Equitable: a new chairman, David A. Harris, an executive vice president; James A. Atwood, and Robert M. Hendrickson, also executive vice presidents; Harry D. Garber, senior vice president and corporate actuary; Ruth S. Block, senior vice president, individual operations; and Barry V. Smith, senior vice president, computer services--all from the higher echelons of The Equitable. In 1975 Morton P. Miller (vice chairman of the board of The Equitable), Carleton D. Burtt, and Raymond D. McCullough (both Equitable senior vice presidents) replaced Harris, Atwood, and Hendricksen. Harris was succeeded as chairman by Garber, Smith, and Burtt, in that order.

Equitable employees--first Ralph Irwin and then Brian Bamforth, became Informatics corporate secretary while Merrilyn Partington (nee McCranie) of Informatics and Dorothy M. Delay of The Equitable served as assistant corporate secretaries. In later years, The Equitable rotated its Informatics board members using its subsidiary partly as a training ground for its younger, upwardly mobile corporate executives. Miller left the board in December 1975. Garber and Block left the board during 1976, Smith left in 1977, and McCullough in 1978. They were replaced by Donald J. Mooney, John R. Goodroe, Nelson Broms, Patricia M. Fuller, and Benjamin O. Holloway.(15) Marian J. Smith of The Equitable replaced Dorothy Delay as assistant corporate secretary in 1978. Throughout the years of Equitable ownership, Bauer remained president and chief executive officer.(16)

Under The Equitable's ownership, Informatics began to implement its plan to grow to become a $75 million revenue company. It actually grew from a $20 million annual revenue rate to over $100 million within five years due to the freedom provided by the "profit plow back," discussed in Section 3.3.3. The Equitable, of course, watched its wholly owned subsidiary closely. Prior to the merger, a formal five year plan had been prepared by Informatics management for

the company's business development, and The Equitable was insistent that this plan, and each annual revision of it, be adhered to. While The Equitable board members have stated they never imposed any unique or separate reporting requirements on Informatics beyond what the company normally had before The Equitable's acquisition of it, Bauer's monthly reports to the board became more formal and detailed compared to those of prior years when the company was publicly owned. Also, Bauer initiated special quarterly reports on the company's "Twelve Business Areas" which covered Informatics on-going performance in twelve distinct marketplaces which overlapped the responsibilities and operations of the four operational groups and their various divisions. Monthly reports to the board primarily dealt with group and divisional performance and activity; quarterly reports covered the twelve business areas. As explained in more detail in Section 3.3.3, these twelve business areas consisted of eight core areas in which Informatics was already doing business and an additional four which it was planning to enter. The eight core areas were:

1. Facilities Management and Support
2. Information Systems Development
3. Information Network Services
4. Mark IV Systems
5. Software Products (other than MARK IV)
6. Commercial Custom Software Services
7. Computer/Communications Services
8. Information Analysis and Processing

Added to these were the four new areas of:

9. Insurance Consulting and Software
10. Insurance Data Services
11. Health Care and Medical Systems
12. Data Services

Although The Equitable did not mandate this reporting requirement, Bauer obviously felt it was needed at least to educate The Equitable members on Informatics business. However, according to Wagner, many Equitable board members complained that the two reporting methods confused them.(17)

The association of the two corporations with each other proved enlightening for both sides. Interestingly, although it did realize a sizable return on its investment when it divested Informatics in 1979, The Equitable never directly gained the primary objective they hoped to achieve from the merger: the upgrading of their data processing capability. It was hoped that by acquiring Informatics, The Equitable would be able to strengthen its own internal computing operations and ensure that the design and implementation of new systems and applications would be performed by farming them out to Informatics.

This did not happen because a distinct coolness, if not outright animosity, to Informatics existed among the middle ranks of The Equitable's data processing management who were responsible for contracting outside services. They refused to actively call for aid from Informatics. Instead the Equitable's computing operations revitalized themselves by recruiting many of the top data processing managers and technical talent in the country, eliminating most opportunities for Informatics to be of service to The Equitable. So, in an unexpected, indirect

way Informatics did contribute to the achievement of The Equitable's main objective!

Informatics was thus the prime beneficiary since it did grow and expand without the constraint to show profitability to public stockholders; but the company also hoped its association with The Equitable would give it a source for further financing to acquire and develop additional software products and services. The parent corporation, however, only made the initial infusion of cash into the joint venture, Equimatics, Inc.; the investment in acquiring Informatics stock provided no financing to Informatics. After the acquisition they never guaranteed a loan for their subsidiary. But it is only fair to surmise that Informatics creditors felt much more comfortable, since they were confident that the highly moral Equitable would make good any default of its subsidiary, even if it were not legally obligated to do so.(18)

Nevertheless, both sides ultimately benefited in other ways. The Informatics board room became a training ground for the younger and upwardly mobile corporate executives from The Equitable. Informatics exposed them to the dynamics of the highly competitive and rapidly changing environment of the data processing industry and gave them a managerial contrast between the slow moving, bureaucratic formal atmosphere of the "institutional" Equitable on the one hand, and the opportunity seeking and adventurousness of entrepreneurial Informatics on the other. According to some Equitable board members, it was at Informatics where they learned the importance of strategic planning, the various methods to do it, and the techniques of incentive programs for middle and upper management. According to Richard Kaylor, The Equitable board members imposed a much needed discipline and formality on the conduct of Informatics board meetings. An early complaint of theirs was a lack of orderliness and an abundance of open debate and casualness among management members during board meetings. Frank Wagner, in contrast, felt that such formality led to total ignorance by the outside board members of the real issues. But no one disagrees that The Equitable motivated the company to adhere to and fulfill its stated objectives in the pre-acquisition five year plan. Additionally, as a subsidiary of The Equitable, Informatics had to emphasize its corporate policies in the areas of personnel practices, affirmative action measures, etc. In a few cases, this resulted in Informatics efforts in these areas being improved and strengthened.(19)

3.2.1.4 Independent Maturity, 1980--1982

Between October 1979 and September 1980, when The Equitable sold its interest in the company in two offerings to the public, the composition of the board changed again with some of The Equitable members resigning. Carleton Burtt and Nelson Broms remained until September 1980, while McCullough, Mooney, Goodroe, and Fuller left. Added to the board were George F. James (an attorney, board member of The Equitable, and former chief financial officer of Exxon), Oscar M. Ruebhausen (a partner in the legal firm of Debevoise, Plimpton, Lyons & Gates and a member of The Equitable's board of directors), and outsiders William M. Duke (then president of Professional Associates, Inc.), Albert G. Handschumacher (an executive consultant, chairman emeritus of Aeronca, and a board member of numerous companies). For the first time in its entire history, Informatics hired an in-house counsel, E. Broox Randall, who became corporate secretary.

Finally, when The Equitable completely divested itself of its interest in Informatics (except for some preferred stock), an almost entirely new and independent board of directors resulted. It was deemed attractive to the investment community that the company have an almost 100 percent outside board. Bauer became chairman and the only employee board member. Staying on the board were Taggart, Duke, Handshumacher, and James, the only board member associated with The Equitable. Replacing the other Equitable members and Frank, Wagner and Wrotenbery in December 1980 were Vincent N. Marafino (senior vice president of finance, Lockheed Corporation) and, interestingly, Erwin Tomash, the Dataproducts founder who provided the original capital for Informatics to begin business 20 years before. Finally, in 1982, another outsider was added, Fred Carr, chairman and CEO of Executive Life Insurance.

The composition of this most recent board of directors is representative of Informatics current and final stage of growth--independent maturity. Transition into this stage brought changes in the corporate staff as well. In 1980 Victor M. Martinelli assumed the role of chief financial officer as vice president of finance and administration, replacing Albert Kaplan who became vice president of operations until he resigned at the beginning of 1982. Richard A. Pardi became assistant treasurer and Kathryn A. Young, an in-house attorney, became assistant corporate secretary.(20)

3.2.2 Corporate Administrative Staff

Initially, all accounting and finance activities of Informatics were directly supplied by Dataproducts under the direction of William Mozena, who served as treasurer and chief financial officer until 1965. Marvin Stein, Dataproducts corporate controller, and his small accounting staff of a half a dozen people simply kept separate (very simple) books for the corporation's software subsidiary. Routine administrative matters were handled by an office manager, Carolyn Denny. By 1963 however, Informatics felt the need to hire its own business manager to handle contract negotiations and financial matters since the software business activity of Informatics differed substantially from the manufacturing operations of its parent. The individual selected for this job was Lynn Jones who served with Walter Bauer and Werner Frank in a similar capacity at Thompson, Ramo-Wooldridge in the Information Systems Department. From 1964 to 1971 Lynn W. Jones II was chief administrative officer for Informatics, and served as treasurer and chief financial officer (CFO) from 1965 to 1969.

Jones immediately began hiring an accounting staff for the young company and devising procedures to meet its unique needs separate from Dataproducts. During his tenure, Donald Einhorn served as the first corporate controller from 1964 until 1966 when he was succeeded by Minoru Tonai. Jones was later succeeded as treasurer and CFO by Carl Long during 1970. Under him Leonard Rebhun briefly functioned as controller. Albert Kaplan, who was chief financial officer of Computing Technology Company, succeeded Carl Long in 1973 when a more developed financial staff appeared with Jack C. Thomas serving as corporate treasurer and Richard Pardi (who came with the Computer Technology acquisition) filling the position of director, profit planning and cash management. From 1975 to 1981 Thomas Harincar filled the position of corporate controller. He was succeeded by Paul Wilde. Kaplan was followed as CFO by Vincent Martinelli in 1980.

On the administrative side, Jones hired Emil Landefeld in 1967 as director of administration. Landefeld was stationed in Washington, D.C. for one year to serve as the business manager for Informatics Eastern Operations under Werner Frank. Landefeld transferred to corporate headquarters in 1968 where he directed all administrative activities except accounting, including the personnel and facility functions until 1973. Wayne Plets has served as the facilities manager since that time. In 1976 Marvin Howard was appointed staff vice president/corporate administration, acting as corporate manager of insurance and risk management and supervising facilities and office services. He served in this capacity until his retirement in 1983.(21)

3.2.3 Miscellaneous Administrative Programs

It was under Jones' direction that most of the company's first financial and administrative programs were implemented. In the early years many of the company's contracts were for custom programming work on a fixed-price basis and most were government contracts which required formal contract administration. Of vital importance were timeliness in project performance, meeting estimated costs, and adherance to security regulations. Therefore, Informatics has continously needed strong administrative programs pertaining to financial cost reporting systems (because as a government contractor, it is subject to audits from the General Accounting Office), project management (due to the number of fixed price contracts), and security systems to protect its own proprietary information as well as that of its customers. This section will briefly discuss the more important programs and related efforts handled by Lynn Jones and later by Carl Long, Emil Landefeld, Albert Kaplan, and their accounting and administrative staffs. Personnel programs are discussed in Section 2.3.

3.2.3.1 Project Administration

Because Informatics profitability was and is dependent upon effective and efficient performance of custom systems design and programming projects, it has always been imperative for the company to possess an up-to-date project control and information reporting system. Since its inception the company has made it routine practice to assign a project manager to each contract which it obtained. Usually, the project manager was a senior systems analyst who had the responsibility of communicating with a potential customer and supervising the project to perform the required job. This meant that systems analysts were motivated to seek opportunities for the company and practice some salesmanship. Analysts who prepared winning proposals (those accepted both by higher management and by the customer) could be promoted to project managers, their first position up the managerial ladder. Successful project managers in turn became managers who supervised a group of projects. Therefore, it was in a project manager's best interest to ensure that the project was completed profitably on time without cost overruns.

At first the higher management of Informatics held regular monthly and quarterly project review meetings for the East and West operations of the company. The meetings involved project managers giving presentations on the technical performance, technical and contractual problems, and their proposed solutions for the applications being designed or programmed, as well as a review of the current operating expenses and adherance to schedule. When the company was small Bauer, Frank, Wagner, Hill, Kaylor, and Lemons routinely attended

these meetings and personally monitored the on-going performance of each project, thereby catching and resolving problems before they became serious. By 1967 however, the company had grown sufficiently large, with numerous projects, that it became impossible to hold project review meetings beyond the division and departmental levels and for higher management to personally watch over each contract effort. This posed a problem for the corporate office in managing the company's overall financial performance.(22)

This problem was made evident by several very large fixed-price projects which experienced schedule delays, reduced profits, and even losses. The first of these was a subcontract to Univac to develop a message-switching system for Western Union (a lengthy advanced development project which, after many crises, resulted in a break-even situation). The next was a $1 million multiple-application systems design and programming contract including several financial systems for the Department of Housing and Urban Development which was never completed successfully. To handle the problem, the corporate office under Wagner and Hill's direction produced a project management handbook in early 1967 to instruct project managers how to estimate time required to perform uncompleted tasks, determine costs, and maintain project profitability.

While improving the skills of project managers, the handbook, however, did not completely solve the problem of the corporate office staying informed on the current status of each project both financially and technically. The problem was furthur complicated by the highly decentralized structure of the company and its various geographical locations. At the instigation of the board of directors, a study group, Task Force "Straw Man," was established, during 1969, under Thomas Taggart's direction to survey the financial and project reporting needs of the entire company and to recommend appropriate solutions.

The result was **Task Force "Straw Man"(Revised): Project Control and Management System for Fixed Price Custom Programming Contracts.** It proposed an integrated information network system tying all divisions to the corporate office, using Telex systems to provide communications. The system was to provide flexible control of firm-fixed price, CPFF, and time and materials contracts and "would satisfy the custom programming information requirements of a $100 million company because of its highly decentralized data input and reporting concepts controlled by a centralized accounting and auditing function." Straw Man proposed making all project control system records and documents the same as the accounting records involved for the same project and that this documentation be standardized throughout the corporation in order to provide a consistent method and common standards of evaluation for all custom programming projects. Each project was to be monitored for its profit contribution or the equivalent of direct gross margin on its revenues and was to be evaluated relative to other projects according to the measures of: 1) Expenditure Variance (monetary costs versus time spent on project); 2) Schedule Variance (actual milestones or project tasks achieved versus planned milestones); and 3) Value Variance (total expenses versus accomplished milestones). Division management was made responsible for local overhead rates, general and administrative charges, and overall profitability. The system thus provided a decentralized accounting approach to projects and provided varying degrees of performance review by division and corporate management with weekly "flash" reports on the current status of projects being transmitted to the corporate office.

For the reasons described below, Project Straw Man was never implemented in its entirety, but major portions of it were developed and installed under the general supervision of Richard Lemons and the Information Systems and Services Company. The criticality of having an integrated project information and management system declined beginning in the late 1960's due to the company's increased dependence on low risk cost plus and time and materials contracts, and on MARK IV and other nonprogramming business for a higher percentage of its profits and revenues. (Custom services revenues declined from 100 percent of Informatics total revenues in 1962 to 53 percent in 1973.) After ten years of experience with fixed-price contracts (which, in aggregate, were unprofitable), the corporate office furthur refined its criteria for performing them by issuing the following operations policy in February 1972:

> In general, the fixed price contract is suitable for procurements with reasonably definite design or performance specifications available and wherever fair and reasonable prices can be established at the outset of the work. . . .
>
> The corporation will not enter into a fixed price contract where there is likely to be a major cost fluctuation in labor, materials or purchased services, and where there are unknown factors related to technical capability. The corporation is unwilling to undertake any fixed price contract with the expectation that the product or the research or development work cannot be accomplished within the dollar limitations of the contract, in expectation that the completion of the contract would lead to new business development. . . .(23)

Since most such fixed-price procurements were, in effect, R&D efforts (else why not use existing software?), the effect was that after 1972 the company very rarely accepted a programming development job under a fixed-price contract. So the need for Project Straw Man, in all its complexity, disappeared.

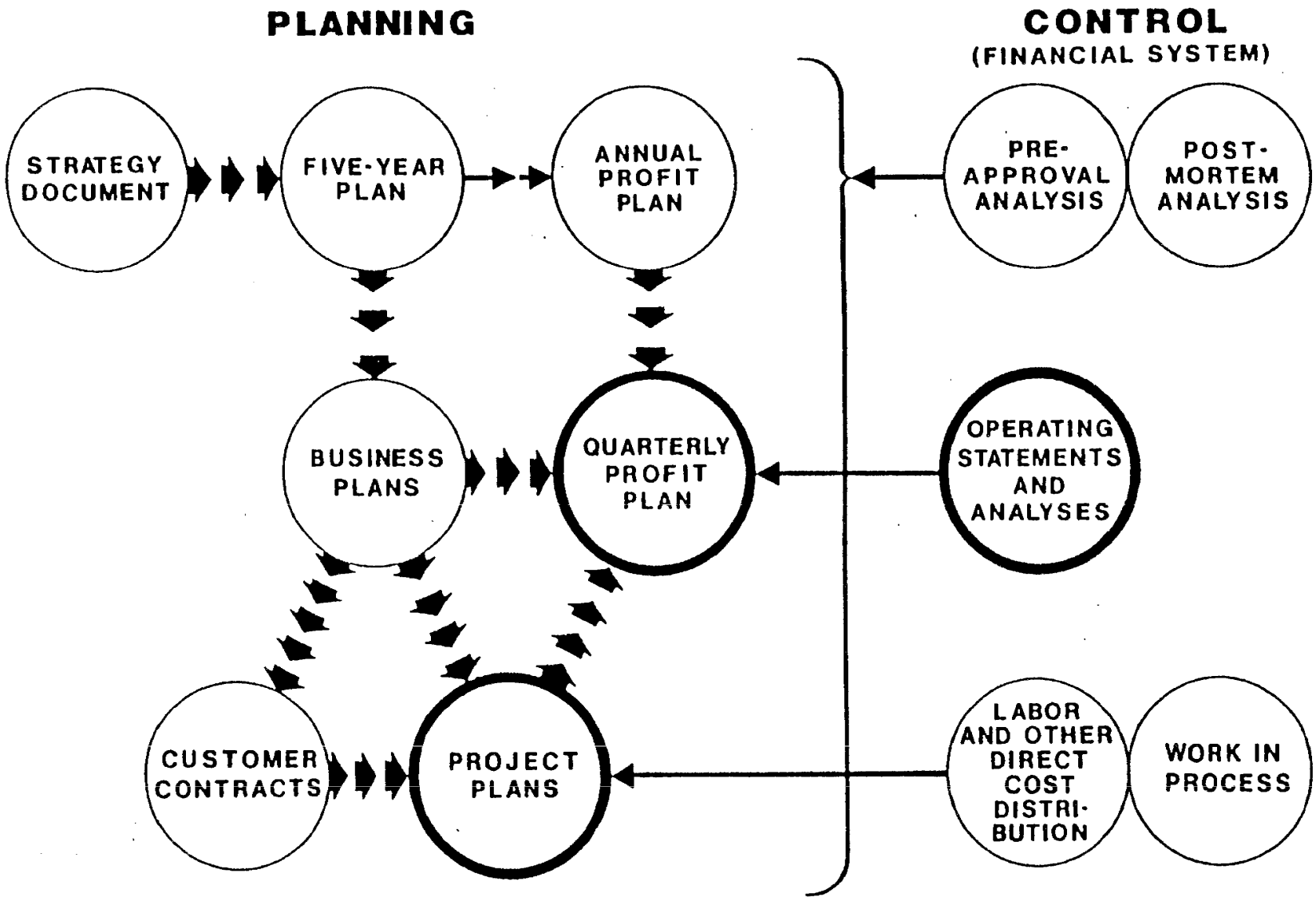
3.2.3.2 Administrative Manuals

In addition to the project management and business planning efforts mentioned above, Informatics has maintained active programs establishing corporate policies and procedures in other administration areas as well. These procedures are documented in six separate manuals: Finance, Security, Equal Employment Opportunity, Administration/Operational Policies, and Personnel.

3.2.3.3 Short-Range Planning

An operations policy was issued during 1972 requiring the preparation of formal business plans for new ventures if the operating budget devoted to it for the first year was $20,000 or more than 50 percent of indirect labor of the cognizant operating unit. This policy came at a time that Informatics embarked on an ambitious acquisition and expansion program in an effort to reverse a previously slowed growth rate resulting from the recession of 1970. The policy established a standard outline for managers to follow in preparing plans for new ventures. The author (the style clearly shows that it was Frank Wagner) admonished them with the following advice:

FUNDAMENTAL PLANNING/CONTROL SYSTEM



Source: Informatics Inc., A Presentation on Informatics Inc. for the Board of Directors of Equimatics, Inc., November 28, 1973

FIGURE 3-20

> . . . wherever possible, think of yourself as an attorney presenting his case to the court, trying to prove the proposition: "Adopting this plan is the best thing for the corporation and must have highest priority compared to alternate ways of using the corporation's resources." Consequently, you should present factual evidence wherever possible. If your "facts" are really guesses, say so, but present them on the basis that you have studied the situation more thoroughly than anyone else and have the highest probability of being correct. Be sure to be logical and, especially, consistent throughout, or the opposition will destroy your case.(24)

The business plans directly influence the types of contracts and markets Informatics pursues and thus influences the plans for any projects which result from it. The project plans in turn are input to the quarter's profit plan, which in turn influence the next year's annual profit plan. The latter two plans are detail financial forecasts of each unit's financial statements to the level of general ledger accounts. In this way planned performance and actual performance are integrated together in the profit plans allowing management to regularly review and monitor the current status of operations. Figure 3-20 portrays the various steps and flow of Informatics planning and control system. Long-range planning is described in detail in Section 3.3 which follows.(25)

3.3 CORPORATE LONG-RANGE PLANNING

Since 1962 Informatics has continually engaged in long-range business planning to determine the directions and goals of its efforts, to increase its size, improve profitability, and to enter and develop new markets. The planning process has become more sophisticated over the years and more extensive in detail and participation. The ultimate general strategy and business objectives of Informatics have never fundamentally changed since its founding; the company continued to pursue all forms of computer software related businesses. The only difference through the years is that Informatics has refined and further defined the specific markets it participates in and the strategy required to succeed.

3.3.1 Long-Range Planning, 1962--1967

During the early years of Informatics history, Walter Bauer was primarily responsible for setting the company's business objectives and priorities. The original **Prospectus for Corporation D**, the business plan for Informatics at its formation, was conceived and entirely written by Bauer. Thereafter, Bauer would prepare a lengthy memo to management outlining the company's current needs, intended strategies and established priorities, leaving the task for division vice presidents to work out the details and the methods required to meet the objectives and various needs that were specified. This process was best described by the introduction of a strategic planning document, **Corporate Goals and Objectives**, prepared by Bauer in 1966:

> The following is a discussion of the objectives and goals for the company which appear important at this time. Although they represent my personal goals, it is obvious that many of them

must be carried out by other members of the management team and, in these cases, it will be my responsibility to advise, lead, and coordinate.(26)

As mentioned in Chapter 1, Informatics was "formed to provide services in the data processing field; specifically, computer applications, systems analysis and development, computer programming and computer time sales" with interests "in the entire scope of the data processing field, exclusive of detailed hardware design and fabrication." In the **Prospectus for Corporation D**, Bauer originally predicted that the company would build upon the expertise of its management in on-line and real-time computer systems and applications by first providing consulting services which would lead to custom programming contracts. The programming and systems design contracts (later called professional services) would in turn ultimately allow the company to develop "items of a proprietary nature," unique software products or services which could be used in a multitude of situations and sell in volume. Custom programming and software product revenues, it was hoped, would pay for the purchase of computer equipment and place Informatics in the "computer time sales" (later called data services) business within two years after its founding. The revenues from these efforts were projected to rise from a $150,000 annual sales rate to over $300,000 by year three.(27)

Eight years later with the benefit of hindsight, the 1970 five year plan observed that there were only two flaws with the predictions of **A Prospectus for Corporation D.** The first was that the length of time required to develop proprietary products and services and to enter the computer time sales market was grossly underestimated. Instead of two years, it took Informatics six years to finally record revenues from software products and six and a half years to record revenues from data services--and to record profits from the latter business area actually took 12 years! The second (happy) fault in the preliminary business plan was that revenues in Informatics third year were four times higher than expected, reflecting the company's highly successful performance in providing professional services (custom programming and systems analysis).(28)

With the exception of these two errors in forecasting, Informatics has consistently followed and achieved its original objectives, pursuing all aspects of the computer software business. This was done without significantly veering off course into other types of non-software businesses or activities nor abandoning its targeted markets. However, there was no refusal to try alternative strategies and tactics nor unwillingness to wait for a more opportune time to succeed after initial efforts failed. For instance, Informatics failed in its first major attempt to enter the data services marketplace (in 1969-1970), but it did not abandon the goal of becoming a supplier of data services. It re-entered this market by establishing Equimatics, Inc. as a joint venture to pursue this business in 1972 with focus on the insurance industry. It then merged with Equimatics in 1974 after Equimatics made a successful entry into this market.

For the first four years, the strategy of Informatics stayed basically the same. Predicting the independent software marketplace to grow to $200 million in business by 1970, the company established an objective to obtain a 5 percent share of this market or approximately $10 million dollars in revenue by that

year. This goal was to be accomplished by using the company's expertise in on-line computer systems to win large technical systems consultation and custom programming contracts with the government and in the computer manufacturing and aerospace industries. It was hoped that by serving on the most technically advanced projects for federal defense agencies, aerospace companies and computer systems manufacturers, the company would be able to discover, foresee, and develop computer applications and systems which would be commonly needed among a number of possible commercial customers, thereby "bootstrapping" its way into offering high profit products and services that only it could provide. For example, the technology and expertise gained from designing an on-line system to allow a military chain of command to know the whereabouts and numbers of troops, supplies, aircraft and ships could be used, it was reasoned, to develop computerized airline reservation systems for airlines, inventory systems for manufacturers or order entry and distribution systems for wholesalers. The offering of these systems either by selling them as software products (where the customer runs and operates the program on his own computer) or as a service (through batch processing service bureaus or time-sharing networks) provided by Informatics would then generate enough revenue for the company to pursue other forms of software business, particularly business data processing, technical communication services and more software products. This strategy is best described by the company's stated **Corporate and Marketing Objectives** of 1963:

> Our business is probably more analogous to a hardware company which produces specialized or customized complex electronic equipment, most of it one of a kind in nature.
>
> If a market can be foreseen with some certainty, we shall seek to develop proprietary programming items, computer programs where a multiplication factor exists in selling the same programs to many customers. In certain cases we shall plan to develop structures of factors and efficiencies. The probability of the foregoing coming to pass is speculative--there is little precedent for it.(29)

The foregoing was written in 1963. The first software products in the industry were offered for sale in about 1967.

With this general approach, Informatics soon organized itself into Eastern and Western Operations to vigorously pursue business from the federal government and the aerospace industry. As discussed in Chapter 1, it did gain some sizable contracts in the first couple of years related to on-line systems, most notably from the National Military Systems Command and Support Center, the Air Force's Rome Air Development Center, Jet Propulsion Laboratory, IBM Federal Systems Division in Houston, and the Pacific Missile Range of the U.S. Navy. These contracts allowed Informatics to grow rapidly, increase its expertise, and earn enough revenues, as predicted, to expand into other areas.

First, in early 1964 the company successfully acquired Advanced Information Systems which was heavily involved in designing generalized file management systems, standardized computer programs for the management of and report generation from data files for IBM computers. This acquisition eventually led to the creation of Informatics first successful software product, MARK IV, in 1967. A second acquisition was made in 1965 with the purchase of Data

Processing Systems to begin pursuing the business programming market. Soon afterwards CPM Systems was acquired. This acquisition had developed a proprietary data service, offering Critical Path Method project planning services to Southern California building contractors and food processing companies. Both of these acquisitions were small and within two years proved unsuccessful.

The on-line programming efforts for the military also led to the in-house development of a software product known as DISPLAYALL for the development of applications using on-line CRT displays and messages. DISPLAYALL was based on work performed for Rome Air Development Center and the Army Behavioral Research Laboratory which required on-line data systems and video displays for the automation of photo interpretation by intelligence personnel. An additional proprietary data service was begun in late 1965 with the development by Advanced Information Systems of the Media Account Control System (MACS) which used computerized file management systems to keep track of advertisements presented in various media for the campaign planning, billing, and verification purposes of advertising agencies.(30)

These extensions of Informatics were, until 1967, rather embryonic and conducted on an opportunistic basis, performed as the possibility arose rather than being deliberately sought out. Several of them, such as Data Processing Systems, CPM Systems Inc., and MACS never contributed much to Informatics. Professional services, especially for military and government intelligence applications, remained the bread and butter of the company. Eastern Operations was in fact divided into command and control systems, intelligence systems and programming departments. Despite the unsuccessful expansions named above, the company still adhered to the same strategy in 1965 with the addition of a bit more refinement resulting from three years' experience. The 1965 plan, for instance, echoed the objectives of 1963 almost verbatim with the exception of added clarification of particular points:

> Informatics should not be regarded as a consulting firm. Although there are many aspects of its business which are similar to those of an accounting firm, legal firm or any similar collection of professionals, there are many aspects of it which are different. For one thing, we do not emphasize personal services, but rather emphasize the product and the development of that product.
>
> We will continually strive to increase our range of services to include greater capabilities in "compiler building" and in business data processing, the production of proprietary programming items and the development of computer based services such as CPM and File Management.
>
> We will continue to investigate opportunities for mergers and acquisitions. Those companies which appear to be especially attractive at this time are those which broaden our technical capability and our sales base, especially in the area of proprietary service packages for commercial use.

> Although recognizing that simply supplying programmers in the so-called "body shop" type of contract is generally undesirable, we shall not neglect the desirable financial aspects of contracts of this type. Furthermore, we shall not regard obtaining contracts of this type as competing with or precluding contracts of more desirable professional stature such as systems design, programming research and the like. However, at this time, we do not plan to bid on contracts where the major manpower requirement is for non-professionals such as data reduction clerks, computer operators, etc.
>
> If a market can be foreseen with some certainty, we shall seek to develop proprietary programming items, computer programs where a multiplication factor exists in selling the same program to many customers. In certain cases, we shall plan to develop structures of systems and thereby achieve multiplication factors and efficiencies. This implies a vigorous marketing and investment program in items such as CPM and File Management and related services.

Additional corporate objectives of 1965 included becoming a leader in technical communications and education, maintaining the company's specialization in on-line systems in order to continue to obtain systems design contracts but with an aim of winning larger follow-on contracts for complete implementation of these systems, expanding into the in-house operation of a computer to support the technical services of the company, and achieving a $6 million sales rate by April 1966 and a $12 million sales rate by April 1970.(31)

During 1966 Informatics pursued the above goals but began to recognize limitations on its future growth caused by various factors. The most significant of these were the unavailability of high level entrepreneurial management personnel capable of selling the technical services of the company or obtaining large contracts, the resulting lack of large programming contracts which could generate enough revenue to support Informatics growth objectives, a low profit rate on cost plus fixed fee contracts, and frequent losses on fixed price contracts. An executive management meeting held in Santa Barbara in April 1966 "to exchange views about the course and nature of our business" dealt with these problems very specifically. New profit objectives were set. Corporate profitability was to increase from 4 to 6 percent while fixed price and time and material contract efforts were to strive for a 20 percent profit rate:

> The point was pressed that there seemed to be a reticence in some quarters to achieve these rates based on a mystical notion "10% before taxes" type of thinking which probably can be attributed to the background of many people in CPFF government contracts. We must achieve the 20% profitability level on commercial contracts for that is the performance level of successful companies. Only if there is overwhelming evidence that the marketplace will not bear the price, will we retreat from that firm point of view.

On the issue of sales performed by middle and top managers, it was decided to promote the notion of selling more thoroughly as a number of managers,

holding to a highly technical perspective, frowned upon selling as beneath them:

> The point was made that sales efforts by technically qualified management personnel are the keystone of our business. Efforts should be made on a continuing basis to develop the correct point of view which boils down to the idea that they regard themselves as strong technical people and not hucksters, and that they will demean themselves by selling. In some cases, these managers feel that they have no capability to sell.
>
> Sales efforts for computerized programming products are not "sales" in the usual sense, but rather consist of a technical discussion of the desired results and the means to that end.
>
> These marketing efforts are intellectually stimulating and rewarding since they most often are technically challenging and to be successful, they must be creative. In other words, there is a considerable technical content to the effort.
>
> We should promote the idea that sales is stimulating, rewarding, and intellectually challenging which, indeed, it is.

Of particular attention at the meeting was a position paper by Werner Frank regarding the future of Informatics. In it Frank argued that the company's growth was limited by the number of managers capable of selling its capabilities to potential customers and by the number of large programming contracts which were obtained:

> The relatively small jobs we predominately bid ($25,000 to $100,000) sap up our energies, just as much as would those tasks having a larger contract price.
>
> I believe this to be the dilemna! Continued growth is limited primarily by the availability of select leaders in the company who are willing and able to build up a business. I observe that when an operating unit reaches the magic size of 75-100, it becomes too big for the one man to keep on top--hence, he must defer capability to the next line of management, where the scarcity lies and where limitations are met.(32)

In answer to this situation, Frank proposed the following three objectives for Informatics to focus upon:

a. The real pursuit of large contracts ($500,000 to $2 million)

b. The development of proprietary products

c. Consideration of formal sales staff

His arguments apparently made considerable impact on the rest of the management team as Frank's proposed objectives were adopted in entirety within the **Five Year Plan** of 1967 prepared a year later. While not opposing or

changing the course of earlier corporate objectives, they provided additional clarity and refinement to the direction of the corporation.(33)

Even before the 1967 plan was written, efforts were made toward the fulfillment of these goals. Most significantly, the MARK IV File Management System was conceived by John Postley for use with the then recently announced IBM System/360 computer. Postley's staff began technical development of this product while Postley himself embarked on a campaign to find customer sponsorship to financially support the design of MARK IV. Although still in its infancy, the corporation began to develop plans to build much of its future growth around this product. Another fortuitous circumstance to occur in 1966 was the employment of Richard C. Lemons to serve as Informatics vice president of Washington Operations.

Lemons turned out to be one of those rare entrepreneurial high level managers able to land a large contract. Not long after joining Informatics, he found himself involved in proposal and marketing activities pertaining to a joint venture effort with Information Dynamics, Inc., of Boston, bidding on a large facilities management contract to manage NASA's Scientific and Technical Information Facility. While the contract had not been awarded by the time the 1967 plan was prepared, it was granted subsequently, and Informatics gained the largest contract in its history up to that time for $4 million. The award doubled the corporation's size with the addition of approximately 400 employees and the creation of a subsidiary, Informatics TISCO, to manage the NASA facility. This event started Informatics in the business of offering proprietary information system and database management services. Lemons had a vision: "We are not in the computing business, we are in the information management business." He made the vision a reality by expanding, during the 1970's, from NASA's technical information to information management for health care, publishing, and legal information services.(34)

The 1967 five year plan dealt with software products in a very direct manner, distinctly proclaiming them to be vital to the future of Informatics and the key area of investment, while still giving acknowledgement to the company's custom services area. Predicting the data processing industry to reach an estimated $12 billion in sales by 1970 with 60 percent or $7 billion devoted to the procurement of software, the plan summed up the company's strategy with the paragraphs below:

> Software companies have grown rapidly during the past five years. Most of them show a 50-100% per year increase in size and profits although some of the larger ones, of course, are now showing only 20% per year increase. They have gained recognition in financial circles. Most of the larger ones are rapidly diversifying into proprietary products in answer to the often stated reservation about software companies that "the business growth is limited by the number of qualified people who can be attracted."
>
> [Informatics plans] to have custom products and services as a sustaining and continually growing area of business. We reject the idea that there is no more growth there. However, we accept the point of view that growth gets more difficult with

> size and is limited not only by the quantity of qualified personnel who can be attracted, but perhaps more seriously by the number of key managers who can build the business in new geographical areas. Therefore, it is the plan to divert resources to the development of proprietary products and services on ever increasing basis. This will provide a new dimension for growth, more company stability, and higher profit margins. [This entails] new problems of market analysis, cash requirements, cash flow needs, marketing and maintenance. . .which were not important matters previously.

Essentially, Informatics embarked upon a dual strategy in earnest. While custom services were continued and provided 80 percent of the company's revenues, corporate investments were to be devoted to software products. Of the $9 million in sales predicted for 1968, $8.5 million were to be from custom services resulting in $415,000 in after tax profits. In contrast, software products development was to be supported from $500,000 in sponsorship funds from initial customers and $120,000 in in-house R&D by Informatics in order to minimize start up losses to $63,000 after taxes. Limitations of the custom services business were already felt and known; those of software products were anticipated.

Although custom services efforts were originally intended to identify and develop applications where software products could be created in a synergistic environment, the markets addressed by the new separate divisions in the company more or less precluded this. The custom services divisions, for instance, provided operating systems software to computer manufacturers "as an extension of hardware capabilities. . .to provide a foundation for the various user and application programs to be implemented for a given user environment. . . ." and supplied systems analysis and programming services for the specific on-line application needs of government agencies and Fortune 500 size companies. Advanced Information Systems (later the Software Products Division and MARK IV Systems Company) concentrated its efforts on MARK IV, a single batch-oriented file management and report generation software product designed solely for IBM System/360 users.

While the company had acquired additional expertise in timesharing, communications, display, and automated programming systems through performance on various contracts, the 1967 plan (before TISCO) asserted that a specialization in on-line systems was still the backbone of custom services:

> In general Informatics business is in the forefront of software technology. Over 80% of our business is in modern on-line systems--systems in which the computer is attached to displays, communications or other instrumentation. We are pleased about this orientation of our work since it represents the most rapidly growing segment of the business and we have very carefully nurtured our professional trade image in this direction.
>
> We are badly in need, however, of large and sustaining operating and programming contracts. Our largest contract is with JPL which runs $600,000-$800,000 per year. After that,

> our largest contracts drop down in the $300,000-$500,000 range per year, and there are only two or three in that category. We have a very large number of small to modest size contracts. It is costly from administrative and personnel assignment standpoints to carry on this work. We have continued, therefore, to seek out the larger contracts and work toward [such] an award. In passing, however, it should be noted that our wide dispersion of small contracts gives us a stability because of the fine granularity of our business. . . .we see a continually growing area of business and we see the prospects as bright. This business requires continuous selling and promotion and there is very little natural momentum. However, with each contract Informatics has gained, as a company, customer relations on which it can build future contracts.

Software products were pinpointed as the future growth area of Informatics with all hopes resting on the MARK IV File Management System:

> Capital expenditures are required. Profit margins can be great--in fact, greater than profit margins of hardware; once the product is developed, there is no cost of "manufacture" and only sales costs are involved plus, perhaps, limited initial services to acquaint the buyer with the full product. Furthermore, many of these products have no competitors and, therefore, high profit margins can be achieved. This is now the case, as we understand it for Informatics MACS system.
>
> [File Management is] becoming increasingly popular on the industrial data processing scene. It was an advanced technical concept two or three years ago, and for this reason the sale of the MARK I and MARK III systems was not pressed to the fullest. However, a significant event occurred within the last few months when IBM announced their Generalized Information System. Because of IBM's predominance and preeminence in the field, their commitment to design and deliver such a system immediately gives an aura of technical and business respectability to the idea. We believe, therefore, that there will be a great deal of buyer interest in a MARK IV file management system. IBM's GIS is now being implemented for large machine configurations of the IBM 360. Therefore, many 360 customers do not want it and are attracted to a similar system which would operate on smaller machines. Informatics system will work on smaller machine configurations. In the event that IBM does implement a GIS which will work on smaller machine configurations, we believe that the file management system will be sufficiently different in many respects and it will have different user characteristics which will enable it to have a sufficient appeal in a sufficiently broad market.

Finally, Werner Frank's recommendation for "consideration of a professional sales force" was adopted in principle:

> Many members of the management group. . .are developing the opinion that in order to take our custom programming services from the $6.5 million per year to the $10 million per year level, we will need to use professional sales people more than we have in the past. Whereas we are convinced that the technical people are indispensable in closing the sale, nevertheless we believe that benefits can be obtained by getting more market intelligence through having full time salesmen call on various customer areas repeatedly to generate a continuing marketing intelligence data base. This will enable us to seek out the better business opportunities and hopefully will reduce our sales costs and put us in a position to identify and land some of the larger programming contracts.(35)

With the above strategy in hand, Informatics rapidly put it to action. MARK IV was soon developed and successful sales of the product began in 1968. During 1967, two major efforts also occurred which expanded the company's activities in providing proprietary services. One of these was successful; the other was not. The successful effort was the formation of Informatics TISCO in 1967 as mentioned above. While initially oriented to the custom data base application needs of NASA's Scientific and Technical Information Facility, Informatics gained enough expertise in this area that it was able to offer data base management as a proprietary service in other areas during ensuing years. Enhancing a predecessor data base program, RECON-STIMS, Informatics was able to later offer on-line toxicological information services to the medical industry and establish specialized data base systems for a number of customers. By 1971 Informatics Information Systems and Services was established as a major organizational entity of the company and a third prong of a multi-thrust into the software services market. The second effort was initiation of computer data services through the acquisition of four California computer service bureaus which provided batch and remote job entry services. While this initial attempt to enter the data services market was unsuccessful, data services eventually became a fourth major thrust of the company.

Informatics old stand-by, custom services, also expanded significantly. Large contracts were won with Western Union for the design and implementation of computerized message-switching systems, with the United States Navy for an advanced naval tactical command and control systems study, with the U.S. State Department for a passport/visa control system, with Dean Witter and Company for a back-office accounting system, with Jet Propulsion Laboratory for additional programming services, and with RCA for all the software required for its contract with the State of California for the design and implementation of the California Law Enforcement Telecommunications System (CLETS). Most importantly, Informatics custom services operations began to pursue the commercial market more intensely, especially after a dip in the federal government computer services market in 1968-1969, by the establishment of the Northeast Division during 1966 and the acquisition of Computing Technology, Inc., in 1968 which placed Informatics in the financial systems market.(36)

3.3.2 Long-Range Planning, 1968-1973

In the period after 1968, Informatics business planning efforts became more detailed and sophisticated. Since the company eventually consisted of four major operational and distinct companies, each company would prepare its own long range and annual plans. These in turn would be consolidated with a corporate strategic and long range plan which served as a summary. Bauer's memos and commentary on what directions the company should aim for still existed, but they served more or less as guidelines rather than the main body of the plan.

In March 1972 even these guidelines became more sophisticated as the formulization of long-range plans became a four step approach. First, Bauer and/or the corporate development office would issue a fairly detailed document describing the company's business philosophy, what markets it wished to pursue, basic assumptions it held pertaining to software technology, the data processing industry and each specific market it participated in, and overall strategic guidelines for the corporation as a whole. The combined document of business principles, market assumptions and strategic guidelines would then be issued to operating divisions and groups who in turn developed long-range plans for each of their business markets. These were submitted to and reviewed by the corporate office to ensure that they adhered to corporate objectives and standards, and then combined into one summary or consolidated five year plan for Informatics as a whole. Finally, each business plan would be reviewed and compared to actual performance at the end of the year in order to pinpoint problem areas among operations or to alter goals or objectives for the preparation of the next long range plan. Since the plans were and are reviewed and updated annually, they are essentially "evergreen" or dynamic documents in nature, continually reflecting the corporation's current activities and future intentions. Each plan is a continuance, therefore, of those which preceded it. Most importantly, an office of corporate development was established in 1972 under the direction of Lynn Jones for the purpose of assisting business planning through competitive analyses, acquisition searches, and examination of new and potential markets.(37)

In the following discussion, each year is the company's fiscal year which ended on March 31 of the year referred to. For 1968 Informatics planned $7.7 million in revenues of which $7.2 million and $560,000 were to come from custom services and proprietary products and services, respectively. This was planned to increase by 1973 to $31.5 million with $19 million from custom services and $12.5 million from proprietary products. In the same time period, after-tax profits were planned to grow from $380,000 (or $.67 per share) to $2.29 million (or $3.63 per share).(38) Although proprietary products and services were the main growth area, the company was still dedicated to a broad base approach to the computer services market. The 1970 five year plan reviewed the original objectives of **A Prospectus for Corporation D** and reiterated the company's commitment to them:

> In the description of the overall strategy, we assert that Informatics as a company is firmly dedicated to the digital computer field, which we intend to approach by helping users use computers. By placing ourselves in this control position

between the hardware supplier and the ultimate user we afford ourselves many avenues technically and marketwise for building our business. It is our strategy to pursue as many of these avenues as we can profitably, and to be opportunistic as we proceed. From a base of software expertise we will branch out into products, services and applications, with the commonality among them that each activity will be closely related to the electronic computer. We will, in all likelihood, tend to follow markets rather than to lead them, in the belief that the pioneer in this or any field is apt to make more mistakes than he can afford, coupled with the belief that the market is growing so rapidly that there will always be room for new entries in any specialty area. Most fundamentally, it is our strategy to ride the surge of the software boom created by ever increasing numbers of computer installations, by increasing interest in software packages and by unbundling by some of the major manufacturers.

No customer area is outside our scope, so long as that customer area represents a fair profit potential. We will service industry, commerce and government, domestic or foreign, local or national. The marketing investment in a customer area, it should be emphasized, will in all cases be proportionate to the profit potential. The final word on scope is that all business for which the profit potential is not clearly visible is outside our scope.

Interestingly, the above statements reveal a change of attitude on the part of management to pursue available commercial markets by "riding the surge of the software boom" rather than being creators or explorers of new systems or markets. This is in contrast to earlier years when Informatics prided itself on its technical expertise and pioneering work in on-line real-time systems. It should be noted that beginning in the early 1970's the company's business and leadership in the area of on-line military command and control and intelligence systems began to decline, reflecting more of a focus on selling 1) information systems and services, and 2) "bread and butter" types of applications where more customers and profits existed rather than spending efforts on advanced single user systems and narrow market applications. In the Washington, D.C. government market especially, Lemons' focus on information management led to the reduction of Informatics market share of the programming business to the competitors who concentrated on it--Computer Sciences Corporation, Planning Research Corporation, and Systems Development Corporation.

Informatics began to develop plans in 1970 to grow in revenues to $135 million by 1975. The company saw the software industry consisting of three major market areas and believed that, in 1970, it had the market shares shown below for each area:

Market Area	Market Size	Informatics Revenues	Informatics Market Share
Custom Services	$ 430M	$14.5M	3.4%
Proprietary Products	$ 50M	$ 2.5M	5.0%
Data Services	$ 940M	$ 3.0M	.3%
Total	$1390M	$20.0M	1.4%

The market share in proprietary products was forecasted to increase to 7.5 percent, $42 million in sales, by 1975. The data services market which Informatics had entered in 1968 was predicted to grow from $940 million in sales in 1969 to $3.5 billion, a 400 percent increase, by 1975. Computer time sales accounted for $1.5 billion of this market while $700 million was from custom services, and $1.3 million from sales of software packages and products devoted to support the data services industry. Having recently acquired and established several batch and remote job entry oriented service bureaus which it hoped to use as a spring board into the very large and competitive computer time sharing market, Informatics decided to attack the data services market through the development of specialized packages for this area (this of course paralleled the company's commitment to software products for end users):

> The latter represents an enormous increase over 1968 levels, which expresses our conviction that custom data services will eventually be based almost entirely on packages. It is our intent to participate in this growth both through providing services and through providing the packages for use by ourselves and others.

The company hoped to increase its market share in data services from .3 percent to .8 percent, or $28 million, by 1975 through such efforts as the franchise sale of MARK IV to service bureaus and computer time sharing services.

In addition to its traditional custom services activities and its burgeoning activity in software products, Informatics also pinned hopes on another area which it had recently entered and had developed through its custom services area--communications systems products. This represented the company's first foray into the "integrated systems" (sometimes called "turnkey systems") market--the selling of bundled software and hardware for a specific application. Through work performed for the General Services Administration, Univac and Western Union for the design and implementation of large scale computerized message-switching systems, the company gained expertise to develop, for the Federal Reserve Bank of New York, the ICS IV/500 communications system which consisted of message-switching software running on Xerox computer hardware. Announced and first installed in 1969, the ICS IV/500 then sold for a typical price of $1.15 million per installation ($.5 million of this was for the

hardware). Informatics believed the integrated systems market had a potential $600 million in sales. It, in turn, hoped to sell an average of ten ICS IV/500 systems per year by 1975. ICS IV/500 sales were expected to rise from $2.01 million in 1971 to $16.4 million by 1975. An additional $9.1 million was to be earned in the latter year by providing custom services for modification of the software for the specialized needs of user installations.

Figure 3-21 shows the expected revenues from the four major product/service areas Informatics intended to participate in between 1970 and 1975 along with the percentages each contributed to the business mix of the company. Revenues from the Information Systems and Services Company were included under custom services as this operating group of the corporation did not develop a product or proprietary service orientation until 1972. As can be seen, proprietary products and services were predicted to become the largest operational area of the company by 1975 amounting to 31 percent of the corporation's revenues in that year. Custom Services were expected to decline to 28 percent of the company's business while integrated systems revenues (for both software and associated hardware) were to jump from 1.8 percent to 20 percent of Informatics business within five years. Data service revenues, while expected to grow from $4.6 million to $28.0 million, would make a contribution of 21 percent of revenues. After-tax profits were projected to increase between 1971 and 1975 from $1.18 million to $9.07 million (or from $.90 per share to $3.70 per share), improving the company's profit rate from 5.0 percent to 6.7 percent. Figure 3-22 gives the amount of annual after-tax profit expected for each major market area of Informatics for the years of 1971-1975.

In 1975 $17 million in revenues, or 12.6 percent, were planned to be from foreign sales. The company foresaw its growth to a $136 million dollar company to be generated through internal development rather than acquisitions. The economic recession of 1970-1971 caused a decline in stock prices of software companies precluding the possibility of favorable equity financing or the use of stock trades to perform acquisitions. Also, the corporation predicted a need for 5000 employees by 1975 and therefore a greater need to sharpen its recruitment efforts.

With the projection of being a large corporation at the end of five years came the realization that greater autonomy had to be given to the operating divisions provided corporate standards were adhered to and cooperation existed. Therefore, Informatics reorganized into four operational companies as previously mentioned. The 1970 five year plan described the need for coordination among the separate units with the following:

> While our guiding principle is operational freedom, we must not lose sight of the fact that we are a large company that intends to be much larger, and that there are strengths in bigness that we will need to take advantage of. The concept of divisional authority does not mean that we want to create five, six or seven small companies going separate ways. Quite to the contrary, the divisions should learn to take advantage of one anothers strengths, whether by using each others capabilities and products, exchanging technical information, advertising the overall company's achievements, or in whatever other way it is possible to achieve that elusive quality called "synergy." At

Source	Actual 1970		1971		1972		1973		1974		1975	
	$(000)	%	$	%	$	%	$	%	$	%	$	%
Custom services	12,336	62.9	12.3	52.1	18.1	48.0	23.7	40.8	29.8	33.0	38.0	28.0
Systems products (software)	350	1.8	1.5	6.4	2.0	5.3	3.0	5.2	5.0	5.5	10.9	8.0
Systems products (hardware)	—	—	1.0	4.2	2.0	5.3	5.0	8.6	11.0	12.2	16.6	12.3
Proprietary products	2,259	11.5	4.5	19.0	10.3	27.3	18.3	31.6	29.2	32.4	42.0	31.0
Data services	4,677	23.8	4.3	18.2	5.3	14.1	8.0	13.8	15.2	16.9	28.0	20.7
Total revenues	19,622	100.0	23.6	100.0	37.7	100.0	58.0	100.0	90.2	100.0	135.5	100.0

REVENUE GOALS, FISCAL YEARS 1971 -- 1975
($ millions)

Source: Informatics Inc., Five Year Business Plan, 1971-1975, April 24, 1970

FIGURE 3-21

Source	FISCAL YEAR 1971	1972	1973	1974	1975
Custom Services	.553	.814	1.066	1.341	1.710
Integrated Systems (Software)	.075	.100	.180	.350	.872
Integrated Systems (Hardware)	.020	.040	.100	.220	.332
Proprietary Software Products	.450	1.030	1.830	2.920	4.200
Data Services	.086	.159	.400	1.064	1.960
Total	1.184	2.147	3.577	5.895	9.074
Profit Percentage	5.0%	5.7%	6.2%	6.5%	6.7%
Shares of Stock	1.500	1.738	1.975	2.213	2.450
Earnings Per Share (Dollars)	0.90	1.23	1.81	2.66	3.70

AFTER-TAX PROFITS BY MARKET AREA, 1971-1975
($ millions)

Source: Informatics Inc. Five Year Plan 1971-1975, April 24, 1970

FIGURE 3-22

> the corporate level we will be attempting to provide this type of coordination and cross-pollenization, but a major share of the responsibility for seeing that it happens will always fall to the operating units since they first realize the needs.(39)

During the next three years, Informatics attempted to achieve its 1970 five year plan and experienced dismal results. Efforts to enter the data services market through the operation of several data centers (three in California and one in New York) proved highly unprofitable due to the decline in business as the economic recession of 1970-1971 impacted the small business customers that were serviced by the data centers. The corporation made a courageous but prudent decision to make a hasty retreat from this business before its severe losses could bankrupt the company. A "long shot" investment in a minority interest in ATAR Computer Systems (a company, described in Section 4.4.2, formed to provide a worldwide reservations system for travel agents) was unsuccessful when the Civil Aeronautics Board delayed approval for the airlines to participate in the system. The recession also caused a decline in commercial custom services and a reduction in government spending for all types of software services including cutbacks in facility management contracts from which Informatics derived sizable revenues. The bottom line for the corporation was a loss of $4.24 million in 1970. These losses occurred as a result of modest operational losses plus over $4.0 million of write-offs of investments in data services. This was the only unprofitable year of the company up to that time. Fiscal years 1971 and 1972 were devoted to consolidating operations and overcoming this loss in order to regain 1969 profit levels.

The company had moderate success with sales of the ICS IV/500. Several of the communications systems were sold to General Foods, Dun & Bradstreet, and Mitsubishi Corporation of Japan. Sales of MARK IV experienced a 20 percent growth rate with excellent profits. A marketing force for the product was established with over 75 salesmen stationed in various locations in North America and Europe. Licensing agreements were made for the sale of MARK IV in Japan and for the offering of it on several time sharing networks, including Interactive Data Systems and National CSS in the United States and Datalogic in Canada. Informatics commercial custom services activities also increased by expanding into the Northern California market, establishing a small domestic professional sales force, and offering proprietary services in the form of MARK IV programming services and on-line data base management systems through the use of RECON-STIMS.

In 1972 Informatics recorded a mere $17.5 million in revenues compared to its 1968 projection of $26.2 million and its 1970 forecast of $37.7 million. Walter Bauer addressed the company's halted growth problems during October 1972 (half way through fiscal year 1973) with the following comments on regaining the corporation's growth process:

> The fiscal year 1972 was not a strong growth year for the company primarily because of the marketplace softness. Both commercial and government market areas were not strong, especially during the early part of that year. In fiscal 1972 the company improved its cash position from borrowings of $1 million to the present cash position of $1.3 million cash in the bank. The entire approach was one of conservatism. The

conservatism of fiscal 1972 has spilled over into the current fiscal year to a considerable extent. We have continued to improve our cash position. Our commercial areas have shown reasonably good growth. Recognizing that the financial community was not courting high multiples or exuding excitement about the software industry, we elected to make substantial investments this year. . . . As a result, we expect our revenue and profit picture to change for the better during future years.

Until recently Informatics had not had, at any time during its history, a committed plan, including full time personnel, for acquisition and mergers. Until this fiscal year, no corporate officer had such an assignment; internal growth was emphasized to the practical exclusion of an acquisition program; acquisitions and business purchases were done on an opportunistic basis exclusively. Starting with this fiscal year, the conscious decision was made to become more venturesome with respect to external growth. The company has two basic strengths from which external growth can be achieved: a strong balance sheet and financial history; and an excellent reputation in the data processing and financial communities.

Much of our external growth will come from "purchased products" and "purchased services" quite apart from company acquistions. We recently purchased a "COBOL pre-processor" [CL*IV] software product to complement our MARK IV product line. We are looking at several more such products and services.

We are interested in any company or business involved in information handling, or where information handling is vital to the product or service. "Information handling" can take the form of "data processing" or the newer technology of "word processing." We are prepared to expand our capitalization to accomplish this external growth and to use our working capital and cash as necessary. The above notwithstanding, it will be our philosophy to be reasonably conservative, making a number of smaller, prudent acquisitions, rather than "betting the company" on one or two. All our acquisitions will be in the information handling products and services area (or related, as described above) and we will insist on the business being "close" to ours where synergism can be achieved.

The above represents the first recognition of the desirability of tilting the "make or buy" decision concerning software products in the direction of "buy." It was reasoned that a better decision to invest in a commitment to the product could be made after it had been developed and test-marketed by someone else.

In addition to expanding the company through selective acquisitions, Bauer placed emphasis on growing the company through sales of software products other than MARK IV. These included the COBOL preprocessor CL*IV, mentioned above, RECON-STIMS and other data base management programs, the CS IV photocomposition

program, and a marketing license for PRODUCTION IV, a manufacturing-inventory management software package:

> We expect to be adding quite a number of non-MARK IV software products and we expect this to be a major growth area in the years to come. There are a number of other specifically identified software products from which we expect to receive revenues.
>
> "On-line and data base services" represents the fastest growing area in the company as a whole. We have installed the RECON system at numerous organizations within the federal government and we have recently won two of the choicest data base contracts in the government, the TOXICON system for the National Library of Medicine and the ENVIRON system for the Environmental Protection Agency. We have identified numerous agencies which will need data base services in the future. We believe that no organization in the Washington area is better qualified to provide these services. We are the leader and we intend to stay there. The data base services business among federal agencies has shown remarkable growth and we expect to capitalize on this. In the future, we will be making investments in our own proprietary data bases and our own system for interrogating those data bases.

Despite the various possibilities for growth, Informatics still had to revise its planned forecasts significantly from the 1970 five year plan. Rather than predicting being over $100 million in annual revenues in 1975, the company could reasonably expect $37.3 million in revenues for the same year and $1.72 million in profit (or $.98 per share instead of $3.70). Planned growth investments included $300,000 for communications systems, $70,000 for acquisition of PRODUCTION IV, $70,000 for the development of MARK IV special features, $80,000 for the design of an on-line MARK IV product (then dubbed MARK VII), and $100,000 for test marketing.(40)

In the next one and half years, Informatics pursued these directions. PRODUCTION IV, a manufacturing systems product, was acquired; an additional communications product, ICS IV/250, was developed; data base management areas were explored; and additional software products for financial applications (ACCOUNTING IV General Ledger, Accounts Payable and Accounts Receivable) were obtained through the acquisition of Assystance Inc. and Computer Applied Systems Co. Most importantly, Informatics entered into a joint venture with The Equitable Life Assurance Society of the United States during 1972 for the formation of Equimatics, Inc., which was founded to offer computer services to the insurance industry. This was a landmark event because in the next two years Equimatics successfully entered the data services network and timesharing market. It acquired United Systems International, a going enterprise which had developed several insurance industry oriented software products and which would soon develop LIFE-COMM, one of the most successful life insurance policy management software products ever produced. The formation of Equimatics would lead to the fourth growth stage and a major shift in long-range planning for Informatics.

Beginning in 1973, the company separated its discussion of strategic planning and its five year plan into two separate documents. The first formal corporate strategy plan of June 1973 stayed essentially the same as that which was outlined by Bauer in 1972. Added emphasis was placed on the importance of systems and applications products:

> A company which has system products and software products can participate in the data services industry in many ways: licensing of products, joint ventures, facilities management, and tie-in sales with proprietary products. The product company can be a supplier to the data services industry. Every product can be used in a RAIR (remote access immediate response) environment.
>
> [Informatics will] consciously shift to more applications capability and expertise and emphasize proprietary products and services to a greater extent. We will, however, expend resources to insure that our custom services business continues to remain healthy and grow. . . .

By 1973 42 percent of Informatics revenues came from proprietary products and services. Informatics had revenues of $7.6 million from software products in that year and was the leading supplier of them, second only to IBM (with $72 million in software product revenues). The software products market was forecasted to grow from $.436 billon in 1972 to $1.188 billion in 1978. The entire computer services industry, in which Informatics was the twelfth largest supplier with $17 million in sales, was predicted to increase from $5.2 billion in sales to $13.6 billion by 1978. The potential for growth still existed; however, the ability of the company to expand via acquisitions through stock trades or through purchases of new products financed by stock offerings was hampered by continuing low prices for software industry stocks. According to Wagner, this was, at least in part, caused by the disenchantment of the financial analysts with stocks which had been promoted to excessive multiples in the late 1960's. Many of these companies had capitalized their costs for the development of software products. When the Accounting Standards Board forced large write-offs of such capitalization, their stock prices plunged, ruining the previously favorable forecasts of a number of financial analysts who had recommended software stocks as good investments to their clients. Hence, in the early 1970's, they cautiously recommended against buying all software company stocks. Informatics was an innocent victim of this attitude.

While the corporation was in a reasonably strong cash position, the investment of internal resources and funds into software products development on an expensed basis meant decreased profits. This in turn could depress the market price for Informatics stock, making it less attractive to potential investors and further prohibit the likelihood of favorable equity sales. Informatics needed protection from the fluctuation of the public market for its stock to continue its growth and keep its leadership in the software industry. Faced with the situation for the potential ability to grow but no convenient or favorable way to finance it, Walter Bauer was persuaded (at first very reluctantly) to consider the idea of merger with Equimatics, under the right conditions.(41)

3.3.3 Long-Range Planning, 1974--1978

During this period planning was dominated by the merger with Equimatics under Equitable ownership. As described in Section 4.4, Equimatics, Inc. had been formed in 1971 as a joint venture of Informatics and The Equitable Life Assurance Society of the United States for the purpose of providing software services and products to the insurance industry and to supplement and enhance the internal data processing capabilities and expertise of The Equitable itself. At its inception, Werner Frank resigned from Informatics to become president of Equimatics, taking along with him Hal Richmond and a few other high level Informatics employees.

The Equitable was originally planned to be a significant source of revenues for the joint venture. Indeed, Equimatics did gain some business providing Medicare claims processing and timesharing services in the New York area to The Equitable. However, the latter company was able to enhance its internal data processing operations on its own without calling on Equimatics for help.

By 1973 Equimatics had made good progress. It had established its own data center in Fairfield, New Jersey, which successfully provided timesharing services to The Equitable, and it had acquired United Systems International which immediately gave the company several insurance application products. Most importantly, as described in Section 10.1.1, the company was developing a large-scale modular, multi-functional software product called LIFE-COMM to provide life insurance policy issuance, maintenance, billing, claims processing, investment monitoring and other functional applications required by large and moderate size life insurance companies. The development of LIFE-COMM, like that of MARK IV but more costly, was a lengthy effort requiring major internal investments in addition to financial support from customer sponsorship.

For a number of complex reasons, which are explained in detail in Section 4.5, a merger was arranged between Equimatics and Informatics, resulting in The Equitable Life Holding Company becoming the owner of the merged entity, which became the "new" Informatics Inc. It had the same name and management, and, to the world, was indistinguishable from the "old" Informatics Inc., except that it now contained Equimatics, was no longer publicly owned, and had a new board of directors, a majority of whom were representatives of The Equitable.(42)

Planning during the years of Equitable ownership became more detailed and precise. The Equitable itself had no influence on the planning. (Indeed, according to Wagner, there was a story that The Equitable had never had a formal long-range plan, and initiated that discipline as a result of several of their senior officers serving on the Informatics board of directors.) A minor change was that Informatics management could and did use The Equitable's economists to obtain expert information pertaining to the expected economy for future years.(43) However, the thinking that went into the preparation of the business plan for the merger had a profound influence. First of all, there was a recognition of the problem of the structure of the plan. Informatics had been planning by organizational unit. But organization changes and expansion into dynamically changing areas of business create the need for new alignments of units. Bauer suggested that it was more realistic to define general types of business and format the basic plan with relation to such areas. Consequently, Informatics developed its business plan for the new Informatics in terms of 12

strategic business areas in which it planned to be active during the following five years. This concept helped to clarify the company's strategic thinking and permitted an easy way to compare actual results with five year plans. All subsequent five year plans followed this pattern. The annual profit plan, however, (which was developed from the bottom up) continued to be presented by organizational unit, though coordinated with the 12 business areas. As a result of the merger, Informatics changed its fiscal year to a calendar year basis. All subsequent references are to calendar years.

Figure 3-23, (taken from a preliminary five year plan prepared before the merger) is an estimate of the 1974 size of the 12 market areas, and shows how much the company expected these markets to grow by 1978 and what Informatics percentage of penetration of them was expected to be. Figures 3-24 and 3-25 (taken from the Five Year Business Plan, revised July 1974) provide, for each area, a summary of expected revenues and profits and a summary of planned investments. Note that this plan assumed deferring certain development costs and amortizing them over the five years. This was done for internal reporting only. As can be seen, four new areas of business for Informatics, gained as a result of merging with Equimatics, were insurance consulting and software, insurance data services, health care and medical systems, and data services. The expanded company saw major growth areas in the future to include each of these new areas along with software products other than MARK IV and computer/communications systems. Therefore, the planned investments (meaning profit plow back) of the company were projected to be in these areas--particularly data services and software products. Of $12.3 million to be reinvested in Informatics, approximately $7 million was planned to go to these two areas alone.(44)

In the ensuing five years, Informatics was predicted to grow from $26 million in revenues and $1.7 million in operating profits in 1973 to $75.7 million in revenues and $8.1 million in operating profits by 1978. Note that the focus of this plan is on "operating profit." This was a concept adopted to measure the true progress of the business, as distinguished from the rather strange accounting that resulted from the merger with Equimatics. Normally, the acquiring company (in this case The Equitable) carries on its books, as an asset, the costs of the acquisition, and amortizes them over 40 years, charging the amortization as an expense against profit. In this case, as explained in Section 4.5, the acquiring company was a subsidiary of The Equitable, Equimatics. Its name was changed and it became the new Informatics, with the costs of acquisition on its books. This ingenious plan was designed with the intent of amortizing all the costs of acquisition in five years, deliberately creating massive pre-tax losses in the new Informatics, while it was still privately owned, as shown on Figure 3-31. The Equitable then, on a consolidated tax return, could deduct these "losses" before taxes from its profits. A formal agreement between Informatics and The Equitable provided for Informatics to pay "pro-forma" provisions for income tax to The Equitable. Because of this involved accounting treatment (all perfectly legal), Informatics recorded pretax income and net losses for the years 1974 through 1978 which had no relationship to the real financial performance of the company. To measure such performance, "operating profit" (after the amortization of internal deferred development costs but before the abnormal write off of acquisition costs) was used to measure the true financial performance of the company. Note that operating profit was planned to be virtually zero for the years 1974 through 1976 (as

Market Areas	1974	(II %)	1975	(II %)	1976	(II %)	1977	(II %)	1978	(II %)	Total	(Total II %)
Facility Management/Support	228.	(2.5)	286.	(1.9)	343.	(1.8)	389.	(1.8)	435.	(1.8)	1681.	(1.9)
Information Systems Development	241.	(0.6)	263.	(0.7)	284.	(0.6)	309.	(0.6)	335.	(0.6)	1432.	(0.6)
Information Network Services	121.	(1.4)	142.	(1.3)	161.	(1.5)	187.	(1.9)	212.	(2.4)	823.	(1.8)
Innformation Analysis/Processing	--	--	--	--	--	--	--	--	--	--	--	--
MARK IV Systems	134.	(5.9)	162.	(5.7)	190.	(6.1)	226.	(6.2)	262.	(5.9)	974.	(6.0)
Software Products	453.7	(0.4)	--	--	733.6	(0.6)	--	--	1188.	(0.8)	2375.3	(6.0)
Commercial Custom/Support	177.	(0.8)	183.	(0.80	193.	(0.8)	199.	(0.8)	210.	(0.8)	962.	(1.0)
Computer/Communication Systems	--	--	--	--	--	--	--	--	--	--	--	--
Insurance Consulting/Software	32.	(9.7)	33.	(13.0)	39.	(14.1)	42.	(16.6)	49.	(16.3)	195.	(14.3)
Insurance Data Services	130.	(1.0)	165.	(1.0)	200.	(1.2)	255.	(1.4)	309.	(1.6)	1059.	(1.3)
Health Care/Medical Systems	217.	(0.1)	168.	(0.2)	321.	(0.4)	402.	(0.6)	485.	(0.6)	1693.	(0.4)
Data Services(1)	842.9	(0.1)	--	--	948.3	(0.1)	--	--	1067.	(0.2)	2858.2	(0.1)

Note: (1) Figures for data services market only reflect known market size and intended penetration for batch services. Figures for market size for time sharing and remote job entry applications are unavailable.

COMPUTER SERVICES MARKET SIZE AND

INFORMATICS PLANNED PENETRATION
($000)

Source: Informatics Inc., Five Year Business Plan (Newco) 1974-1978, Circa 1973

FIGURE 3-23

	Estimated Actual 1973		Plan 1974		1975		1976		1977		1978		Percent Growth
REVENUES													
Facility Management and Support	5.6	21.4%	5.8	17.4%	5.5	13.6%	6.0	11.7%	6.9	10.6%	7.6	9.3%	8
Information Systems Development	1.6	6.1%	1.5	4.5%	1.9	4.7%	1.8	3.5%	1.9	2.9%	2.0	2.4%	7
Information Network Services	1.3	5.0%	1.7	5.1%	1.9	4.7%	2.4	4.7%	3.6	5.5%	5.0	6.1%	31
Information Analysis and Processing	2.7	10.3%	3.3	9.9%	3.7	9.2%	4.2	8.2%	4.8	7.3%	6.1	7.5%	17
MARK IV Systems	7.2	27.5%	7.9	23.7%	9.3	23.1%	11.6	22.7%	14.1	21.6%	5.5	6.7%	18
Software Products	.3	1.2%	1.6	4.8%	2.8	6.9%	4.5	8.8%	6.6	10.1%	9.1	11.1%	55
Commercial Custom and Support Services	1.8	6.9%	2.0	6.0%	2.1	5.2%	2.4	4.7%	2.5	3.8%	2.6	3.2%	7
Computer/Communications Systems	1.7	6.5%	2.8	8.4%	3.1	7.7%	3.7	7.2%	4.7	7.2%	6.8	8.3%	25
Insurance Consulting and Software	2.3	9.8%	3.1	9.3%	4.3	10.7%	5.5	10.7%	6.9	10.6%	8.0	9.8%	29
Insurance Data Services	1.0	3.8%	1.3	3.9%	1.7	4.2%	2.5	4.9%	3.5	5.4%	5.0	6.1%	36
Health Care and Medical Systems	--	--	.1	.3%	.5	1.2%	1.4	2.7%	2.5	3.8%	3.0	3.7%	180
Data Services	.7	2.7%	2.3	6.9%	3.5	8.7%	5.2	10.2%	7.4	11.2%	11.0	13.5%	48
Total	26.2		33.4		40.3		51.2		65.4		81.7		
Less Eliminations	(.2)		(1.0)		(1.5)		(2.4)		(3.8)		(6.01)		
Total Revenues	26.0		32.4		38.8		48.8		61.6		75.7		
PROFIT BEFORE AMORTIZATION													
Facility Management and Support	.3	16.7%	.3	23.1%	.2	7.7%	.3	8.6%	.3	4.3%	.4	4.0%	30
Information Systems Developing	.1	5.6%	.1	7.7%	.1	3.8%	.1	2.9%	.1	1.4%	.1	1.0%	--
Information Network Services	.1	5.6%	(.1)	(7.7)%	--	--	.1	2.9%	.5	7.1%	.7	7.1%	600
Information Analysis and Processing	.2	11.1%	.3	23.1%	.3	11.5%	.5	14.3%	.5	7.1%	.6	6.1%	200
MARK IV Systems	2.6	144.4%	1.0	76.9%	1.0	38.5%	1.2	34.3%	2.1	30.0%	2.6	26.5%	--
Software Products	(.5)	(27.8)%	.1	7.7%	--	--	.2	5.7%	1.2	17.1%	1.4	14.3%	280
Commercial Custom and Support Services	(.1)	(5.6)%	(.1)	(7.7)%	.1	3.8%	.2	5.7%	.2	2.9%	.2	2.0%	200
Computer\Communications Systems	--	--	.1	7.7%	.4	15.4%	.5	14.3%	.7	10.0%	1.0	10.2%	--
Insurance Consulting and Software	(.2)	(11.1)%	.2	15.4%	.4	15.4%	.6	17.1%	.9	12.9%	.8	8.3%	400
Insurance Data Services	--	--	.2	15.4%	.3	11.5%	.4	11.4%	.4	5.7%	.5	5.1%	--
Health Care and Medical Systems	(.1)	(5.6)%	(.1)	(7.7)%	.1	3.8%	.2	5.7%	.3	4.9%	.3	3.1%	300
Data Services	(.6)	(33.3)%	(.7)	(53.8)%	(.3)	(11.5)%	(.8)	(22.9)%	(.2)	(2.9)%	1.2	12.2%	200
Total Profits Before Amortization	1.8		1.3		2.6		3.5		7.0		9.8		
Amortization of Deferred Cost	.1		1.1		2.5		3.4		2.9		1.7		
Total Operating Profit	1.7		.2		.1		.1		4.1		8.1		

3-38.2

SUMMARY OF REVENUES AND PROFITS

BY MAJOR BUSINESS AREAS
($ millions)

Source: Informatics Inc., Five Year Business Plan 1974-1978, Revised July 1974.

FIGURE 3-24

	1974	1975	1976	1977	1978	Total
Facility Management and Support	–	–	–	–	–	–
Information Systems Development	–	–	–	–	–	–
Information Network Services	.2	.4	.2	.1	.1	1.0
Information Analysis and Processing	.1	.2	.2	.1	.1	.7
MARK IV Systems	–	–	–	–	–	–
Software Products	.5	1.0	.9	.3	.3	3.0
Commercial Custom and Support Services	–	.1	–	–	–	.1
Computer/Communications Systems	.3	.5	.3	.2	.2	1.5
Insurance Consulting and Software	.2	.4	.2	.1	.1	1.0
Insurance Data Services	.1	.1	.1	–	–	.3
Health Care and Medical Systems	.2	.2	.2	.1	.1	.8
Data Services	.8	1.4	1.0	.4	.3	3.9
Total	2.4	4.3	3.1	1.3	1.2	12.3

SUMMARY OF INVESTMENTS PLANNED

DURING THE FIVE YEAR PLAN PERIOD
($ millions)

Source: Informatics Inc., Five Year Business Plan 1974-1978, Revised July 1974

FIGURE 3-25

	1974(1)	1975	1976	1977	1978
REVENUES					
PLAN(2)	32.4	38.8	48.8	61.6	75.7
ACTUAL(3)	33.1	39.4	59.3	75.0	92.5
OPERATING PROFIT(4)					
PLAN(2)	0.2	0.1	0.1	4.1	8.1
ACTUAL(3)	0.7	(0.5)	0.4	2.6	4.7

(1) Pro-forma, as if merger with Equimatics Inc. had been January 1, 1974.
(2) Informatics Inc., **Five Year Business Plan 1974-1978** prepared early 1974, published July 1974.
(3) As reported in internal management reports.
(4) As defined for internal reporting--omits amortization of cost of acquisition of Informatics by The Equitable.

ACTUAL RESULTS VS. FIVE YEAR PLAN OF 1974
($ Million)

FIGURE 3-26

profits were reinvested in the business) and was then planned to gradually return to "normal profits" in 1977 and 1978. By 1979 "operating profit" would be the same as pretax income.

The composition of the company's business was expected to be significantly altered as well. By 1978 the single largest portion of Informatics business was expected to be software products of all types with data services (for both the insurance industry and other applications) being second. The third largest portion of the company's operations was expected to be in the area of insurance industry-oriented products and services. The fourth major area of activity was expected to be information systems analyses, development, and "network" (meaning remote inquiry into data bases) services. Commercial software services and facility management and support, the areas that Informatics started business in and used to bootstrap its way into proprietary products and services, was planned to account for only $10.2 million of the company's revenue or 13 percent.(44)

With The Equitable's patience and willingness to allow profits to be reinvested, Informatics was able to resume its growth and, with a few favorable and unfavorable twists, make the 1974 five year plan a reality. In the period between 1974 and 1978, the corporation experienced difficulty in penetrating the health-care market and in increasing and developing its computer/communications business, so it eventually retreated from these markets. Difficulties were also experienced in successfully producing profits from certain applications software products such as PRODUCTION IV and ACCOUNTING IV. Most goals were attained, however, and favorably enhanced in 1975 with the acquisition of Programming Methods, Inc. (PMI), although there was a temporary setback in profits in 1977 with the acquisition of Management Horizons Data Services (MHDS).

PMI was a major competitor of Informatics in the custom programming services market and a producer of telecommunications software. Informatics acquired PMI from General Telephone and Electronics which had made an unsuccessful bid to enter the computer hardware and services marketplace through a number of subsidiaries. Though PMI had some software products, its real strength was its commercial professional services operations with headquarters on both the East and West Coasts. PMI was a leader in this market throughout the country, providing project management services as well as the temporary services of analysts and programmers to meet the staffing needs of both commercial and governmental clients. It had a programming support contract with NASA's Ames Research Center very much like the one that Informatics had there. Its penetration of the market for programming for business data processing for commercial clients and state governments was far greater than Informatics.

The acquisition of PMI placed Informatics in a position of leadership within the commercial professional services market--a position which Informatics had previously never achieved because of its emphasis on proprietary products and services and, in the government market, on information analysis and processing. This new, major involvement in professional services, primarily for business, allowed Informatics to produce respectable profit levels which had eroded by the lack of continued success in computer/communications systems and by massive losses from all software products except MARK IV.

The second acquisition, of Management Horizons Data Services (MHDS), allowed Informatics to obtain a completely established data center in Columbus, Ohio, with a nationwide data communications network and proprietary software applications products for wholesale distribution in the pharmaceutical and hardware industries. MHDS permitted Informatics to become, for the first time, a major market factor in proprietary data services for an industry-specific, "vertical" market.

Additional growth in Informatics occurred in 1976 in the information systems and services area where the company began providing litigation management information services to clients involved in major antitrust suits and contract disputes. This was a logical part of the information "network" service business area although, if it had not been for the policy to preserve comparisons with the original five year plan, it would have been classified as a new business area, "legal information systems and services." It represented the first commercial, highly profitable flowering of Lemons' vision of a pure information service business. The demand for this service increased tremendously in the late 1970's, and Informatics found itself with a new operation which produced profits margins in excess of 20 percent. Added revenues were also gained through the expansion of professional services to Britain and the European market, and the addition of several new software products. Among these were SERIES IV and TRANS IV (both acquisitions which produced massive losses), and Answer/DB and Answer/2. The latter two represented profitable outgrowths of the report generation technology of MARK IV.

At the end of five years, Informatics found that its original five year plan prepared for The Equitable had been accomplished. As shown in Figure 3-26, actual revenues exceeded plan from 1975 on, and in 1978, the last year of the plan, reached $92.5 million compared with the $75.7 million planned in early 1974. In the first year operating profits were $0.5 million better than plan, since investment spending was slow in gaining momentum. However, the sum of operating profits for the years 1974 through 1976 was $0.6 million, very close to the $0.4 million planned. But the planned rapid return to normal profitability was badly missed, only $4.7 million in 1978 compared with the $8.1 planned in early 1974. (The 1978 annual plan only called for $5.1 million, which was almost reached.) This showed up the one basic flaw in the 1974 five year plan--its failure to appreciate two important factors. Firstly, a growth business cannot afford to cut back annual "investments" from an average of $3.3 million (in 1974-1976) to $1.25 million (as had been planned for 1977 and 1978--see Figure 3-25). Secondly, when a large number of investments are made, spread over many business areas, several of them are going to fail, and unless such projects are ruthlessly cancelled fast, the losers will lose faster than the winners can compensate for them.

But the basic objective of the plan, rapid growth in market share, was achieved. Informatics had the greatest growth of any software services company in the computer services industry for the years 1974-1978, jumping during this period from being the twelfth largest software service supplier to being the sixth largest. Additionally, it had remained the largest independent (non-computer manufacturer) supplier of software products. At its 1978 growth rate, Informatics was forecasted to become a $100 million revenue corporation during 1979, giving The Equitable the $100 million computer services subsidiary it planned for during the formation of Equimatics in 1972-1973, three to four years ahead of expectations.(45)

During 1978, the data processing industry was estimated to be growing at an annual rate of 14 percent domestically and 17 percent overseas. The market areas in which Informatics participated had an estimated annual growth rate of 18 percent. The corporation confirmed, in its strategic plan of 1978, that the industry was maturing in accordance with Bauer's early predictions. A number of larger companies were emerging, formed from combinations of smaller ones. Informatics had achieved a broadbased market position and was among the leaders in the information services industry. That plan stated:

> Many companies are achieving both size and profitability. Industry coalescing has continued through mergers, acquisitions, and other arrangements. Indeed, a qualification for ultimate viability is to reach a certain critical size and to focus on specialized areas.
>
> Due to shortages of investment capital, consolidation within the industry continues, making acquisitions and mergers especially attractive at this point. There are quite a number of promising companies and/or products which have reached a position just short of achieving economic viability but need the environment of a more mature management and financially sound organization in order to capitalize on their investments.
>
> A "strategy for success" is the development of multiservices in areas of specialization. There is continuing realization and understanding that the successful computer software and information services company provides a broad range of services to selected markets, with heavy applications orientation.
>
> In order to grow according to plan, the Corporation need not diversify beyond its current business areas and markets. We now have a broad span of capabilities, products, and services to offer; we need to choose among these for our major concentrated efforts, rather than search for new areas. What is needed most for financial performance is to terminate the several areas of operations which are substantial losers, or improve their financial performance in 1978. This is of the highest priority.(46)

In anticipation of the above summary of the "state of the company," Informatics was well along in modifying its business objectives. It had phased out of the health care and computer communications markets which were the least successful business areas of Informatics twelve markets, and it was concentrating its efforts on the increased offering of application and industry-oriented software products and proprietary data services. It recognized the need for an aggressive approach to acquisitions to enhance further growth of the corporation:

> It is recognized that the best interests of the company will probably be served by a much more aggressive acquisition strategy. In the computer services industry there are evident trends toward consolidation; it may transpire that leadership

> can be achieved only by a series of major acquisitions. To achieve the desired acquistions it may be necessary to issue common stock, an action not feasible without a public market for the stock. During 1978 we will undertake detailed studies of the desirability of such a strategy, and of the pros and cons of implementing it by issuing new equity or debt financing. The Five-Year Plan for 1979-1983 will reflect the conclusions reached by such studies.

This statement was the start of a campaign to persuade The Equitable to divest itself of Informatics to the public, so that the company could re-assume its rightful place as a major publicly owned leader in the information services industry.

In order to concentrate on its strengths, it focused planning efforts around three major lines of business (with no direct correlation to operational groups or organizations) which encompassed the company's nine remaining market areas. Each of these contained several business areas. The first line of business consisted of information processing services which included information network services, information analyses and processing, insurance data services, and general data services. The second line of business was software products which comprised the areas of MARK IV systems products, other software products and insurance consulting and software. The third line of business, professional services, consisted of facility management and support services (for the federal government which incorporated the old business area of information systems development) and commercial software services. The 1978 five year plan shows that the first two lines of business were expected to experience the greatest growth by 1982 with $60.6 million and $55.9 million in revenues, with 18 and 16 percent compounded annual growth rates over 1977 levels, respectively, for each line. Professional services was forecasted to have more moderate growth of 4 percent in revenues, to $28.2 million, by 1982. All told, Informatics saw itself growing at 15 percent, from $74.7 million to $154.2 million in revenues between 1977 and 1982 and from $2.5 million to $18.6 million in operating profit for the same period. (Note that, beginning in 1979, since all the acquisition costs had been amortized, "operating profit" became equivalent to pretax income. Consequently, the latter term came back into internal use.) To achieve these goals, acquistions were considered necessary in addition to internal growth. Since profit plowback after 1978 could only be performed on a modest basis, other forms of investment financing had to be relied upon. The business plan of 1979 dealt with this problem in greater detail.(47)

3.3.4 Long-Range Planning, 1979--1982

The five-year business plan of 1979 was based on the premise that Informatics would again go public during the year, and that by having a public market for its stock a modest acquisition program could be embarked upon with the purchase of other companies and products being performed through the issuing of Informatics stock. This was not an unreasonable premise because The Equitable decided during 1979 to divest itself of Informatics. Unfortunately, this did not completely solve the problem of financing acquisitions by issuing stock, since accounting standards prohibited the favorable (and logical) "pooling of interests" accounting for acquisitions until two years after complete divestiture. The alternate "purchase accounting" treatment was

unpalatable since it probably would cause, for any good (inevitably high priced) large acquisition, both an undesirable large "soft asset" of goodwill on the balance sheet, and unacceptably large charges against earnings for the amortization of the assets acquired. Hence, Informatics was, in effect, totally inhibited from making any very large acquisitions until 1982.

The proposed divestiture fitted in well with the company's plans to pursue equity financing to support a small acquisition program. A public market would make Informatics stock a more attractive payment for acquisition possibilities, or, alternatively, issuing new stock to the public could raise cash for the same purpose. The divestiture decision was prompted by a shift of strategy within The Equitable itself and from the fact that the insurance giant's efforts to diversify into noninsurance fields through an aggressive acquisition program of its own was only mildly successful. Since Informatics Inc. was one of the most successful acquisitions it had made, The Equitable decided to dispose of its holdings and realize a profitable return on its investment. Informatics management was concerned that The Equitable might be tempted (by several rumored approaches to them) to sell the company privately to a competitor or to some other large corporation, whose management might be less enlightened than The Equitable in its dealings with Informatics. Equitable's management was reminded of its original "gentlemen's agreement" to sell Informatics only to the public. Equitable also came to realize that a private sale, opposed by Informatics management, would drastically reduce the market price for the company. Whether any responsible faction in The Equitable, or in their financial advisor, Goldman, Sachs, ever seriously advocated such a private sale is unknown to Informatics. However, the final decision was made to sell Informatics to the public.

The divestiture took place in two phases as two public offerings of Informatics stock by The Equitable. At first The Equitable sold 600,000 shares of its holdings in October 1979 at $12.50 per share, reducing its ownership from 93 percent of Informatics common stock to 63 percent while still retaining 97 percent ownership of Informatics preferred stock. A second offering occurred in September 1980 whereby The Equitable disposed of its remaining holding of Informatics common stock, 1,267,250 shares, at a price of $20.63 per share. Prior to the final sale of its common stock, The Equitable agreed to have its preferred stock holdings converted to a new cummulative preference stock, redeemable at Informatics option, with limited voting powers. Essentially, Informatics became a fully independent, publicly owned corporation again.(48)

The business objectives of 1979 were similar to those of 1978 except for the further development of the acquisition program, revised market and financial forecasts, and a recognition of the growth and future importance of the mini- and micro-computer markets. The 1979 business plan forecasted revenues to increase from $92.5 million (the actual performance in 1978) to $245.2 million by 1983, with pretax income increasing from $3.2 million (a four percent profit rate) to $30.2 million (a 12 percent profit rate) for the same period. Figures 3-27 and 3-28 show the breakdown of revenues and profits, with corresponding percentages, for the company's nine remaining business areas. A major area of increase of these forecasted figures over those from the 1978 plan were revenues resulting from four "moderately sized acquisitions" producing $5-10 million in revenues each, for a total by 1985 of (including growth of the acquisitions) $41 million additional revenues and $3.1 million additional pretax profit. An

optimistic 18 percent annual revenue growth was planned to occur internally with no allowance for any possible discontinued operations. When the business areas were aggregated into the three lines of business, software products was expected to show a 21 percent compounded annual revenue growth rate, while information processing services and professional services were planned to have 19 and 10 percent growth rates, respectively.(49)

In the three years (ending in 1982) since the 1979 plan was prepared, Informatics divested itself of its Series IV and ACCOUNTING IV software products (which had experienced technical and financial difficulties) but acquired several new products. These included TRANS IV, TAPS, and INQUIRY IV/IMS all of which are implementation products, and Management Control Systems, which supplies accounting and practice management application products (on small IBM computers) to certified public accountants. Data services offerings were further expanded in vertical industries with the acquisition of Transportation Computing Services, whose subsidiary Commercial On-Line Systems, serves the apparel manufacturing industry.

A major new foray was mounted into a previously discontinued business area (not yet formally recognized in the 1979 five year plan, but included in software products.) This was integrated systems, where the company supplies a total system composed of its own software and hardware, purchased for resale, from a manufacturer of mini or microcomputers. During 1980 the corporation established Project 80 as a corporate development effort to enable Informatics to enter the microcomputer marketplace by offering integrated systems. This effort, directed by Werner Frank, resulted in the creation of INFORMATICOM, a microcomputer workstation using Ontel hardware for the office environment, as described in Section 11.5.2. In 1981 the company acquired Professional Software Systems, which supplies to law firms both software for law office management and word processing and the Wang hardware on which the software runs.

3.4 CORPORATE MARKETING FUNCTIONS

Until 1975 marketing of professional services and information systems and services had traditionally been handled largely by the sales, technical, and management staffs of the individual divisions and groups. The company, however, has consistently maintained a marketing support function within the corporate office.

3.4.1 "Plans and Programs"

Between 1962 and 1971, a position of vice president of "plans and programs" existed (first filled by Frank Wagner, then Robert Rector, and finally George Vosatka) for the purpose of seeking out and pursuing new market opportunities and customers for Informatics. For Wagner this took the form of making Informatics known to the government and commercial aerospace industry of the southwestern United States. Rector's main success in the area of plans and programs was helping to obtain a large programming services contract for the company from Jet Propulsion Laboratory, and developing the relationship with U.C.L.A. for joint promotional technical symposia. While the position was titled "plans and programs," its main function was to pursue new customers and support the sales of existing services via market analysis, advertising, proposal writing, and customer prospecting.(50)

	Actual		Plan								Compounded % Growth
	1978		1979		1980		1981		1982		1983	1978-1983
Facility Management and Support	11.5		10.8		7.5		8.6		9.8		11.2	
% Growth, Year to Year		(6%)		(31%)		15%		14%		14%		0%
Information Network Services	4.1		4.7		5.7		6.9		8.3		9.3	
		8%		21%		22%		20%		12%		16%
Information Analysis and Processing	8.7		9.9		12.8		15.8		19.0		22.2	
		14%		29%		23%		20%		17%		21%
Implementation Systems	16.8		20.5		23.8		28.3		33.3		38.9	
		22%		16%		19%		18%		17%		18%
Software Products	8.2		9.4		13.6		18.0		23.6		29.7	
		15%		45%		32%		31%		26%		29%
Commercial Software Services	16.8		18.4		21.4		25.1		29.2		33.8	
		10%		16%		17%		17%		16%		16%
Insurance Consulting and Software	7.0		7.9		8.6		9.6		10.7		11.9	
		13%		9%		11%		12%		11%		12%
Insurance Data Services	1.6		1.8		2.7		3.7		4.9		6.3	
		13%		46%		37%		32%		29%		31%
Data Services	19.0		21.7		25.8		30.3		35.8		42.3	
		14%		19%		18%		18%		18%		18%
Sub-Total	94.0		105.1		121.9		146.3		174.6		205.6	
		12%		16%		20%		19%		18%		18%
Eliminations	(1.5)		(.9)		(1.2)		(1.3)		(1.5)		(1.7)	
Total, Current Operations	92.5		104.2		120.7		145.0		173.1		203.9	
		13%		16%		20%		19%		18%		18%
Acquisition Revenues	—		—		10.0		16.5		28.7		41.3	
Total Revenues	92.5		104.2		130.7		161.5		201.8		245.2	
		13%		25%		24%		25%		22%		22%

REVENUES AND PERCENT OF GROWTH
($ Millions)

Source: Informatics Inc. Five Year Business Plan 1979-1983

FIGURE 3-27

	Actual	Plan				
	1978	1979	1980	1981	1982	1983
Facility Management and Support	.7	.6	.4	.5	.5	.6
% Operating Profit to Revenues	6%	6%	6%	6%	6%	6%
Information Network Services	1.0	.6	.8	1.0	1.2	1.4
	22%	12%	14%	14%	14%	15%
Information Analysis and Processing	.4	.7	.9	1.2	1.6	1.9
	4%	7%	7%	8%	8%	8%
Implementation Systems	1.0	2.6	4.1	5.1	6.3	7.8
	6%	13%	17%	18%	19%	20%
Software Products	(0.5)	.3	.9	1.7	2.9	4.0
	(7%)	3%	7%	9%	12%	13%
Commercial Software Services	1.5	1.7	1.9	2.3	2.6	3.0
	9%	9%	9%	9%	9%	9%
Insurance Consulting and Software	.9	1.6	1.7	1.9	2.2	2.4
	13%	20%	20%	20%	20%	20%
Insurance Data Services	(.1)	(.2)	.1	.2	.5	1.0
	(6%)	(11%)	2%	6%	10%	15%
Data Services	.3	.6	2.4	3.8	5.4	7.5
	2%	3%	9%	13%	15%	18%
Sub-Total	5.1	8.4	13.2	17.7	23.2	29.6
	5%	8%	11%	12%	13%	14%
Unallocated Income (Expense)	(1.9)	(1.6)	(1.3)	(1.6)	(2.0)	(2.5)
Total, Now Current Operations	3.2	6.8	11.9	16.1	21.2	27.1
	4%	7%	10%	11%	12%	13%
Acquisition Profits	—	—	.5	1.1	2.0	3.1
			5%	6%	7%	8%
Total	3.2	6.8	12.4	17.2	23.2	30.2
	4%	7%	10%	11%	12%	12%

PRETAX INCOME AND PERCENT OF REVENUE
($ Millions)

Source: Informatics Inc. Five Year Business Plan 1979-1983

FIGURE 3-28

During early years, the company placed great emphasis on the technical staff seeking out potential contracts, on publicity in the trade press, and on high quality proposal writing to obtain business. This is best described by the following comments made at a management meeting in 1966:

> [Informatics method of marketing is] to disseminate information on a very wide basis in the data industry and computer fields about the adaptability of the services of Informatics. Personal contacts to determine what is going on are indispensable. Following these shotgun approaches, we should spend our time and money incisively in proposal work and in specific selling only when the probability appears high for success.
>
> Inferior proposals should be rejected at the management level; Informatics should jealously guard its reputation for good proposals. . .continuous attention should be directed toward the physical preparation of proposals; there should be no evidence of "cut and paste;" boilerplate should be carefully reviewed. . . . Continued consideration should be given to current plans for training courses in proposal writing, proposal scoring by members of the Senior Staff, and effective means for management review of proposals.(51)

Proposal writing was important enough that much of the corporate marketing activity was devoted to it, which supported the idea of the establishment of the Technical Communications department.

The support functions of corporate marketing eventually became so specialized that two activities, computer education symposia and technical communications, became revenue producers in their own right when the services they provided were sold to customers and industry participants outside of Informatics. The corporate marketing staff of the first ten years included at various times Jackson Granholm as vice president of technical communications, Robert Steel as director of advertising, Fred Gruenberger as the Informatics manager in charge of coordinating the joint symposia with U.C.L.A. and editing their published proceedings (as discussed in Section 2.4.1) , and Eric Burgess, Robert Stone, and Robert Davis as senior technical writers.(52)

3.4.2 Technical Communications

The Technical Communications department was originally established in 1963 under the direction of vice president Jackson Granholm (a former engineer of the Boeing Company with vast experience in technical writing and a former president of an audio-visuals production company) for the purpose of assisting the company's various divisions in proposal preparation, system documentation and customer education and manuals. It produced a proposal handbook and had responsibility for everything but the technical content in the production of West Coast proposals.

As the function developed, it was soon decided to offer the department's expertise to systems manufacturers as a commercial service. The first effort to extend technical communication services outside of Informatics began with a

proposal to Dataproducts for the production of a film strip promoting that corporation's capabilities. A similar film strip was prepared for Informatics as well on "How Informatics Inc. Manages a Software Contract." The storyline of this production featured the design and implementation of a on-line Display and File Management System for "Pacific American Insurance Group," a fictional business, for the control of and query about policy information. The film drew the analogy of program design as a creative process, using an analogy of an orchestra, a musical score, and a composer.(53)

In 1964 Informatics gained the first of an important series of technical communications contracts from IBM for preparation of the Concepts and Facilities Manual for the newly announced System/360 computer. Other System/360 documentation contracts soon followed. The most interesting of these was for a management guide to aid potential System/360 customers to determine what kind of operating system they required. To prepare the manual, members from Informatics management team, including Wagner and Hill, sequestered themselves in a hotel room and play-acted the assumed customer roles of data processing managers, company executives, and representatives of user departments making the key decision on what model System/360 to buy and what systems software to use. The dramatization was tape recorded, transcribed, and edited into the required guide. Other System/360 documentation prepared for IBM included operator manuals for the System/360 Datatext and TSS 67 Time Sharing systems. Subsequently, a motion picture (starring Frank Wagner) was produced for IBM to promote the use of QUICKTRAN, a remote FORTRAN service offered by their Service Bureau Corporation.(54)

Other major technical communications projects included efforts for Control Data Corporation and NASA. Two 35mm color slide presentations were produced for Control Data on the capabilities of its Special Systems Division and its Data Processing and Communications System. These presentations were produced for $15,000 under the direction of Robert Steel and Fred Gruenberger. The effort for NASA was more prestigious as it was a joint project with Pacific Productions for the production of two short motion pictures on the transfer of NASA's research and developed technologies to industry. A fixed-price contract for $78,350, it consisted of a 15 minute film for presentation to Congress by NASA and an extended 20 minute version for general audiences. A sample of the technical manuals and films produced by Informatics for customers are listed in Figure 3-29.(55)

3.4.3 Advertising and Public Relations

Until 1970 the advertising and public relations activities, under the direction of Walter Bauer, consisted of advertisements and brochures used during the company's first years as announcements of its existence and capabilities. Advertisements such as **"the World's Smallest Giant"** (see illustration in Chapter 1) and **"A Resume of a 4-Year Old, 47,250 Pound Software Expert"** were produced by the advertising agency of Faust & Day.(56) Subsequently, the Carson Roberts Agency produced several successful "long text" ads featuring comments by company executives. Considerable effort was expended during these years in producing press releases and articles for the trade press. By 1970 however, the company had grown large enough, due to the success of MARK IV, to justify enlarging its formal public relations. Under Robert Steel's direction the corporate advertising function expanded to support a small internal staff of three people

Pacific Missile Range
- FORTRAN Reference Manual for Real-Time Data Handling System (RTDHS)
- Executive Monitor System User's Manual for RTDHS
- Operators Guide and Procedures Manual for RTDHS

Defense Communications Agency
- System Description, Program Specification, User's Manual and Operator's Manual for NMCSSC's Display System

RADC
- User's Manual for Display Oriented Computer Usage System

Univac
- Programming Reference Manual for the CP 642B
- Programmer's Guide to Operating System for the CP 642B
- System Operating Instructions for the CP 642B

IBM
- Linkage Editor Manual for System/360
- Concepts & Facilities Manual for System/360
- Sequential Access Method Program Logic Manual for System/360
- System Programmer Guide for System/360
- System Generation for System/360
- Introduction to System/360
- Job Control Lanugage for System/360
- Control Program Services for System/360
- Management Handbook for Basic Operating System/360
- TSS/360 Concepts & Facilities
- TSS/360 Publication Procedures
- TSS/360 Publications Standards & Practices

Univac GSA/ARS
- ALS Specification Manual
- Operator's Manual
- Detailed Program Manual
- Table Data Manual

GSA Advanced Research System
- Systems and Programming Documentation of the Operational Subsystem

Control Data Corporation
- User's Reference Manual for the Data Processing and Communication System (DPCS)
- Request Language (RL) Manual for the DPCS
- DPCS Maintenance Manual

General Electric Company
- System Documentation for the GECOS II/Operating System

General Dynamics Electronics
- "Mark of Man" - 16 mm sound color film

AFIPS
- 30 minute sound color motion picture training film for elementary and secondary school teachers(56)

SOME PRODUCTS OF TECHNICAL COMMUNICATIONS

FIGURE 3-29

and the contracting with three outside public relations firms and one art consultant. These were Ray Engle & Associates; Robert Rusting & Associates; Gumpertz, Bentley & Dolan; and Stackig & Sanderson, Inc.

With a budget of $102,000 ($50,000 of which was devoted to the promotion of MARK IV), the additional resources permitted the placing of ads in Fortune and Newsweek magazines, the use of four-color advertising, the production of three motion pictures and two slide presentations on the company, and the performance of a readership study. These extra efforts allowed Informatics management to make over one hundred presentations in 1970 to the financial community alone, as well as to promote the company to the general public and its employees. The circulation of the company's publication Informatics Ink (for employees, customers and financial analysts) was enlarged from 5,000 to 8,000. The increased activity paid off as the company won national awards for its advertisements for the first time and attracted widespread attention when it became the subject of two television financial news programs, one of which was an interview with Walter Bauer. An intensive public relations effort has continued since 1970 with the corporate office responsible for shareholder, employee and general public relations while each division or business group handles its own product advertising in conformance with corporate standards.(57)

In 1972 Bauer assigned certain corporate Marketing responsibilities to Lynn Jones. This job encompassed seeking business opportunities for Informatics but on a more sophisticated basis than salesmanship. Jones's duties in this function were to perform competitive analyses, search out and review potential acquisition possibilites, develop marketing standards, and create and build a base of market information. But most of Jones' efforts focused on acquisitions which will be discussed in Chapter 4. From 1974 to 1982 an effort to coordinate the marketing activities of the various operating units was the responsibility of Executive Vice President Werner Frank.(58)

3.5 FACILITIES

Informatics has leased numerous facilities and field offices through the years to accommodate its growth, venture into new markets, and serve the specific needs of particular customers. Figure 3-30 lists the facilities of Informatics occupied by the headquarters of its major organizational units, their address and geographic location, the dates of their existence, and their square footage. In addition to these, Informatics has leased over 50 minor facilities for sales offices or project offices. These have been located in over 20 states and 20 foreign countries, have ranged in size from 200 square feet to 12,000 square feet, and frequently have been shared by two or more organizations.

3.6 OPERATING RESULTS AND FINANCIAL HISTORY

3.6.1 Summary of Financial Results

Figure 3-31 provides a chronological listing of Informatics actual financial performance. Note that the results listed are the most recent available restatement for such effects as discontinued operations and acquisitions done on a pooling of interests basis. Hence they frequently will not agree with the financial reports as published for the years listed. Note also that they do not

agree with the data shown in Figure 3-26, since the latter shows reported "Operating Profit" as explained in Section 3.3.3.

Finally, mention should be made of 1970, when, as described in Section 12.3, a huge write-off (for the discontinuance of data services operations) resulted in an extraordinary item loss of about $4.0 million. (It is not shown on Figure 3-31, which shows restated results.) Consequently, on May 21, 1970, as a result of the net loss for the year ended March 28, 1970, the company effected a quasi-reorganization as of March 18, 1970 whereby the deficit of $3,319,000 in retained earnings at March 28, 1970 was eliminated by its transfer to capital in excess of par value.

3.6.2 Relations with the Financial Community

Informatics has always maintained active relations with the financial community during the years in which it was a publicly held company. The first shareholders meeting was held at the Sportsmen's Lodge Hotel in North Hollywood, California, on June 13, 1967. Since that date the company has continually kept the financial community informed of its activities through reports to shareholders, brochures, presentations to security analysts, and by interviews of company management on television and radio programs. The most significant of these efforts were discussed earlier in this chapter under the section on public relations. Informatics was particularly well known on Wall Street during the late 1960's when Informatics Computing Technology Company installed a back-office accounting system for Dean Witter and Company, performed systems analysis and design for a computerized money transfer system for the New York Federal Reserve Bank and installed various data processing systems at number of brokerage firms and the American Stock Exchange. Corporate courting of financial analysts was at a high point during 1969 and early 1970 when over 100 management presentations were made to them and the stock prices of software companies were high. During the years of The Equitable's ownership, overt efforts to brief the financial community were discontinued until 1979 when Informatics became public again; however, they were kept informed of the company's progress by a continual stream of press releases and by annual reports which stated revenues but not profits.(59)

3.6.3 Financing

Prior to December 1965 Informatics was a wholly owned subsidiary of Dataproducts Corporation which purchased the company's initial issuance of 200 shares of $1.00 par value common stock for an equity investment of $20,000. In 1965 a 2,280 for 1 stock split occurred whereby Dataproducts holdings of 200 shares were converted to 456,000 shares of $.10 par value common stock, and 36,750 shares (out of 40,000 shares authorized) were sold to Informatics management (Bauer, Frank, Hill, Jones, and Wagner) for $2.25 per share or a total of $82,687. This transaction gave Informatics management 7.5 percent ownership.

Other financing during the first four years simply consisted of short-term borrowings from Dataproducts. The balance was $486,608 on March 26, 1966, just before the first sale of stock to the public. However, Dataproducts' share of the "hard" stockholder equity in the company was $360,128. After collecting the $82,687 for management's shares, they had gotten $442,815 from Informatics. So

OPERATING UNIT(1)	LOCATION	DATES OF OCCUPANCY	SQUARE FOOTAGE
Corporate Headquarters	8535 Warner Drive Culver City, CA	May 1962 - May 1964	1,500
	15300 Ventura Boulevard Sherman Oaks, CA 91403	May 1964 - July 1965	8,000
	5430 Van Nuys Boulevard Sherman Oaks, CA 91401	August 1965 - July 1970	25,000
	21050 Vanowen Street Canoga Park, CA 91304	July 1970 - November 1974	62,300
	21031 Ventura Boulevard Woodland Hills, CA 91364	November 1974 - December 1982	14,500
Western Operations(3)	Same as Corporate Headquarters	May 1964 - November 1974	
	3971 East Bayshore Drive Palo Alto, CA 94303	December 1968 - September 1975	2,400
Eastern Operations	4429 Wisconsin Avenue Washington, DC 20016	April 1964 - May 1965	3,000
	4720 Montgomery Lane Bethesda, MD 20014	June 1965 - August 1971	18,170
Information Systems and Services	6000 Executive Boulevard Rockville, MD 20852	July 1971 - February 1978	35,160
	6811 Kenilworth Avenue Riverdale, MD 20737	June 1973 - December 1982	32,800
	6011 Executive Boulevard Rockville, MD 20852	February 1978 - December 1982	52,800
Information Clearinghouse Division	5711 Sarvis Avenue Riverdale, MD 20840	August 1974 - December 1982	10,000
NASA Facility Operations Division	College Park, MD	1968 - 1975	Owned by NASA
	Baltimore/Washington International Airport, MD	1975 - 1979	Owned by NASA
Professional Software Services	200 East Mitchell Drive Phoenix, Arizona 85012	April 1981 - December 1982	7,800
Northeast Operations	467 Sylvan Avenue Englewood Cliffs, NJ 07632	April 1966 - June 1969	7,600
Computer Technology Company	65 Route 4 River Edge, NJ 07661	June 1969 - November 1981	22,400

HEADQUARTERS FACILITIES

Source: Corporate Lease Files

FIGURE 3-30 (page 1)

OPERATING UNIT(1)	LOCATION	DATES OF OCCUPANCY	SQUARE FOOTAGE
Software Products Group(2)	Same as Corporate Headquarters	May 1964 - November 1974	
	21050 Vanowen Avenue Canoga Park, CA 91304	November 1974 - December 1982	62,300
International Marketing(2)	Ch-1217 Meyrin 2 Geneve, Switzerland	September 1968 - December 1982	1,000
Management Control Systems	2400 Lake Park Drive Smyrna, GA 30080	October 1981 - December 1982	35,000
TAPS Division	708 Third Avenue New York, NY 10017	February 1981 - December 1982	17,000
Commercial Information Systems (Equimatics)	1025 Elm Street Dallas, TX 75202	November 1973 - October 1978	8,000
	10300 North Central Expressway Dallas, TX 75231	October 1978 - June 1982	22,400
	9441 LBJ Freeway Dallas, TX 75243	June 1982 - December 1982	60,800
Data Services Group(2)	6 Kingsbridge Road Fairfield, NJ 07006	Late 1971 - December 1982	47,100
	1651 Northwest Professional Plaza Columbus, OH 43220	February 1977 - December 1982	26,000
Commercial On-Line Systems	360 West 31st Street New York, NY 10001	February 1980 - December 1982	
Professional Services Operations West(2)	1121 San Antonio Road Palo Alto, CA 94303	September 1975 - December 1982	9,700
Professional Services Operations East(3)	1301 Avenue of the Americas New York, NY	September 1975 - January 1978	6,000
	555 Madison Avenue New York, NY 10022	January 1978 - December 1982	7,800
	64/78 Africa House Kingsway, London WC2B 6AL	May 1978 - December 1982	1,400

(1) Current Name. Occupied early facilities under predecessor names which are described in Section 3.1.
(2) Has leased numerous branch offices.
(3) Has leased many long-term project offices.

HEADQUARTERS FACILITIES

Source: Corporate Lease Files

FIGURE 3-30 (page 2)

FISCAL YEAR[1]	REVENUE[2] ($000)	PTI[2] ($000)	NET INCOME[2] ($000)	EARNINGS PER SHARE ($)[3]
1963	150	(64)	(64)	($0.09)
1964	813	67	38	0.05
1965	2,185	169	88	0.13
1966	4,496	329	171	0.25
1967	6,428	535	279	0.34
1968	9,049	417	77	0.04
1969	11,463	1,174	570	0.30
1970[4]	14,703	461	235	0.11
1971	16,497	911	427	0.19
1972	17,525	1,034	544	0.24
1973	18,780	1,218	650	0.29
1974[5]	29,527	(1,695)[6]	(1,300)	(0.45)
1975[5]	38,982	(4,318)[6]	(4,365)	(1.52)
1976[5]	58,743	(1,793)[6]	(1,865)	(0.65)
1977[5]	74,768	1,340 [6]	620	0.11
1978[5]	92,507	3,233 [6]	1,497	0.39
1979[5]	112,388	5,128	3,077	0.90
1980	125,893	7,658	4,059	1.18
1981	150,327	9,310	5,120	1.47
1982	170,167	10,685	5,445	1.49

(1) Twelve months ending March 31 for 1963 through 1973 and ending December 31 for 1974 through 1982.
(2) Continuing operations reported only.
(3) Earnings per share restated for all years prior to 1981 for stock dividend of 1981.
(4) Excluding data services revenues of $4.7 million and in PTI an extraordinary item of ($4.0 million).
(5) Privately owned by The Equitable from March 1, 1974 to October 4, 1979.
(6) Includes amortization of The Equitable's acquisition costs.

CONSOLIDATED STATEMENT OF RESULTS
(As Most Recently Restated)

FIGURE 3-31

Dataproducts' true investment (money at risk) was about $44,000 on March 26, 1966. Records are not available to determine their maximum risk between 1962 and 1966, but it was probably about $125,000 in early 1963.

A public market was created for the company's stock in May 1966 when 70,000 new shares were sold to the public at $7.50 per share for total proceeds to the company of $483,000 after underwriting commissions and discounts. Seven thousand of these shares were sold by the underwriters to Informatics employees at the public offering price. Additionally, Mitchum, Jones & Templeton, the underwriters, received a warrant for $1,415 to purchase 5,660 shares of stock exercisable over a four year period at an increasing price per share from $8.25 to $9.30. This warrant was never exercised. As a result of this offering and its associated transactions, Informatics management had 7 percent ownership, Dataproducts ownership declined to 80.6 percent while the public obtained a 12.4 percent participation. Proceeds from the offering were used by Informatics to repay a portion of the short-term borrowings from Dataproducts.(60)

By 1967 Informatics had grown from 3 to 325 employees and from $149,541 in revenues (and a $63,672 loss) in its first year to $6.43 million in revenues and $279,020 after-tax profit from continuing operations. Desiring to benefit from its investment, Dataproducts decided to sell 80,000 shares of Informatics stock in May 1967 for a market price of $23.25 per share. Underwriters were Mitchum, Jones and Templeton. The proceeds to Dataproducts were $1,748,000 after deductions for underwriting commissions and discounts--over 87 times its original $20,000 equity investment in Informatics. As a result of this offering, Dataproducts ownership was reduced to 66.4 percent of the company, less than the 80 percent required for income tax consolidation. Management's ownership remained at 7.5 percent (42,218 shares) while public holdings increased to 26.1 percent. Additionally, under the company's qualified stock option plan, options granted to key employees were outstanding for the purchase of 25,000 shares at prices between $2.60 to $9.50 per share.(61)

During 1968 the data processing market was booming with the stock market and investors expressing keen interest in the stocks of software products. Bid prices for Informatics stock during the first two quarters of 1968 ranged from a low of $32 to a high of $72 per share. After Dataproducts successful offering of Informatics stock, the company decided to resort to an offering itself in order to repay $550,000 in short-term borrowings from Dataproducts, finance the purchase of land (for the planned construction of Informatics Eastern Operations headquarters--which never happened), and to support costs for an expansion of MARK IV marketing estimated at approximately $500,000. During June 1968, 30,000 shares of stock were offered to the public at a price of $65 per share for total proceeds to the company of $1,830,000 after underwriting commissions. The effect of this offering was to reduce Dataproducts ownership to 62.9 percent while Informatics management retained 7.2 percent (40,962 shares out of a total of 597,082 outstanding) while public ownership increased to 29.1 percent. Of particular interest of this offering was the fact that underwriters included both Mitchum, Jones & Templeton, Inc. and Dean Witter & Company. The prestigious Wall Street firm of Dean Witter became interested in Informatics and was induced to serve as its co-underwriter for such a small offering. This came about after the company designed and installed a comprehensive back-office accounting system for the New York brokerage house and John Witter, the firm's head, became impressed with Walter Bauer's leadership and Informatics rapid growth.(62)

A few months later in February 1969, after the stock was split 2 for 1 on January 2, 1969, Dataproducts divested itself to the public of its remaining holdings in Informatics (752,000 shares) and Informatics sold 73,000 new shares at $25.50 per share. The proceeds to Dataproducts were approximately $18.1 million. The underwriters were Dean Witter & Co.; A.G. Becker & Co.; and Mitchum, Jones & Templeton Inc. This action made the company entirely publicly owned except for a 7-8 percent interest held by the company's management. During the "independent" years until 1974, there were no further offerings of the company's stock. This was due primarily to the fact that the recession of 1970-1971 caused a decline in stock prices, and investor interest in software companies declined markedly.(63)

As discussed in detail in Section 4.5, in 1974 Informatics "went private," becoming a wholly owned (except for management shares) subsidiary of The Equitable Life Assurance Society of the United States through merger with Equimatics, Inc., a joint venture company previously established by The Equitable and Informatics in 1971. The merger was accomplished through purchase by Equimatics of all outstanding shares of Informatics stock for a total price of $12,468,000 (or $7 per share) in February 1974. Informatics was then merged into Equimatics during April 1974, and the enlarged or new company changed its name to Informatics. "Old Informatics" contributed 50,000 shares of Equimatics Class B stock to the capital of the new company upon completion of the merger. Equimatics financed the merger by selling 400,000 shares of $1.20 Cummulative Convertible Preferred stock to The Equitable at $30 per share for a total of $12 million. Additionally, the new company enacted a set of stock conversions whereby one share of its Class A stock ($.50 par value) was converted into one share of Class A stock ($.25 par value) and one-half share $2.00 Cummulative Preferred stock, and one share of Class B stock ($1.00 par value) into one share of $2.00 Cummulative Preferred stock and one share of Class B stock ($.50 par value). The result of these several transactions was that The Equitable acquired 93 percent ownership of the company's outstanding common stock and 97 percent of its preferred stock. The remaining interests were held by Informatics management.

In October 1979 The Equitable sold to the public 600,000 shares of the company's common stock for $12.50 per share, giving it proceeds of $6,936,000 after underwriting discounts and other expenses. Eighteen thousand of these shares were reserved for sale to Informatics employees. The result of this offering was to make Informatics a publicly owned company again, reducing The Equitable's ownership to 63 percent of Informatics common stock. The Equitable retained ownership of 97 percent of Informatics preferred stock, and therefore maintained 83 percent of the voting power in respect to the selection of company officers and directors (as preferred stock possessed one vote per share pertaining to the election of officers and .175 vote per share with respect to other company matters submitted to shareholders). Of 2,009,483 shares of common stock outstanding, 95,200 shares, or 4.7 percent, were owned by management members.(64)

In September 1980 The Equitable sold to the public its remaining common stock holdings in Informatics, 1,267,250 shares, for $20.63 per share. This gave the Equitable $24,743,056 after deducting underwriting discounts and other expenses.(65) Coupled with the results of the offering of 1979, the Equitable's

total investment in Equimatics and Informatics of $18,800,908 had grown to $31,679,056 in cash. The Equitable still retained its holdings of Informatics preferred stock (approximately 99 percent in 1980) with a redemption value of approximately $3,394,000. By 1980 The Equitable had earned approximately $815,500 in preferred dividends. Thus The Equitable's total return on its investment was approximately $35,889,000. This represented a profit before taxes of about $17,088,000 or 91 percent of its investment. (Note that, as discussed in Section 3.3.3, The Equitable got back a substantial fraction of its costs for acquiring Informatics (in an amount unknown to Informatics) in the form of income tax deductions.) The average length of time that this money was at risk was about seven years. So, disregarding the income tax deductions, the average rate of return was about 9.7 percent annually.

In connection with this offering, Equitable further pledged to vote its preferred shares in respect to company matters in the same proportions as shares voted by public shareholders--thereby eliminating its control of Informatics. At the time of the offering, management and directors as a group owned 5.36 percent of the company's common stock or 110,780 shares. With this change Informatics fully became an independent corporation and altered the membership of its board of directors as explained in Section 3.2.1.

During the years of Equitable ownership, dividends on The Equitable's $.10 cumulative Preferred stock, in accordance with their terms, were not paid because the company had an earnings deficit of $593,000 as of June 1980. There were cumulative earned dividends of $822,000 through December 31, 1980 which were declared payable during 1981 after retained earnings became positive. Dividends have been paid annually since then.

During the company's existence, there have not been any private placements of stock nor the issuance of bonds nor convertible debentures. Occasionally, in connection with acquisitions, the company has issued term notes. No cash dividends have ever been paid to common share shareholders; all earnings have been reinvested in the company. But at the end of 1981 a 50 percent stock dividend of $1.1 million was issued to common stockholders.

From 1968 to 1974 financing for the company was obtained from internal growth of the corporation and by short- and long-term bank borrowings from Bank of America. In 1982 the company changed bankers from Bank of America to Chase National Bank and Security First National Bank, because they offered terms for borrowing which were much more advantageous to the company than Bank of America was prepared to offer. With the exception of long-term bank borrowings which peaked at $2,713,000 and a short-term line of credit of $3 million, through 1982 no other financing has been sought by the company.(66)

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