

# memo

DATE: July 22, 1976

TO: Lynn Sanden

COPIES: Al Eisenstat

FROM: Lucille Wallace

SUBJECT: TYMSHARE

*Lucy* *no to comments*

Attached is the report you requested on Tymshare.

I have extrapolated a good portion of this information from a number of different sources, including annual reports, our 1970 Prospectus, the WEMA report, old organization charts and newsletters, shareholder reports, the FCC TYMNET filing, news releases, speeches and interviews.

In addition, I was fortunate to have the ability to draw upon the memories of some of the most knowledgeable people in our Company, such as Ken BeDell, Pat D'Agati, Kathy Dionne, Ed Field, Don Flippo, Ann Hardy, Sue Osborn, Warren Prince, Bob Schwartz and Bob Wallace. Without their help, I could not have provided the attached.

With the assistance of Bob Fermoye's group, and perhaps a few descriptive pictures of our computer center, terminals, and some of our locations, as well as pictures of Tom and the VP's, I believe this report could introduce the new employee to Tymshare, familiarize them with our top management, and give them an idea of where we came from, what we do and how we do it.

/w

Attachment



TIME-SHARING - WHAT IS IT?

*Should broaden to include other computer services or add another paragraph covering*

Computer time-sharing is a service which enables a number of different users from their own business locations to simultaneously use a computer system to solve computational and information retrieval problems without a major commitment to hardware, systems software development, or facility installation. Using the service requires data processing equipment (computer hardware) and an appropriate system of coded instructions (computer software). A customer either leases or purchases a terminal device, such as a portable desktop typewriter-like unit, which is usually connected by means of an acoustic coupler to the customer's standard desk telephone. These devices enable the customer to communicate directly with the central computer which then provides the requested computational service and almost instantly sends the results back to the terminal for the customer's use. This on-line interaction continues until the customer's work is completed. To accomplish his purposes, the customer either uses computer software programs previously stored, new programs which he has designed and entered into the computer from his remote terminal, or a variety of programs made available by Tymshare. At the same time, other customers will be sharing the computer, solving similar or different kinds of problems and using the same or different computer software programs.

HISTORY OF TYMSHARE

Tymshare was the first independent commercial venture into the time-sharing industry. The Company had its beginning in mid-1965 when Tom O'Rourke and Dave Schmidt, who knew each other from their employment at General Electric Company, got together to investigate whether or not time-sharing could be a commercially viable business. Tom studied the financial end and Dave worked on the technical aspects. They acquired some office space on Distel Drive in Los Altos, California in July 1965 and by year end began hiring employees. Scientific Data Systems in El Segundo, California had just built a new time-sharing computer known as the SDS 940 Series I (which later became known as XDS 940 when Xerox acquired SDS), and was looking for companies to purchase these machines and write programs for them. Tymshare and Comshare, a time-sharing company in Ann Arbor, Michigan, worked with SDS to develop the initial software for the computer.

In May 1966, Tymshare received and installed its first computer and on November 1, 1966 began billing for services furnished to its customers. Although Dave Schmidt left Tymshare late in 1969 to form another company, many of the first employees hired into Tymshare are still with the Company today.

In 1967, even though the Company experienced machine problems, slow delivery from SDS, and major software changes, three additional SDS systems were added; computer and marketing operations space was leased at Englewood Cliffs, New Jersey; a new software language

developed by Tymshare, EDITOR, was released internally for testing; software manuals were, for the first time, professionally set up on a new IBM composer typewriter; and the first New Employees Class was held with three employees attending.

In 1968, gross revenues reached \$2.5 million, Tymshare expanded services nationally with General Foods-Maxwell House becoming the first customer in the East, and the Company started using its computers to process its own accounting data.

During the first three years of operation, Tymshare relied heavily on engineering and scientific computation to form the major part of the business; however, in 1969, Tymshare began to develop applications packages and programming systems designed to expand our services to a much broader group of customers, those in business, commercial and financial activities.

Dial Data, Inc., a time-sharing company in Boston, was acquired in 1970. This acquisition got us ~~three~~<sup>five</sup> more XDS 940 computers, some excellent new customers, and additional employees to our technical research and development area. The basic production of Tymshare services and products was, and still is, concentrated in Cupertino, California where the site of the Company's National Computer Center and home base for software, hardware and communications is located.

In 1970, commercial operation began for CEGOS-Tymshare in Paris, France, a joint venture among Tymshare, Inc., CEGOS-Informatique (a leading French management consultant firm), and Credit-Lyonnais (one of France's largest banks).

In September of 1970, Tymshare sold stock to the public for the first time, offering the stock at \$6.00 per share.

At that point in time, TYMNET, Tymshare's telecommunications network interconnected nineteen metropolitan centers in North America through some 25,000 miles of direct or leased telephone lines. Through TYMNET, the Company is able to service markets geographically dispersed from our central computer locations as reliably as if the computers were located in each of these market areas. In addition, TYMNET's Network Supervisor (a computer program) provides economical use of the lines, the ability to monitor the accuracy of data and to reroute data through alternate circuits in the event of line outage.

Tymshare purchased the time-sharing operations of Graphic Controls in May 1971. This acquisition brought to Tymshare additional marketing and technical people and four new metropolitan centers to add to our national marketing coverage. We also broadened our service offering by the addition of larger and faster computers, the Digital Equipment Corporation PDP-10.

In February of 1972, we expanded TYMNET from a private Tymshare network to a commercial network, with the National Library of Medicine in Bethesda, Maryland becoming the first customer.

By the end of 1971, Tymshare had grown in size to 297 employees with marketing offices in 23 major cities across the country and sales and customer support facilities providing 1500 customer organizations with complete computation service, customer training and counseling and a wide range of terminal equipment.

The development of several software packages, such as IML, TYMTAB, RETRIEVE, and STATPAK came about in these early years.

Tymshare continued its rapid growth pattern into 1972 with a revenue increase of 26% and a net income increase of 156% over 1971. The Company completed the acquisition of Computer Complex, a Houston-based time-sharing company, giving us an entry into the petro-chemical industry.

In this year, we also extended our TYMNET service into Europe.

Personnel increased 40% in 1973 with 530 employees now on the roster and 42 field sales offices providing services to a customer base which by now had grown to 2000.

In 1972 we had entered into an agreement with Xerox Corporation to purchase all 23 XDS 940 computers we had on lease, which significantly reduced our computer expenses, and we expanded our DEC PDP-10 service. As a result of the XDS 940 purchase, Tymshare now had to assure the availability of spare parts and equipment refurbishment for these computers, as well as personnel who were knowledgeable in this area. Thus, in 1973, Valley Computer was acquired and began this type of operation as the Valcomp Division located in Westlake Village, California. *2/1/73*

It was in 1973 that Tymshare installed its first IBM 370/158 (of which we now have ~~three~~ <sup>four</sup> and another scheduled for Valley Forge in late 1976), allowing us to offer IBM computer compatible services for the first time. This was a major milestone for Tymshare in view of the fact that IBM controls approximately 70% of the industry in computers sold. Our customers who have IBM computers in-house were now able to ~~develop systems on our computers and upon completion, transfer them directly in-house to their computers without a conversion.~~ *assure themselves of file compatibility with in-house systems. In addition the many programs written for IBM mainframes can also be offered as a Tymshare service.*

Early in 1974, Tymshare signed a joint venture agreement with Unilever, Ltd. of London, enabling us to provide services throughout the United Kingdom and the Republic of Ireland; and in the same year, CEGOS-Tymshare expanded market coverage into Switzerland. A major new computer center was opened at Valley Forge,

*lets not do this unless we mention the other late joiners  
i.e. Prince, Heintz, ~~...~~*

Pennsylvania housing ten complete computer systems and related equipment to provide for the anticipated growth in additional computer capacity.

Laszlo Rakoczi joined Tymshare in May of 1974 as Vice President of our Technical Research and Development Division, directing the software research and development efforts.

A major accomplishment in 1974 was the merging of United Data Centers into Tymshare, which nearly doubled our employee count to around 1100. UDC, based in Greenwich, Connecticut, now expanded our services through a network of 15 data centers, to include automated systems for income tax processing through the Dynatax Division, retail fuel oil dealer management through the Computafuel Division, and cable television accounting through the Cablefacts Division. Through this merger, Tymshare added two vice presidents to its management team, Bernard Goldstein, who is now Vice President of Corporate Development, exploring all new prospective acquisitions, and Albert Eisenstat, who is now Vice President and Corporate Counsel negotiating all contracts, leases and legal matters for the Company as well as directing the administrative services of the Company.

Tymshare's employee population grew to more than 1250 as we acquired the U.S. time-sharing operations of Leasco Response, Inc. in Germantown, Maryland, and Quelex Data Systems merged with our Valcomp Division to further expand our operations in the refurbishment area. ~~Incl. 42-29 - Unintex - Simplified~~

Our TASC (Tymshare Applications & Systems Consultants) operation in New York was expanded to a nationwide effort at this period of time. This operation develops specialized applications software under contract for customers for implementation on our computing and network systems.

Final installation of the Uninterruptible Power Supply (UPS), a massive supply of batteries and generators, assuring constant power to our computers despite fluctuations in the public power, was accomplished both at Cupertino and Valley Forge Computer Centers.

MAGNUM, a huge new software program providing a data base management system for the design, development and use of centralized information systems for management was introduced late in 1975, as was SURVEY, an on-line market research service, and TYMQUOTE, a new service in investment and securities business.

CEGOS-Tymshare continued to expand with a new facility in The Hague.

Tymshare reached an Agreement in Principle with Simplified Processing Systems, Inc. in March of 1976. Simplified, headquartered in Melville, New York, furnishes "Telefuel" on-line service which

will be compatible with Tymshare's "Computafuel" service for fuel oil distributors.

In May of 1976, we filed an application with the Federal Communications Commission to form Tymnet, Inc. as a new communications common carrier.

TYMNET now has 60,000 miles of leased telephone lines reaching all parts of the United States and approximately 200 Tymsats (a minicomputer developed by Tymshare) located in 61 metropolitan areas with the capability of expanding wherever there is regular telephone service in the country or overseas. TYMNET presently services Paris, Brussels, Lausanne, and London through our affiliates CEGOS-Tymshare and Tymshare UK. TYMNET now has over 30 joint users with more than 50 non-Tymshare computers connected to the network.

Also in May of 1976, Tymshare reached an Agreement in Principle to acquire Unitax, Inc. in Anaheim, California. Unitax provides low-cost computerized tax processing services for professional tax preparers on behalf of individuals, partnerships, and corporations throughout locations in California, Arizona, Indiana, Oregon, and Michigan, which expands our services for this industry to the western part of the United States.

With the joining in June of 1976 of Medical Data Systems in Mahwah, New Jersey, who specialize in financial and administrative data processing services to professionals in medicine, we can now address the health care industry, as well as the travel industry as a result of our recent acquisition of Western Twenty Nine, Inc. out of San Francisco, California who provide computerized travel tickets, invoicing and itineraries for customers.

In expanding our overseas operations, Tymshare signed a joint venture agreement in June 1976 with Taylorix, a West German electronics data processing corporation headquartered in Stuttgart, to provide remote computer services in West Germany. The name of this new company is Taylorix-Tymshare GmbH.

As of July 1976, Tymshare has

- . nearly 1500 employees
- . 65 marketing and customer service areas
- . 15 data centers
- . 4 major U.S. time-sharing computer centers and 1 in Paris
- . an approaching gross revenue of \$75,000,000

Our services have been expanded over the past ten years to include:

- . telephone industry
- . petroleum industry
- . financial industry
- . manufacturing
- . fuel oil dealers
- . cable TV firms
- . health care industry
- . travel industry

In the support services area, we lease or sell terminals to service customers, we perform contract maintenance, and through our Valcomp Division, we act as an equipment broker. These functions are a necessary part of supporting our mainline services.

ORGANIZATIONAL STRUCTURE OF TYMSHARE

As mentioned previously in the history of Tymshare, the Company began operations with a very small version of the organizational structure as we know it today. At that time, there was a Technical Division handling the design, development and enhancement of software as well as training and documentation, an accounting section which handled all facets of accounting, payables, receivables and payroll, and three computer operations divisions, one in the East, one in Southern California and one located in Northern California. These three divisions, although reporting to Corporate Headquarters, provided technical services, marketing and computer operations within their divisions for their specific areas.

Today, we have over 1500 employees in seven different divisions.

The Administrative Services Division is headed up by Albert Eisenstat, Vice President & Corporate Counsel and encompasses the administration of all of the Company's contracts and leases, the Personnel Department, office services (shipping and receiving), and the Mail Room/Copy Center. Mr. Eisenstat, who is both a CPA and a lawyer, also deals directly with our outside counsel at Wilson, Mosher and Sonsini in all legal matters pertaining to the Company.

The Finance Division is headed by Edward J. Field, Vice President and Treasurer. Mr. Field came to Tymshare during its first months of operation in 1966 from Arthur Andersen & Company (who today are our auditors). This Division handles all of the accounting procedures of the Company as well as Payroll and Purchasing Departments.

Alden Heintz, Vice President of our International and Corporate Operations Division, has been with Tymshare since mid-1968. Mr. Heintz oversees all activities within the Division with emphasis on the expansion of our international marketplace. At present, key areas of worldwide expansion of our services include the recent Taylorix-Tymshare GmbH venture and the ongoing penetration into Japan via a wholly-owned U.S. affiliate or joint venture.

This Division also incorporates the responsibility for all pricing studies considered by the Company; acquisition support, surveys, revenue analysis and special projects for all other Divisions of the Company; public relations activities including promotional literature, photographic services, computer shows, conferences and

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speeches as well as the writing and distribution of our monthly Company newsletter, its about tym; and billing, technical and sales support between the United States and our overseas affiliates, coordinating meetings, training sessions and documentation to keep our overseas personnel well informed at all times.

Laszlo Rakoczi, Vice President and General Manager of our Technical Research and Development Division, directs a group of approximately 100 employees, including software system designers, programmers and engineers who provide systems support, language and data base systems, communications systems & network applications, and special applications & products.

The Data Services Division is directed by Warren Prince, Vice President, who has been with the Company since the latter part of 1971. This Division is responsible for the purchase, installation, operation and maintenance of all Company computing and communications network facilities.

DSD presently includes all of the TYMNET communications marketing, field engineering, National Computer Operations, and manufacturing personnel of the Company. Valcomp, the facility for the repair and refurbishment of computer equipment, is also a part of the Data Services Division.

The Corporate Development Division is the only Division not physically located within the Corporate Headquarters building on Valley Green Drive in Cupertino, California. This operation, headed by Bernard Goldstein, Vice President, is located in Darien, Connecticut and is primarily responsible for the stimulation and evaluation of acquisition and merger opportunities.

Ronald W. Braniff began with Tymshare in the latter part of 1966 as a salesman, shortly thereafter being promoted to Marketing Manager in what was then the Northern California Division, and today is the Vice President and General Manager of the Marketing Division.

Within this Division is the Marketing Services group, located at the Corporate Headquarters, supporting all of the field marketing functions with product support, planning and marketing, including training, publications and documentation, and the promotion, sale and lease of all terminal equipment.

The Information Services Division within the Marketing Division (headed by Bob Schwartz, Vice President, Manager) represents our field marketing locations. Most of our customers are business managers or professionals who are very knowledgeable in their own business but who require specialized applications as well as training and ongoing support in the areas of corporate planning,



financial, administrative, marketing management, manufacturing control and many other tasks. Information Services is able to define the needs of the customer, provide him with a remote computer service application that will fit the requirements of his business, and support that application or applications on a continuing basis.

National TASC and Telephone Industry Marketing fit within the Information Services group.

The Industry Services Division within Marketing Division is directed by Gary Myers, Vice President, Manager. This part of marketing includes those groups who deal in one or more specialized industries, where the customer comes to Tymshare in order to solve a specific problem which we have solved for others in his industry. This customer draws upon our services and hardware, but most particularly, our expertise in his field. The Data Centers Division falls within this group with specialization in tax processing, fuel oil distribution and cable TV industries, as does Unitax (tax processing specialization), Medical Data Systems (health care specialization), and all but the technical personnel of Western Twenty Nine (travel specialization).

Federal Government Marketing located in Washington, D.C. provides Company-wide support of all Federal Government contracts and negotiations with the Federal Government, and is another part of the overall Marketing Division.

It is the objective of our management to continue our growth pattern, faster than the industry as a whole, largely by building on the customer base we have created and, where we have compatible opportunities, by selected expansion of our capabilities through the addition of joint ventures, mergers and acquisitions.

*Suggest we arrange THIS 14  
following order  
Marketing  
Data Services  
Tech  
Finance  
International  
AD MIN ——— Department Director*