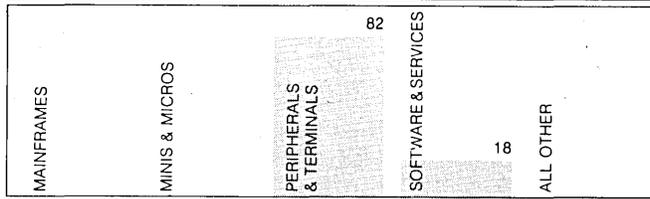


# 31



CY '79 DP Rev.	% Change	% Tot. Rev.	CY U.S. DP Rev.	% Change	% DP Rev.	CY Tot. Rev.	% Change	CY Net Income	% Change
\$179 (M)	32	100	\$144 (M)	26	80	\$178 (M)	31	\$16.7 (M)	37

**FOUR-PHASE SYSTEMS, INC.**  
 10700 NORTH DE ANZA BOULEVARD  
 CUPERTINO, CA 95014  
 (408) 255-0900

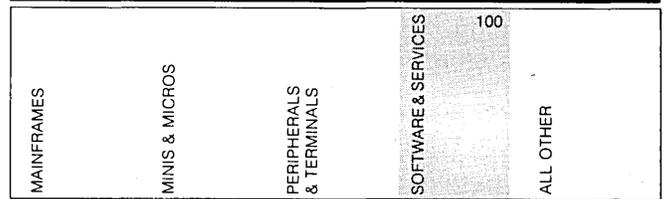
Continued momentum of shipments, up 25%-30%, boosted revenues by 32% and income by 37% for Four-Phase in 1979. Rising competition from IBM, nonetheless, appeared to impact backlogs at Four-Phase—up a modest 6.4% to \$77.9 million. With an average system value of \$75 thousand to \$80,000, the company's products compete directly with the IBM 8100.

Four-Phase responded to IBM's 8100 in April 1979 with its own enhancements to main memory capacity and processing speeds. Serving up to 16 users, the System IV/60 and IV/65 defined new mid-range systems in the \$100,000 to \$140,000 price class. Along with the IV/90, released in mid-1977, the three top-end systems utilize mapped memory which extends program addressing to 256K words (or 768K bytes) versus the 32K word limit on other Four-Phase products. Up to 280K and 480K bytes of physical memory can now be attached to the IV/60-65 and IV/90 models, respectively. The memory upgrade enables Four-Phase to support more on-line terminals in individual networks. For example, the company asserts that compared to several years ago up to three times as many terminals, depending upon the application, can be in use on one system without degrading individual response times.

Greater memory capacity supports the MFE/IV (multifunction executive), which enables multiple software packages to operate concurrently and independently—including Data IV for shared processor data entry, Vision for transactions and on-line inquiry, Foreword for text editing, and COBOL. Each package may be addressed independently and concurrently by any operator. The new IV/60-65 remains compatible with the IV/90, providing an easy upgrade path for customers to add multiple functions. The trend toward multifunction was especially evident in the System IV/60-65 orders, which were predominantly for MFE/IV. With the number of installations using the new operating system software rising sharply toward the end of 1979, the company appears to be well on its way toward resolving the usual field problems associated with new software.

In January, Lee Boysel, president, cautioned his investors that near-term earnings would likely be impacted by the company's plan to sustain corporate development plans for the future despite the likelihood of a recession in the United States. Margins may be impacted by a 50% rise in engineering expenditures, and a continued buildup in field personnel contributing to an expected overall gain of 8%-10% in employment, against moderating revenue growth. The actions once again confirm that the industry, and distributed data processing in this instance, is not for the fainthearted.

# 32



CY '79 DP Rev.	% Change	% Tot. Rev.	CY U.S. DP Rev.	% Change	% DP Rev.	CY Tot. Rev.	% Change	CY Net Income	% Change
\$176 (M)	28	91	\$167 (M)	27	95	\$193 (M)	29	\$14.6 (M)	38

**TYMSHARE INC.**  
 20705 Valley Green Drive  
 Cupertino, CA 95014  
 (408) 446-6000

One of the major network information services companies in the country, Tymshare had a good year in 1979 and took important steps to expand its business worldwide and to enter new markets. Total revenues reached \$193 million, 91% of that from dp services and equipment sales. This represents a 29% growth, outpacing the estimated 20% increase the services industry is averaging. It also means Tymshare has almost 3% of the diverse and scattered \$6.7 billion processing services market.

More important were Tymshare's actions in preparation for the 1980s. These ran the gamut from growth of specialized services for vertical industries, to expansion of data network availability, to entry into new communications markets.

Through subsidiary Tymnet, which became a common carrier in 1977, Tymshare is already in the public data network market (estimated at \$80 million to \$100 million annually). And it is in the electronic mail market (\$150 million). In 1979, it went after an even bigger one: private data network development (\$200 million to \$250 million). Several sales were made, but one publicly announced was a contract from TRW to install a network to service its 30,000 credit information customers on-line. In addition to expanding its \$30 million-plus business in credit card processing for banks, Tymshare inaugurated its first electronics funds transfer service this January, in the San Fernando Valley region in California.

Tymshare also continued to develop its Augment network service for automated office applications; a Stanford Research Institute development, this system appears to be one of the first to go operational. The company also is making strides in another industry, health care systems; it says it is a "distant third" in competition, with \$14 million to \$16 million in revenues, but its target is to become a leader through acquisitions (such as recently acquired Medistat, which had 1979 revenues of \$4 million) and through development of applications, such as patient information control.

Like other big services companies, Tymshare's main 1980s target is to serve the growing demand for "complex applications" through provision of terminals and mini- and midcomputers on-line to Tymshare's massive computer facilities. It added the 1100 intelligent display terminal to its offerings in 1979.

The way to reach Tymshare's systems is through the public Tymnet packet switching network. The company's \$24 million Tymnet subsidiary did a great deal to expand the availability of this network in 1979. (Only one-third of Tymnet's revenues are from Tymshare centers.) Tymnet added 13 countries (total now 28) which have links to Tymnet in the U.S. Technically Tymnet came up with the software to make its network accessible by the vast IBM 3270-terminal base.