
Mainframes: Market Overview



Synopsis

Editor's Note

This report is an overview of general-purpose mainframes. For the first time systems from two European vendors are included. Both International Computers Ltd. (ICL) of Great Britain and Siemens AG of West Germany have offices in the United States and are actively marketing their systems to American customers.

More detailed information on the mainframes featured in this report can be found in the individual product reports in this volume. For information on mainframe technology, see Report 70C-000DJ-201; for comparison columns of 51 mainframe models and model groups from 12 vendors, refer to Report 70C-000DJ-301.

Mainframe Highlights

Dispelling the belief that large mainframes are becoming extinct, three new companies have entered the mainframe arena, two for the first time. The established mainframe vendors have also introduced new models or added enhancements to already existing systems despite some discouraging financial returns.

The newcomers, Digital Equipment Corp. (DEC), Tandem Computers Inc., and Hewlett-Packard (HP), joined the traditional mainframe vendors late in 1989 and early in 1990. For Digital Equipment it was the second time around. All in all, 1989 was a very active year for product announcements, and the activity carried over into the early months of 1990.

While revenues remained flat for the U.S. market during 1989, sales in Europe and the Far East were vigorous, and most vendors are counting on an active overseas market for 1990 and 1991. Like the rest of American industry, mainframe manufacturers have their sights set on the emerging East European countries, mainly East Germany and Hungary, and their pent-up demand for computers.

Analysis

Vendors and Markets

1989 was a year of contradiction for the mainframe industry. On one side, mainframe sales were slow, revenues stagnant, profits low, and companies were restructuring and reducing staff. On the other side, vendors were busy introducing new systems and adding more models to both the lower and upper ends of their mainframe product lines, and last but not least, two well-known minicomputer vendors introduced mainframes.

Digital Equipment announced the VAX 9000, its first mainframe since 1985 when the DECSYSTEM-20 was discontinued. Midrange VAX users need a growth path, and Digital wants to protect this big installed base from raids by other large-system vendors, particularly IBM. Incidentally, IBM announced the high-end ES/3090 J and JH models at the same time that Digital and Tandem unveiled their new mainframes.

Tandem Computers' new Cyclone mainframe is aimed at the fast-expanding on-line transaction market. The powerful Cyclone not only provides an upgrade for Tandem's NonStop CLX and VLX users but will also attract new customers because of its price/performance.

In January 1990 Hewlett-Packard introduced its high-end system, the HP 9000 Series 800. The new RISC-based UNIX machines have the same performance range as the IBM 3090 E models and the Digital VAX 9000 but are targeted at the realtime/technical market.

Control Data and Unisys, two vendors that had severe financial difficulties last year, also announced new additions to their mainframe lines. Control Data enhanced the Cyber Series with two high-end models. The Model 2000S is a database

management and information processing system, while the Model 2000V provides both vector and scalar processing.

Unisys announced new low-end models for both the V Series and the A 4 and A 6 systems and revitalized its five-year-old V Series with two entry-level V 400 models. The new systems are aimed at the financial services market where the V Series has a large user base. The enhanced A 4 and A 6 "S" models feature more main memory and 3.2 times the performance of the earlier A 1 F model and offer an upgrade path for the existing user base.

While ICL and Siemens both have a large mainframe user base in Europe, their installed base in America is miniscule. ICL's acquisition of Datachecker Systems has given it a foothold in the U.S. retail market. Siemens hopes its merger with Nixdorf Computer will allow it to gain market share in the U.S. because of Nixdorf's representation in the financial sector.

The number one mainframe vendor remains IBM, with Unisys a distant second. According to Computer Intelligence Corp. of La Jolla, CA, IBM holds 64 percent and Unisys 22 percent of the large system market. Amdahl's share is 4 percent, and the other vendors share the remaining 10 percent of the market. Such statistics present quite a challenge for the newcomers. But even 1 percent of an installed base of over 40,000 high-profit mainframes makes the challenge worthwhile.

Transaction processing is the big lure for mainframe vendors. The big machines with their proprietary operating systems, large main memory, and fast I/O speed are needed to support massive databases and multiple I/O channels. Vendors also expect the mainframe replacement market to be quite profitable because many users still work with older systems which lack the memory capacity and throughput speed of the new machines.

The immense processing power and fast response time of a mainframe are needed to handle large databases and to manage complex communications networks plus heavy on-line transaction processing for organizations such as banks, insurance companies, and airlines. In sum, the general-purpose mainframe remains vital to the organizational health and security of large companies. ■