



## IT'S GRAB-YOUR-PARTNER TIME FOR SOFTWARE MAKERS

Alliances are forming to bring 'relational data bases' to personal computers

It was a jolt in mid-January when two of the Big Three in personal computer software, Microsoft and Ashton-Tate, teamed up with minicomputer software maker Sybase on a key product. Each company had decided not to go it alone in pursuing one of the most important software developments of the 1990s: a way to run so-called relational data base programs using personal computers. The three expect to have a product ready late this year. And they hope their reputations as software powerhouses will make it a product that dominates its market so quickly that other competitors withdraw.

It's a goal that, suddenly, everyone has. Since last November, three other alliances between microcomputer and minicomputer companies have been announced, all aimed at cornering the same market. And Lotus Development Corp., the No.2 personal computer software maker, is expected to announce a project next month with Gupta Technologies Inc. in Menlo Park, Calif., to design a product much like the one the Microsoft group is working on. Says Paul V. Cabbage, an analyst with market researcher Dataquest Inc.: "It's gonna be a real dogfight."

Relational data-base programs, which have been on the market for a decade, make it much simpler for professional computer operators to find information stored in a data

**WHO'S TEAMED UP WITH WHOM IN DATA BASES**

Apple Computer/Sybase*
Ashton-Tate/Microsoft/Sybase
Informix/Innovative Software
Lotus Development/Gupta Technologies**
Relational Technology/Sun Microsystems

\*Apple has 5% stake in Sybase    \*\*Not announced  
DATA: BW

base that's sitting in a mainframe or minicomputer. But with the proliferation of personal computers in the office, companies want more of their employees to use the corporate data bases. and minis with a program that lets non-professional computer operators work with the relational data bases. The trick is to link all these personal computers to the mainframes and minis with a program that lets non-professional computer operators work with the relational data bases.

These days no major company can function without data-base systems. Increasingly, managers base major decisions on information stored in them: United Parcel Service uses a data-base program to plan its flight schedules, for instance. Indeed, U. S. sales of data-base programs should jump 19% this year, to \$1.4 billion, according to Dataquest, and at least 70% of programs sold will be relational products.

**NO CINCH.** Only a decade ago, working with a database program could be an excruciating exercise. It meant going through a series of rigidly defined steps. The process became simpler in the late 1970s, when an International Business Machines Corp. researcher came up with the relational model for data bases. Essentially, it cross-references information so completely that a single computer command can generally track down a piece of information. This technology also created a market for a new kind of software company. With the rise of minicomputers in the mid-1970s as a cheap alternative to mainframes, a cluster of startups developed relational systems for the new machines. Thanks partly to slick marketing, Oracle Corp. in Belmont, Calif., emerged the leader. Its sales should double to about \$270 million for the fiscal year ending May 31.

Now the cycle is occurring again—with personal computers. Just as minicomputers took over some jobs of mainframes, local area networks of personal computers are taking over some functions of minicomputers. A key step in hastening this process is writing bridges between microcomputer applications programs, such as spreadsheets or word processing packages, and the increasingly popular relational data bases that run either on a minicomputer or a specially outfitted microcomputer.

It's the effort to achieve this that's prompting the new alliances. Consider the Microsoft-Sybase-Ashton-Tate group. It's adapting Sybase's relational data base to make it easier to use through a personal computer. And it's developing so-called software tools that other microcomputer software developers can use to adapt applications programs so they communicate with Sybase's revised database product. Says Ashton-Tate Chief Executive Edward M. Esber: "We can create a standard."

That won't be a cinch. By yearend, IBM will have a competing data base for its PS/2 computer to link to DB2, its relational data base for mainframes. Then there's next month's anticipated announcement from Lotus. Some experts speculate that the company will work with IBM to adapt the popular 1-2-3 spreadsheet program to work with IBM's data-base software. And last November, Informix Corp. bought its own microcomputer software company, Innovative Software Inc., to create personal computer programs that will work with its minicomputer relational data base.

**TIME WILL TELL.** Other alliances aim at more than IBM's personal computers. Relational Technology Inc. is working with Sun Microsystems Inc. to create a database standard for workstations. And last summer, Apple Computer Inc. bought 5% of Sybase, which is developing a data-base program for the Macintosh. With so many alliances, says Sybase marketing Vice-President Stewart A. Schuster, "this is marketing warfare."

One exception to the joint-venture trend is Oracle. Leveraging off its in-stalled base of 50,000 programs and its strong presence in the market for Digital Equipment Corp. minicomputers, Oracle is trying to set its own data-base standard for personal computers. It is selling a scaled-down version of its program for micros. Moreover, in January it announced a program that will let 1-2-3 work with Oracle's data base. Another version, due this quarter, will work with WordPerfect Corp.'s word processing program.

Most analysts expect it to be a couple of years before a market leader emerges. There may even be three competing standards: Oracle, IBM, and Microsoft/Ashton-Tate/Sybase. Indeed, this is one market that no one's going to relinquish without a grueling battle.

***By Richard Brandt in San Francisco***

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