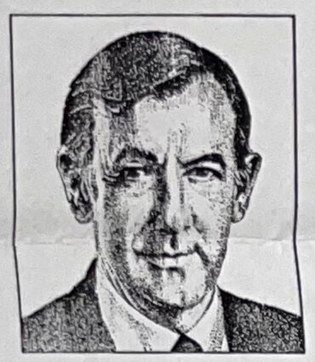
APPLIED INTELLIGENCE

Lotus Banks on Integrated Products to Win Front-End War



JAMES MARTIN

This is the last in a series of articles on the strategic directions that Lotus is pursuing and the significance of those strategies to organizations planning for the 1990s.

Software vendors such as Lotus Development Corp. are moving swiftly to support user requirements for applications that run on networks of PCs and that can access data anywhere within a distributed network of computers. Such networked applications are often based on a client/server model, composed of front-end client applications and back-end data servers.

Lotus plans to offer an integrated family of products that may be used to build front-end PC applications that operate within a LAN.

Networked products from Lotus include 1-2-3 (releases 2.01, 2.2 and 3.0), Notes and future products such as 1-2-3/G (a graphical version of 1-2-3/G and 1-2-3/M (a mainframe version of 1-2-3).

Lotus offers a common application programming interface (API) called DataLens that provides a consistent interface to external data sources. DataLens drivers developed by Lotus will permit users to access external data and load it directly into a 1-2-3 spreadsheet. Networked applications compatible with DataLens will use database servers to gain direct access to a wide variety of data sources in many environments such as DB2, Oracle, dBASE, OS/2 Data Manager and CD ROM.

Lotus/DBMS Product

Lotus/DBMS is an unreleased product that will consist of a family of tools used to build front-end applications that access relational data from a back-end database server.

Initial applications of the product are likely to be the creation of forms linked to external data sources. The product will work with a number of network database servers, notably SQL Server from Sybase.

Lotus' strategy is not to compete with database vendors, such as IBM, Oracle, Ashton-Tate and Ingres. Although Lotus/DBMS provides access to relational data, it does not include a relational-database engine.

Lotus has indicated that its front-end tools will access Lotus/DBMS from both DOS- and OS/2-based machines. Add-in tools will provide access to Lotus/DBMS for 1-2-3 releases 2.01 and 2.2 under DOS. Similarly, the Lotus Add-In Toolkit for release 3.0 will provide access to Lotus/DBMS for 1-2-3 release 3.0.

These add-ins will probably not support the extensive database-server access to be provided through 1-2-3/G, a graphical spreadsheet that will run under OS/2 and the Presentation Manager.

Lotus/DBMS will be tightly integrated with 1-2-3/G, sharing a common menu structure and programming capability. The two products will transparently and bidirectionally share data. 1-2-3/G will be the single most important front-end tool. The product is likely to be available in the first quarter of 1990.

The database-server software shown in the figure is based on standard Structured Query Language (SQL) that operates with a set of data-management tools and applications running under OS/2 and the Presentation Manager. Using the DataLens API, 1-2-3 release 3.0 is likely to be the first Lotus product that will be interfaced to SQL Server.

The database-server race has been a "me too" response from vendors. For more than a year, database-server products promised to provide access to corporate databases on a LAN. It is an important market that no large software developer can afford to ignore.

OS/2 is the starting point for the race for a networked database-server product because it is not possible to run a database server without the memory enhancements and multitasking capabilities of OS/2. Improvements to be gained by moving to this technology include faster access to data, better security and the elimination of the potential for system crashes when two users simultaneously access the same record.

If properly implemented, a move to networked database servers will save money. The focus will be to provide Lotus/DBMS database tools that will work with multiple database engines running on PCs, minicomputers and mainframes.

Significant players in the SQL database-server market include Gupta Technologies with SQLBase, Sybase with SQL Server and Oracle with Oracle Server, an SQL-based server for OS/2. IBM's OS/2 Extended Edition includes a Database Manager component that is expected to provide network support in a future release.

Although Microsoft and IBM are design partners on previous versions of OS/2, the Extended Edition is currently an IBM product; however, as announced at Comdex/Fall, IBM may unbundle components of OS/2 Extended Edition to create a common OS/2 product. The goal of these alliances is to create a de facto standard or, minimally, to offer a strong alternative to products from other vendors.

Lotus initially based its database-server strategy on SQLBase. It then moved to the Oracle Server and finally to SQL Server. In September, Lotus purchased a 15 percent interest in Sybase with an option to purchase an additional 10 percent. Microsoft and Ashton-Tate will jointly market SQL Server as part of their product family. Thus, Lotus, Microsoft and Ashton-Tate have all settled on a database-server strategy based on SQL Server from Sybase.

Lotus and Microsoft are implementing different strategies with respect to DBMS products. Although the SQL Server product to be used by both companies will run only under OS/2, Microsoft would clearly like to "own" the SQL Server standard and firmly put it in place as systems software. Development of front-end tools will be facilitated and encouraged through third parties.

Lotus approaches the challenge of distributed-database support from the applications end with the development of tools to access a wide variety of data sources.

These tools will work with SQL Server as well as other database products by using the DataLens driver technology.

Powerful Front End

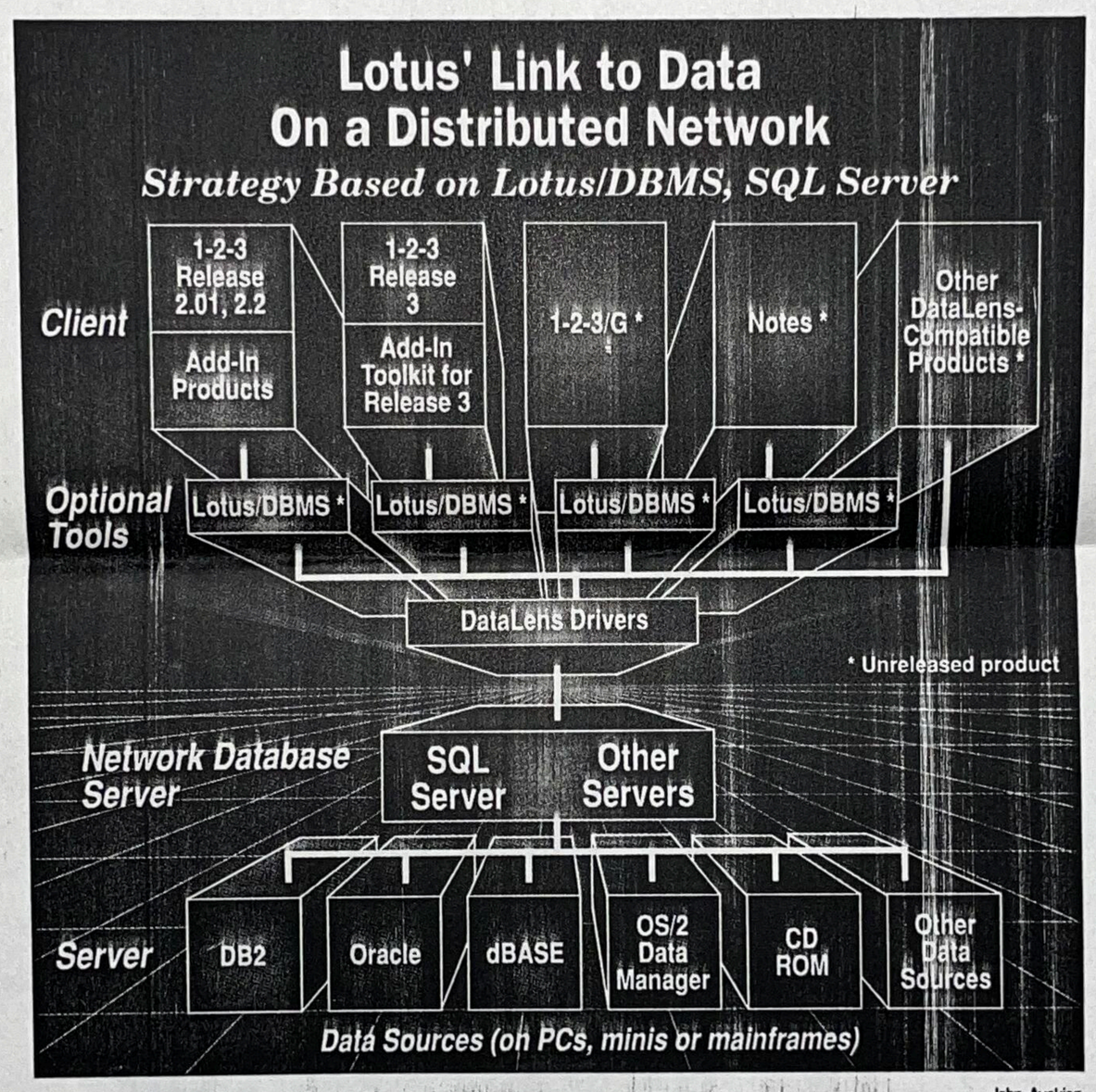
The systems problems will largely be the responsibility of Sybase, which will be responsible for implementing cooperative processing through LU 6.2 and other communication protocols. Lotus has stated that it intends to support multiple database servers across a variety of hardware environments.

In the future, the real software battles among vendors will take place in the front-end tools market. The back-end database-server products, used to process queries and manage the shared data, are hidden from the user.

Lotus/DBMS promises to provide a powerful front end in a familiar format. Lotus has stated that its primary focus will be on the development of the front-end Lotus/DBMS tools that will work with databases that reside on a number of platforms including mainframes, minicomputers and PCs.

One element of the Lotus/DBMS strategy is to move the Decision Support System (DSS) analysis to the desks of managers who are comfortable working with spreadsheets but who do not want to perform ad hoc queries using SQL. The widespread use of the 1-2-3 spreadsheet means that Lotus is well positioned to support front-end spreadsheet applications that use a database server to access back-end corporate databases. This networked client/server mode of operation will become increasingly common in the enterprise information system of the future.

Next week, I will begin a series of articles on Rapid Application Development, a new set of techniques and life cycles that permit applications to be created and modified much faster than with traditional techniques. ■



John Avakian

Lotus' primary focus will be on the development of the Lotus/DBMS tools that will work with databases that reside on a number of platforms, including mainframes and PCs.

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