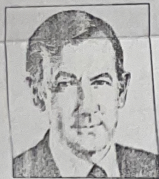


APPLIED INTELLIGENCE

In Spreadsheet War, Excel Poses Serious Threat to 1-2-3



This is the fifth of a series on the strategic directions that Lotus Development Corp. is pursuing and the significance of those strategies to organizations planning for the 1990s. Lotus 1-2-3's long-overdue upgrade has provided competitors

with a marketing advantage. 1-2-3 release 2.01 is being challenged by several products that offer a greater number of features at less cost. If spreadsheet-buying decisions were based only on features and cost, alternative products already would have gained a much larger share of the market.

The competition attacked the indomitable 1-2-3 spreadsheet market by providing features such as enhanced graphics capabilities, an undo command, search and replace facilities, intelligent recalculation, background recalculation, a macro learn feature, linking of spreadsheet cells, three-dimensional spreadsheets, improved memory management and mnemonic cell notation.

Features Lotus Lacks

Most of these features are available to 1-2-3 users through add-in or third-party products. As a result, more demanding users have tended to buy add-ins rather than move to alternative products. While this causes the price-to-performance ratio to become even less favorable, it has been possible to meet many of the needs of "power users" by adding in outside functionality.

According to industry projections, the total number of spreadsheets sold in 1989 will exceed 3.5 million. This would represent a 25 percent increase in unit sales over last year. With this large a market, there is plenty of room for competition. 1-2-3 has dominated the market since it took the lead from VisiCalc in 1982 and should continue to dominate for the foreseeable future.

The software industry is seeing the signs of a gradual slowdown from the meteoric growth of the past two years. The expected effects of a slowdown will include greatly increased competition, a consolidation of vendors and some business failures.

The following issues represent the battlegrounds on which the software wars will be fought:

- With projections that, over the next two years, more than 50 percent of office PCs will be networked, networking features will become increasingly important in the selection of software.
- A convergence of DOS and Windows 3.0 may occur, leaving Lotus at a competitive disadvantage.
- The move to OS/2 and Unix will begin slowly. To lure users away from DOS, products must be highly integrated and must clearly demonstrate superiority.
- Boundaries between databases and spreadsheets are blurring. New products

will allow the user to access data without knowing whether the source was a spreadsheet or a database.

- Integrated local area network computing environments will replace islands of computing on PCs. Therefore, Lotus seems to be banking on a cross-platform strategy.
- Direct competition on features is insufficient to move current users away from an installed world-class product. Integration of products with other software will assume more importance as users demand greater functionality.
- International markets will become more important, requiring more efficient marketing and support to customers to

business systems. As shown in the figure, Lotus intends for strategic products such as 1-2-3 to reside on all the important operating systems and platforms, using features and functions common to 1-2-3. In this cross-platform strategy, all implementations of 1-2-3 interact with a common applications-program interface, called DataLens, that provides bidirectional access to data sources.

Microsoft is pursuing a different approach, one in which access to mainframe and departmental minicomputers is achieved through products such as SQL Server.

SQL Server is a multiuser relational database-management system from

Another significant difference can be seen in Microsoft's orientation toward operating systems. Owning a standard appears to be extremely important to Microsoft. DOS, Windows, OS/2, Presentation Manager and Xenix are examples of these Microsoft standards.

In contrast, Lotus maintains an orientation toward applications and intends to leverage the power of its 5 million spreadsheet users by making the transition from 1-2-3 to its database product an easy one.

The strongest competitor to Microsoft's Excel will be the as-yet-unreleased 1-2-3 version 3. But until Lotus releases version 3, it will be unable to compete against Microsoft. The electronic-spreadsheet market is now waiting to see the benchmarks.

Microsoft's Mac Attack

Meanwhile, Microsoft Excel has captured almost 15 percent of the market and holds the major share of the Macintosh market with its Mac version. Lotus' 1-2-3 for the Macintosh is not due until 1990, which allows more than five years for Excel to establish dominance, while Microsoft's Mac product has been on the product since 1985.

The market shares are shifting so that Microsoft will garner a projected 15 percent to 18 percent of the PC spreadsheet market by 1990. It remains to be seen what effect 1-2-3 release 3 will have on this trend, but it is not likely that there will be a dramatic shift in either direction.

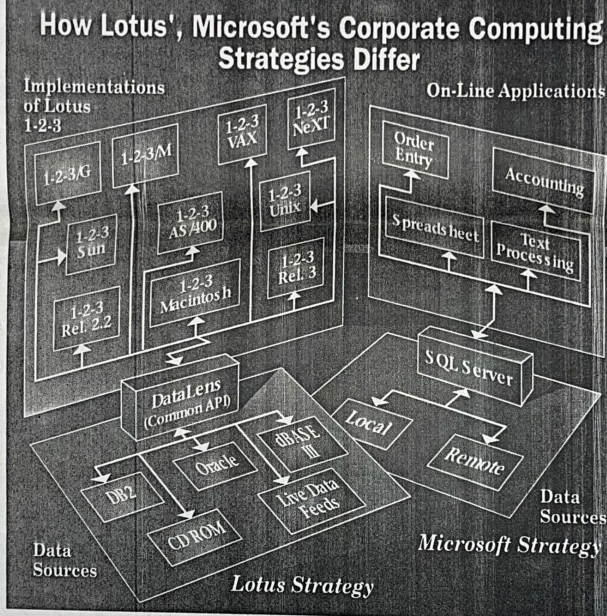
In short, Microsoft Excel will continue to gain market share, but Lotus should be successful in slowing this trend with its new releases of 1-2-3. Most likely, a massive marketing campaign will be waged by Microsoft to counter the effects of release 3.

With a declared strategy of moving its products to OS/2 and the Presentation Manager, Lotus is vulnerable because Microsoft will have had a Windows-based spreadsheet on the market for more than two years by the time 1-2-3/G is shipped.

The Macintosh market is more difficult to predict. If 1-2-3 for the Macintosh is ready early in 1990 and if it is well received within the Mac community, there may be an opportunity for Lotus to take advantage of its market presence. If not, the Macintosh market is likely to belong to Microsoft for a long time.

Next week, I will discuss how Lotus' spreadsheet-product strategy takes advantage of its installed base and positions the company to respond to both technological change and market dynamics. ■

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Microsoft Excel will continue to gain market share, but Lotus should be successful in slowing this trend with its new release. Most likely, a massive marketing campaign will be waged by Microsoft to counter the effects of release 3.

increase sales. Unlike in its early days when Lotus dominated the market and was able to overpower its competition, the company is now facing stiff challenges from a number of competitors. The most significant is Microsoft Corp. Microsoft competes with Lotus in several major software categories: Microsoft Excel, its spreadsheet product; Microsoft Word, its No. 2-selling word processor; and Microsoft Chart and Microsoft Works, an integrated software package. Lotus and Microsoft differ in their interpretations of connectivity and the way in which PCs will be linked in busi-

ness systems. As shown in the figure, Lotus intends for strategic products such as 1-2-3 to reside on all the important operating systems and platforms, using features and functions common to 1-2-3. In this cross-platform strategy, all implementations of 1-2-3 interact with a common applications-program interface, called DataLens, that provides bidirectional access to data sources. Microsoft is pursuing a different approach, one in which access to mainframe and departmental minicomputers is achieved through products such as SQL Server. SQL Server is a multiuser relational database-management system from

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