

MICROSOFT MEMO

TO: Apps Staff Retreat Attendees
FROM: Jeff Raikes
DATE: 2/29/88
RE: Summary of Microsoft Applications Strategy

CC:

As we head into the apps staff retreat, it is time to recap the applications strategy and summarize the key open issues that should be addressed in the coming months. This memo describes our applications strategy. A separate memo summarizes the 3 year (FY-88-90) business plan. We welcome your input.

Situation Analysis

Microsoft is the leader in office productivity software for the Apple Macintosh. We have the leadership product in five categories: spreadsheet, word processing, integrated, presentation graphics, and recreation (Flight Simulator). However, our Macintosh leadership will be challenged in all of these areas this year. (A discussion of the Macintosh office productivity categories is contained in Appendix A.) FY'87 worldwide revenues were approximately \$47 million on sales of 470,000 Mac systems, or \$100 per Mac.

Microsoft significantly trails Lotus, Ashton-Tate, and WordPerfect in office productivity software for IBM PCs and compatibles. We do not have a leadership product in any category, and we are especially weak in the US and most English-speaking countries. (A discussion of the PC office productivity categories is contained in Appendix B.) FY'87 worldwide revenues were approximately \$72 million on sales of 5.7 million PC systems, or \$12 per PC.

Applications Strategy=Superior Solutions

At the highest level, the Microsoft applications strategy can be summarized in two words: superior solutions. We study and project the needs of our target market, while also understanding the directions and potentials of systems technology. We combine the market and technology visions to provide our customers with superior benefits for their office productivity. Microsoft's unique industry position and the resulting clarity of our technology vision helps us to produce these superior solutions while also providing our customers a "safe" feeling about our products and directions.

As an example of a superior solution, look at Microsoft Excel. We understood the potentials of the graphical user interface (GUI) technology, and we had a strong understanding of the tasks and needs of users who work with numbers. This knowledge resulted in Excel, a spreadsheet providing superior benefits in comparison to competitors.

The key benefits to our customers of superior solutions are:

- faster completion of office tasks
- more efficient communication
- reduced learning time
- minimal training and support

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These add up to greater efficiency for our customers, which provides for a more important benefit: enabling greater productivity. With increased efficiency on typical office tasks, our users should have more time and ability to think through information and be creative in response to opportunities.

Target Market

Our business focus is on personal computer based office productivity. In particular we strive for leadership in the categories of high penetration (>5%) horizontal office productivity tools:

- word processing
- spreadsheet
- database
- presentation graphics
- workgroup applications (email and personal services)
- project management
- integrated

In the foreseeable future, we will not pursue other applications categories such as accounting or products specific to a vertical market. This does not preclude, however, leveraged adaptations of our horizontal productivity tools for specific vertical or niche markets (eg. special word processors for the legal or publishing market). There are no plans for special SKUs at this time, but we are beginning to develop some marketing programs targeted at prime vertical markets.

Learning DOS is an opportunistic entry into the educational market. It is synergistic with the needs of our primary target market and leverages our very high quality computer based training (CBT) technology. Future entries, including the development of a Learning OS/2 product, are an open issue. We continue to offer Flight Simulator, but have no plans to increase our presence in the recreation market.

Depth customers require full functionality. They use (or wish to use) a personal computer to be more productive: to complete their task(s) faster, with higher quality, or perhaps some other dimension of productivity. For the benefit of added productivity, depth customers require many features ("product depth"), and they are willing to pay a higher price for software. They prefer easy to learn software, but they are willing to incur some additional learning time for the added productivity benefits of software with depth.

Breadth customers require simplicity. They are also interested in improved productivity, but generally they don't have specific or well-defined ideas of how computer usage will improve their productivity. They are less likely to value or desire high functionality, and thus, they will tend to be more price-sensitive than the depth customer. Over time, we believe many of the non-depth customers will enter into at least one of the depth segments.

(A more detailed discussion of our market segmentation and trends is contained in Appendix C.)

Corporate or large account customers are discussed in additional detail here because increased corporate penetration is a significant goal for our applications products. The corporate market is complex but can be simplified into two key sets of interests affecting product design and marketing. The first, users' interests, emphasize the need for higher productivity through performance of the product(s). They are also very concerned with ease of learning and use. Essentially, the users wish to maximize productivity and minimize learning time. The second set, the institutional interests, places emphasis on maximizing price performance, integration into the overall computing strategy, minimizing training and support costs, and protection and security of information. Successful product design and marketing will address both sets of interests.

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User Environment

Personal computers based on either the IBM PC or Apple Macintosh architectures will dominate the office productivity market. All other microcomputer architectures and Unix will have a combined share of less than 5% of the office productivity market. Our focus will be on the IBM PC and Mac architectures, and we will only pursue adaptations to other PC architectures for strategic reasons (eg. increased sales of our PC or Mac apps), or for highly leveraged (low development cost, high potential return) opportunities. At this time, PMX (Presentation Manager on X-Windows on Unix) is the only "PC" architecture under consideration for an adaptation; specifically Excel.

We have lost some sales due to the lack of versions of our productivity software for non-PC environments, though this seems to be a dying issue in the US. The two key non-PC environments are Vax VMS and IBM 370 (VM and MVS). We are investigating our alternatives for entering these environments and/or developing a strategy for effectively competing with products (eg. WordPerfect and IBM DisplayWrite) supporting non-PC environments. One approach is to offer Microsoft Works with Email and Personal Services as a low-end integrated office system; code-named OfficeWorks. This strategy is attractive not only because it may be an adequate solution for terminals connected to hosts, but also because it is a solution for low-end (8088-based) PCs. Vijay Vashee is leading the investigation of OfficeWorks.

Microsoft Application Product Architectures

To provide superior solutions to the two key segments of our target market, we are focusing on two product architectures:

- Microsoft Works for breadth users
- Microsoft Office for depth users

As mentioned above, our focus will be on the Mac and PC environments. Our goal is to have the highest degree of leverage between our product lines on the PC and Mac while still providing the opportunity to exploit unique characteristics of each environment. We are working toward "product engines" that provide the primary functionality of the product. The engine is not specific to either environment, but is separately adapted or bound to either the Windows, Presentation Manager, or Mac environments. The most important benefits of achieving this goal are a very high-degree of code, testing, and user education leverage, and simultaneous introductions of the PC and Mac versions. (Mac CBT is an obstacle to some of the user education leverage; this issue will need to be addressed.)

The Microsoft Office System Architecture

We define an Integrated Office System (IOS) as the combination of hardware, systems software, and productivity applications for enhancing both individual and workgroup productivity. I stress both dimensions of office productivity because we believe that even in workgroups, applications maximizing individual productivity at the workstation will be crucial to success. I.e. product family and/or workgroup strengths will not be enough to carry applications that are weak in their categories. Part of the reason is the significant number of users who will never be networked into a workgroup or who will never use more than one depth application. However, meeting these users needs will be an important part of building momentum for the leading productivity applications.

In short, we see the same workstation applications leading their categories regardless of individual vs. family/workgroup usage; stable market share will only come from success in both dimensions. For

this reason, the Microsoft Office architecture encompasses both segments of depth customers, and both dimensions of office productivity.

The business goal of the Microsoft Office architecture is to dominate workstation and workgroup application categories. We have established category leadership on the Macintosh which now must be defended, and extended to new categories, and to family and workgroup leadership. To succeed in the PC market, we will need to win in two phases, described below.

Phase I=Category Leadership

We will be the first to introduce great applications in key categories (SS, WP, DB) that exploit the new PC platform. These applications must be a generation beyond the old standards (1-2-3, WordPerfect, dBase), and introduced early enough to establish leadership positions before other new generation applications arrive or establish momentum. Category leadership will come from achieving these design goals:

- **Exploit graphical user interface to provide rich output, both on the screen and in output.** Another key opportunity of GUI is the increase in the user's ability to access the functionality of the application. The intuitiveness of GUI increases the bandwidth of the user, allowing us to pack more power into the product. The elegance of the Mac Excel user interface was certainly a factor contributing to its success. Consistency of user interface is also important, but it is more a feature selling the new platform than a key to category leadership.
- **Provide a new generation of power in the category.** Part of this comes from following our strategy of appropriate integration; ie. these apps are incorporating many of the add-ons we saw for old generation products. And part of this comes from having a vision of where the category is going and how we can exploit new technology opportunities for innovative additions to the product.
- **Significantly advance programmability and customizability of the application.** Enhanced programmability or macro languages, provide for automation of more tasks, customizability of the user interface, creation of end-user solutions/applications built on top of the productivity application, and greater flexibility in applying the application to user needs.
- **Pre-emptively support both Windows and Presentation Manager.** Since our key competitors are not doing Windows applications, we will have a significant time advantage on GUI for PCs. We must follow this up with releases soon after the availability of the presentation. As mixed environments of Macs and PCs grow in the corporate world, our support of the Mac increases as a strategic advantage for our Mac business. However, combined Windows/PM support is the key advantage.
- **Include superior user education.** This may become a differentiating factor for our products. High quality documentation for ease of learning and reference is clearly a requirement. But the integrated approach of our learning tools, especially the computer-based training, may lead to clear evidence of reduced training and/or support. This would incent users and particularly large account buyers and support centers to recommend our products. (Note: courseware or classroom training materials and context-sensitive help are also user ed tools.)
- **Lead in workgroup productivity enhancements.** These are the features added to our workstation applications to offer added productivity when used in workgroup environment. A good example is annotations, where multiple reviewers comment on the document and the writer has the ability to merge and do other manipulations of the annotations. A related enhancement is version control. While I don't see workgroup enhancements as key

differentiating factors in our first releases, I do expect that this will be a great way to advance our leadership in the next 3 years.

While the keys to category leadership provide for differentiation ("motivators"), it is important to review the requirements for success ("satisfiers"):

- Since our target market is dominated by competitors, conversion and coexistence are key design goals for our applications. Another way of stating this is minimization of switching costs. We must be able to read and write the data files of the old standards, and offer other components to aid the transition to our products.
- Top product quality and support are obvious, but important requirements for success. Bug-ridden releases tarnish the product's reputation to prevent gaining leadership, and to contribute to losing leadership. Regarding support, WordPerfect seems to be successfully using free phone support as a differentiating factor.

The presentations and memos done by the group product managers summarize each category strategy. The summary includes the key success factors, our weaknesses and the strengths of competitive strategies, and our responses to those issues.

Phase 2=Family/Cross-Apps Leadership

We will be the first to introduce a family of applications that adhere to the cross-application or family design goals discussed below.

- User interface consistency across the applications family. Common user access (CUA) provides too much flexibility to achieve the maximum learning leverage. Tandy Trower is responsible for proposing guidelines for family consistency, and for reviewing application specs to judge consistency. Tandy will also review cross-environment consistency (PC<=>Mac).
- Data exchange and integration. Increased connectivity will increase the demand for transparent access to information; ie. a user should have to only specify the data he's interested in, not the location of the data. In addition, GUI leads to a high percentage of compound documents (integrated text, graphics, formatted data, images, eventually voice). A clear understanding of these scenarios will lead to application design goals for data exchange and integration. Dynamic Data Exchange (DDE) provides an open architecture for meeting these needs. Viktor Grabner will take responsibility for this area.
- Document transfer and interchange. Increased connectivity will also lead to an increased demand for electronic distribution of documents, in both revisable and final forms. Since various email systems and editors will be in use, and because hosts will often be involved in the document transfer, we will have to support certain interchange format standards. We will also have to consider issues such as the mailing of application content where the receiver doesn't have access to the application needed to display the content. Viktor Grabner will also take responsibility for this issue.
- Programmability for procedural/office task automation. Perhaps the greatest opportunity to differentiate our applications family is tight coupling with a cross-applications macro language. The languages group will develop "macro BASIC". We must provide the user scenarios and design goals, and work with languages in defining the interfaces necessary for Microsoft applications to exploit this approach. We expect Lotus's LEAF to be a direct competitor. Jabe Blumenthal will take responsibility for the applications program management of this project.

Appendix A: Macintosh Categories

- **Spreadsheet.** Excel is the leader in the spreadsheet category. Two new and dangerous competitors are expected this year: WingZ from Innovative Software and Full Impact from Ashton-Tate. Multiplan, Trapeze, and MacCalc are the old competitors.
- **Word processing.** Microsoft Word is the leader, and WriteNow and MacWrite have been battling for second. However, two formidable competitors are entering the market: Ashton-Tate's FullWrite, and Mac WordPerfect. It is appropriate to segment the category into low-end (standalone) and high-end word processing. Microsoft Word is the leader in high-end word processing but will be challenged by FullWrite and Mac WordPerfect. Microsoft Write will vie for low-end word processing market share with MacWrite and WriteNow. Microsoft Works includes low-end word processing functionality, but it is included in the Integrated Category.
- **Integrated products.** This is the "all-in-one" category where Mac Works and Lotus Jazz are the only significant competitors. Mac Works currently outsells Jazz by more than 10 to 1 in units. But an upgraded version called Modern Jazz will be shipping this year and targeting Mac Works.
- **Flat-file database.** Microsoft File has lost the leadership of this category to FileMaker Plus, now marketed by Nashoba.
- **Relational database.** Omnis from Blythe software and Odesta Helix were the #1 and #2 products in the high-end database market. Ashton-Tate dBase Mac and ACIUS's 4th Dimension are shaking up the market and challenging for leadership.
- **Graphics.** This is a broad category including
 - Data charting products. Microsoft Chart is a distant 2nd to Cricket Graph and will continue to lose ground as we focus on presentations.
 - Drawing products. MacDraw from Apple has dominant market share and we do not intend to compete in the standalone drawing segment.
 - Text-charting. I put Living Video Text's More product in this category. (Note: LVT is now a subsidiary of Symantec.)
 - Presentations products. This segment includes products integrating text and data charting with drawing. The functionality of the product is focused on the office task of creating presentations. PowerPoint is the first entry, but will soon face competition from Cricket Presents!. We also expect LVT/Symantec to introduce a competitor code-named "Broadway".
- **Workgroup applications.** This category includes electronic mail (email) and any other products fitting into our model of integrated office systems. InBox from Symantec (Think Technologies was acquired) has been the leader, but our acquisition of InterMail gives us the opportunity to displace them.

Appendix B: PC Categories

- **Spreadsheet.** Lotus 1-2-3 is extremely dominant. Multiplan continues to lead in certain countries (France, Germany, Japan) but is under severe attack by 1-2-3 in all of them. Besides the PC Excel, the other significant new competitors include, Borland's Quattro, a \$195 "clone plus", and Surpass. There is GUI challenger to Excel shipping yet, though we expect 1-2-3/G by late Q4'88 or Q1'89. Lotus 1-2-3 v3.0 will support OS/2 v1.0 and is expected in June '88.
- **Word processing.** WordPerfect is the dominant product, selling approximately 35K units per month in the US, or ~3 to 1 over PC Word. DisplayWrite is losing ground though it continues to be strong in corp accts due to the direct selling of the IBM sales force. Multimate from Ashton-Tate and WordStar (the latest version is rated very highly) are also players in the market.
- **Relational database.** Ashton-Tate's dBase III+ is the dominant product, and they are increasing their lead over the #2 product, R:Base. Paradox from Ansa/Borland is another important competitor and they appear to be gaining ground.
- **Integrated products.** In the PC market, there is really a high and low-end in this category. We focus on the low-end where First Choice is the dominant product. PC Works made a big dent this fall, but weak distribution relative to 1st Choice appears to be our barrier to break through.
- **Flat-file database.** We have no plans to compete in this category on PCs.
- **Graphics.** On the PC, this broad category includes:
 - **Data charting products.** Microsoft Chart may be the leader for this small niche, but is probably second to ChartMaster from Ashton-Tate. We will probably only maintain our share and sales as a flat level.
 - **Presentations products.** Freelance Plus, projected to be a \$40-50 million business for Lotus this year, is the likely leader. Harvard Presentation Graphics (SPC), Ashton-Tate old Master Series, and their new Draw Applause are other key competitors in this market.
- **Workgroup applications.** PC Email is a fragmented market today, with competition among Network Courier from Consumer Software, The Coordinator, CC:Mail from PCC:Systems, and mail from network companies like 3-Com.

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Appendix C: Market Segmentation and Trends

The success of our Works introductions, in particular the positioning relative to our depth products, supports our view that the office productivity market segments into breadth and depth customers. In addition, the previously successful introduction of PFS:First Choice reinforced this segmentation in the PC environment, but also provided a serious competitive threat – First Choice had a 1 year lead on PC Works and the strength of SPC in the low-end and dealer loyalty and sales rep knowledge has helped to entrench the product.

The dominant characteristics of breadth customers impacting product marketing are:

- purchase decision by user, influenced by dealer, word of mouth, and brand-name awareness
- less sophisticated understanding and interest in applying the computer to their productivity needs
- entry-level users trade-off functionality for simplicity and lower price
- trade-off hardware "horsepower" for lower price system
- home, small business users

A secondary market exists for the Works product as an add-on product for a depth customer used in the non-depth areas. Early feedback from purchasers of Mac Works indicates that this segment may be larger than expected. We also believe that Works can be strong in the university market, however, the initial reaction to Mac Works in the university channel has not been strong (not much data on PC Works yet) and we should evaluate the reasons why. They might include: the demand for high-end word processing functionality, and/or the price/performance differential for word processing-oriented students. (Word is very aggressively priced at most universities.) Vijay Vashee will take responsibility for leading our research of both Mac and PC Works customers to better understand these secondary target markets for Works.

Another breadth sub-segmentation issue which may be investigated this year is the potential difference between entry-level users buying from mass-merchants vs those buying from computer specialty stores. A specific theory impacting our product strategy is that mass-merchant entry-level users require a software street price under \$100. If true, this potentially opens the "HomeWorks A,B,C" product strategy issue (though right now there are no resources available). Bruce Jacobsen is take responsibility for this issue.

The dominant characteristics of depth customers impacting product marketing are:

- more knowledgeable users, either experienced users or new computer users with well-defined ideas about applying the computer to productivity needs
- trade-off price or simplicity for more functionality
- users/buyers of medium to high-end systems
- medium to large business users
- make or significantly influence the purchase decision (but see more detail under explanation of corporate depth customers)
- they are influenced by colleagues (support issue), corporate "standards" (support and in some cases purchasing guidelines on approved alternatives), availability of specific product features

In the past, I have advanced the idea of depth users being "primary-task oriented" in the key sub-segments of spreadsheets, word processors, and databases. E.g. a financial planner spends all or nearly all of his computer time using a spreadsheet, a writer uses the word processor, etc.

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While primary-task orientation helps to describe the customer, they are only a subset of depth customers. This has led to some mis-conceptions which I'd like to clarify:

- primary-task oriented users often buy depth productivity products in addition to the software for their primary task.
- primary-task oriented users are only a subset of depth customers, and in fact, I believe they are a declining subset. Product line improvements such as consistent user interface, data exchange and integration, compound documents with objects integrated from more than one program, quick-switch or hot-link capability, and server-sharing technology will increase the usage of multiple depth products.

One other mis-conception, I'd like to clarify:

- "Power-users" are only a small subset of depth users. Many people think power users are the same as depth users. If that were true, we would have called them power users. Power users generally refers to those who use a significant percentage of all the advanced functionality, they are often interested in the subtleties of the product architectures, and they love to read Byte magazine. If depth users were the same as power users, the market would probably be dominated by breadth users, about 9 to 1. However, depth users dominate the overall market.

Depth users almost always have a few advanced features they require. These features vary a great deal from user to user which explains why you need depth products with a large number of features, even though an individual depth user may only use a few.

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