

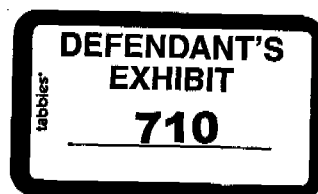
LOTUS DEVELOPMENT CORPORATION

1988 BUSINESS PLAN

880157-2

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IBM 7510272088

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Summary
Memorandum

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Summary Memorandum to the Board of Directors
November Planning Sessions
November 13, 1987

1987 Overview: Accomplishments and Lessons Learned

During 1987, the company accomplished a great deal. Most notably, we:

1. posted substantial growth in revenue and profitability, delivering on all financial and operating objectives
2. improved our position in the marketplace by better supporting end-using organizations and distribution channels; and through establishment of major partnerships in product development
3. dramatically improved our ability to service and support end-users on an efficient basis
4. established ourselves as the leader in two emerging markets: graphics software; and business and financial data delivery using CD-ROMs.
5. established a successful and profitable business in Japan
6. made great progress toward rationalizing our product strategy and development efforts
7. improved the quality and depth of the organization by bringing significant new talent into the organization

In the last 12 months we also learned a few more lessons from some mistakes that we hopefully have put behind us. In addition, we also have a few major areas that are now stressed and need direct attention.

Specifically, we need to spend more energy on building some of the company infrastructure (systems, training programs for managers, etc.) and improving some of our management processes (resource allocation, business planning, cross-product planning, etc.).

We also learned the lessons that come from a bit of overreaching and overextension; that more focus and completed work is required in a more complex and competitive environment.

However, when we look back at 1987 we can say with some certainty: *"This is as good as it gets."*

1988 Board Memo

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1987 Report Card

The following section represents a self-assessment on performance against the set of objectives we established for the company last year and which were presented to the Board last November.

1. 123 and its derivatives approach 50% of our business.
1-2-3 is still running above 50% because of a very strong year but we have made significant progress on revenue diversification this year.
2. We ship 123 Release 3 and Symphony III (1988) and deliver it to customers intelligently.
Release 3 is scheduled for shipment in Q1/Q2 1988 with Symphony III in 1989. More time required as a function of cross-product rationalization, particularly with 123IG and 123IM. We have been showing the product to customers since early November. Interim release of Symphony will ship in January.
3. APG (No Comment) family is ready for market and is structured in a manner that complements our installed base with clear and manageable growth paths for our users.
APG products will be released in late 1988 or early 1989 on OS/2 with the Presentation Manager from IBM which is scheduled for market release in October 1988.
4. Lotus is established as the winner in the graphics market.
Done. Reversed share positions with Ashton Tate and now outsell their graphics line 2-to-1.
5. The Beethoven (123/M) project is ready for market.
123IM will follow 123 Release 3 to market next year. Project is fully staffed and development is on schedule with IBM requirements.
6. We claim an early and defensible position in E-mail...
Disinvesting as a result of lack of acceptance; problems at MCI and investment required in the face of continuing uncertainty.
7. We make the product initiatives of 1986 successes in 1987.
Mixed results here. Hal and Manuscript proceeding forward. New release of Metro planned for Q1. Rethinking T-A-C strategy. Looking for buyer of Measure.
8. We put ISD on clear path to profitability.
Promising results with One Source; enhanced through acquisition of Datext. LINC (Signal) turns profitable in 1988.
9. Other service businesses, including ISD, start us toward 1990 goal of 20 to 25% recurring revenue business by 1990.
On target.

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10. International stays high growth, high contribution and is ready to pass \$100 million in 1988.

1988 target revenue is \$128 million.

11. We develop successful strategy for increasing our penetration in small business.

123 Small Business Kit and marketing program now in launch.

12. We limit Excel to less than 10% of 123 rates at year-end.

Microsoft late in shipping Excel. Expected this month.

13. Improve relationships with customers, channels, etc.

Dramatic improvements already. More to come.

14. We build a rolling backlog of 10 to 15% of next quarter sales.

Done. Now running at 20 to 25% at end of quarter.

15. We ship products right the first time, i.e. no bug fixes within 12 months of first shipment.

No bug problems in 1987.

16. We rationalize several development, documentation and QA processes.

In process and continuing. Major advances in 1987 in upfront international design.

17. We develop successful R&D efforts at corporate and operating levels.

In place. Too early for product "results."

18. We increase gross margin and deliver high pretax profitability; become leaders in cash management practices.

Done.

19. We systematically address human resource issues, e.g. improved hiring, career planning, performance evaluation etc.

Much accomplished. Much more required.

20. We get through 1987 without any substantial reorganizations.

Failed. Impossible objective in this environment.

1988 Objectives

Our strategy continues to be centered on *PC-driven software and services*. We continue to set high growth and profitability objectives while we continue to pay attention to the type of company we are building and what it means to work here.

If we fell short on one of our strategic objectives, it was our failure to demonstrate our ability to use our own technology as well as we should. As we said last year, it is strategic for us to be our own best example of increased individual and organizational productivity through personal computers. We have made some progress but it is, honestly, minimal. This needs to be and will

be a major focus for the next two years since it will provide us an opportunity to better understand the issues our customers are facing and then better demonstrate the value of this technology to our users.

1988 will be a year of increased uncertainty in a number of respects:

- market growth will be significantly slower
- the macroeconomic climate is extremely uncertain
- technological uncertainty continues in several important areas
- competition will be far more intense than ever before

We have built an operating plan that we think factors in this uncertainty --to the extent that is possible. (Separate downside scenario planning will take place next month).

The 1988 plan is, as in previous years, an aggressive one as we continue to set ambitious growth and profitability objectives for the company. Several factors, in addition to those identified above, are working against our efforts to sustain 1987 margin levels, e.g. dramatic increase in manufacturing complexity (number of products, upgrades, and disk formats); increased service and support costs in our industry; increased marketing and selling expenses in a more crowded and competitive environment, etc.

The objective of "making the numbers" in the financial plan is obvious. Our other critical operating objectives are set forth below:

1. Deliver 123 Release 3 and 123/M during the first half of 1988 while successfully defending our core market against Microsoft and others.
2. 123/G and Lotus DBMS are ready for shipment within two to three months after shipment of OS/2 and Presentation Manager by IBM.
3. Establish Agenda as new software "category" and provide quick turnaround, if appropriate, for second release and for Macintosh version.
4. Begin to establish "Notes" as a premier product entrant in "groupware."
5. Begin to gain position in Macintosh market with "Modern Jazz" and make inroads for 123/Mac for late 1988/early 1989. Develop 123/V for VAX environment for delivery in Q1/1989 and explore other hardware platforms for 123.
6. Maintain leadership in graphics market.
7. Continue to build a dominant position in CD-ROM data delivery to business markets.
8. Build/enhance several strategic relationships with hardware and software vendors --and industry-leading customers-- to assist market entry for Agenda, Notes, Lotus DBMS, etc.
9. Establish significant relationship with Dow Jones in news provision services to major

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customers using both "Princeton" and "Notes."

10. Improve our position in text-based products leveraging off unique technology in Agenda, Notes, Analyzer. Develop and begin to implement a word processing strategy for graphic user interfaces.

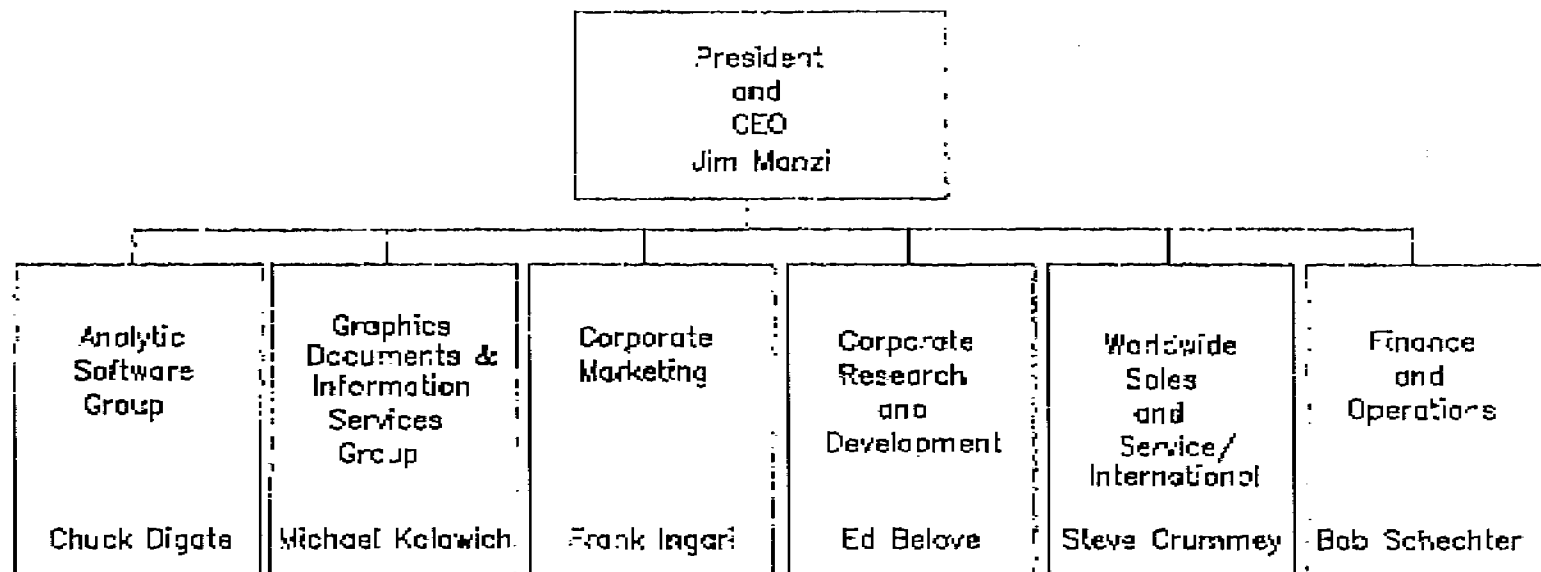
11. Improve our field coverage and effectiveness in retail, in Canada, in the government marketplace, and in international markets while building on the strong field sales and support base that is in place.

12. Retain and enhance leadership position in Japan.

13. Bring Modeler and Analyzer (if technically feasible) to a point where they are ready for market in the first half of 1989 and improve our development backlog in all groups with projects of equivalent potential.

14. Improve the systems and process infrastructure of the company, e.g. human resource practices, planning, resource allocation practices, upgrade product development management pool, etc.

Corporate Organization



Market & Technical
Environment

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Market and Technical Environment

Overview

Evolution of Personal Computing

1) Acceptance of IBM's new PS/2 standard will not forestall the emergence of 80386 machines produced by other vendors and marks the first of several evolutionary technology transitions during the next three years. Major areas of technological advance include operating system sophistication, graphic environments, CD-ROM and related high density storage and retrieval, increased price/performance of non-PC systems, and PC-related workgroup systems. Our large, corporate customers will expand their efforts to integrate PC-based computing into their overall computing environment. Their connectivity concerns will extend beyond data sharing into the sharing of both applications and processing, necessitating broader application-platform coverage. Smaller customers and individual end users will confront challenges of technological discontinuity heretofore reserved for mainframe-oriented I/S organizations.

Competitive Strategies

2) Most strategies appear to be built around specific product categories or market niches, rather than around building strong customer/channel partnerships to deal with the evolution of personal computing. Acquisitions by all but the largest competitors appear to represent "next step", product-extension activities, rather than "line of sight", technology-incorporation ventures.

Monitoring the Environment

3) Continued growth in market demand should accompany expected growth in personal computer shipments, though growth rates should moderate from the pace of 1987. As products are extended to other platforms, an additional source of demand is likely to emerge. Demand growth associated with several of these platforms is expected to exceed that of personal computers.

The Evolution of Personal Computing

High Performance Hardware

An overview of the more significant technologies and their potential impacts is included in the Hardware Technology Prospects table below.

Expenditures for each will be based upon the productivity of existing PC investments and organizational learning which enables the adoption of new technology. Each of these technologies is commercially available today, so that their economic adoption is likely to depend upon these constraints and traditional price/performance improvements.

Technology	Prospective Advance	Technology Impact	Market Interaction
Microprocessor	<ul style="list-style-type: none"> 32-bit machines with virtual memory (80386 & 68030) Custom microcode processors 	<ul style="list-style-type: none"> Minicomputer performance in desktop environment High-speed image processing Natural language/expert system interfaces Increased use of ROM-based software Segmentation of processor technology base 	<ul style="list-style-type: none"> Customized, integrated workstations More natural user environment Support of mixed operating/machine environments Hardware migration
Memory	<ul style="list-style-type: none"> 4Mb, high speed RAM Low-power, 256Kb CMOS 	<ul style="list-style-type: none"> Inexpensive, large memory systems Very high resolution graphics Rapid context switching Increased performance Better price/performance 	<ul style="list-style-type: none"> More sophisticated, complex applications Embedded training and support systems
Mass Storage	<ul style="list-style-type: none"> Battery CMOS for portable systems Optical technology (CD-ROM/WORM) Large, inexpensive magnetic disks 	<ul style="list-style-type: none"> Dispersed, distributed processing High volume, image/textual databases 	<ul style="list-style-type: none"> New applications (e.g. textual, image, voice)
Display	<ul style="list-style-type: none"> Megapixel, color CRT's Hardware-based manipulation Graphic objects Low-power, high-resolution portable displays 	<ul style="list-style-type: none"> Graphical user interfaces Increased importance of visual elements Increased used of animation Emergence of image representation standards 	<ul style="list-style-type: none"> Focus attention on both input and output interfaces Emergence of video / animation disciplines
Communications	<ul style="list-style-type: none"> Low cost, chip-based network interfaces Gateway technology between major network architectures 	<ul style="list-style-type: none"> Workgroup oriented systems Transparent, cooperative data processing 	<ul style="list-style-type: none"> Workgroup sharing - data, applications, and processing Locational independence for complex systems Move rapidly toward cooperative processing Increased demand for access to centralized data Service staff to support increased data and process sharing

In addition to the arrival of new technology, the advent of inexpensive, relatively high-performance PC's and peripherals will also complicate the marketplace. These machines should appeal to under-penetrated market segments and could exert downward pressure on software pricing. Most notable of these entries is Amstrad, which sells complete systems in Europe for under \$1000 and announced their entry into the US market this November.

New System Software

The good news about operating systems is that announcements of direction in 1987 by IBM and Microsoft have reduced some of the uncertainty present in last year's plan. The designation of Presentation Manager as the graphical interface standard and specifications for initial and extended versions of OS/2 have established the basic Applications Program Interfaces (API) necessary to begin development of next generation products. In addition, releases of virtual machine operating systems for the 80386 chip reached the market during the fourth quarter of 1987, extending the lifecycle of DOS 3.x based products in a multiprogramming environment. Combined with a new specification for Lotus/Intel/Microsoft extended memory, users of both high- and low-end machines should have most of their immediate needs answered in the context of DOS 3.x applications.

System	Major Features	Target FCS	Target Machine	Potential Impact
DOS 3.x	<ul style="list-style-type: none"> • Large application base • 640Kb in main memory, 32Mb of disk 	Available	• All Intel based CPUs	
Windows/386	<ul style="list-style-type: none"> • Multiprogramming • DOS application compatibility • DOS command compatibility 	'87 Q4	• 80386 - (virtual mode 8088's)	
OS/2, v1.0	<ul style="list-style-type: none"> • More addressable memory (16Mb) • Multi-tasking • DOS compatibility "box" 	Dec. 1987	<ul style="list-style-type: none"> • 80286/386 • PS/2 Models 50,60,80 	<ul style="list-style-type: none"> • Ability to move large, applications to PC • Interprocess data exchange • Necessity of multiple operating system support requirements (DOS & OS/2)
OS/2, v1.1 Presentation Manager (PM)	<ul style="list-style-type: none"> • Graphical user interface 	Oct. 1988	• Same as above	<ul style="list-style-type: none"> • Heightened visual interest • Heightened emphasis on graphical elements in all applications
OS/2, Extended Edition	<ul style="list-style-type: none"> • SQL database engine • Query Management Facility • Communications Manager 	July 1988 ; Nov. 1988 with PM	• PS/2 only	<ul style="list-style-type: none"> • Easier access to mainframe data • Complex and transaction related systems • Emergence of workgroup applications • Support more complex, transactional systems for multiple workgroups • Data resource management
Apple Multi-Finder	<ul style="list-style-type: none"> • Run multiple applications in Macintosh windows • Limited background processing capabilities 	Oct. 1987	Macintosh SE, Mac II	<ul style="list-style-type: none"> • Limited multi-tasking enhances desktop metaphor • Alternative to integrated product design

The bad news is that delays in the development of OS/2 and its associated technology have hampered the development of application programs which are likely to prove crucial to the rapid adoption of OS/2 as a new operating system standard. While it is unlikely that OS/2 will fail to gain acceptance as a standard, a long adoption cycle may result from inroads made by virtual machine systems. Gradual acceptance could also reduce the return on development investments based upon OS/2 and its successors. In any event, the major effects of OS/2 will not be felt until 1989, as OS/2 will not represent a significant fraction of operating environments until that time.

The acceptance of OS/2 will force developers and users to reprogram their products and applications, creating both costs and opportunities. As a result, this period of migration/change offers real opportunity for vendors to extend proprietary control over their products. For example, IBM's Extended Edition of OS/2 is designed to establish its proprietary rights beyond the hardware platform. Several vendors, notably Microsoft, Novell, and Relational Technology, have announced products that will compete with all or part of the Extended Edition of OS/2. In Microsoft's case, this is somewhat "competing with themselves" since IBM will be including portions of Microsoft's LAN Manager product in the Extended Edition, possibly in OS/2 v1.1 as well.

As the preceding table indicates, a variety of system software environments should be available by the end of 1988. Depending upon user/application needs, there may be several operating environments in a given organization. Again, a challenge/opportunity exists for vendors to support user/IS requirements in a multiple environment setting.

Workgroup Oriented Systems

Traditionally, the high cost of network technologies combined with the absence of applications designed or optimized for sharing among PC users minimized the development of PC based workgroup systems. The arrival of new technologies is likely to coincide with increased user readiness to establish systems to support workgroup activities. While existing "multi-user" applications enjoyed limited acceptance, given DOS limitations and lower performance technologies, the future demand for workgroup products could be a source of significant industry growth.

Workgroup oriented systems will also become a fundamental building block for the next generation of industry-specific, vertical market software products. The decision to build vertical market applications or support third party/VAR developers is an important choice for applications vendors. Building effective partnerships with customers will increasingly involve solving their actual business problems with technology.

Competitive Strategies

The accompanying table provides a summary of the strategic objectives, competitive strengths and weaknesses, key plans/programs, and competitive productivity trends for Lotus' major competitors. The analysis of competitive strengths focused upon (1) installed customer base, (2) support of third party activities, (3) pricing flexibility, (4) technological advantage, (5) distribution channels, and (6) strategic alliances.

Competitor	Strategic Objectives	Competitive Strengths	Major Product Areas	Key Plans/Programs
Microsoft	<ul style="list-style-type: none"> Multi-level System Software - "define the operating environment" Languages - "outfit the developers workbench" Applications - "automate the business office" New Technology - "capture the technical high ground" 	<ul style="list-style-type: none"> OS monopoly Large technical staff IBM relationship 3rd party ties to software developers 	System DOS, Windows/386, OS/2 LAN Manager, Xenix Language BASIC, FORTRAN COBOL, Pascal Assembler, C Applications Word Excel, Multiplan Works, Chart File, Project, Access Hardware Mouse Mach 20 (286) board	<ul style="list-style-type: none"> OS/2 and "flanking" system products Excel/Works for PCs Office productivity products (mail, W/P) Language SAA standards CD-ROM publishing and applications
Ashton-Tate	<ul style="list-style-type: none"> Full-line PC software supplier Premier DBMS developer / vendor for PCs 	<ul style="list-style-type: none"> DBMS installed base Distribution 3rd party aftermarket 	DBMS dBase II, III Plus RapidFile, dBase Mac Word Processing MultiMate MM Advantage II Multi-function Framework II Business Graphics Chart-Sign-Diagram-Map-Master	<ul style="list-style-type: none"> SQL compatible dBase dBase Macintosh Revive MultiMate Defend graphics vs. Lotus
Borland Inter.	<ul style="list-style-type: none"> International expansion, esp. Europe Diversify product base Languages Business productivity Reference products 	<ul style="list-style-type: none"> Direct marketing capabilities Low operating expenses Pricing flexibility 	Languages TurboPascal, Basic, C Eureka Business Productivity Reflex, SideKick SuperKey, Paradox Artificial Intelligence TurboProlog Electronic Reference TurboLightning	<ul style="list-style-type: none"> Productivity products Quattro Paradox Sprint Defend language products vs. Microsoft Move into higher price classes

Competitor	Strategic Objectives	Competitive Strengths	Major Product Areas	Key Plans/Programs
Oracle	<ul style="list-style-type: none"> • Provide predominant SQL compatible DBMS across all hardware platforms • Strengthen customer service, satisfaction • Build strong vertical market positions 	<ul style="list-style-type: none"> • Oldest, mid-range DBMS ('79) • Revenue leader in DBMS for minicomputers • Portable products link multiple environments • Aggressive direct sales organization 	<ul style="list-style-type: none"> • ORACLE DBMS 	<ul style="list-style-type: none"> • Development of GUI • Promote ORACLE-PC as alternative engine to OS/2 Data Manager • Maintain portability
Relational Technology	<ul style="list-style-type: none"> • Provide portable, SQL, distributed DBMS across all hardware platforms • Provide high performance DBMS solutions 	<ul style="list-style-type: none"> • Excellent distributed DBMS architecture and products • Solid experience in DEC VAX market • Product portability 	<ul style="list-style-type: none"> • INGRES DBMS 	<ul style="list-style-type: none"> • Aggressively maintain technology leadership (e.g. object oriented databases) • Joint development of GUI with Sun Microsystems • Enhance market position by alliances
Interleaf	<ul style="list-style-type: none"> • Provide corporate-wide solutions for electronic publishing • Build OEM and 3rd party relationships • Open European markets 	<ul style="list-style-type: none"> • Products address major Fortune 500 need (expense reduction) • Strong recognition as market leader • Products ported to major hardware platforms 	<ul style="list-style-type: none"> • Technical Publ. • Workstation Publ. • Interleaf Publisher (MAC II) 	<ul style="list-style-type: none"> • Macintosh products • Extending OEM network • Link to PC market • Access to word processing market • Defend vs. Aldus
Aldus	<ul style="list-style-type: none"> • Maintain leadership in low-end desktop publishing • Utilize OEMs for widespread distribution • Build marketing and support organizations 	<ul style="list-style-type: none"> • Market leader position and image • Strong OEM relationships 	<ul style="list-style-type: none"> • PageMaker 	<ul style="list-style-type: none"> • Defend against WP vendors' features • Increase OEM position • Extend customer support programs
MicroPro International	<ul style="list-style-type: none"> • Recover market share • Expand sales organization • Enter market for desktop publishing features • Focus on word processing 	<ul style="list-style-type: none"> • Large installed base 	<ul style="list-style-type: none"> • WordStar series 	<ul style="list-style-type: none"> • Desktop publishing entry • Expansion of sales and support staff
Computer Associates	<ul style="list-style-type: none"> • Leadership in the independent software industry • Complete integration of recent mergers • Move products onto DEC platforms 	<ul style="list-style-type: none"> • Diversified product line • High penetration of Fortune 500 accounts • Strong Information Center experience • Significant applications product experience 	<ul style="list-style-type: none"> • Systems UNICENTER • TOP SECRET • Visual TELLAGRAF • DISSPLA • Microcomputer SuperCalc 4, BPI • DBMS UNIVERSE • Financial Appl's. • Software Int. line of products 	<ul style="list-style-type: none"> • Complete acquisition integration • Move products into DEC environment • Expand international presence • Establish larger PC presence
Autodesk	<ul style="list-style-type: none"> • Maintain leadership in providing tools for drawing and analyzing objects • Establish AutoCAD as a corporate standard • Promote PC as standard CAD platform 	<ul style="list-style-type: none"> • Installed base • Market leadership and recognition • Dealership / distribution relationships • Third-party software links • Link to engineering education environment 	<ul style="list-style-type: none"> • AutoCAD • AutoSKETCH • AutoSHADE • AEC Mechanical / Architectural • CAD/camera 	<ul style="list-style-type: none"> • Increase global presence • Keep pace with 80386 and workstation technologies • Complete analytic modeling products • Expand 3rd party relationships

Monitoring the Environment

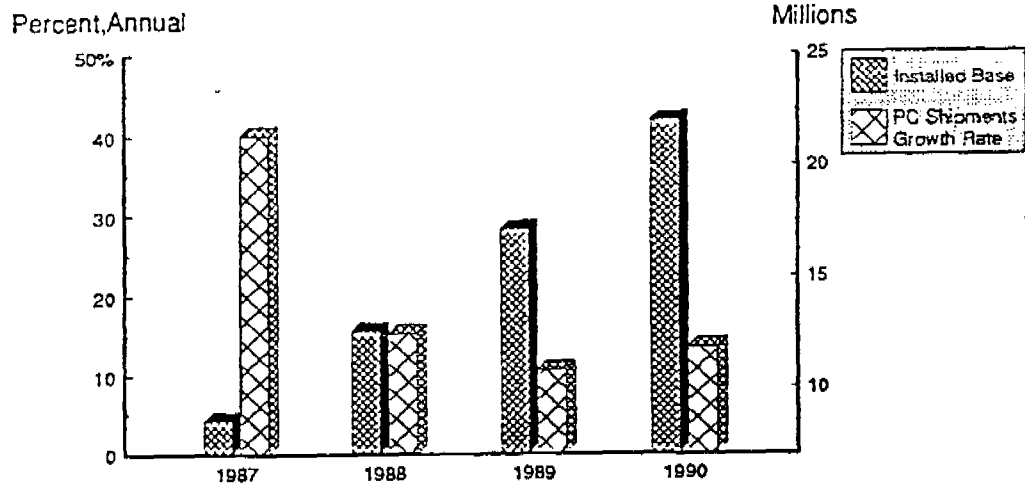
Hardware Growth and Market Penetration

Growth projections for the number of MS-DOS compatible machines reflect a slowdown from this year's record pace. The slowdown in domestic growth largely reflects rising market penetration, higher unit prices for high performance PS/2 and 80386 machines, and normal recovery after two years of strong growth. Even with significantly lower growth rates, the installed base of MS-DOS machines will represent roughly one machine for every 2.5 white collar workers by 1991. After accounting for shipments which replace existing PC's, shipments of PC's requiring new software are projected to grow 8% in 1988, 4% in 1989, and 13% in 1990, after surging 38% in 1987. Worldwide, lower penetration levels facilitate slightly higher growth. Shipments of PC's outside the U.S. increase 39% in 1988, 8% in 1989, and 22% in 1990 in current projections.

Other hardware platforms (mainframe, mid-range, and mini- computers) are forecast to reflect the successful introduction of new products by IBM and DEC. With the addition of new VAX models by DEC and the Model 9370 by IBM, shipments of mid-range processors should increase by more than 30% during 1988 and 1989. Similarly, new MicroVAX and S/3x machines are projected to fill a substantial market demand for small scale/departmental processing requirements. The dramatic growth in these platforms is balanced by their smaller base of unit shipments compared to PC's - roughly 1% for mid-range and 2% for minicomputers in 1990.

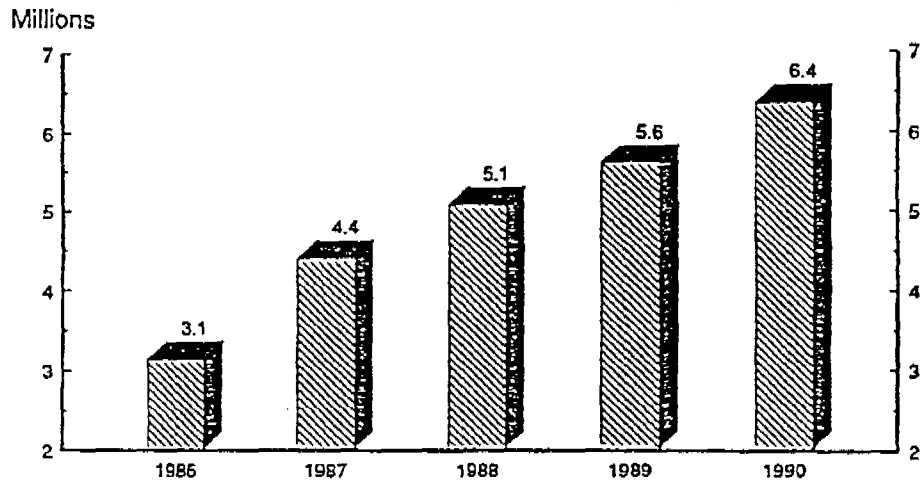
The projections illustrated in the following figures were completed prior to the mid-October decline in the stock market, so that the effects of any resulting economic slowdown have not been factored into these forecasts. Even without these effects, projected slower growth in PC shipments support the proposition that selling products to the installed base of PC's will be strategically important through 1990.

Domestic PC Growth Slows From '87 Pace...

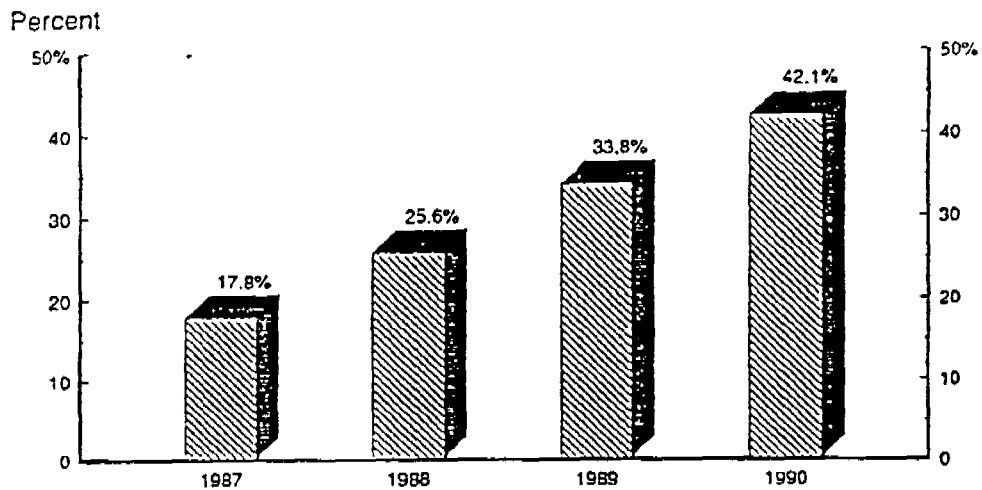


...But Installed Base Still Reaches 22MM

...As Shipments Reach 6 Million In 1990...

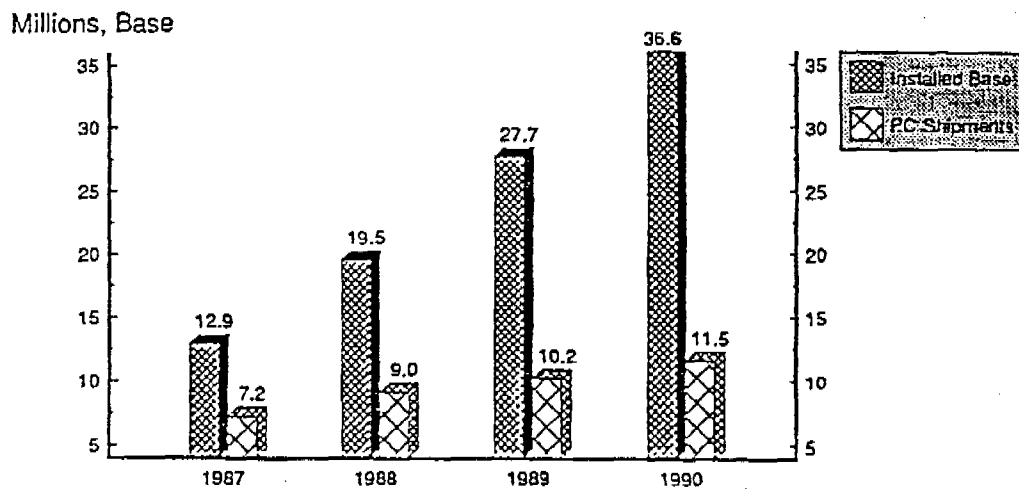


...Pushing Technology Penetration ...



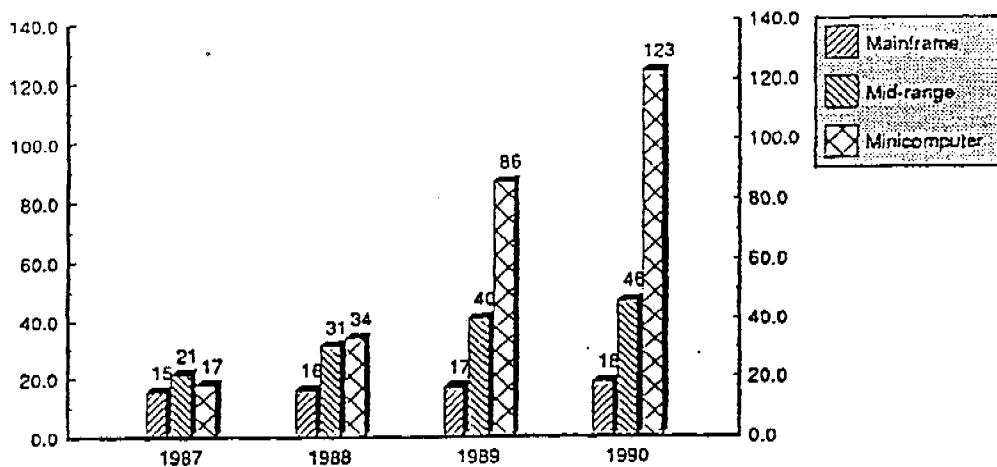
...To Roughly One PC For Every 2.5 Workers

Worldwide, PC Growth Is Slightly Greater...



...Reflecting Lower Market Penetration

IBM and DEC Products Fuel The Growth of Departmental/Workgroup Computing...



...Creating New Software Opportunities

Small Business Computing - An Important Opportunity

At the beginning of 1987, a survey of 8,000 establishments indicated that 41% of the planned purchases of IBM and compatible machines were accounted for by organizations with fewer than 50 employees. Thus, while larger organizations grapple with issues of investment payoff, smaller businesses continue to represent a high-growth segment of the PC market. However, this rapid growth does mask some significant differences in the acquisition and use of PC technology. Field interviews with owners and general managers underscore strong desires for support in solution design, flexible software with immediate productivity impact and room for growth, timely technical support, and a trustworthy vendor. While accounting, inventory, and word processing are the major application areas articulated by these businesses, their typical uses center around recordkeeping, simple financial analysis, invoicing, and customer contact.

In addition to different needs, small business decisionmakers characterize their acquisition of PC technology as an independent/isolated process. Unlike their larger counterparts, they rely much less on traditional media and retail information - much more on personal word-of-mouth - in deciding when and what to purchase. In this regard, the experience of other small businesses is deemed reliable, that of large companies largely irrelevant. Furthermore, traditional retail sales channels in our industry are considered an obstacle by most small business owners. Most take advantage of a thriving consulting underground to make purchase and system implementation decisions. A major challenge for vendors to this market segment is capture and lever the value-added "high ground" for which small businesses are clearly willing to pay.

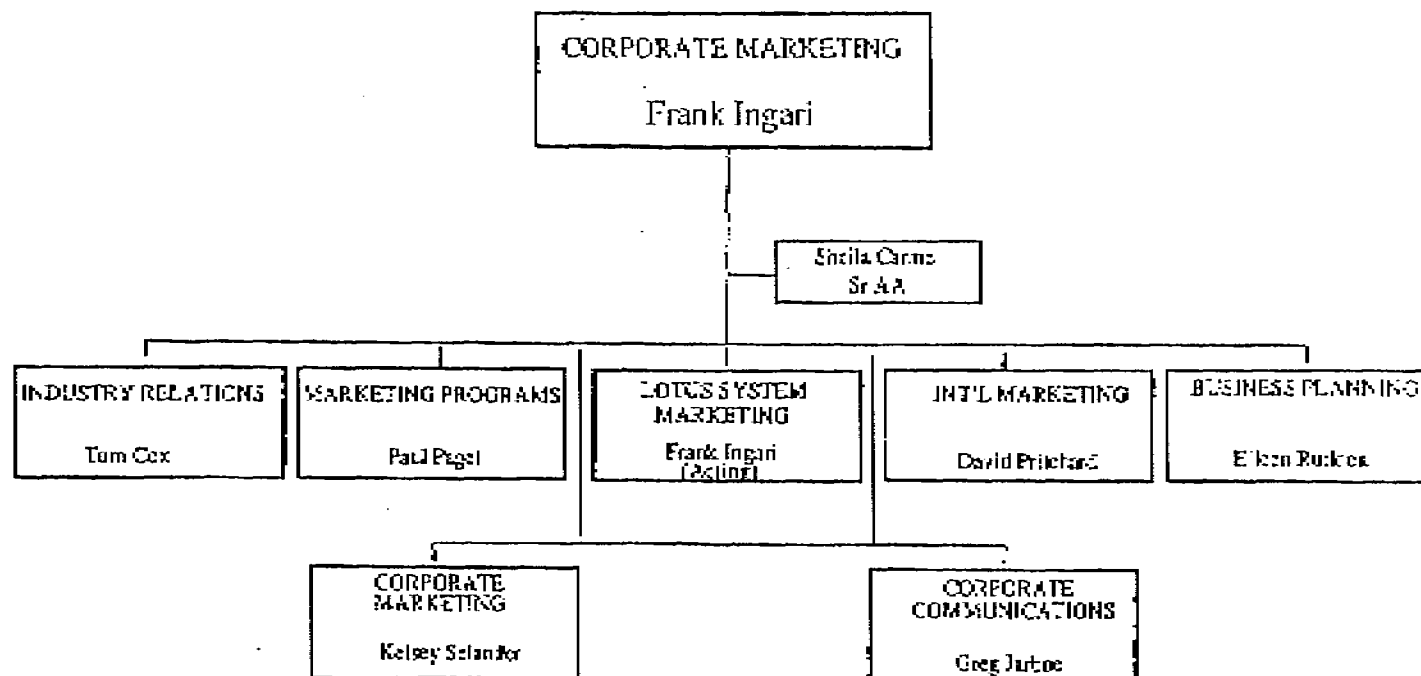
Viewed as a continuum of sizes and vertical markets, our most recent analyses reveal that the markets where Lotus' relative market share across all product categories is lowest and PC's have penetrated least are firms with fewer than 20 employees, wholesale and retail trade, personal services (real estate, auto dealers, lodging/entertainment), and governments (Federal, state, and local). Markets with high relative share and solid PC penetration include medium-sized firms with 50 to 250 employees, manufacturing, and financial services. The most competitive markets facing Lotus are the very largest (1000+ employees), the very smallest (fewer than 10 employees), and the service and trade industries.

	1986	1987	1988	1989	1990	Units
DOMESTIC PC's						
Installed Base - MS-DOS PC's	5.44	8.50	12.57	17.13	22.03	MM
< Annual Growth >		56.3%	47.9%	36.3%	28.6%	%
Total Shipments - MS-DOS PC's	3.14	4.40	5.07	5.60	6.35	MM
< Annual Growth >		40.1%	15.2%	10.5%	13.4%	%
U.S. White Collar Workforce	46.4	47.8	49.2	50.7	52.3	MM
< Annual Growth >		3.0%	2.9%	3.0%	3.1%	%
White Collar Penetration	11.7%	17.8%	25.6%	33.8%	42.1%	%
WORLDWIDE PC's						
Installed Base - MS-DOS PC's	7.77	12.88	19.54	27.67	36.55	MM
< Annual Growth >		65.8%	51.7%	41.6%	32.1%	%
Total Shipments - MS-DOS PC's	5.24	7.2	9.04	10.15	11.53	MM
< Annual Growth >		37.4%	25.5%	12.3%	13.6%	%
U.S. Shipment %		61.1%	56.1%	55.2%	55.1%	
POTENTIAL LOTUS PLATFORMS						
WORLDWIDE						
Mainframe (438x-3090) Shipments	14.1	15.2	15.7	16.5	18.2	K
< Annual Growth >		7.8%	3.3%	5.1%	10.3%	%
Mid-range (436x-937x) Shipments	17.1	21.1	30.7	40.2	46.2	K
< Annual Growth >		23.4%	45.5%	30.9%	14.9%	%
Minicomputer (S/3x-VAX) Shipments		17.4	33.5	85.8	122.7	K
< Annual Growth >			92.5%	156.1%	43.0%	%

Corporate
Marketing

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Corporate Marketing 1987 Performance Measures

I. Raise the overall marketing skill level and sophistication of the entire Lotus organization in a noticeable and measurable way (e.g. communications planning, direct marketing, general advertising, channel incentive planning). Be the most highly-regarded company in our industry when it comes to launching our new products and achieving the recognition and purchase intent they deserve. Prepare a "best-practices" manual on launching new products, and a set of decision rules which drive which of a broad range of marketing tactics to apply.

We have attacked the skills improvement challenge on multiple fronts. To guide product marketing managers, we published a "best-practices" analysis of five successful competitive product launches; more than 15 presentations of the material were given, resulting in some changes in the role of the product marketing manager and in communications programs across multiple divisions of the company. Corporate marketing is sponsoring a weekly assembly of product marketing managers for training and information exchange. Marketing plan templates and budget guideline tables have assisted in the preparation of effective and efficient market communications programs. Skills within the Corporate Communications department improved to the point that most PR work is now being performed in-house, rather than by an agency. Continued skills improvement will remain a priority for 1988.

II. Break new ground in successfully launching (or, depending on schedules, preparing to launch) "different" kinds of products (i.e. system-sold, group productivity products).

Lotus Week, with its new messages about a Lotus system and Lotus' commitment to workgroup productivity tools, was conceived and coordinated by Corporate Marketing; it has begun softening the ground for the top-down sell required for systems products. Market research on Agenda, Notes, Lotus/DBMS, and 1-2-3/G have been instrumental in setting marketing and positioning strategies for these new types of products. 1987 was a year of preparation for these products; 1988 will require follow-through to roll them out.

III. Extend our communications turnaround success to additional high-priority targets. With small-business targets in particular, develop a communications strategy that increases both primary demand for spreadsheets and specific demand for Lotus products.

Small business and house accounts were chosen as key communications targets for 1987. A small-business task force, initiated and supported by Corporate Marketing, used special-purpose research to design a product bundle and new advertising campaigns directed at Small Business during Q4/87 and Q1/88. Corporate Marketing conceived and executed a retail-targeted advertising campaign ("1-2-3 isn't just a

product; it's an entire industry") during Q2 and Q3/87, tied house accounts into a major cross-product insert campaign during Q3/87, and has supported targeted marketing programs with Egghead Software and 47th Street Computer, and established a manager to directly interface with and coordinate house account marketing programs.

IV. Achieve strong external understanding and buy-in to our corporate positioning ideal: to be the preferred vendor, the preferred investment, and the preferred employer in our industry.

The evidence is largely anecdotal, but we are receiving stronger, more positive feedback on our public image. By providing access to senior executives, a consistent story about our corporate direction, and active seeding programs for new software and announcements, we have continued to increase the proportion of positive press. More quantitative measures of our progress will be available when a corporate image survey is completed in early 1988.

V. Extend our design consistency program worldwide, with no problems of internationalization of our materials.

Domestically, the Lotus design group has won national acclaim for its packaging and collateral design programs. The Lotus Annual Report was designed completely within Lotus, and has won numerous awards as well as praise for its content. International Lotus has increasingly adopted the corporate design program, and internationalization problems have nearly disappeared.

VI. Achieve consistent excellence in our advertising relationships and programs; successful ramp-up of Direct Marketing effort in a way that supplements our dealer channel without unduly competing with them.

We dismissed our former advertising agency, Hill Holliday Connors Cosmopolos, in January; we named Leonard Monahan Saaybe shortly thereafter. LMS says we're their best client ever; we say they're our best agency. The relationship has yielded hard-hitting, benefit-oriented product advertising (e.g. "The biggest problem on Wall Street isn't inside information; it's getting information inside."); and bold corporate cross-product advertising worthy of a market leader (e.g. the 14-page fold-out insert in *Time* magazine, which was noticed by 69% of its readers -- 75% of whom folded it out!). Direct Marketing fell short of expectations: while it was a profitable program overall, it was not profitable on all products. A key reason for lack of success is that our direct mail programs compete at full-price with the widely-advertised, discounted prices of the retail channels. We have cut back on direct marketing programs, but continue the database development and name acquisition work in preparation for upgrade mailings during Q2/88.

VII. Improve our ability to forecast sales volumes for our products, and appropriate ramp-up characteristics.

To improve the basis for long-range forecasting, Corporate Marketing has: intensified and consolidated its collection of public research data on PC installed base and unit growth; built an on-line market research database which is available to managers and planners company-wide; worked with outside professionals to improve its sales forecasting model; applied the model in making product funding decisions (Modeler, Budgeter, and Executive Workstation project reviews). Short-range forecasting has been aided by improvements in the Retail Tracking study, a key source of information on how quickly Lotus and competitive products are moving through the retail channel.

VIII. Become a showcase business in our use of personal computers. Work with the MIS group and Corporate R&D on increasing personal computer use and productivity within the corporation.

Corporate Marketing sponsored MIS' participation in the Nolan Norton working group on "PC Payoff"; this increased the understanding of the true cost of PC's and how to derive best value from investment in them. Out of that work, and of several meetings with the company's PC Task Force, came a recommendation to use Corporate Marketing and two other departments as prototypes for applying the Nolan Norton group's recommendations. In Corporate Marketing, the hiring of a personal systems administrator during the summer has already yielded improvements in departmental database and communications systems which are enhancing in the department's productivity and work quality. This work will continue into 1988, at which time we will document and showcase the results to the rest of the company and, as appropriate, to outside customers.

Corporate Marketing

1988 Performance Measures

Effective the week of November 16, 1987, the Corporate Marketing organization is merged with the Software Products Group Marketing organization. At publication time for this document, the performance measures of the two groups had not yet been integrated.

The following performance objectives for 1988 apply particularly to organizations incorporated from SPG Marketing:

1. Establish review process for marketing plans and programs
2. Support launch of Lotus System under OS/2 (Q1 '89)
3. Supply innovative program direction leading to acceptance of Agenda in retail channel
4. Achieve consensus on definition of Lotus Desktop, Lotus Network Architecture
5. Reach agreement between IMCP/GDPD and APD on design/utilization of APD platform as architectural basis of Lotus "family" product design
6. Develop network pricing strategy useful for all Lotus PC products
7. Transition International Marketing into the line, retaining small corporate function only
8. Move ISV community to active 1-2-3 R3 support; foster rapid growth of ISV activity for Agenda
9. Sustain high level of manufacturer commitment to Lotus products through technology transitions
10. Provide programs and direct sales support to help effect dramatic improvement in retail channel relations

The following objectives apply particularly to the organizations incorporated from Corporate Marketing:

1. Consistently deliver on-time "grade-A" communications, reflecting Lotus corporate and product strategy, with measurably increased efficiency.
2. Extend the Lotus design consistency program beyond advertising and collateral to new media (Slides, audio-visual presentations), reinforcing Lotus and supplier adherence to these standards.
3. Deliver a coordinated corporate advertising and public relations campaign which sustains the market's interest level in Lotus (with a halo effect on 1-2-3) during the first half of 1988. Measure the success of the program by periodic product awareness tracking study as well as by specific advertising follow-up.
4. Make changes in product upgrade mailing programs which increase by 30% the yield of these mailings versus historic direct-mail upgrade programs at Lotus.

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5. Reduce by 20% the dollars spent per lead generated via trade shows and special events.
6. Approach agency independence in corporate communications.
7. Break new tactical ground in launching product solution sets, systems, and templates.
8. Substantially close the leadership perception gap versus Microsoft among journalists and other market opinion-leaders, as measured by the corporate image survey.

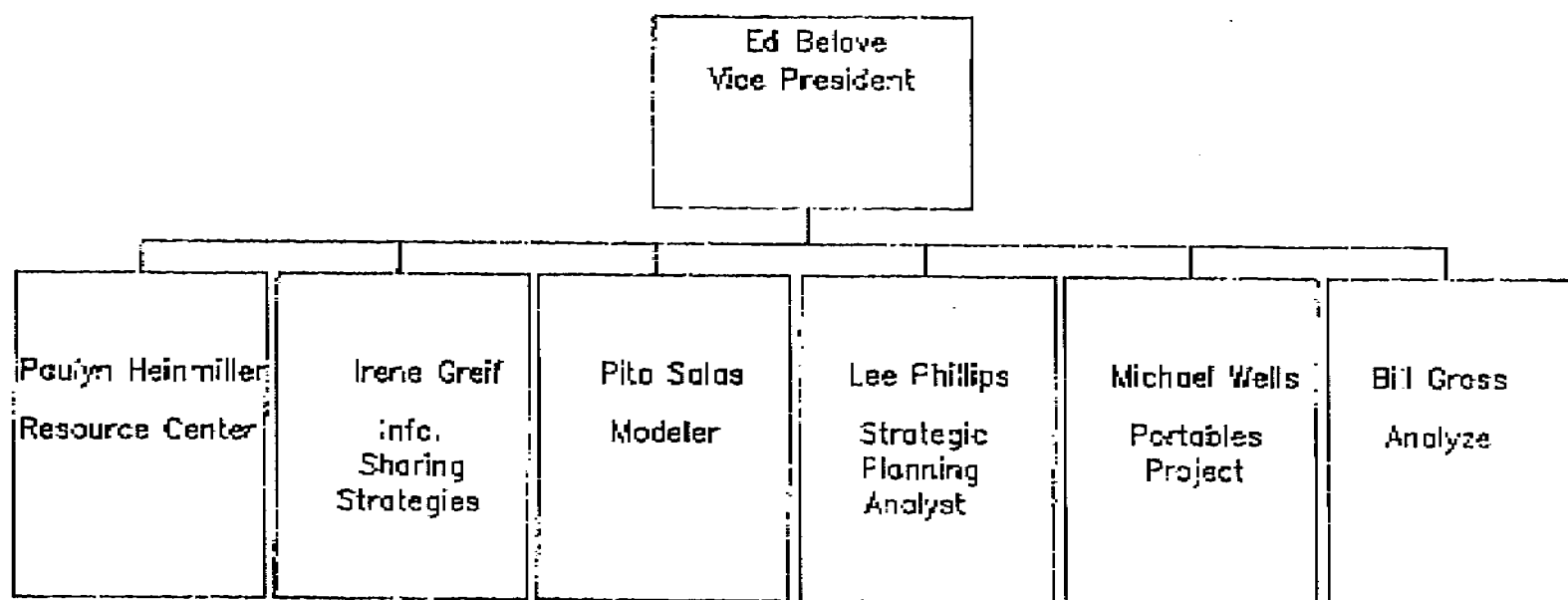
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Corporate R & D

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Corporate Research & Development



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Corporate Research and Development

Charter

The Corporate Research and Development Department is responsible for the overall technical direction for Lotus Development Corporation. With the divisionalization of the corporation and the organization into product line groups, the individual development groups have become focused on their specific product area. This created the need for a group that provides a corporate level view and presence for development and technology.

Objectives

- Provide a focal point for tracking and evaluation of advanced technology. This includes the base technologies for the industry (hardware platforms, operating systems, etc.) as well as more speculative technology that might be incorporated into future Lotus products (object oriented databases, multi-media filing systems, etc.). CRD coordinates with the development groups for dissemination of this information and to provide consulting on technology and product development.
- Ensure that the implications of key technology are well understood and integrated into divisional and corporate planning
- Work with Manufacturer Relations to manage and improve key relationships
- Provide support for evaluation of potential strategic partners, acquisitions and internal development projects
- Provide support for divisional and corporate management for product and strategic planning in support of the corporate planning and review process
- Development of non-divisional projects. These are projects that are either a) base technologies (e.g. networking) b) outside the business scope of the current product lines, c) highly speculative either in their product goals or direction, or d) technology based projects with no specific product direction. These projects are nurtured to the point where they can be integrated into the line product groups.
- Provide coordination and support of development activities throughout the company. This includes minimizing duplication of effort, sharing of information, availability of training and tools, and consulting on development, design and technology.
- Act as a corporate advocate for the Lotus development community. This includes working to enhance training, education, opportunities and support for developers throughout Lotus.
- Encourage technology exchange within the company

Key Measures for 1987 and results

1. Complete the Business Systems Project. This includes release of the first set of products and creation of a methodology and group structure for future development of the core spreadsheet products.

The Business System Project's product - 123 Release 3 - while not yet released, is well along. It is currently in test and will be released in the first half of 1988. The development of a methodology for spreadsheet development has been successful, as evidenced by the fact that core code written in BSP is the base of 12313 for DOS, OS/2, 1231M and 1231V. The Project and its associated products was transferred into SPG when that group was formed.

2. Ensure compatibility between the two new product lines from BSP and APG. The 123/3 and No Comment families are the two major product families for Lotus' future. It is imperative that appropriate levels of compatibility exist between these two families and between the current products and the new families.

During the last year, major steps were taken to bring the basic spreadsheet metaphor, programming languages and keyboard interfaces in line. This is a continuing effort as product development continues in both families and we continue to refine the definition of compatibility between them.

3. Successfully conclude negotiations for the Beethoven deal and initiate development activities.

The contract was signed on April 27th. Development efforts were started in parallel with the contract negotiations. The development continues in the Mainframe Software Division of SPG with a goal of shipping within 60 days after 12313.

4. Creation of the advanced technology group. We must establish a mix of innovative products and technology under investigation both internally and externally, and evolve the procedures for moving these products and technology into the product line organization.

Advanced technology investigations are proceeding in a number of areas. The process of moving products from CRD to the business units is still unique to each transition, and none has occurred without problems. With a better understanding of the process and a more stable organization for the business units, we hope to improve this process in the future.

5. Complete and ship Agenda.

The product was announced at Comdex on November 2. It will ship in Q1 88. Responsibility for the product is in the Communications Products Division of SPG.

6. Create a product plan for Notes and transfer it to a business unit.

Notes is now a part of the Communications Products Division of SPG. It is currently in test with a goal of shipping under OS/2 and Presentation Manager in late '88 or early '89.

7. Complete acquisition or development of a text indexing/retrieval system. Have the first products incorporating this system available for shipment in 1987.

Computer Access Corporation, developers of the Bluefish full text retrieval system, was acquired in March, 1987. The group and its technology are a part of the News and Full Text Group in ISD.

8. Complete design and prototype, and start making Modeler into a product. Create a product plan for it and transfer it to a business unit.

Modeler has been successfully prototyped and development is proceeding with a testable kernel planned for April 1988 leading to a completed product in early 1989. A product planner has just been hired. We are starting the transition into SPG.

9. Increase the use of advanced software engineering methodology in the development groups. Work with one group to establish a test bed and model for evaluation and use of new software development tools.

Some advances have been made here, with better tools for source control and product management being employed by a number of the development groups. We also are experimenting with the use of object oriented programming systems (C++) in the Modeler project. Due to the independence of the development groups, however, there is still no consistency across the company.

10. Work with the MIS group on increasing personal computer use and productivity within the corporation. The goal is to become a showcase business in our use of personal computers.

Very little advance was made in this area by the PC productivity task force. There is no overall plan and little organized help is available for less sophisticated users and new employees. Increased use of our network and our own products (most notably Notes and Express) has brought new applications highlighting the use of PC's in the company. However, this remains a fertile area for improvement.

Areas of investment for 1988

1. Modeler

WHAT IS IT	<ul style="list-style-type: none">• Application for working with and analyzing tables of numeric data• Marriage of database and spreadsheet technology in a single, simple to understand paradigm• Provides financial analysis with ease and power associated with fourth generation /database languages• Tables and Symbolic Formulas rather than Cells and Numeric Formulas• Powerful reporting, consolidation and graphing capabilities
GOALS FOR 1988	<ul style="list-style-type: none">• Complete development team -QA, Documentation, Market planner• Minimal functionality for application partner program in Q1• Complete functionality for test in Q3/Q4• Transition to correct business unit• Prepare for shipment in first half of 1989
RISKS	<ul style="list-style-type: none">• Hiring• Market Positioning• Platforms (DOS 3, OS/2, Presentation Manager)

POTENTIAL CUSTOMERS	<ul style="list-style-type: none"> • Power users or corporate developers whose applications exceed in complexity what can reasonably be done with a traditional spreadsheet • Users of mainframe and minicomputer financial modeling packages • Analysts with multi-dimensional databases requiring analytical capability and sophisticated report generation (e.g. packaged goods demographics)
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2. Analyst

WHAT IS IT	<ul style="list-style-type: none"> • Allows the PC user to access and organize textual information by providing the ability to search, scan, combine and understand large volumes of data • Reads various forms of data - WP documents, spreadsheets, Agenda database, etc. • Abstracts information from documents and allows the user to manipulate either the document or the outline • Powerful "fuzzy" search algorithm to locate relevant documents in priority order from a large textual database
GOALS FOR 1988	<ul style="list-style-type: none"> • Prototype in Q1 • Test phase in summer • Shipment goal - late '88/early '89

1988 Operating Plan

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RISKS	<ul style="list-style-type: none"> • Hiring • Technology risk - can this be done? • How to make the technology accessible and useful • Market direction/positioning - convincing customers of the applicability and usefulness of the product
POTENTIAL CUSTOMERS	<ul style="list-style-type: none"> • Managers, executives - to reduce the time spent reading, reviewing, summarizing and extracting the essence of information • Anyone who searches through quantities of data, news, facts, prices, etc. for meaningful relationships and trends • Workers who must sift through quantities of information, extract selected pieces and recombine for reports and presentations

3. Information Sharing Technology

AREAS OF INVESTIGATION	<ul style="list-style-type: none"> • Lotus Network Architecture • Textual data bases • Lotus filing system / document handler • Groupware Prototypes
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4. Other

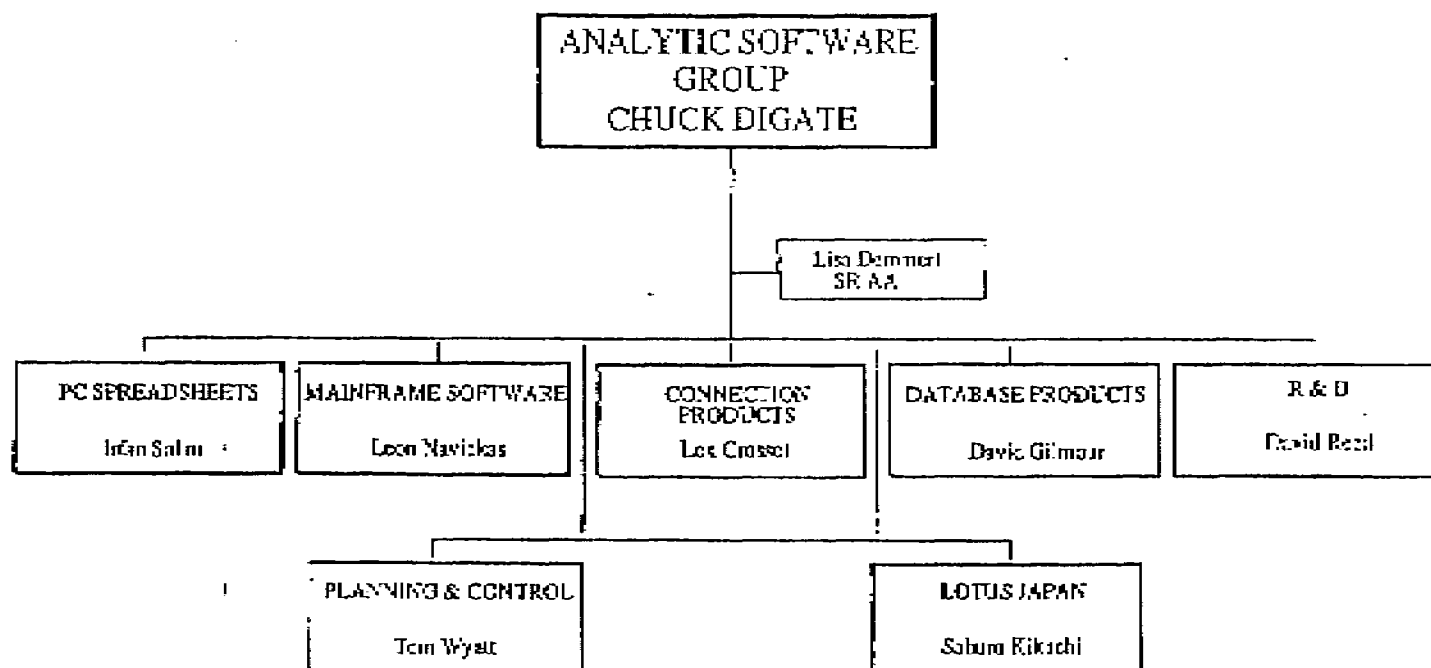
Portable Technology	<ul style="list-style-type: none">• Investigation into potential business opportunities made possible by the increasingly powerful technology available on small, hand held computers• Why do it? With 1-2-3, Agenda and E-Mail technology, we have an attractive and unique set of software to offer users of hand held computers• How to do it? Most likely in a strategic relationship with one or more hardware vendors (Casio, Citizen, HP, Panasonic, Sharp, Tandy, TI). However, if products gain independent distribution (e.g. Sinclair), we might just do a special version of existing or new products.• Decision point - June, 1988. By then we will have a plan for entering this market.
Other technology	<ul style="list-style-type: none">• Visual/Image databases• Human factors research - basic directions in underlying enabling technology as well as human interface design• Continuing investigations - X-Windows, Object oriented databases, etc.

1988 Principal Goals and Objectives

1. Bring Modeler to the launch phase and transition into a business unit.
2. Bring Analyze to release or launch phase and transition into a business unit.
3. Complete the portable computing investigation. Define and start follow up activities.
4. Complete the definition of LNA Phase I. Have the first products that use it in the test or launch phase. Have LNA Phase II in the prototype phase.
5. Start two new advanced product prototype projects.
6. Build a set of advanced development groups capable of generating and supporting investigation and prototyping activities that result in new product prototype projects.
7. Establish a business development group capable of supporting the strategic analysis and acquisition activity requirements of a growing corporation.
8. Increase the level of standardization and consistency in new products throughout the company. In the short term, areas for definition include installation and set-up, network access and the presentation manager desktop.

Two objectives carry over from last year:

9. Increase the use of advanced software engineering methodology in the development groups.
10. Work with the MIS group on increasing personal computer use and productivity within the corporation. The goal is to become a showcase business in our use of personal computers.



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1987 Summary-Software Products

1. Make the product sales mix as forecast:

Outstanding year in total revenue; spreadsheet and graphics products were well above plan with all other product lines below plan.

1987 was a record year for 1-2-3 shipments due to stronger than expected PC ship rates, spreadsheet buying patterns and Lotus' continued excellence and focus on spreadsheet marketing and sales both in the US and internationally, especially Japan. Symphony also did well primarily due to a strong promotion with Toshiba's lap-top PC product line.

Freelance Plus, released in late 1986, was established as the best selling presentation graphics product worldwide. It now commands a 2 to 1 lead over its closest competitor.

Low-end companion products such as Report Writer, Metro and Hal were below plan due to appropriately inadequate marketing investment and sales force attention although the products would make any almost any other PC software company ecstatic with their performance.

2. Keep on or under headcount projection:

Continued to invest upside profits in new business areas.

QA resources under-planned to support the number of major product initiatives undertaken; began ramping up staffing on new products in Information Management, Vax and Macintosh spreadsheet areas.

Made several key hires and built the strongest management team in the industry to help lead Lotus' Software Products Group into the next generation of technology and competition.

Stopped investing in three product lines and re-deployed the personnel to other more critical programs.

3. Approach breakeven in Japan:

Outstanding year; earned over \$1M operating profit on 2 times the revenue plan at \$11M. Shipped new release of 1-2-3 2J and a Japanese-language wordprocessing product.

Built sales and service infrastructure and attracted key developers to product organization.

4. Hold PC version of Excel under 10% of 1-2-3 sales:

Microsoft too late with first shipment in 1987 to make a difference to Lotus' market position; no apparent "freezing" of customer buying yet as a result of Excel's announcement or seeding programs.

Orchestrating a powerful tactical program to capture and retain Lotus' dealer and corporate customer mindshare for Lotus' products in the face of Excel's launch. Lotus needs to take its customers minds off PC spreadsheets for another 4 to 6 months until 1-2-3 Version 3 is almost ready to ship and 1-2-3/G is demonstrable.

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5. Make first two ESPD products successful, and decide next program:

Measure is a strong contender in its market; too small a market for Lotus to earn adequate profits. Looking for a buyer.

Manuscript also a strong contender in its market niche; well below plan due to overscoping size of niche and competitive reaction from major WP players. Repositioning product as a document publishing solution in conjunction with Lotus' successful graphics products.

Lotus is exiting the Engineering and Scientific market as a major vertical market opportunity for now.

6. Get mainframe project established and optimize T-A-C program:

1-2-3/M project started up, well-resourced, and on schedule for shipment just behind 1-2-3 Version 3.

New, corrected release of T-A-C was shipped a few months behind schedule; very well-received. Delay in building sales organization contributed to the revenue miss for the year. Product still needs work to reduce costs of marketing and installation in order to be a profitable business.

7. Ship 1-2-3 Version 3:

Team is in place, product is in final alpha test and customers and analysts are well-impressed with its design.

Software won't ship until 2Q88 due to need to ensure highest level of compatibility with future graphical-oriented spreadsheet (1-2-3/G), resource diversion to complete Symphony 2.0 and support for 1-2-3/M.

8. Have APD products ready to ship:

New Operating System/2 1.1 that these products are dependent on has slipped to 4Q88; Lotus is still planning to ship within 2 to 3 months of OS/2 availability.

Major and appropriate changes needed in user interface design, programming language definition and cell engine features for spreadsheet compatibility with 1-2-3 Version 3 have increased the schedule risk for 1-2-3/G.

Lotus/DBMS is proceeding well; only potential major risk to schedule is a strategic change in the back-end engine vendor this late in the development process.

9. Decide Word-processing program:

Lotus is giving Manuscript one more chance; even if the next version 2.0 is successful, Manuscript will never be Lotus' core WP entry.

The decision is to not build a next generation core WP in-house, but to either acquire it or build a strategic marketing alliance with another vendor.

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10. Enter the electronic mail business:

Very slow build for Lotus Express: prospects look dim as technology changes and partner (MCI) weakens. Disinvesting.

11. Decide another "vertical market" program:

Pursued and consummated the acquisition of Dattex for Lotus' Information Services Division.

Built a whole new division for the new class of applications software called Information Management products. Announced Agenda for early 1988 shipment. In serious discussions with IBM to OEM Notes.

Began an organization for building Vax-based and workstation-based products, starting with 1-2-3/V.

Built an Apple Macintosh product strategy.

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1988 Objectives

Ship 1-2-3 3.0 in 2Q and 1-2-3/M by September

First customer shipments of 1-2-3 3.0 are planned for early 2Q88; there is still an enormous amount of work to be done in the areas of final feature design, development effort, quality assurance and performance optimization. Competitive threats from Microsoft's Excel and Borland's Quatro products are causing us to both ensure that 1-2-3 3.0's feature set is truly competitive within the chosen technology platform's limits and to ship as soon as we can. These two goals are in conflict and thus will continue to require senior management judgement to make the appropriate tradeoffs between time and functionality.

Marketing and sales challenges for 1-2-3 3.0 have already begun; 1988 will be a watershed year for Lotus as we bridge a systems software-driven technology gap from character-based to graphical-based applications environments. 1-2-3 3.0 will be a major beam of that bridge for our customers; its availability under both DOS and OS/2 1.0, its backward compatibility with 1-2-3 2.0 as well as its very strong forward compatibility with Lotus' next generation 1-2-3/G will be unique and powerful advantages for Lotus.

However, there will be customers, particularly in smaller business that have little or no investment in PC or spreadsheet technology currently, who will migrate to early versions of graphical environments and purchase competitive products instead of 1-2-3 2.0 or 1-2-3 3.0. Two of Lotus' primary quantitative spreadsheet objectives for 1988 are to minimize this substitution effect to less than 10% of Lotus' current market share and to maximize the percentage of our installed 1-2-3 base who upgrade to 1-2-3 3.0. Those customers who stay with Lotus will have an advantage when 1-2-3/G is available under the standard graphical systems environment called OS/2 1.1: choice of character-based or graphical-based spreadsheets from the same vendor, resulting in applications compatibility, dramatically lower cost user transition and re-training and the opportunity to participate in the complete Family of next-generation software products from Lotus.

This Family will present a Desktop of tools tightly integrated in terms of data exchange and applications development (Lotus/DBMS, Notes and new versions of Lotus' presentation graphics products). Moreover, several key components of this Family will be ported over time to the Apple Macintosh and DEC environment, thus providing for true "inter-operability" in a customer's mixed computing environment. Versions of 1-2-3 for the Macintosh and for DEC's VAX class of minicomputers and workstations will be development in 1988 for 1Q89 shipment.

Those current customers who defect now or those new users who buy competitive spreadsheet products will miss the opportunity to participate in this exciting new personal computing and workstation world.

1-2-3/M for the IBM 370 platform is planned for shipment immediately after availability of 1-2-3 3.0 due to its dependence on code from that product. The tough issues for 1-2-3/M in 1988 are less technical in nature than for 1-2-3 3.0 and more related to managing the IBM marketing relationship. After ensuring that 1-2-3/M's performance is acceptable, the key problems to solve will be joint IBM and Lotus management of customer beta tests, joint sales calls and referral system management, technical support management and product positioning within IBM's software line. Beyond 1-2-3/M, 1988 will be a year of joint technical specification for the next 3 spreadsheet development projects under agreement between Lotus and IBM.

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Ensure Lotus/DBMS, 1-2-3/G and Notes are ready for 1Q89 FCS

All three of these key next generation products are tied to the availability of Operating System/2 1.1 with the Presentation Manager, a standard graphical operating environment with an announced availability of October, 1988. 1-2-3/G is the end goal for Lotus' spreadsheet transition from release 2.0 in the DOS, character-based world to a rich, multitasking, large memory graphical world as described above.

Lotus/DBMS is Lotus' high stakes, high reward entry in database software for work groups and individual PC users with requirements for high-end, yet familiar and low learning cost analytical tools and access to host databases through the industry-standard SQL protocol either in transactional mode or in analytic mode. These customer requirements can finally be met with the advent of the next generation of operating systems discussed above as well as the availability of high performance 80386 network servers and powerful, easier to use network software and communications technology. Both technical and marketing relationships with back-end database "engine" vendors such as IBM, GTI and RTI and possibly others over the first couple of years after first shipments will be crucial to Lotus' success in this market. Moreover, the very tight integration of Lotus' spreadsheets, particularly 1-2-3/G, with the front-end tools of Lotus/DBMS will be one of the primary advantages of Lotus' product entry.

Marketing issues are broad and new to Lotus in many ways in that there will be an entrenched competitor, Ashton-Tate, as well as innovative channel services and promotional packages required to sell network software to groups of people. Lotus can help ensure its marketing success by working closely with IBM or Compaq as part of their planned Extended Edition system software offerings late in 1988 and early 1989. These kinds of relationships as well as engine vendor relationships will require and deserve an enormous amount of senior management time and patience over the next 12 to 18 months.

Notes is Lotus' other major entry in the category of Information Management products alongside Lotus Agenda. It is workgroup-oriented and relies exclusively on a graphical environment. Although designed and developed primarily by Iris Corporation, a Lotus spin-off, Notes is being tuned and directed by Lotus. The same marketing issue that applies to Lotus/DBMS as a workgroup product applies even more so to Notes in that it can't be used at all in a standalone configuration; a network server must be purchased and the workstations configured into the network. Notes is a prime candidate for OEM marketing to dramatically reduce Lotus' risk of market entry; after the category is established and the marketing issues resolved, Lotus may then resume total, exclusive marketing control.

IBM is currently in negotiation with Lotus for such an OEM arrangement. Moreover, Sun Microsystems has also expressed a strong interest in a similar arrangement. The product has not been disclosed to other hardware vendor candidates at this time.

Retain leadership position in Graphics Products

Lotus will be attacked from multiple directions in its core graphics business, particularly with the advent of OS/2 1.1 with the Presentation Manager. There are three key programs that must be executed in 1988 to sustain Lotus' tremendous growth opportunity in Graphics Products:

1. Deliver the next version of Lotus' drawing product, Freelance, by early 3Q88. Freelance must be enhanced in its primary area of advantage, drawing, while continuing to add charting functionality.

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2. Make the new Graphwriter II product a corporate standard for automated charting. Joint marketing programs with key hardware vendors and 1-2-3 will be important elements in establishing a new category of "desktop charting".

3. Make significant progress in developing next generation graphics products based on the new operating system technology.

Ensure Lotus Agenda is the new software "hit" of the year

In addition to creating and "owning" a totally new category of Information Management applications products, Lotus Agenda will steal a substantial portion of the limelight in Lotus' reseller channels away from competitive spreadsheet products during 1988. Lotus Agenda will generate new revenue streams both for Lotus and for its resellers, thus ensuring that dealer time is spent on earning incremental profits and not on trying to fruitlessly switch customers to some ostensibly better "mouse trap".

By itself, Lotus Agenda represents a significant upside opportunity for Lotus in 1988; if we execute the final product design changes correctly, launch it creatively to our current user base as well as to non-spreadsheet users and continue to generate demand after the initial pipefill through strong promotion, relationships with lap-top computer vendors and third party applications support, it could do better than the \$5M revenue planned for 1988 by a factor of 2.

The future is quite clear: do a Macintosh version, support graphics and workgroups, enhance the concept to more truly serve as an information engine and tie into the Notes technology and News projects.

Retain and enhance leadership spreadsheet position in Japan

Achieve 18% operating profit and over \$18M revenue in 2nd full year of operations. The PC market is expected to grow in excess of 45% from 1987 to 1988; Lotus ought to be able to continue to capture spreadsheet market share from Microsoft's Multiplan product through a new version of 1-2-3, 2.1J, ported to 5 different hardware vendors' machines, as well as through a new Japanese wordprocessor add-in to 1-2-3, 4Word. Major increases in development expenditures in 1988 for a Japanese version of Lotus' best-selling presentation graphics product, Freelance, for delivery of 1-2-3 3J in 4Q88 and for start-up development efforts on a Japanese version of 1-2-3/M will serve to set the stage for a very competitive market position in 1989.

The sales and service infrastructure was built in 1987; 1988 will be a year for broadened coverage of the very large heterogeneous IBM and NEC dealer base. Moreover, during 1988 Lotus Japan will take the next step in covering the largest 150 corporate accounts through executive briefings and specialized support.

Depending on its success with 1-2-3 2.1J and its ability to deliver the new products planned for late 1988, Lotus Japan has an opportunity to do better than \$25M in revenue in 1988 and earn more than \$5M in operating profit.

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Evolve the Lotus Family concept

The notion of a suite of applications software products on a "Lotus Desktop" metaphor that are tightly integrated through high performance data bridges ("Promise") and high level programming language facilities ("LEAF") will provide a powerful competitive barrier for Lotus' product entries in the next generation of operating systems and environments. Ties to third party software products either loosely or tightly through marketing and development agreements will provide an opportunity for Lotus to set new standards for "look and feel", connectivity and programmability. Moreover, the network architectures that Lotus will employ in Lotus/DBMS and the next release of 1-2-3/G should also provide Lotus with some interesting advantages in terms of database tool standards and spreadsheet cell engine standards.

The Lotus Family concept will be extended across other hardware platforms as suggested above in order to "own" customers' end user workstations and provide for the highest level of "inter-operability".

Executing this concept is non-trivial; it requires massive buy-in across the Software Products Group and close cooperation among dozens of top-notch designers and system architects. The payoff could be enormous.

Develop and close several strategic relationships

As mentioned before, Lotus' DBMS entry will require several key partners to increase the probability of success. Notes ought to be OEMed; IBM is a strong potential candidate. LEDS, Lotus' Electronic Distribution System for downloading software and providing administrative assistance to large customers for tracking and controlling their software and hardware purchases, also will be best marketed through an OEM; again, IBM is a strong candidate.

Lotus Agenda is an ideal laptop computer application; a bundling arrangement with NEC or Toshiba should be in place for first customer shipment of the product. Such a marketing channel will assist in positioning the product and extending Lotus' sales force coverage of dealers and end users.

Another key relationship that must be established is in wordprocessing. Lotus needs a graphical wordprocessor as part of the Lotus Family in 1989. As discussed, this product will not be built internally; a partnership is required-whether as an acquisition of a Macintosh WP software company or as a development and marketing relationship wherein the partner is provided with the relevant specifications of the Lotus Desktop for portation of their product.

There are many others as well; the objective is to leverage third parties for marketing channel assistance and for technology relationships. Lotus can reduce its entry risks through such partnerships in many areas. The key is manage them properly and fairly.

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Make significant progress in evolving Lotus' connectivity solutions

An important competitive advantage for Lotus in its major corporate accounts is the ability to connect Lotus' spreadsheet and future database products to corporate information systems, allowing DP/MIS shops to build company-wide or departmental applications on top of Lotus products. Lotus' solution today is T-A-C, The Application Connection. This product has been installed in 30 accounts and is well-received. However, it is expensive to sell and support and headcount intensive for a relatively small market long term. The product is being re-designed for 2Q88 release to reduce the cost of marketing and support. Even if success is achieved in marketing cost reduction, this product will never be a large enough business for Lotus to receive the necessary management attention and resources.

If an attractive buyer for T-A-C appeared, Lotus would sell the product yet try to retain a marketing relationship.

Regardless of the short to medium term disposition of T-A-C, Lotus has proprietary connectivity technology in "Promise". This technology will be evolved into a series of tool kits for Lotus to license to customers and third party host software vendors to connect their applications to Lotus' products, both PC-based and host-based. Lotus has an exciting opportunity to create a standard connectivity methodology.

Encourage a strong competitive spirit

Lotus' division and product line management need to focus their attention on success in a competitive environment. Lotus has historically either dominated its markets such as spreadsheets or integrated software or has participated in a small niche where it could readily achieve a majority position partly through its ties to its market leading spreadsheet products. Going forward, Lotus is no longer entering niche markets, but either large markets with entrenched competitors ala database software or creating new markets ala information management where an initial success by Lotus will breed fierce competition very rapidly.

This environment requires stronger, more experienced managers in some cases and more flexibility in dealings with customers and potential partners in other cases. Lotus will not be able to rely on its spreadsheet prowess alone any longer; Lotus will need to enhance its marketing skillset across the board and ensure that its product organizations are properly incented and measured in terms of time to market, product and communications quality and product design.

Achieve revenue and profit contribution plan

Software Products plans to deliver \$577M of revenue in 1988, up \$90M or 31% from 1987 and profit contribution of \$202M, up \$45M or 28% from 1987. The slight margin degradation is more than accounted for by a decrease in gross margin resulting from increased initial unit costs for the new releases of 1-2-3 and Symphony and the heavy mix of lower margin upgrades. Operating expenses are actually down as a percentage of revenue from year to year even with heavy investments in launching 10 new products and completing the first three products in Lotus' next generation of applications due for shipment in early 1989.

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The key areas of revenue increase are in 1-2-3 and upgrade business resulting from the introduction of Symphony 2.0 in 1Q and 1-2-3 3.0 in 2Q. 1-2-3 is planned to hold market share at 900ku in the US, tracking expected PC shipment growth of 15%. Spreadsheet upgrade revenue is planned at \$40M in total, up \$31M from 1987 levels. The key risks are in total shipment volume of 1-2-3 due to both economic and competitive factors and in upgrade volume due to economic and customer hesitation factors. The downside risk is probably no worse than 15% in 1-2-3 volume and 150ku of upgrades for a total revenue risk of \$50M.

Graphics and Document Products revenues are planned to grow by 75% to \$41M in 1988. Continued market strength of Freelance, the new version of Manuscript, and the launching of Graphwriter II and Modern Jazz should easily drive this revenue growth. Moreover, 1988 will be the first year for significant profit contribution by this operation: \$10M vs. less than a million dollars in 1987. There should only be upside opportunities in this business unit. If Graphwriter II takes off as the new charting standard, Modern Jazz is successfully positioned by Lotus and Apple as a strong competitor to MacWorks and Manuscript 2.0 is as good as customers are now saying it is, the revenue upside here could be around \$9M.

Mainframe software revenue is primarily driven by shipments of 1-2-3/M by IBM, at \$9M vs. less \$1M in 1987. Assuming first shipments by early 3Q and well-coordinated marketing by Lotus and IBM, there is a strong upside potential of up to \$10M in 1988.

The Information Management and Communications Division revenue plan of \$7M is primarily driven by Lotus Agenda in 1988. If it becomes the "hit" it could be, there may be an additional \$5M revenue opportunity in 1988.

Finally, even though Lotus Japan is planned at \$18M, it ought to be able to generate an additional \$7M in 1988 assuming the new release of 1-2-3 J continues to be well-received.

In summary, there is up to \$50M downside risk in Lotus' US spreadsheet business in 1988 partially offset by up to \$31M in upside opportunities in other areas. Software Products' year 1988 is aggressive, but achievable.

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KEY MEASURES FOR 1988
ANALYTIC SOFTWARE GROUP

Objective	% Weighting
1. Achieve revenue and profit contribution plan	40%
2. Ship 1-2-3 3.0 in 2Q and 1-2-3/M by September	10%
3. Ensure Lotus/DBMS, 1-2-3/G and Notes are ready for 1Q89 FCS	10%
4. Retain Leadership position in Graphics Products	10%
5. Ensure Agenda is the new software "hit" of the year	5%
6. Retain and enhance leadership spreadsheet position in Japan	5%
7. Evolve the Lotus Family concept	5%
8. Develop and close several strategic relationships	5%
9. Make significant progress in evolving Lotus' connectivity solutions	5%
10. Encourage a strong competitive spirit for Lotus' product organizations	5%

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PC SPREADSHEETS

CHARTER

1988 Business Plan

- PC Spreadsheets charter is to maintain and potentially grow Lotus's market share and profitability in the PC spreadsheet market, with advances in both character based and GUI spreadsheets across multiple hardware platforms. To do so not only through technological advances but by developing business practices coincident with the complexities of the marketplace and the broad customer needs.
- To assist the Lotus installed base through the technology transition.
- To ensure a successful Lotus entry in the DBMS market .
- To participate/lead in cross divisional development efforts e.g. LEAF, Lotus GUI platform etc.

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