Visio Corporation

Business Plan

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Visio Corporation
1601 Fifth Avenue
Suite 800
Seattle, WA 98101
(206) 467-6723
(206) 467-7227 FAX

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Executive Summary

Overview

Visio Corporation develops and markets graphics software products for personal computers. Our goal is to produce graphics software that brings drawing software to the mainstream personal computer user.

Visio's first product is a drawing program aimed at the general computer user who needs diagrams to accompany his text documents, but does not have the skills to produce them using today's graphics programs. The increasing use of computers and printers capable of mixing text with high-quality graphics provides a market for a tool that allows users to produce graphics themselves, rather that relying on graphics specialists. To reach the mainstream market we are targeting, our products must be genuinely easy to learn and use—as natural and intuitive as using a pencil and paper.

Founders

Visio was founded in September 1990 by Jeremy Jaech, Ted Johnson and Dave Walter, former Aldus founders and technical leaders. All three were key developers of PageMaker, Aldus' well-known desktop publishing software. Jaech, Johnson and Walter combine strengths in software development, product marketing, and management.

The development team has a total of over 30 years of Windows development experience, with a proven track record of delivering successful commercial applications. Members of the Visio team have contributed to the following Windows-based products: Aldus PageMaker 1.0, Aldus PageMaker 3.0, Aldus PageMaker 4.0, Aldus Persuasion 2.0, and Hewlett-Packard NewWave.

Milestones

The first six months of the company's operation were spent prototyping the underlying technologies, creating a product specification, and building the development team. Subsequently, Visio completed its first round of funding in April 1991 and commenced product development in May. The company hopes to finalize its second round in March 1992. Our plan is to launch our first product in September 1992.

Objective

Visio's objective is to bring graphics software power to a mainstream audience. To do so, we must offer drawing and diagramming capabilities that are easy to use yet solve a wide range of specific business drawing problems. Research has shown that these are mainstream users' primary unmet graphics requirements.

> **"**
>
> **... drawing products represent the greatest opportunity for growth ... with sales to closely track sales of Windows itself."[1]**

Long term, Visio's goal is to be recognized as the leading supplier of Windows graphics software. We expect our core products to be mainstream business applications, eventually issued as a matter of course by IS or procurement departments to new employees.

The Customer

Visio's target customers are the so-called "knowledge workers", users who are accustomed to using a word processor and a spreadsheet as a means of accomplishing their business tasks. These users need diagrams to illustrate processes, concepts and relationships, and need to include them in memos, reports and proposals.

Our users do not specialize in graphics or want to spend the required time to learn existing packages. But they are tasked to find the most efficient way to combine textual and graphical information. The drawings and diagrams they need include flow charts, network layout diagrams, space plans, block diagrams, and bubble diagrams.

The Product

Visio's first product, code-named Mainline™, is designed to quickly and simply solve users' specific drawing needs. With it, users "drag and drop" symbols from stencils of parametrically-defined shapes to create drawings, diagrams,

[1] Graphics Powers, User Power, Alex, Brown & Sons investment research report, October 15, 1991, page 2.

and sketches. Popular shape stencils are provided by Visio, but users can easily create stencils of their own shapes or modify those provided with the product.

Mainline gives users fewer, but more powerful tools—accomplished through gesture reconnection. This results in a program that is easier to learn and remember how to use. This emphasis on reducing modalities significantly differentiates Mainline from the competitive field where more complexity is considered more powerful.

Mainline drawings are incorporated into word-processed documents via Microsoft Windows' Object Linking and Embedding (OLE) protocol. This standard date exchange mechanism provides integration with most major Windows applications.

Mainline will initially run under Microsoft Windows 3.1. Being designed from the ground up for the Windows 3.x environment, its modern, object-oriented design fully exploits the power of Windows 3.1. Our development team's 30+ years of experience developing applications for Microsoft Windows places Visio in a unique position to exploit the explosive growth in the Windows applications market.

The Market

Visio is targeting the market consisting of the users of Windows-based word processors such as Microsoft Word for Windows, WordPerfect for Windows and Lotus Ami Professional. As these products become more widely used and eventually displace their DOS counterparts, a new market is created for high-quality, easy-to-use, general-purpose, Windows-based drawing programs which work well with Windows-based word processors.

Before the use of drawings in business documents can become widespread, creating those drawings must be made easier. Today's solutions range from complex illustration program such as CorelDRAW! or Micrografx Designer, to drafting programs such as Generic CADD or AutoCAD, to new low-end products, which are no easier to use than their high-end cousins.

Most people will not take the time and effort required to use an illustration of CAD program. Even if one takes the time to learn one of these applications, relatively few will use the program regularly enough to remember how to use it effectively.

While users may consider purchasing the new low-end drawing products such as Micrografx's Windows Draw, few will be fooled by these products' over hyped marketing claims. The reality is that these low-end products are neither easy-to-use, nor designed with business computer users' drawing needs in mind.

Marketing and Sales

Visio's marketing efforts will revolve around creating a new product category. Although there are several high-end illustration programs in the marketplace, including CorelDRAW!, Micrografx Designer, Aldus FreeHand, Harvard Draw and Adobe Illustrator, Mainline appeals to different user. Mainline's user is not the trained graphics specialist who spends many hours a day using an illustration program. Our customers are the engineers, scientists, or business professionals who use graphics to communicate an idea, a process, or a conceptual relationship.

Mainline nicely complements word processing, presentation, and desktop publishing products in that users of these products want to incorporate drawings and diagrams into their documents, yet none of these products let their users produce these drawings quickly an easily. Mainline will provide an easy-to-use fool for creating simple drawings typically used in these kinds of documents. Thus, we have an opportunity to co-market Mainline with vendors of other Windows products. In terms of partnerships, there are opportunities for licensing arrangements with Windows for Pen OEMs and hardware manufacturers. Channel partners also can offer promising marketing opportunities.

Strong programmatic emphasis will be given to public relations, joint user seminars, user group relations and direct marketing.

Mainline will list at $395 and should be available a street price around $250. We plan to distribute the product to retail dealers through distributors and through mail order. We will provide technical support for the product with our own staff, both via telephone and electronic mail.

Financial

Jaech and Johnson provided an initial seed investment of $120,000 to fund early company operations. Visio raised an additional $800,000 in April 1991 to fund development of the product to a demonstrable state, to recruit a vice president of marketing, and to develop a marketing plan. $700,000 of that round came from Technology Venture Investors of Menlo Park, California with the balance from two private investors. Additionally, founders Jaech, Johnson and Walter are working without salary until September 1992 (Jaech and Johnson) or April 1992 (Walter).

Business Opportunities

The Emerging Windows Market

The personal computer software market is at the threshold of a major change. The revolution is the wide business acceptance of a standardized graphical user interface-Microsoft Windows 3.0.

Windows 3.0 broke DOS's 640K memory barrier and unleashed the power of Intel's 386 and 386SX processors. It effectively brought MS-DOS computing up to the standard, which had been set by the Apple Macintosh years before. Windows 3.0 has been a resounding success for Microsoft. Sales of Windows exceeded 9 million copies by the end of calendar year 1991.

Missing from Windows 3.0 success story was the availability of high-quality, high-function applications. These applications are just now coming to market. The release of products such as WordPerfect for Windows, Lotus 1-2-3 for Windows, and Harvard Graphics for Window legitimizes Windows use in many corporate environments. We are just now beginning to see the broad-based switch from DOS to Microsoft Windows within business. We believe that within three years virtually all new DOS machines will be delivered with Windows installed.

The benefits Windows delivers go beyond simply icons and pretty graphics. By standardizing the common commands between applications, users can learn and use more applications more quickly. By providing standard ways to cut and paste data between applications, users can integrate software from different vendors more easily. By providing a richer base on which to build applications, software developers can provide more functionality to their users.

Visio was formed against this backdrop. We believe that the widespread acceptance of Microsoft Windows as the corporate computing standard will create a market for mainstream graphics applications. We intend to be the leading company in this new market.

The Company

Visio Corporation develops and markets graphics software products for personal computers. Our customer is the general computer user who feels more comfortable in a spreadsheet or word processing program than with a drawing program.

Our first product is a general drawing program, code-named Mainline™, aimed at the user who needs conceptual illustrations to accompany his text documents, but does not have the skills or the time to produce them using the drawing programs now on the market. The increasing use of computers and printers capable of mixing text with high-quality graphics opens the door for a tool that allows users to produce these graphics designer, problem-oriented drawing software can move conceptual diagramming form the artist or draftsman to the author.

Visio products will initially run under Microsoft Windows 3.1. We believe that Windows will be the predominant graphical user interface of the '90's. We will design our products to exploit the capabilities of Windows NT and Windows for Pen Computing as well as Windows 3.1. Our previous experience developing applications for Windows and the Apple Macintosh places us in an advantageous position to consider Macintosh development as well.

We expect Mainline to be completed and ready to ship in the fall of 1992 and spend the summer developing templates for specific drawing types debugging the product, and finishing the supporting documentation and packaging.

The Customer

The Mainline customer is the general computer user who is accustomed to using a word processor and a spreadsheet - the so-called "knowledge worker". He writes memos and reports as a part of his job. Our customer often describes processes, concepts, and relationships in his memos and reports. He has a need for simple diagrams to illustrate these abstract ideas, but describes them in words rather than take the time and effort required to learn and use today's drawing programs.

Our target customer is not a trained graphics specialist - he does not consider graphics part of his job. The Mainline target customer does not think the current drawing products meet his needs; he's looking for a better, more appropriate solution.

The initial adopters of a new software product make their decisions to buy the product based on a belief that it will make their job easier or their work product better. Professionals who use Mainline in conjunction with their word processor and spreadsheet can produce better work. Users can substantially improve the readability of reports and memos by including diagrams of processes, concepts, and relationships rather than writing several paragraphs about them. Much as desktop publishing raised the ante for

proposals and reports, early users of Mainline will raise the expectations of the readers of reports and memos to include more diagrams and less verbiage.

The greatest sales obstacle to overcome is the belief of potential customers that they cannot diagram their ideas efficiently or effectively using a software application. The overwhelming majority of business professionals do not believe that they can draw. Given the current crop of software products on the market, they are right.

The key to success in this market will be targeting customers who have a compelling reason to buy. Mainline must be sufficiently rich in the kinds of drawings it supports to make potential customers see that they can use it often, and it must be sufficiently easy to use that potential customers believe that they will be able to use it without special training.

Our Competition

Our competitors include the graphic arts illustration products, low cost "junior" versions of the graphics arts products and their imitators, specialty diagramming products that can be used to produce only one kind of drawing, an "free" drawing capabilities included with several Windows products.

The graphics arts illustrations, products currently sold into or anticipated for the Windows market are geared for specialist user. These products include CorelDRAW!, Micrografx Designer, Aldus FreeHand, Adobe Illustrator and Harvard Draw, Visio products will not compete directly against these products, but may take mainstream users away from these specialist products. Visio products will bring graphics power to the general computer user, some of whom may be using specialist products today simply because they need to create graphics and these are the only products that can do so on the market today. However, the majority of Windows-based word processor users don't use drawing software today because they rightly believe that the products available now are too difficult for them to use.

Recently we have seen the introduction of low-cost products—such as Micrografx Windows Draw—that claim to be aimed at the broader business market. However, a careful look at the products features show that they are simply stripped-down versions of graphic arts illustration packages. While these products deliver some impressive high-end features at a low cost they do so using traditional graphic-arts metaphors and operating procedures. They do not deliver new functionality targeted to business users. We believe few users will find these products easier to use than high-end products such as Micrografx Designer, Aldus FreeHand, or CorelDRAW!. As such, we believe these products will appeal primarily to cost-sensitive desktop publishers and graphic artists.

Mainline differs form these products by offering a new and unique approach to drawing—an approach that is specially designed and implemented with the mainstream business user in mind. This unique approach greatly enhances ease-of-use. Mainline cannot be characterized as a "high-end" or "low-end" product; it has features not found in any current drawing offerings. Additionally, Mainline borrows concepts from product categories as diverse as CAD, word processing, spreadsheets, and desktop publishing when these concepts are appropriate for our target user.

We believe Mainline is the first Windows-based drawing program to be completely designed and implemented with an end-user problem focus. The result is a product that uniquely solves the problem of communicating graphically in printed documents.

Future Potential

Mainline will open a new market which will provide other new business opportunities to Visio. We believe that we can either repackage the technology for specific drawing types, or sell add-on products to our existing customer base for new kinds of drawings.

We will also develop follow-on releases of Mainline to cover a broader range of drawing types than can be handled by a general drawing tool. We believe that the constraint management technology used in Mainline can be applied to other application areas. However, our intention is to remain focused on general drawing, perhaps with a single application, as long as we can continue to make strong inroads into that market.

Product Description

Mainline defines business drawing as "drawing for people who don't draw but have a need to communicate with drawings". It's not that these users can't draw, but that drawing is not their job. For these users, drawing simply another way of communicating information. Mainline's target users are comfortable communicating with Windows-based word processors but uncomfortable with drawing programs.

What makes business drawing functionally different that the drawing offered by products such as CorelDRAW! and Micrografx Designer? *It is a focus on solving business users' drawing problems.* Most drawing products today fundamentally offer the user what is easy to implement on the underlying graphics imaging model. MacDraw offered what was easy to implement on Quickdraw. Adobe Illustrator and Aldus FreeHand offer what is easy to implement on PostScript. Likewise, CorelDRAW! and Micrografx Designer are PostScript-based but have also had to deal with the peculiarities of Windows' GDL. In none of these cases are they drawing problem-oriented in their approach.

Mainline, by contrast, is a drawing program designed and implemented with business drawing users and business drawing problems in mind. It is a fundamentally easier to use drawing program than previously available for personal computers. It offers functionality appropriate for business drawing users. It is neither a "high-end" nor a "low-end" product; it has features which may correctly be classified as either. Mainline offers unique technology to achieve these objectives; it is more that a "veneer over an imaging model".

Mainline will achieve these goals by executing on six key development objectives:

- Present metaphors appropriate for our target users;
- Deliver basic drawing functionality appropriate for our target market;
- Reduce the 'tool modality' of today's drawing programs;
- Capture and maintain relationships within shapes and between shapes so that both shapes and drawings behave 'correctly' when moved, sized, or edited; and
- Conform to the user interface and data exchange standards of Windows 3.1 and leading Windows 3.1 applications.

In addition to these objectives, Mainline is guided by the following principles of good product design:

- Application design must center on solving customer problems, not delivering what is easy to implement.
- The fewer arbitrary limits a product imposes on its users, the easier it will be to learn and use.
- Products must be designed and built from day one with international requirements in mind.
- Applications of the 90s must be end-user configurable and extensible.
- Successful applications are both broad and deep.

Metaphors

When Mainline's target customers draw by hand, they typically rely on drawing aides such as rulers, symbol templates, quadrille ruled (i.e. graph) paper. Mainline presents visual equivalents of all three of these elements.

The Mainline drawing window (the window in which the drawing is created) had rulers along its top and left edges. The rulers indicate the location of the cursor on the screen and can be used for accurately positioning and sizing objects. Though the rulers themselves cannot be moved into the drawing window directly, ruler guides can be "pulled" out of the rulers to aid in the alignment of objects in the drawing.

The drawing surface in the Mainline drawing window displays a colored grid of lines, presenting a visual representation of graph paper. These grid lines serve as drawing aids for positioning and sizing objects. Objects drawn in the drawing window will typically "snap" to either the grid of graph paper or ruler guides pulled out of the rules. This snapping behavior is expected to make drawing straight lines and correctly connected objects very easy.

Mainline recognizes that there are large classes of business drawings composed almost entirely of standard symbols. For these classes of drawings, Mainline will offer a visual "stencil" or "template" metaphor. This metaphor is implemented through a stencil window, which displays a collection of standard shapes on a visually distinctive background. The user incorporates these standard shapes into his or her drawing by directly dragging these shapes

from the stencil window and dropping them in the drawing window. Such “drag and drop” behavior is becoming part of the Windows 3.1 user interface model and should not be foreign to our users.

The user interface elements are shown in the following screen capture of Mainline.

Basic Drawing Functionality

Many basic drawing programs believe users drawing needs are satisfied by a very basic set of primitive tools. However, a quick scan of example business drawings results in the conclusion that any product, which hopes to really address business-drawing needs, must provide a “line and arc shape” as a standard object. But most basic drawing programs do not. Polygons are their most complex shape.

The so-called “high-end” drawing programs (e.g., CorelDRAW!, Micrografx Designer) recognizes curves as important but present the user with complex PostScript “paths” consisting entirely of Bezier curve segments. Such paths are useful only to the highly trained or highly motivated user. They present an inappropriate interaction model for a business drawing application.

Mainline provides a line-and-arc shape as its basic graphic object. This shape is easy to understand: it is simply a sequence of straight-line segments and/or (elliptical) arc segments. One segment begins where the previous one ends. A Mainline shape can be open or closed. Closed shapes can be filled with a pattern and/or color.

Open shapes can have special line ends (e.g., arrowheads) at their begin and/or end points.

The scan of business drawings also yields a listing of “special effects, which are frequently used but often tedious to create. Drop shadows are one such effect. Rounded corners are a second. Mainline provides both special effects—drop shadow and round corners—as a property of any shape.

These same business drawings illustrate that text is an important part of such drawings. Consequently, text is an important part of Mainline’s basic functionality. All Mainline shapes can have text associated with them. The text moves when the shape is moved. The text wraps within a rectangle that sizes when the shape is sized. The text can be left, center, right-aligned, or justified within the text box. The text can also be top-. middle-, or bottom-aligned vertically within the text box. Because text can be associated with any Mainline shape, the “rules” associated with text are eliminated.

A study of certain classes of business drawings, notably floor plans and maps, indicated that arbitrary rotation of text and graphics is a requirement. Mainline provides rotation of its shapes, groups of its shapes, and any text within the shapes. Because of implementation limitations (yes, some limitations still remain), foreign objects such as bitmaps, scanned images, OLE objects form other applications, and some metafiles will not be rotated in Mainline version 1.0.

Reducing ‘Tool Modality’

Most drawing programs offer a plethora of drawing tools. The more “advanced” the drawing program, presumably the more tools it has. Products such as Ashlar Vellum, have even gone to hierarchical tool palettes to present something like thirty tools to the user. Each tool creates a mode in which the user must operate. Each mode has an associated set of rules. In a product with a large number of tools, therefore a large number of modes, the non-dedicated user of the product is hopelessly lost.

When it comes to tools and modality, Mainline takes the Bauhaus viewpoint: less is more. A dedicated effort has been made in Mainline to reduce the number of tools and number of modes. A further effort has been made to make the differences between the tool modes as few and as clear as possible. These objectives are achieved without overloading the tools with numerous shift-, ctrl-, and alt-key modifiers, though some state modifiers are used where appropriate.

Key to achieving the reduced modality foal is the use of gesture recognition in the drawing or “pencil” tool. Mainline employs a form of gesture recognition, which allows the user to interactively draw its line-and-arc shapes without special tools, modifiers, or modes for the line and arc segments. Moreover, shape and shape-segment editing is integrated with the drawing tool; a special “shape edit” mode does not exist in Mainline.

The gesture recognition portion of Mainline will be enhanced in the Windows for Pen Computing (“pen Windows”) version to include the direct gesturing of stencil objects in addition to the standard Pen Windows system gestures for editing actions.

Capturing and Maintaining Relationships

Many business drawings contain relationships between the symbols used to illustrate the diagram. Connection is a very common relationship found in many types of business drawings including flow charts,

Organization charts, and business graphics (pie charts, bar charts, etc.) In addition, relationships such as "these objects are to be vertically center aligned" are found in diagrams of many types. Mainline introduces "relationship management technology" using a familiar spreadsheet model, unique to graphics programs.

Relationships are captured using an extension of the "snap to" idea we call "glue to". When "glue to" is enabled, objects or object endpoints, which are dragged and snapped to guides, object vertices, or object boundaries become "glued" to those guides, vertices, or boundaries. Relationships can also be established by an extension to the usual "Align Objects" command found in most drawing programs. Mainline's "Align Objects" command adds a "remember relationship" feature, which automatically creates a guide and glues the aligned objects to it. This allows the guide to be moved and the objects to be moved with it.

Relationships are maintained by storing object boundaries and vertices as spreadsheet-like "formulas" which are reevaluated whenever an object is moved or sized. A collection of these formulas forms what is called either a "page sheet," a "group sheet," or a "shape sheet" depending on the context of the formula-either page, group, or shape. In addition to the graphical operations, which create and modify these formulas, the user can open a window onto these sheets and directly manipulate the sheet's formulas. Consistent with our objective of presenting familiar metaphors to our users, these sheet views are user-interface-compatible with the market-leading Windows-based spreadsheets programs.

Mainline incorporates a state-of-the art minimal-recalc spreadsheet engine complete with formula evaluation, a library of functions, conditional expressions, cell referencing, cross-sheet references, and live inheritance from styles sheets and master objects.

Conformance to Windows Standards

It is fundamentally important that any Windows application that expects to appeal to the broad horizontal Windows marketplace conform to the user interface and data exchange standards of Windows 3.1. Visio recognizes that Windows computability extends beyond the set of guidelines published as part of the SDK to include the de facto standards created by the market-leading Windows application. Visio considers Microsoft's Windows-based applications—specifically Microsoft Excel for Windows and Microsoft Word for Windows-to be the leading applications in our target market from which we will infer de facto standards. As a pioneering Windows application, Aldus PageMaker for Windows has also established de facto standards, which we will take into account.

The following product attributes described later in this specifications stem directly from our objective to conform to the stated and de facto standards of Windows 3.1:

- Menu, menu command, and dialogue box organization
- Menu, menu command and dialog box vocabulary
- Menu, menu command, and dialog box item keyboard shortcuts
- The presence and visual presentation of a status bar along the bottom of the application Windows
- The presence, visual presentation, and operation of a ribbon (control bar) immediately below the menu bar in the application window
- The ShapeSheet™ equation syntax
- Rulers, guides, and "snap-to" behavior "hot cursor" that shows what will happen if the mouse is pressed and dragged over a object or object handle
- The Multiple Document Interface (MDI) for managing multiple open documents
- Windows Object Linking and Embedding (OLE) support, both client and server, including the standard Windows OLE user interface.
- Windows GDI metafile import, export, copy, and paste for document interchange
- Windows Device-Independent Bitmap (DIB) import and paste for bitmap incorporation

Mainline will also utilize the standard Windows 3.1 file access, print and setup dialog boxes.

Mainline will attempt to be compliant with IBM's Common User (CUA) guidelines. However, when CUA guideline differ from standard Windows 3.1 and leading Windows application practice, Mainline will favor the Windows 3.1 and

leading Windows application standard over the CUA.

Mainline's user interface design takes into account the guidelines specified for the Pen Windows extensions but does not limit itself to those features possible on a pen-based computer.

Product Development

Personnel

The Mainline development project is directed by Ted Johnson, Visio's Vice President of Product Development. His experience at Aldus Corporation included the supervision of many similar projects. Ted is also the Mainline product visionary. Much of the product design and specification can be attributed to Ted. Assisting Ted in the management of this project are a technical development lead, an associate program manager, a lead software test engineer, and a lead technical writer.

Founder Dave Walter functions as Visio's chief software design engineer. In this role, Dave is responsible for the overall software design of Visio's products and the specific design and implementation of key components of our products. For Mainline, Dave has worked on the underlying data management system and is responsible for the product's gesture recognition technology.

Peter Mullen serves as Mainline technical development lead. In addition to a substantial implementation load, Peter is responsible for ensuring that all development tasks are accounted for, scheduled, and completed in a timely fashion. Peter will have final responsibility for determining the priority of bug fixes once the product is in testing. Peter functioned in a similar capacity on two releases of Aldus Persuasion while at Aldus.

The Mainline engineering team consists of Mitch Boss, Mark Davison, Richard Miyauchi, and Lori Pearce in addition to Dave and Peter. Ted also contributes to the implementation of Mainline. These seven engineers represent over 30 years of Windows programming experience and one of the strongest Windows development teams to be found anywhere.

Mainline Design Center

Mainline was designed and is being implemented for a minimum target machine configuration consisting of a 386SX processor running at 20MHZ of RAM, 40MB hard drive, and monochrome VGA display. However, we expect the bulk of our sales on higher performance machines with color VGA displays. Mainline contains specific features of benefit to such users.

Mainline requires the user to already own and have installed Windows 3.1 or later. Microsoft is expected to ship Windows 3.1 in March or April of 1992. Windows 3.1 offers performance, functionality, and reliability over Windows 3.0, which we believe justify requiring it for Mainline.

Since Mainline's internal graphics computations are performed using double-precision floating-point values, Mainline benefits from the presence of a math co-processor. To offset its use of floating point, Mainline caches the integer results of most calculations. The effect of this caching is good performance on machines without a math co-processor and stunning performance with a co-processor (including all 486DX machines). Mainline is one of the few mainstream business applications other those spreadsheets, which benefit from a math co-processor.

Development Environment, Languages, and Tools

Mainline is developed using widely available and supported DOS- and Windows-based development tools running on standard '386- and '486-based PCs. These PCs are connected on a Microsoft LAN Manager network. Project source code is maintained on a LAN Manager server. At the preference of the developers, no formal software version control system is utilized. Instead, Visio-developed compare utilities are used to manage the master source code. This method of working has caused no problems or setbacks to date.

Mainline is being developed in straight C (not C++) using Microsoft's Optimizing C Compiler. Version 6.0. We plan to convert to version 7.0 (currently in beta) later this spring in order to benefit from its enhanced code generation. The decision to use straight C was made in the fall of 1990 and was based on the lack of commercial-quality C++ tools from the major language vendors. Though not implemented in an object-oriented language, Mainline's design and implementation is, in fact, very object-oriented. We plan to consider converting portions of Mainline which may benefit from a C++ implementation to Microsoft's C++ (part of version 7.0 of their C compiler) following initial product release. We do not anticipate converting large portion of the product.

Other development tools include program editors (Microsoft Programmer's Workbench), debuggers (Microsoft Code View for Windows), the Windows 3.0 Software Development Kit, and various Visio-developed and maintained utilities, including the previously mentioned version control tools.

Licensed Components

Visio intends to license import and export filters for use with the product. Multiple vendors of such filters exist. We are currently working with ImageMark. Software Labs of Kansas City though we have not finalized any business arrangements at this time.

Any clipart, which we decide to ship with Mainline, will be also licensed from a third-party supplier. No agreements have yet been entered into.

We do not expect Mainline to contain any other licensed software components.

Status and Schedule

Two key technologies that underlie Mainline-gesture recognition and constraint management using spreadsheet models-were prototype in late 1990 and early 1991. A product specification for Mainline was developed from March to May 1991. Production coding of the product began in mid-May, 1991. We expect Mainline to reach "function-complete" in May 1992 and be ready to ship in September 1992.

Mainline will enter pre-beta testing in late March followed by three full beta releases scheduled for June, July and August of 1992. The third beta, in August 1992, will be an expanded beta release and will include marketing evaluation units.

We plan to conduct both informal and formal usability tests of the product in the April to June time frame.

Difficulties and Risks

Gesture Recognition

Using simple gesture recognition, we hope to be able to reduce the number of drawing tools to be single pencil tool. Our success in making this happen will depend on how well the gesture recognition technology we are developing works. Because gestures from a mouse are "noisy" and because different people gesture differently our gesture recognition technology requires a lot of user testing and algorithm fine-tuning. We may be unsuccessful in our attempt to make gesturing with a mouse as "intuitive as using a pencil and paper".

However, we do not expect gesturing to be the primary way in which users create drawings using Mainline. Most users will drag and drop pre-defined shapes from stencils (i.e., libraries) of symbols. Gesturing is, therefore, supplemental and will be used primarily to connect standard symbols and to create on occasional unique shape. If gesturing proves more difficult that we currently believe it to be, we will introduce additional drawing tools, most probably a box (rectangle) and on oval (ellipse) tool. Even with the addition of these tools, gesture recognition would remain as the primary way to create other line and arc shapes.

Performance

We are building Mainline on top of a spread-sheet-model constraint management system that allows parts of a drawing to make reference to other parts of the drawing. It is possible that the calculations required to maintain these references could negatively affect the performance of the product.

The pre-alpha versions of Mainline have not shown this to be a problem. However, we have not yet created the shapes and templates that will be shipped as part of the product. When we do so, we could run into unforeseen performance problems.

If performance proves to be a problem, we face a choice between limiting the drawing types we support to those for which we can provide adequate performance, allocating additional resources to identify and reduce performance bottlenecks, and/or raising the minimum machine requirements for Mainline.

Timely Delivery

The most dangerous development risk is failing to deliver the product on schedule. Because each project is different and because requirements change over the life of the project, accurately predicting an end date at the beginning of the process is unlikely.

We have not placed the development team in this difficult position. We only require the team to be able to predict the end date from the vantage point of February 1992. With nine months of development behind them and their task estimation track record to consider, predicting the end date becomes less daunting. Given a development team composed of senior developers with a lot of experience developing Windows applications this risk is largely reduced. The equity stake the development team has in the company also reduces our risk of schedule slippage. None of these factors, however, eliminates the risk.

Product Evolution

We see Mainline as the first in a series of product releases. Mainline can also be the basis for a range of related products. We are already

anticipating the development of both Windows NT and Windows for Pen Computing versions of Mainline. We are investigating technologies and alliances, which would allow us to easily, bring Mainline to UNIX workstations and Macintosh computers.

The technology underlying Mainline can be extended for some time to come. There are different classes of problems that can be solved using constraint management systems, ranging from quite simple to the very complex. We are implementing a one-way, one-pass solver in the first release of Mainline. While we believe this solver will be sufficient to address a wide range of users' drawing problems, it will not address them all. We can extend our constraint management technology to handle additional classes of drawing and simulation problems in the future.

We can also extend the breadth of the application, increasing the number of drawing types that are well supported. This can be done by releasing additional drawing templates by updating the product, or both.

Additionally, the technology underlying this product can be applied to specialist drawing applications including graphic arts illustration, mid-range desktop publishing, presentations, and low-end CAD. We may choose to target specific specialists markets with products based on the same technology as our broad market product.

Marketing Analysis

Overview

Visio's marketing thesis is that our fundamental market development challenge with Mainline is ultimately one of market creation, not market sharing. We see Mainline as a product that targets a new set of users; general computer users that need immediate and function-specific drawing capability without learning or usage barriers.

The intent of the marketing program is to define and establish a new category of graphics software—drawing software for mainstream computer users. Windows has provided the technological opportunity and the market momentum for the creation of this type of graphics category. Visio has the opportunity to be the first to see the category possibility and deliver on it.

Market Assessment

Marketing's first task was to validate this market creation assumption and identify related marketing issues. The methodologies selected were two external primary research programs, one qualitative and one quantitative. The time frame for the studies was November and December 1991.

The first initiative was structured as a series of 20 one-on-one interviews with corporate micro managers and representative Windows users in the greater Seattle area and in the Bay Area. Our second research effort was quantitative phone survey with 100 Windows-based word processing users, conducted by Griggs Anderson Research.

These two courses were selected because we believe corporate micro managers play important roles in influencing product selection and that Windows word processing users represent the largest segment that would incorporate drawings into their documents. Specific research objectives included the following.

Examine Current Customer Trends

- Explore Windows acceptance issues
- Test general drawing habits
- Test computer-related drawing habits
- Investigate purchasing process

Examine Perceptions vis-à-vis Mainline

- Test competitive product usage
- Determine computer-related drawing needs
- Identify target user profiles
- Refine "whole product" requirements
- Test price thresholds

Conclusions: Windows

Windows deployment is generally occurring, usually without any grand plan or sophisticated understanding of Windows' potential power. In general, MIS time is focused on daily demands; Windows importance is evaluated according to how it will solve real problems today. Consequently, MIS is not driving the Windows story inside their organizations and we can't assume that they will drive Visio's story. Nonetheless, the various MIS roles—as researchers, gatekeepers, caretakers and potential users—must be respected. They remain a primary target audience that we need to influence and educate.

We will focus on MIS management as users before pursuing them as recommenders. Let MIS leadership understand Mainline's power through their own usage.

Conclusions: Importance of Drawing

In organizations, drawing is an important way for people to communicate concepts, abstract ideas, organization relationships, etc., but most use traditional, non-computer-based tools as the graphics medium.

Yet quantitative research showed that two-thirds of our Windows-based word processing user samples currently use a computer to create graphics at work, with half of this group finding drawing difficult. Another fourth don't use a computer to draw, but are inclined to if it were easy.

We will focus our; initial marketing efforts on predisposed users—those who have existing drawing needs today, have Window technology, and are dissatisfied with their options. Communications will emphasize that Mainline simplifies the drawing task, addresses business-specific drawing needs, and providers easy integration of drawings into user-generated documents.

Conclusions: Competitive Environment

Current illustrations products such as CorelDRAW! and Micrografx Designer are seen as very specialized and difficult to use; they don't address the specific drawing problems that

users want to solve. Their penetration is the corporate environment is limited for these reasons. CorelDRAW! was mentioned by only 15% of Windows word processing respondents as the software used to draw, sketch or otherwise create graphics; it received the lowest ease-of-use rating at 5.5 and is used the least, on average 1.9 hours a week by those who do use it.

We will aggressively distance ourselves from current illustration products, as they are perceived as being niche-oriented, while articulating a mainstream product category strategy from introduction on.

Conclusions: Product Requirements

Mainline should provide integration capabilities, such as ease of importing/exporting and cutting/pasting. It should also feature ease of drawing and intuitive operations.

Thus, much of Mainline's market value is linked to how it maximizes the use of, and adds a new dimension to, existing applications.

We will evangelize the message that the product's scope and user reach could redefine graphics as mainstream.

Conclusions: Drawing Types

The most popular types of drawings are ones that are already being created regularly, either by hand or by computer. These drawing are mostly technical, conceptual, or organizational in nature.

On an unaided basis, one fourth of the survey respondents wanted to incorporate business graphics into their word processing documents, and another fourth wanted to do the same with drawings and sketches. On an aided basis, users wanted to incorporate the following drawing types in their computer-generated material:

Drawing Types

Business Graphics - bar charts, pie charts, line graphs, etc.	90%
Flow Charts	75%
Space Plans	77%
Organization Charts	68%
Block Diagrams	66%

Over half of the survey respondents would use a variety of standard shapes and symbols, less that a third would require advanced features and just over one in ten would take advantage of FreeHand capabilities.

We will package Mainline so that general users understand that they can immediately solve specific drawing needs and that power users recognize that they can tailor their own solutions.

Conclusions: Early Adopters

Mainline's early adopters will be engineering, technical and MIS professions because they have identified drawings needs today and have the necessary technology to use Mainline. The MIS early adopters in particular will have broad referencing reach within companies.

We will further segment early adopters for the purpose of direct marketing and match compelling reasons to buy with each user group.

Conclusions: How Buying Takes Place

The following marketing factors determine whether products are evaluated by users and MIS; trade press editorial, especially reviews; local seminars and road shows, especially for the purpose of hands-on product exposure; general word of mouth; user groups.

Management commits to extensive PR, seminar and user group programs.

Conclusions - Pricing:

Street Price

Over $300	23%
$201 - $300	27%
$101 - $200	25%
$100 or less	9%

A $395 list price, with a street price under $300 positions Mainline as a serious product and meets user price thresholds.

Projected Market Size/Trends

The Alex, Brown & Sons investment research report dated October 15, 1991 entitled "Graphics Power, User Power" concludes that "the compound annual growth of the Windows installed base (60%) will drive a dramatic compound annual growth of 25-35% in the installed based of graphics software applications of all types." The report also projected that

"drawing products represents the greatest opportunity for growth (in the graphics arena) at the moment, with sales of Windows-based drawing software to closely track sales of Windows itself, just as it has in the Macintosh market"

The report went on to note that Macintosh drawing software sold as a rate of about 12% of the installed base; if Windows drawing software sold at only 5% that would mean 500,000 drawing packages sold in 1992 based on the report's 11.4 million Windows installation projection for that year.

The rationale for the projected growth in Windows-based drawing is that when users experience Windows word processing and spreadsheet integration capabilities, they will want to integrate another primary capability "taken for granted on paper," drawing.

Although the report projected the 1991 graphics market at $ 1.2 billion, analysts "are convinced that, even at that size, the market is far from mature: it is about to accelerate dramatically. Through 1995, we expect the overall compound annual growth rate to be at least 20-25%, yielding a potential market size of $2.5 to $ 2.9 billion.

Competition

Although Mainline is differentiated by its general computer user focus, it cannot help but be compared to existing graphics and illustration products until it has firmly established a new category. The primary competitive field today consists of existing Windows drawing products and specialty diagramming products featuring one drawing type. The indirect competitive environment includes DOS-based drawing and charting products porting to Windows and free drawing in mainstream business applications. Potential competitors include product entries from well-established companies.

Windows Illustration Products

This category includes such products as CorelDRAW!, Micrografx Designer, Micrografx Windows Draw, Arts and Letters, Adobe Illustrator for Windows and Aldus FreeHand for Windows. All of these products are squarely aimed at specialist and/or graphic arts users. Although they are Windows-based and work with Windows word processors, they have been proven difficult for the general computer user to learn and use.

From a technical standpoint, these products are heavily dependent on Bezier curve construction to build most drawings. Users need to know how to draw and be willing to learn the specifics of Bezier curve construction. When users launch into applications they are given blank sheets of paper and an extensive drawing tool palette, a daunting introduction.

These products don't match Mainline's ease-of-use, intuitiveness, and intelligence in that they don't have anything to compare with our foundation of gesture recognition technology, symbol stencil interface, and relationship management system.

With the exception of Micrografx Windows Draw, pricing also is geared for the specialist segment that needs to use the product extensively. Street prices are approximately as follows: Designer, $499; CorelDraw!, $399; Windows Draw, $129; Draw Plus, $259; Arts & Letters $460; Illustrator, $399; and FreeHand, $495.

As a lower-priced competitor, Windows Draw is basically a stripped-down version of its parent product, Micrografx Designer, and is still fundamentally structured for a specialist user despite reports of an improved interface. It also is not set up to help users address specific business drawing problems.

According to IDC, market share figures in the Windows-based illustration category are: CorelDRAW!, 18%; Micrografx Designer, 10%; and Arts & Letters, 12%.

Specialty Diagramming Products

Because Mainline will feature specific drawing types there will be some comparison to products that feature one drawing type. Products in this category include Roykore's A-B-C-Flow-charter street priced at $99, and Banner Blue Software's Org Plus street priced at $149.

Visio's differentiation vis-à-vis these specialty products is its ability to focus on a range of specific drawing problems. Our research shows that MIS strongly prefers products that encompass a range of needs rather that a collection of single-use products.

Free Drawing in Applications

Although extremely limited in capability, free drawing in applications will appeal to certain low-end users. There will be users who are not interested in connecting shapes, having a collection of shapes specific to the kinds of drawings they do, being able to modify shaped significantly, etc. However, this will most likely be a very small percentage of the market, especially as people begin to demand drawing applications that behave more like pencil-and-paper drawings

and require drawing products to solve their specific drawing problems.

Entries from Established Companies

Companies that could compete directly with Visio include Microsoft, Aldus Adobe, Claris, Micrografx, Corel Systems, and Software Publishing. All of these companies have some graphics technology that could be redirected towards our market. In many cases, companies that are selling graphics or illustration products successfully today are unlikely to immediately change direction and funnel extensive resources into pursuing Visio's category of users. This type of effort takes serious corporate focus and senior development talent that successful companies won't want diverted. This is not to say that these companies won't enter the market; they simply don't have pressing cause to do so today.

Companies interested in entering the graphics and drawing market could be immediate competition; they, too, could be looking at unsatisfied users for the purpose of identifying, creating and owning a market segment. A company like Borland, without a graphics focus, could be investigating new ways to approach the drawing market opportunity—either through internal development or acquisition.

Opportunity Analysis

Positioning Gap

Visio's two most primed user groups—general computer users who use PCs to generate graphics and drawings but find the experience difficult, and users who rarely or never use PCs to draw or create graphics but would like to — would be most interested in a drawing product that provides broad functionality while maintaining a high level of ease to use and integration.

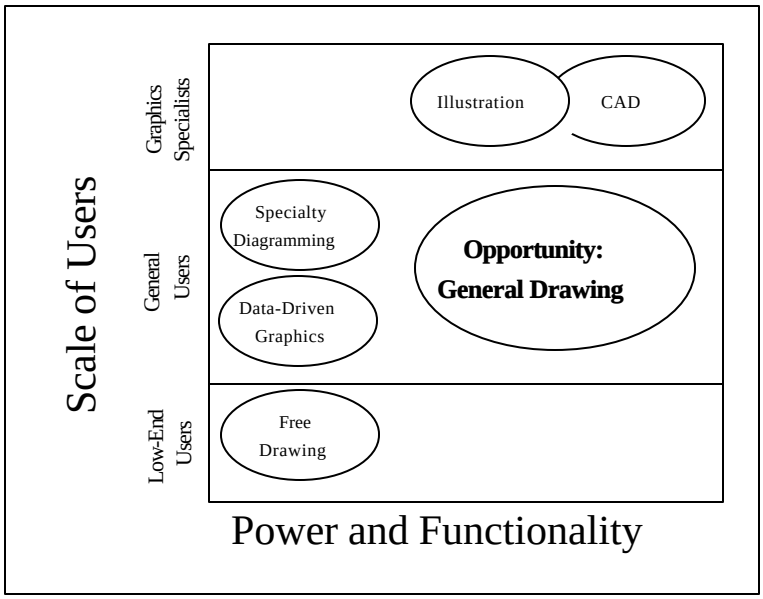
The diagram on this page illustrates the current gap in drawing and graphics products that meet general computer users' needs.

Window of Potential

Without a doubt, a number of companies are going to recognize the potential of the Windows drawing market. Visio's window of opportunity is to own the message of seeing a new product category, entering it first and being the leader in developing it. If Visio can be seen as the first to articulate this message, first to back it up with a product, and first to provide substantive evidence that this general computer segment supports Mainline, we will make it very hard for later contenders to create strong competitive positions. Defining and developing a new category is a powerful competitive weapon. Companies that are successful at doing so own the early adoption and infrastructure referencing process.

If another company preempts us in delivering this message, then they will have to leap some key hurdles to have their message accepted. In the case of current Windows illustration applications, their referencing process would have to begin anew, with general computer users instead of graphic specialists; they would have to overcome their own established "specialist" positions; their prices are wither too high or too low according to what general computers users expect to pay; and they would have to deliver user-required functionality and ease.

Specialty diagramming companies have to face the fact that MIS likes to support fewer, not more, products and that their user base is fragmented and thus difficult to leverage in referencing. Companies porting DOS-based applications need to deliver products that maximize Windows' potential and target their marketing resources at a whole new set of users. All new market entrants will have to make a significant development commitment to this category to equal Visio in product. We believe few will make such a commitment.

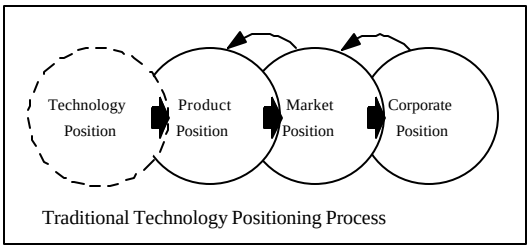


Positioning Strategies/Concepts

Strategies

The normal sequence for establishing product, market and corporate positions follows a linear model as depicted in the diagram to the right.

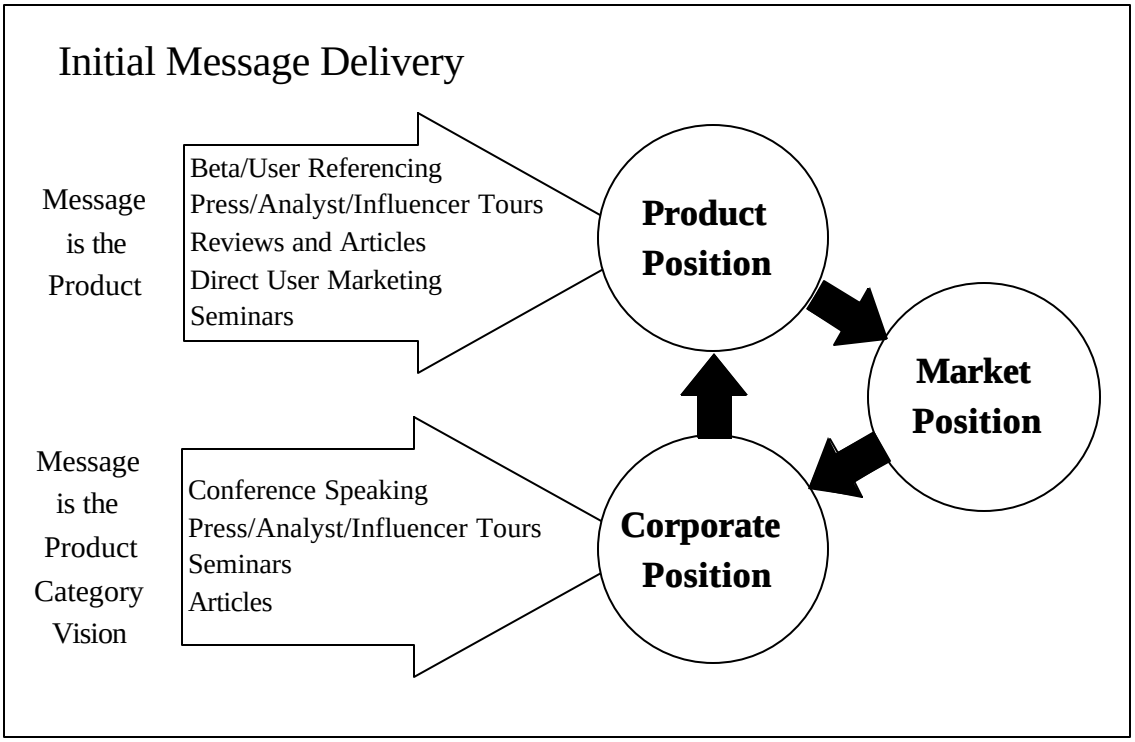
That is, influencers and early users validate underlying product technology and the product's value to them. They build the referencing process with market acceptance as the end result. Corporate business strategies and product vision then become important to the market as customers make bigger and bigger investments.



Traditional Technology Positioning Process

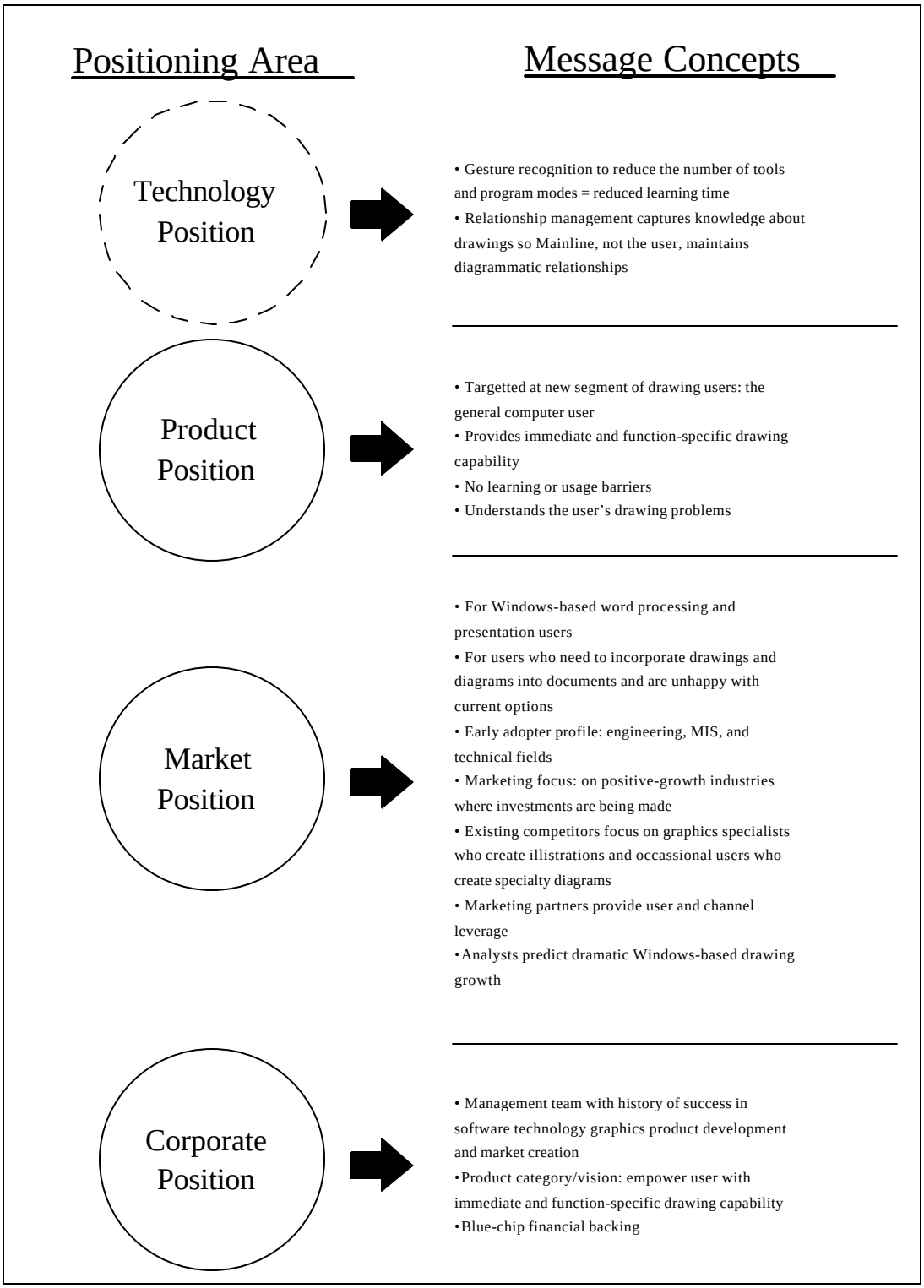
But this model isn't always followed. Management with PC software success under their belts can credibly voice product category vision from pre-product introduction on. These messages build early perceptions of corporate leadership, which in turn give more weight to product position. Increased product confidence positively impacts market acceptance. *Bottom line; such companies have a greatly accelerated positioning process.*

The diagram below describes the process Visio will follow.



Positioning Messages

The following diagram summarizes Visio's marketing messages.



Marketing Program

Goal

Marketing's primary goal is to establish Visio as the creator and leader of a new category of business graphics software targeted at solving general computer users' drawing needs, and in doing so, help Visio own the majority of the market.

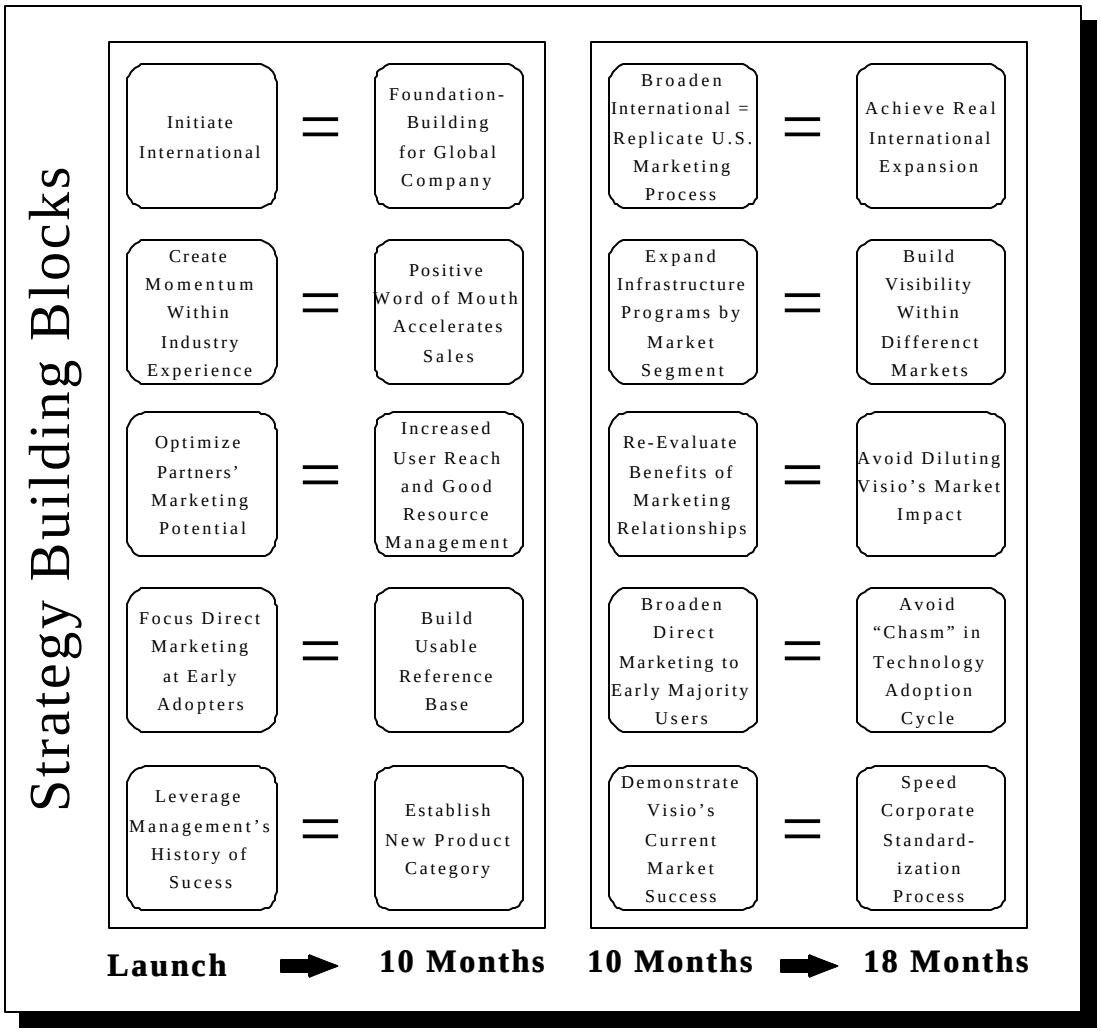
Objectives

1. Identify, understand, reach and sell early adopters, such as engineers, MIS and technically related professions, in the national corporate environment. Identify the probable universe of user segments and their compelling reasons to buy Mainline, and project where user segments fit on the adoption curve and develop marketing programs accordingly.
2. Identify the universe of marketing partners, such as word processing, presentation and systems vendors and distribution players, ascertain the value contribution of potential partnerships, negotiate relationships and partnerships and manage implantation programs.
3. Identify the universe of licensing partners, such as Windows for Pen OEMs and the Sun platform, ascertain the value contribution of partnerships, negotiate relationships and any partnerships and manage implementation programs.
4. Validate and provide needed drawing types for early adopter and early majority segments.
5. Build strong word of mouth momentum in the early adopter and potential mainstream user community through the appropriate combination of public relations, seminars, user groups, trade shows and advertising.
6. Initiate, with sales, international distribution.
7. Manage all aspects of creative communications including packaging, documentation, collateral and sales support tools.

Strategies/Programs

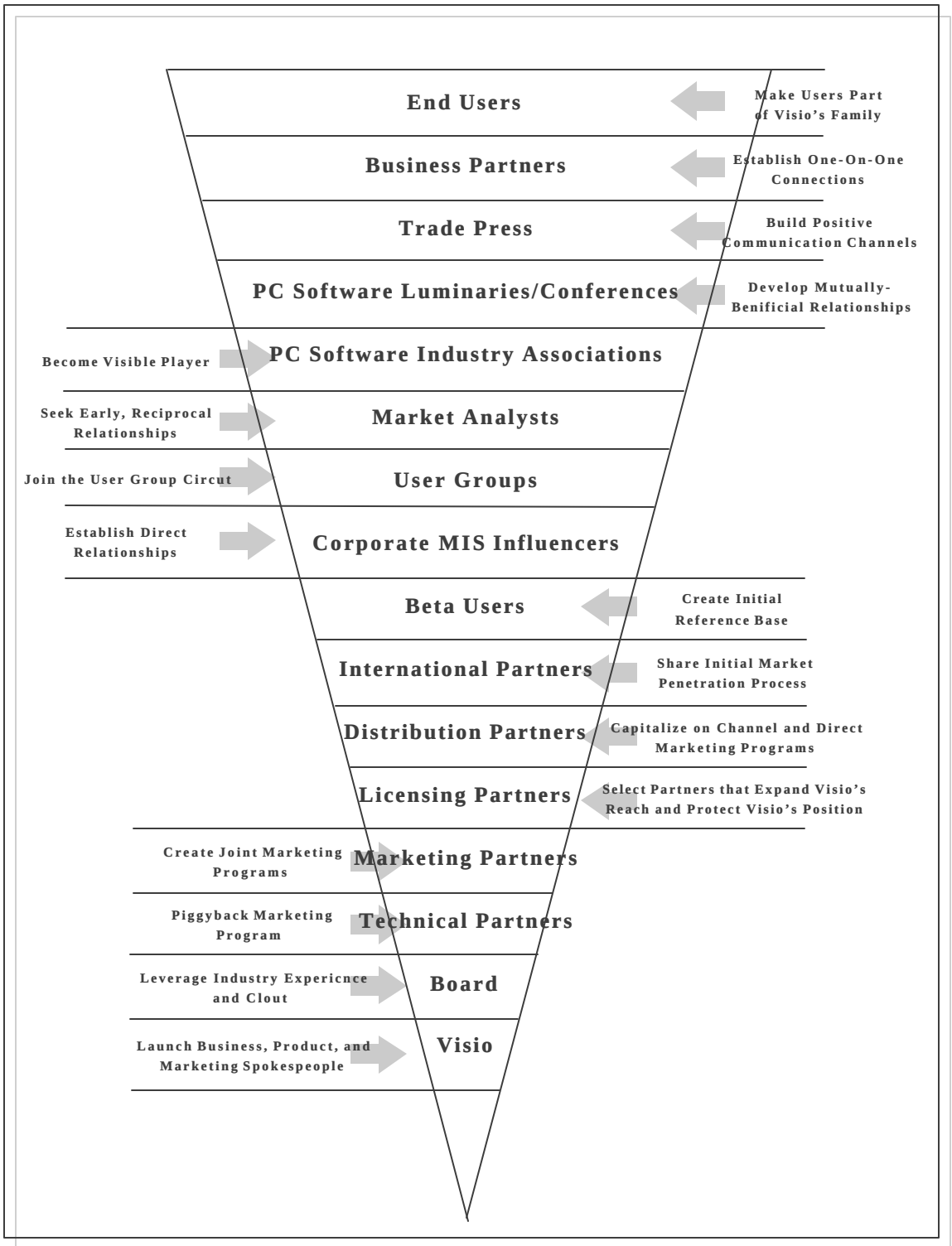
Strategy Concepts

The following diagram provides a quick look at the key strategic building blocks of the marketing plan, illustrating the fundamental concepts, which guide Visio's marketing efforts. Programmatic detail is available in an extended version of the marketing plan.



Infrastructure Approaches

The infrastructure model below outlines the key audiences that Visio must build relationships with in order to achieve successful and positive infrastructure referencing. By having an approach for each segment we insure that all infrastructure categories are positive and active Visio advocates.



Revenue Forecasts

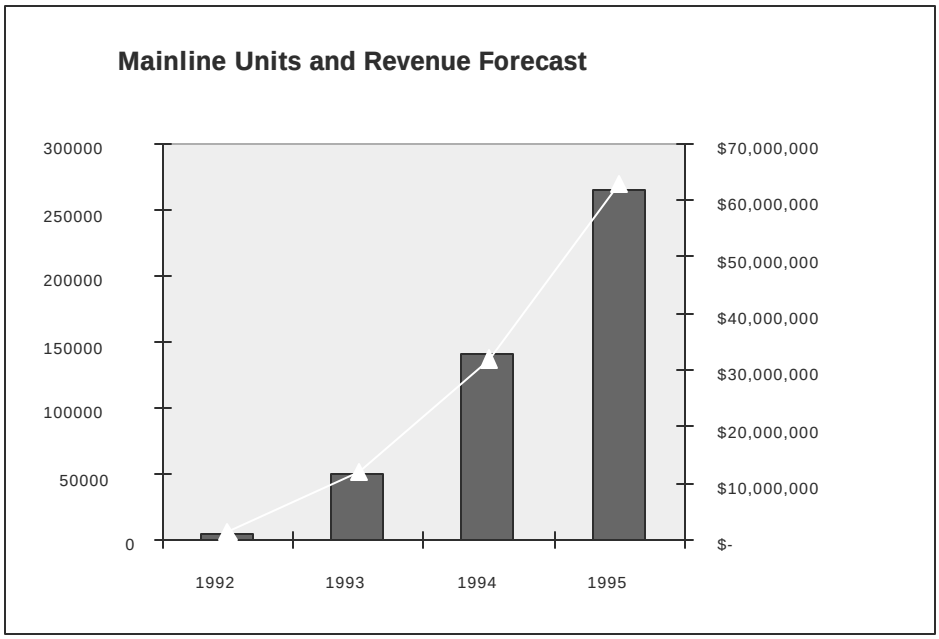
Visio's forecast methodology focuses on the original market creation thesis. We are not going after the current Window-based drawing application user; we are targeting Windows-based word processing users who want to communicate ideas, concepts, processes and relationships graphically. Thus, our forecast goal was to determine what percent of the Windows-based word processing market would buy Mainline.

Specific forecast assumptions follow. We first determined what percent of the DOS market forecasts Windows represented and applied that percentage to US based word processing forecasts to get a forecast for Windows-based word processors. We then reviewed Griggs-Anderson's analysis of our initial market potential (25% of the total market based upon a study comprised of early Windows-based word processing adopters) and compared those conclusions with their recent word processing user segmentation study (Visio's early adopters represent 12% of the word processing market). From that analysis we estimated that our primed early adopters then represent 3% of the total Windows-based word processing market.

We then calculated our market development capability, a qualitative assessment based on marketing budget and outlined strategies/programs, and determined that we would be able to convert -33% (1% of total) of our predisposed users during the first 15 shipping months. That conversion increases to 40% (1.2% of total) for months 17 through 28, and 50% (1.5% of total) from months 28 and 29 through 40. During months 17 through 28 and 29 through 40, we believe that new user segments will be converted through the MIS and technical user referencing process. This, too, is a qualitative assessment based upon our face-to-face research. To arrive at a percentage, we reviewed Grigs-Anderson's study on word processing user segmentation where managerial users represent 32% of the total market. We estimated managerial conversions at 1% (.32% of total) for months 17 through 28, and 2% (.64% of total) for months 29 through 40.

Our sources include 1991 IDC market analysis reports on the word processing and drawing markets, 1991 Interface Group market projections, 1990 Dataquest market projections and 1991 Griggs-Anderson market research reports.

The Excel worksheet used to calculate these results is included in Appendix C.



Manufacturing & Operations

Facilities

The company currently leases 5,000 square feet in the Westlake Center Office Tower located in downtown Seattle. Our lease expands to a total of 11,000 square feet beginning April 1992. In addition, we have an option to take the balance of our floor, which would provide us with a total of 18,000 square feet, should we elect to exercise the options before September 1992. The lease contains an option allowing us to expand to a total of 20,000 square feet in the building during

the life of our lease. The term of the lease is to December 1994, unless the landlord cannot provide us with the space we require (up to 20,000 square feet), in which case the lease is terminated.

The lease rate is $16 per year per rentable square foot for a three-year term. We negotiated free rent for the first four moths of the lease, reducing the effective rate for the term to $15.14 per year.

We can accommodate approximately 40 people in the 11,000 square feet to which we are currently committed. We believe this will cover our space needs until at least early 1993. We are likely to exercise our option to expand into more space following first product ship.

Visio subsidizes parking and other transportation cost of our employees to offset the higher employees costs associated with being downtown. Visio pays up to $45 per month for employees who park downtown and pays approximately $21 per month to employees riding public transportation.

Manufacturing

We intend to use outside contractors for building our products. This approach is common in the software industry. Once we have produced software masters and camera-ready documentation and packaging, we will use outside disk duplication, product assembly, and shipping. We believe that this is the best way to keep our cost of goods down and maintain our focus on designing and developing products.

Because the local software industry includes Microsoft, Aldus and a host of smaller companies, there are many potential manufacturing subcontractors available in this area. Among them are Pac Services, MicroDisk Services, Media Technologies, and Trojan Lithograph. All of these companies provide full-service manufacturing, including printing, disk duplication, storage of inventory, assembly, and shipping. In addition, there are a number of other companies that can provide a subset of our manufacturing needs should we find it more economical to mix and match vendors.

We expect the Mainline product cost of goods to be about $20, allocated as follows:

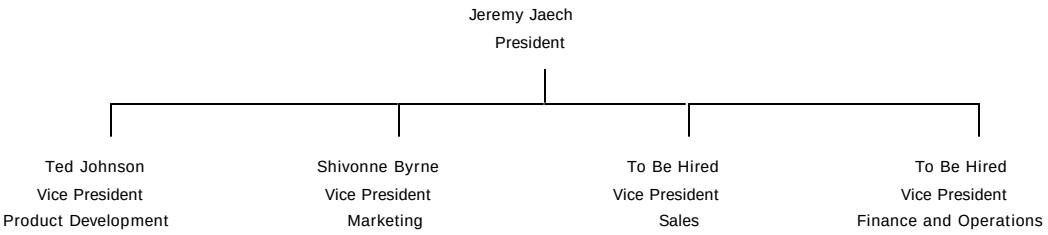
Item	No.	Cost	Ext'd
3.5" Disk (1.44MB)	3	1.09	3.27
User Manual	1	3.00	3.00
Reference Manual	1	3.00	3.00
5.25" Disk (1.2MB)	3	0.69	2.07
Installation Guide	1	1.00	1.00
Box	1	1.00	1.00
Assembly Labor	1	0.80	0.80
Registration Card	1	0.29	0.29
5.25" Disk Sleeve	3	0.09	0.27
Shrink Wrap	1	0.20	0.20
Visio Promotion	1	0.20	0.20
Disk Envelope	2	0.07	0.14
5.25" Disk Labels	3	0.04	0.12
3.5" Disk Labels	3	0.03	0.09
Brake Seal	2	0.04	0.08
Promo Literature Env.	1	0.07	0.07
License Card	1	0.05	0.05
Subtotal			**15.65**
Fulfillment Charge			0.45
Inventory Carrying Cost			3.11
Fully Burdened			**19.21**

We plan to build 20,000 units initially, and will adjust our build schedule and quantity as needed to keep no more than three months of inventory for the first few builds. Although our cost of goods will be slightly higher than if we built in greater quantities, the inventory carrying costs and the danger of early product releases requiring unplanned changes outweighs the cost savings.

Management & Staff

Organization Structure

Visio is organized into four functional areas: product development, marketing, sales, and finance and operation. These four organizations report to the president of the company, Jeremy Jaech.



The marketing organization is responsible for market development, product marketing, marketing communications, and channel marketing, and is managed by Shivonne Byrne.

The sales and service organization is responsible for sales, customer service, and end-user product support. This organization currently does not include any employees. We expect to recruit a vice-president to build and lead this organization in early 1992. Our plan is to hire an individual with particular strength in building a distribution network for Visio products.

The finance and operations organization is responsible for finance, accounting, manufacturing, personnel, and facilities. The manufacturing function will manage the outside contractors who build product. This organization is currently led by Linda Johnson and includes one other employee, both primarily handling Visio's accounting and facilitates work. We expect to recruit a vice-president to also act as our chief financial officer.

Visio's Board of Directors is comprised of Jeremy Jaech, Ted Johnson, and Dave Walter, all insiders, and John Johnson of Technology Venture Investors.

Key Personnel

Jeremy Jaech was a co-founder of Aldus Corporation in 1984 and was the technical leader for the original development of PageMaker. Following its introduction he managed the product development function at Aldus and in 1986 was named vice president of engineering.

The product development organization is responsible for program management, product engineering, product documentation, and product testing. The product development organization is led by Ted Johnson. (For the first product release, product documentation will work with marketing communications and report to the vice president of marketing to balance the management load between the two executives.)

Jaech left Aldus in April 1989 to lay the groundwork for Visio. At that time, he was managing the development organization with about 75 people. Jaech holds a B.A. in Mathematics and an M.S. in Computer Science, both from the University of Washington.

Ted Johnson joined Aldus in May 1985 as the software engineer responsible for development of PageMaker for the PC. He worked closely with Dave Walter to develop the multi-platform "core code" foundation for that and all subsequent versions of PageMaker. Following the release of PageMaker for the PC, Johnson managed the development of PageMaker 3.0 for both Windows and Macintosh, the acquisition of Aldus Persuasion and the development of PageMaker 4.0 for Macintosh. He left his position as director of PageMaker development in August 1990 to join Jaech in forming Visio. Johnson received a B.S. in Computer Science from the Institute of Technology at the University of Minnesota.

Dave Walter, also a co-founder of Aldus in 1984 was responsible for writing the interactive graphics for the original version of PageMaker and is credited with giving the product much of its intuitive "feel". After leaving Aldus in 1987 he conducted basic research in speech recognition. He studied electrical engineering at Cornell University.

Shivonne Byrne joined Visio in October 1991 as vice president of marketing. Prior to Visio, Shivonne was the managing partner for Regis McKenna Inc.'s Seattle office, and the co-leader of RMI's personnel computer practice. During her RMI tenure she managed product rollouts and market development efforts for such companies as Apple Computer, The Learning Company, Ansa Software, Plus Development and BrØderbund Software. Byrne received a B.A. English from Stanford University.

Besides the people described above, Visio currently employs, five engineers, an associated program manager, a lead software test engineer, a marketing manager, and two finance and operations personnel. Four of the engineers are considered "founding engineers" and have a substantial equity stake in the company. Described below, these key developers will be instrumental in our success.

Mark Davison joined Visio in December 1990 as our first hire. Before Visio, Mark was a developer at Aldus providing the technical leadership for the PageMaker 4.0 text team. Prior to Aldus Mark worked for a Department of Defense contractor developing DoD-specific software. Mark holds a B.S. Mathematics, Massachusetts Institute of Technology, an M.S. Mathematics, University of California, Berkeley, and a Ph.D. Mathematics for the University of California, Berkeley.

Peter Mullen joined Visio in January 1991 from ElseWare Corporation, another Aldus spin-off. At ElseWare Peter wrote an application called DataShaper that facilitated database publishing with PageMaker. Prior to ElseWare, Peter worked on various releases of PageMaker and Persuasion over several years. Peter has a B.A. Physics from Middlebury College and an M.S. Geophysics from the University of Washington.

Richard Miyauchi joined Visio in February 1991 from Aldus Corporation. Richard worked on several releases of PageMaker while at Aldus. Prior to Aldus, Richard worked at CADDEX, a minicomputer-based document production system, at Alex (for Jeremy), and at Boeing. Richard has a B.S. mechanical Engineering from the University of Washington.

Mich Boss joined Visio in March 1991 from Aldus Corporation. While at Aldus, Mitch was responsible for the text composition subsystem of PageMaker for several product releases. Prior to Aldus, Mitch worked for Atex in Boston on Atex's page layout system. Mitch holds a B.A. in Religion from Dartmouth College.

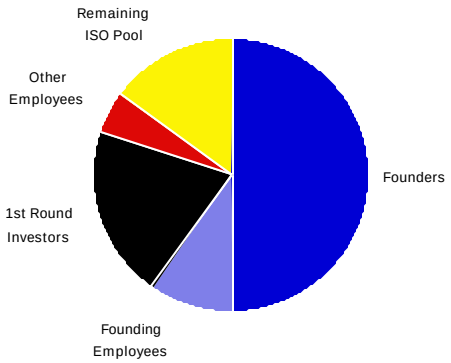
Founders' Compensation and Employee Stock Ownership

Jeremy and Ted are receiving no salary until September 1992. Dave is receiving no salary until April 1992. We expect that we will pay market-rate salary for the other members of the executive team we will recruit.

The founders, founding employees, and other employees in the company currently hold a total of 3,145,000 shares of Visio stock.

414,500 shares remain unused in the ISO pool. First round investors own 1,194,030 shares of Series A Preferred stock.

Adding these shares to those listed above, yields the following pie chart:



Supporting Professionals

Visio's accountants are the Seattle office of Coopers & Lybrand. Our primary contacts there are tax partner Clay Campbell and audit partner Claire O'Keefe.

Company lawyers are the Seattle offices of Perkins Coie, Seattle's largest law firm. Our primary contact there is Evelyn Sroufe.

Visio's bank is the Commerce Bank of Washington, headquarters in downtown Seattle. Our primary contact there is bank president Jim Hawkinson.

A marketing consulting and market relations firm is Regis McKenna Inc. Our account manager is Barbara Curtis, based in Seattle. Our marketing consultant is Geoff Moore, based in Palo Alto. Our market research firm is Griggs Anderson, based in Portland. Our primary contact at Griggs Anderson is Dave Dickinson.

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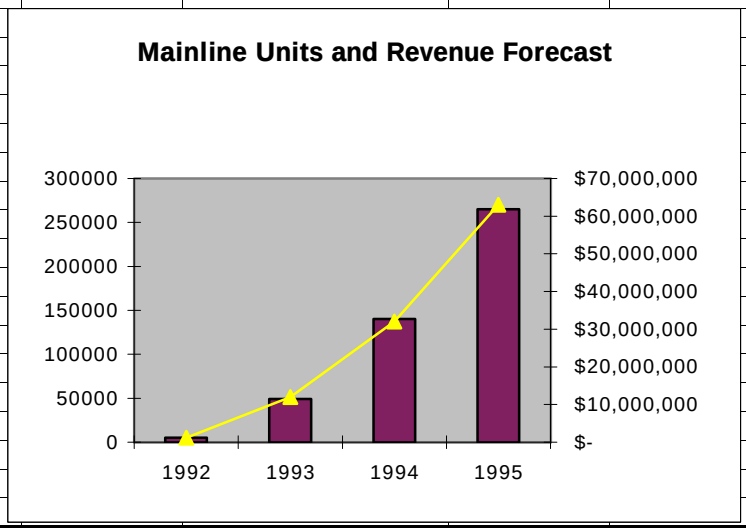
Appendices

1992	5000	$	1,200,000		
1993	49000	$	12,000,000		
1994	140000	$	32,000,000		
1995	265000	$	63,000,000		



Visio Corporation
1601 Fifth Avenue
Suite 800
Seattle, WA 98101-1625

Balance Sheet
December, 1991

Assets				
Current Assets				
Cash & Cash Equivalent				
General Checking Account	$ 972			
Money Market Savings	$ 382,534			
Petty Cash	$ 100			
Total Cash & Cash Equivalents		$ 383,606		
Total Current Assets			$ 383,606	
Fixed Assets				
Furniture & Fixtures				
Office Equipment	$ 6,331			
Office Furniture	$ 11,301			
Total Furniture & Fixtures		$ 17,632		
Computer Hardware & Software				
Computer Hardware	$ 87,448			
Total Computer Hardware & Software		$ 87,448		
Accum Deprec - Equipment				
Accum Deprec - Furniture	$ (2,395)			
Accum Deprec - Computers	$ (27,172)			
Total Accum Deprec - Equipment		$ (29,567)		
Total Fixed Assets			$ 75,512	
Other Assets				
Deposits Paid		$ 7,917		
Prepaid Business Insurance		$ 486		
Prepaid Health Insurance		$ 2,311		
Prepaid KM Life Insurance		$ 2,181		
Prepaid Bus Pass		$ 1,209		
Prepaid Parking		$ 858		
Organization Costs		$ 1,242		
Accum Amortization		$ (662)		
Total Other Assets			$ 15,541	
Total Assets				$ 474,660
Liabilities				
Current Liabilities				
Accounts Payable				
Salaries Payable	$ 17,500			
Total Accounts Payable		$ 17,500		
Accrued Taxes Payable				
Federal Unemployment Payable	$ 140			
State Unemployment Payable	$ 303			
FICA Payable	$ 1,339			
Total Accrued Taxes Payable		$ 1,782		
Total Current Liabilities			$ 19,282	
Other Liabilities				
Deferred Rent		$ 12,720		
Total Other Liabilities			$ 12,720	
Total Liabilities				$ 32,001
Equity				
Common Stock			$ 179,520	
Series A Preferred Stock			$ 800,000	
Retained Earnings			$ (149,766)	
Current Year Earnings			$ (387,095)	
Total Equity				$ 442,659
Total Liability and Equity				$ 474,660

Visio Corporation
1601 Fifth Avenue
Suite 800
Seattle, WA 98101-1625

Profit and Loss Statement
For the Month Ended December 31, 1991

	Selected Period	% of Sales	Year to Date	% of Sales
Income	$ -		$ -	
Cost of Sales	$ -		$ -	
Gross Profit	$ -	NA	$ -	NA
Expenses				
License Fees	$ -	NA	$ 95.00	NA
Bank Charges	$ -	NA	$ 105.00	NA
Dues & Subscriptions	$ 300.00	NA	$ 3,032.97	NA
Late Fees	$ -	NA	$ 115.89	NA
Employee Benefits	$ 2,757.76	NA	$ 9,421.33	NA
Business Insurance	$ 60.70	NA	$ 41.40	NA
KM Life Insurance	$ 242.33	NA	$ 726.99	NA
Office Expenses	$ 6,359.99	NA	$ 18,957.63	NA
Professional Fees	$ 1,456.01	NA	$ 90,657.62	NA
Seminar Fees & Tuition	$ -	NA	$ 5,440.00	NA
Salaries	$ 35,000.02	NA	$ 190,109.00	NA
Telephone	$ 290.66	NA	$ 1,884.16	NA
Travel & Entertainment	$ 666.28	NA	$ 9,559.49	NA
Payroll Tax, Employer	$ 3,298.48	NA	$ 16,814.68	NA
Software (Expenses)	$ 2,461.63	NA	$ 9,101.59	NA
Hardware (Expenses)	$ -	NA	$ 5,428.85	NA
Market Research	$ 4,000.00	NA	$ 4,000.00	NA
Lease Expense	$ 5,763.34	NA	$ 23,559.23	NA
Depreciation	$ 2,441.41	NA	$ 19,998.33	NA
Amortization Expense	$ 20.70	NA	$ 186.30	NA
Total Expenses	$ 65,119.31	NA	$ 409,235.46	NA
Operating Profit	$ (65,119.31)	NA	$ (409,235.46)	NA
Other Income				
CD Interest Income	$ -	NA	$ 1,679.09	NA
Money Mkt Int. Income	$ 1,541.46	NA	$ 20,854.54	NA
Interest on Deposits	$ -	NA	$ 27.48	NA
Total Other Income	$ 1,541.46	NA	$ 22,561.11	NA
Other Expenses				
Interest Expense	$ -	NA	$ 420.84	NA
Total Other Expenses	$ -	NA	$ 420.84	NA
Net Profit/(Loss)	$ (63,577.85)	NA	$ (386,253.51)	NA

	Jan-92	Feb-92	Mar-92	Apr-92	May-92	Jun-92	Jul-92	Aug-92	Sep-92	Oct-92	Nov-92	Dec-92	Total
Capital Expenditures													
Total Capital Expenditures	5,633	14,833	27,767	7,883	39,499	16,179	16,742	11,267	5,633	0	0	0	145,436
Expenses													
Misc. Expenses	237	242	252	267	287	302	312	322	327	322	312	312	3,494
Employee Benefits	5,180	5,425	7,165	6,650	18,930	8,465	7,705	8,095	8,340	8,095	7,605	7,605	99,260
Business Insurance	0	0	0	0	0	0	700	0	0	0	0	0	761
Key Man Life Insurance	0	0	0	0	0	0	0	0	2,908	0	0	0	3,150
Office Expenses	894	785	1,037	1,290	1,604	1,577	1,529	1,611	1,482	1,121	889	1,189	15,008
Professional Fees	5,250	8,750	7,250	15,250	48,250	5,250	550	1,350	550	550	550	550	94,100
Seminar Fees & Tuition	2,230	2,296	2,429	2,645	3,286	3,428	3,510	3,560	3,601	3,535	3,403	3,403	37,326
Repairs & Maintenance	350	375	425	500	600	675	725	775	800	775	725	725	7,450
Salaries	38,437	55,389	52,307	73,811	90,672	101,135	109,583	113,333	135,833	130,833	127,167	127,458	1,190,960
Telephone	618	651	719	984	1,254	1,436	2,054	2,324	2,633	2,599	2,531	2,531	20,623
Travel & Entertainment	8,683	8,827	9,113	9,257	11,817	12,390	18,070	18,070	20,910	20,767	20,480	20,480	178,864
Taxes	8,088	5,138	5,022	6,847	8,377	9,358	10,124	10,531	12,312	11,870	11,469	11,492	110,628
Computer Software (Expense)	1,792	1,813	3,354	1,917	2,000	2,063	1,604	1,646	1,167	646	604	604	21,670
Computer Hardware (Expense)	350	375	425	500	600	675	725	775	800	775	725	725	7,450
Market Research													4,000
Lease Expense	450	450	450	15,103	15,103	15,103	15,103	15,103	15,103	15,103	15,103	15,103	137,277
Product Roll-Out Costs	28,000	1,400	3,829	11,995	56,012	80,762	232,946	275,529	255,363	117,683	72,933	96,600	1,233,052
Inventory Carrying Costs	0	0	0	0	0	0	0	0	200,000	0	0	0	200,000
Total Expenses	100,559	91,916	93,777	147,016	258,792	242,619	405,240	453,024	662,129	314,674	264,496	288,777	3,323,019
Cash In													
Total Cash In	1,089	671	193	2,999,580	11,354	10,272	8,470	6,476	3,583	2,222	972	(167)	
Cash On Hand Month Start	381,360	276,257	170,179	48,828	2,893,509	2,606,572	2,358,046	1,944,534	1,486,719	822,540	510,088	246,564	
Monthly Cash Outflow	(106,192)	(106,749)	(121,544)	(154,899)	(298,291)	(258,798)	(421,982)	(464,291)	(667,762)	(314,674)	(264,496)	(288,777)	
Monthly Cash Inflow	1,089	671	193	2,999,580	11,354	10,272	8,470	6,476	3,583	2,222	972	(167)	
Cash On Hand Month End	276,257	170,179	48,828	2,893,509	2,606,572	2,358,046	1,944,534	1,486,719	822,540	510,088	246,564	(42,380)	

Revenue Forecast

	1990	1991	1992	1993	1994	1995
Projected DOS Unit Sales	15,500,000	17,000,000	14,000,000	13,000,000	13,000,000	13,000,000
Projected Windows Unit Sales	1,500,000	3,000,000	4,500,000	9,000,000	13,000,000	13,000,000
Projected Windows % of DOS Market	9.68%	17.65%	32.14%	69.23%	100.00%	100.00%
Projected U.S. Word Process Unit Sales	3,276,000	4,000,000	5,500,000	7,000,000	9,400,000	12,500,000
Projected Windows Word Processor Forecast	317,032	705,882	1,767,857	4,846,154	9,400,000	12,500,000
Windows Word Processor Actual Sales	445,000					
Monthly Windows Word Processing Units Fore	26,419	58,824	147,321	403,846	783,333	1,041,667
Mainline Potential Market (Monthly)			36,830	100,962	195,833	260,417
Mainline Early Adopter Potential Mkt (Monthly)			4,420	12,115	23,500	31,250
Expected Annual Unit Sales to Early Adopters			4,420	48,462	112,800	187,500
Expected Annual Unit Sales to Management Mkt					30,080	80,000
Total Unis per Year Forecast			4,420	48,462	142,880	267,500
Total Revenue per Year			$ 1,047,455	$ 11,485,385	$ 33,862,560	$ 63,397,500

Factors			
% of WP Market Interested in Diagrams	25%		
% of WP Market Adopter Segments	12%		
1992/1993 Market Development Capability	1.00%		
1994 Market Development Capability	1.20%		
1995 Market Development Capability	1.50%		
1994 Referencing Conversion of Mgr Segment	0.32%		
1995 Referencing Conversion of Mgr Segment	0.64%		
Suggested Retail Price	$ 395	$ 237	to Visio
Visio's Margin	60%	$ 284	Street Price
Dealer's Margin	120%		