Emgt 520 Strategic & Policy Issues—Microsoft

Fall 1997

1997-F-520-03-1

Dale Andert
Jaclyn Danh
Nathasit Gerdsri
Freddie Hidajat
Joan Kauth
An Pham

Introduction

This paper discusses Microsoft and its strategies in the computer industry. It is organized into three parts. The *Microsoft Overview* presents information about Microsoft in the areas of:

Organization
Resources
Microsoft within the Computer Ecosystem
Product Competition
Product Strategy

The *Analysis* part of the paper focuses on Microsoft's corporate strategies in the areas of:

Imitation Strategy
Acquisition Strategy
Partnering Strategy
Marketing Strategy
Strategic Elements of the Authority Stage

The *Critical Issues* section addresses the future—it asks some questions that might be important in the future of Microsoft and the computer industry.

We conclude with a description of some of the key factors that led to Microsoft's success.

Microsoft Overview

About Microsoft

Microsoft Corporation was founded as a partnership in 1975 and incorporated in 1981. Microsoft develops, manufactures, licenses, sells, and supports a wide range of software products, including scaleable operating systems for information appliances, personal computers and servers, server applications for client/server environments, business and consumer productivity applications, software development tools, and Internet and Intranet software and technologies. The company has recently expanded its interactive content efforts, including: entertainment and information software programs, the Microsoft Network (MSN) online service, Internet-based services, and alliances with companies involved with other forms of digital interactivity. Microsoft also sells personal computer input devices and books, and researches and develops advanced technologies for future software products. [17]

Organizational Overview

Microsoft's business strategy emphasizes the development of a broad line of software products for business and personal use, marketed through multiple distribution channels. The company is divided into four main groups: the Platform Product group, the Interactive Media Group, the Sales and Support Group, and the Operations Group. [17]

The ***Platform Product Group*** is comprised of five primary divisions, each responsible for a particular area of platform software development and marketing:

The *Personal Systems Division* develops PC operating systems.

The *Business Systems Division* develops server operating systems and server applications.

The *Internet Client and Collaboration Division* develops Web browser technologies and e-mail, editing, and collaboration products.

The *Developer Tools Division* creates software development tools.

The *Consumer Platform Division* develops systems software for non-PC devices, multimedia devices, and digital authoring environments.

The ***Interactive Media Group*** creates and markets productivity programs, interactive entertainment and information products, desktop finance products, and PC input devices.

The Desktop Applications Division creates business productivity applications and products designed for the home, school, and the small business market.

Interactive Media offerings include children's titles, games, reference sources, online information services, and MSN.

The Desktop Finance Division develops personal finance products.

The Input Device Division creates PC peripherals.

The ***Sales and Support Group*** is responsible for building long-term business relationships with customers. This group is organized to serve various customer types, including original equipment manufacturers (OEMs), end-users, organizations, enterprises, application developers, and Internet content providers (ICPs) and infrastructure owners. Large enterprises are offered tailored license programs, enterprise-wide support, consulting services, and other specialized services. The group manages the channels that serve customers by working with OEMs, distributors, and re-sellers. In addition to the *OEM channel*, Microsoft has three major geographic sales organizations: *U.S*. and *Canada*, *Europe*, and *Other International*. The group supports the company's products with technical support for end-users, developers, and organizations.

The ***Operations Group*** is responsible for overall business planning and for managing business operations. This includes the processes of manufacturing and delivering finished goods and licenses; corporate functions such as finance, administration, human resources, and legal; and the publishing efforts of Microsoft Press.

Resources

Human Resources and Culture

The computer software business is extremely competitive. Because the market changes so quickly it is crucial for a company to maintain its brain capital. Unlike a manufacturing company a software company’s assets are not in tangible equipment but rather in the creative abilities of the firm’s employees. As such Microsoft competes in a fierce arena for the brightest and most gifted software developers.

To keep their employees from seeking other employment Microsoft Corporation prides itself on maintaining an environment that encourages employee productivity and satisfaction. *Microsoft culture* is a reflection of the founding partner's business attitudes. The dress is casual, a campus work environment promotes a family feeling, but employees are expected to work long hours and be devoted to their work. The implicit message is that they will receive personal satisfaction from being a part of a solution-oriented business. In 1975 there were two Microsoft employees, now there are more than 20,500 [10].

Bill Gates, founder of Microsoft, best summarizes the attitude of productivity, "If somebody is very smart and contributing a lot, then it is fun. If they don't match that kind of level of energy, then it is really not the right place for them" [4]. The message is if you are not giving it all, then move on. As the work force gets tighter and tighter, Microsoft may find this type of position hard to maintain.

To counter the people shortage Microsoft has aggressively courted a diverse work group. But this is more of a business strategy than a goodwill gesture. "Today in a remarkable transformation, Microsoft has made itself into what is arguably the best place in the business for women to work. Very simply, Microsoft has adopted as a strategy the goal of cornering the market on female engineering talent. … Microsoft understands the nature of Competition in the software industry like no other company. Outsiders see the business as a competition for markets and dollars. Microsoft sees it as a competition for talent. The company's approach to engineering and corporate strategy has always been to 'pour IQ,' as Gates puts it, into a knotty problem or competitive crisis. The company with the most brains wins. In remaking his company into something even a woman could love, Gates has simply added one more weapon to his arsenal in the fight for software engineering and design talent"[11].

The Microsoft culture that existed when the company was founded is very difficult to maintain. The current outlook is that Microsoft will continue to adopt standardized business attitudes and will eventually lose the uniqueness that enabled it to grow so quickly.

Product Development Environment [5]

The product development department *effectively supports the competitive strategy*, which is to design products for mass market and then improve these products incrementally by enhancing existing features or adding new ones. This department also works well because its processes and objectives are highly consistent with Microsoft's culture and goals. Program managers and developers have large amounts of freedom to evolve features by experimenting with designs and user reactions. The emphasis is on individual specialists making decisions but sharing responsibilities and working as a team.

Microsoft's cultures also promotes a process for product development that combines efficiency and structure with flexibility. Flexibility is important in software development because it is difficult to predict at the beginning of many projects how products will eventually turn out, or how users will respond to product features.

Microsoft's approach to product development contains several mechanisms for incorporating feedback and learning, especially from customers, directly into the development process. These

mechanisms are used for analyzing user activities for product innovation and checking support data to prioritize features as well as generating ideas. Although several Microsoft products and projects are now quite large, the employee groups devoted to them continue to work very much like nimble small teams.

Most of the Microsoft projects take place at Microsoft headquarters, except for some acquisitions. This makes it possible for the team to communicate and solve the problems together. Projects rely on a common development language.

The culture of Microsoft is still not too far away from a loosely organized world for the hacker programmers. Individuals and teams act together and quickly on the issues they feel are important

One problem is that Microsoft's driven approach is that it tends to result in products that contain more features than the users really need. This is less true for system products, although even Window 95 has an abundance of new functions that have taken longer than initially planned to develop, test and debug.

Financial Resources

Microsoft has grown by 30 to 40 percent each year for most of its life. It currently has $9 billion in cash and short-term investments, and the money pile grows by $18 million a day. [2]. This remarkable continuous growth and extensive current cash reserves gives Microsoft tremendous power in the software industry, enough to conquer just about any market it wants to [1].

Specific financial information from Microsoft's 1997 annual report follows [9].

Income Statement

	1995	1996	1997
Revenue	**$5,937**	**$8,671**	**$11,358**
Operating Expense			
Cost of Revenue	$877	$1,188	$1,085
R&D	$860	$1,432	$1,925
Sales & Marketing	$1,895	$2,657	$2,856
General and Administration	$267	$316	$362
Total Operating Expense	$3,899	$5,593	$6,228
Operating Income	**$2,038**	**$3,078**	**$5,130**

Data are for fiscal years ending June 30. All dollar values are times 1 million.

Revenue

Microsoft's revenue grew 46% in the fiscal year ended June 30, 1996 and 31% in fiscal 1997. Revenue growth was particularly strong in 1996 due to the retail introduction of Microsoft Windows 95 operating System. Software license volume increases have been the principal factor in Microsoft's revenue growth. The average selling price per license has decreased, primarily because of general shifts in the sales mix from stand-alone desktop applications to integrated product suites.

Operating Expense

Cost of Revenue: As a percentage of revenue, cost of revenue was 14.8% in 1995, 13.7% in 1996, and 9.6% in 1997. The decrease was due to the shift in mix to CD-ROMs that carry lower cost of goods than diskettes.

Research and Development: Microsoft invested heavily in the future by funding research and development (R&D). Expense increases of 67% in 1996 and 34% in 1997 resulted primarily from development staff headcount growth and higher levels of third-party development costs in many areas, including continued development efforts for Windows desktop operating systems, Office, BackOffice, and Internet and intranet technologies. R&D costs also increased for development tools, consumer systems, and Interactive media initiatives such as MSN and other online services.

Sales and Marketing: The increase in the absolute dollar amount of sales and marketing expenses in the three-year period was due primarily to expanded product-specific marketing programs, particularly for Windows 95 during 1996. Sales and marketing costs as a percentage of revenue decreased, particularly in 1997, reflecting moderate headcount growth. Also in 1997, Microsoft brand advertising and product support expenses declined.

General and administrative: Increases in general and administrative expenses were primarily attributable to growth in the number of people and computer systems necessary to support overall increases in the scope of the Company's operations.

Summary Financial Status

	1995	1996	1997
Revenue	$5,937	$8,671	$11,358
Net Income	$1,453	$2,195	$3,454
Earnings per share[1]	1.16	1.71	2.63
Return on revenue	24.5%	25.3%	30.4%
Cash and short-term investments	$4,750	$6,940	$8,966
Total assets	$7,210	$10,093	$14,387
Stockholders's equity	$5,333	$6,908	$10,777

Data are for fiscal years ending June 30. All dollar values (except Earnings per share) are times 1 million.

[1] Earnings per share have been restated to reflect a two-for-one stock split in December 1996.

Microsoft within the Computer Ecosystem

By the mid-1980s, the IBM PC technical architecture defined the business structure for the personal computer industry as a whole. This industry was well into the authority stage in which products are stable and competition for leadership broadly expands to customers (see details in exhibit A). Compaq, Intel, Microsoft, and other suppliers, without IBM, were working together to determine common standards for hardware and software to usurp IBM's power. Unfortunately, IBM didn't find a way to keep innovating, or even to achieve economies of scale. IBM spent most of its money on promotion and advertising. Finally, IBM lost its position in the PC ecosystem. [13]

Intel and Microsoft achieved their initial central position in the ecosystem largely by being in the right place at the right time. Both spent time and money to improve their core contribution, expand the functionality of their contributions, and work with partners across the computer business to set standards.

Microsoft under Bill Gates focused on gaining a superior position in the ecosystem. Microsoft has built and managed relationships with thousands of other businesses, mostly software developers and users.

By the 1990s, the IBM personal computer community had become the Microsoft-Intel ecosystem.

Product Competition

The PC software business is intensely competitive and subject to extremely rapid technological change. Microsoft faces formidable competition in all areas of its business activity, including competition from many companies much larger than Microsoft. The rapid pace of technological change constantly creates new opportunities for existing competitors and startups, and quickly renders existing technologies less valuable. Microsoft also faces constant competition from software pirates who unlawfully copy and distribute Microsoft's copyrighted software products. [17]

Operating systems: Microsoft's operating system products face substantial competition from a wide variety of companies. Major competitors such as IBM. Apple Computer, Digital Equipment Corporation, Hewlett-Packard, Sun Microsystems, and others are vertically integrated in both software development and hardware manufacturing and have developed operating systems that they pre-install on computers of their own manufacture. Many of these operating systems are also licensed to third party OEMs for pre-installation on their machines. Microsoft's operating system products compete with UNIX-based operating system from a wide range of companies including IBM, AT&T, Hewlett-Packard, Sun, The Santa Cruz Operation, and others. The variants of UNIX run on a wide variety of computer platforms and have gained an increasing acceptance as desktop operating systems. As PC technology increasingly moves toward connectivity and communications, Microsoft's operating system product will increasingly face competition from network server operating systems such as Novell's NetWare, Banyan's Vines, the many variants of UNIX, IBM's OS/2, "middle-ware" products such as IBM's Lotus Notes, and Intranet servers from Netscape, IBM, Sun, and others.

Business systems: Microsoft is a fairly recent entrant into the business of providing enterprise-wide computing solutions. Several competitors enjoy a larger share of sales and larger installed bases. Many companies, including IBM, Digital Equipment, Hewlett-Packard, and Sun, offer operating system software for mainframe and midrange computers. Since legacy business systems are typically support-intensive, these competitors also offer substantive support services. Software developers that provide competing server applications for PC-based distributed client/server environments include Oracle, IBM, Computer Associates, Sybase, and Informix. There are also several software vendors who offer connectivity

servers. As mentioned above, there are numerous companies and organizations that offer Internet and Intranet server software that competes against Microsoft's business systems. Additionally, IBM has a large installed base of Lotus Notes and CC: Mail, both of which compete with Microsoft's workgroup and mail products.

Desktop applications: Microsoft's competitors include many software application vendors such as IBM (Lotus), Oracle, Apple (Claris), Corel, and local application developers in Europe and the Far East. IBM and Corel have large installed bases with their spreadsheet and word processor products, respectively, and both have aggressive pricing strategies. Also, IBM and Apple pre-install certain of their software products on various models of their PCs, competing directly with Microsoft desktop application software.

Developer tools: Microsoft's software development products compete against offerings from Borland, Macromedia, Oracle, Sun, Sybase, Symantec, and other companies.

News Services: Microsoft's MSNBC joint venture faced formidable competition from other 24-hour cable and Internet news organizations such as CNN and Fox Network. MSNBC also competes with traditional news media such as newspapers and broadcast TV and Internet news services.

Consumer Platforms: A wide variety of companies develop operating systems for information appliances, including Apple, Motorola, 3Com, Poison Software, and others. The Company's nascent Web TV offerings and other multimedia consumer products face competitors such as Sun, Oracle, NetChannel, and others. An enormous range of companies, including media conglomerates, telephone companies, cable companies, retailers, hardware manufacturers, and software developers, are competing to make interactive services widely available to the home.

Internet Platforms and Services: The advent of the Internet as a computing, communication, and collaboration platform as well as a low cost and efficient distribution vehicle increases competition and creates uncertainty as to future technology directions. Microsoft faces intense competition in the development and marketing if Internet (and Intranet) software from a wide variety of companies and organizations including IBM, Netscape, Novell, Oracle, Sun, and many others. In addition, the very low barriers to entry on the Internet have allowed numerous Web-based service companies to build significant businesses in areas such as electronic mail, electronic commerce, Web search engines, and information of numerous types. Competitors include Netscape, Lycos, Yahoo, Excite, Infoseek, CitySearch, and many others.

Online Services: Microsoft's online services network, MSN, faces formidable competition from America Online and other online networks, such as CompuServe (the sale of which to America Online is pending), Prodigy, and impending entrants. Additionally, MSN faces competition from online services that are offered to users directly via the World Wide Web.

Interactive Media: Microsoft's Interactive Media division faces many smaller but focused and branded competitors, particularly in the areas of entertainment and education. Consolidation in this area of software development has made certain competitors even stronger.

Competitors include Intuit, Broderbund, Electronic Arts, The Learning Company (which includes Softkey, MECC, and Compton's), Voyager, CUC International (including Sierra On Line, Knowledge Adventure, and Davidson Associates), and Dorling Kindersley. Still other competitors own branded content, such as Disney and Lucas Arts.

Additionally, PC-based games are increasingly competing head-to-head against games created for proprietary systems such as Nintendo, Sony PlayStation, and Sega. Input devices face substantial competition from computer manufacturers (since computers are typically sold with a keyboard and mouse) and other manufacturers of these devices.

A number of Microsoft's most significant competitors, including IBM, Sun, Oracle, and Netscape, have jointly embarked upon various technology development and marketing initiatives that are intended to increase customer demand for products from these companies. These initiatives relate in part to efforts to move software from individual PCs to centrally managed servers. While the likely technological and business success of such "thin client" strategies is currently unknown, widespread adoption of such computing systems would present significant challenges to Microsoft's historical business model.

Microsoft's competitive position may be adversely affected by one or more of these factors in the future, particularly in view of the fast pace of technological change in the software industry.

Product Strategy

The following lists Microsoft's product strategies by product category. [7]

Browsers/Web Servers

Microsoft's goal is to make Internet Explorer (IE) the browser of choice for consumer and business customers and its BackOffice suite of Windows NT-based servers and technology the standard for enterprise customers. Microsoft's strategy for Internet Explorer includes the following:

- IE 4.0 is free.
- IE is the default browser on most Windows PC desktops, with Window 95 licensees compelled to distribute IE. Distribution now is through more than 50 major PC vendors.
- Microsoft invested $150 million in Apple Computer Inc. to make IE the default browser on Macintosh computers as well.
- Microsoft announced plans to integrate IE into the Windows operating system, with beta releases of Windows 98 showing a user interface that function more like a Web browser.

Previous moves by Microsoft to integrate file compression and other system utilities resulted in the disappearance of those markets for third-party suppliers.

This strategy targets Netscape Communications Corp. and Sun Microsystems Inc.

Streaming media

Microsoft's goal is to influence or determine the direction of audio and video streaming technology on the Net. To achieve this, Microsoft:

- Purchased Vxtreme Inc.
- Took a 10 percent stake, valued at $60 million, in RealNetworks Inc.
- Obtained a minority interest (undisclosed) and board seat on VDOnet Corp.
- Distributes a free streaming media server called NetShow.

This strategy targets RealNetworks Inc., VDOnet Corp., and Vxtreme Inc.

Operating systems

Microsoft's goal is to undermine the "write once, run anywhere" promise of Java, which is seen as a threat to Microsoft's cash cow, the Windows operating system. To reach this goal, Microsoft:

- Has implemented Java in ways that vary from the specification. According to JavaSoft, a unit of Sun Microsystems, Inc., Microsoft changed 109 programming interfaces in its Software Development Kit for Java. Microsoft acknowledged it implemented substitutes for two parts of language, precluding a program written for its version of Java from running on non-Windows machines.
- Uses the streaming coffee cup Java logo with its products, even though it has made the changes, and advertised its J++ language and the Java virtual machine in its IE browser as "Java compatible" for the Windows environment, even though applets written in other versions of Java will not perform as expected in IE.
- Bought the right to outfit Macintosh systems with its version of the Java virtual machine.

This targets Sun Microsystems, Inc., and the Java development community

Web appliances

Microsoft's goal to put in place infrastructure that will help port its Windows technology and IE browser to non-PC devices for customer and businesses. Microsoft:

- Acquired WebTV Network Inc., creator of a technology for integrating the Web with television displays, for $425 million.
- Has an equity investment in Navitel Communication Inc., developer of Internet telephone technology that has been using Windows CE operating systems.
- Poured $1 billion (for an 11.5 percent interest) into Comcast Corp., the fourth-largest national cable TV operator, to help it add high-speed data and video services to its cable delivery network.
- Is believed ready to invest $1 billion in cable operator Tele-Communication Inc. in exchange for the right to make sure some form of Microsoft's Windows operating system is at the heart of the new interactive set-top cable boxes.

This targets Sun Microsystems Inc./Diba Inc., Oracle Corp., Network Computer Inc./Navio Communications.

Merchandising services

Microsoft's goal to build an electronic commerce marketplace. Microsoft:

- Developed Carpoint, teaming with providers such as Reynolds & Reynolds Inc., to offer automotive information and ordering capability online.
- Developed Expedia, launching a foray into travel reservation services.
- Developed Microsoft Investor with the aim of becoming a central clearinghouse for financial information and, eventually, transactions.

This targets Auto-by-Tel Corp., Travelocity, Preview Travel Corp. and financial sites.

Navigating services

Microsoft's goal is to develop a portal to the Web that gives Microsoft a role in determining the flow of online traffic. Microsoft:

- Launched the Microsoft Network (MSN), a content service and Internet service provider, in 1995.
- Developing enhancements to MSN's Commercial Web site, including introduction of a search engine that will be part of navigation services that may be distributed via other internet service providers.

This Targets American Online Inc., Cnet Inc., Excite Inc., Infoseek Corp., Lycos Inc., Planet Direct, and Yahoo Inc.

Analysis—Corporate Strategy

Imitation Strategy

Microsoft uses an imitation strategy for dealing with technological change. A company that uses the imitation strategy is not the first to introduce a new product. Instead of being a technology leader, the imitator copies ideas and products that have been introduced by other companies, then adds value to the product through incremental improvements until the product can successfully compete in the marketplace. Microsoft has demonstrated that it is a master of this strategy. Microsoft products that began as imitations of existing software products include Word, Excel, Money, and Internet Explorer.

Microsoft was an imitator in the word processor and spreadsheet markets. A company called MicroPro introduced the world to word processing in 1979 with its product, WordStar. Microsoft didn't launch its word processing product, Word, until 1983. Microsoft started spreadsheet work in 1980 after studying VisiCalc (by Software Arts, which Lotus later acquired) and SuperCalc. Microsoft released the first version of Multiplan in 1982. Multiplan's successor, Excel, was influenced heavily by the functionality of Lotus 1-2-3. [5]

Microsoft was an imitator in the personal finance software market as well. It entered that market in 1989 with Money This program was written for the Windows environment and competed with Intuit's Quicken. Quicken was introduced in 1984 and had been through several DOS versions by the time Microsoft introduced Money. Because Quicken was a more mature, technically superior product to Money and because Intuit was able to release a Windows version of Quicken just six weeks after Money first appeared, Microsoft had difficulty wrenching market share from Intuit. Quicken has continued to lead in market share, but

competition between the two products has led to improvements in both. For example, Microsoft added an auto-fill feature to one of its text fields, and Intuit responded with a similar feature in Quicken. [16]

Microsoft is in trouble with the Justice department right now because of one of its imitator products, Internet Explorer. Internet Explorer is a follow-on to Netscape's Navigator. By the time Microsoft got to market with the Explorer, Netscape had already captured a large part of the Web browser market. To counter this, Microsoft turned on its aggressive marketing strategies. It required computer manufacturers that ship Windows 95 to also ship Internet Explorer. In October of this year, the U.S. justice department asked a federal court to hold Microsoft in contempt for requiring computer manufacturers to license and distribute its Internet browser, violating a 1995 court order that barred Microsoft from such anti-competitive licensing practices. [15]

Microsoft enters potential mass markets not as the inventor, but as one of several pioneers. It leverages existing technologies and products, and then incrementally improves a product until it becomes the market standard. Microsoft has rarely introduced very good products initially. Instead, Microsoft gets to market fast and then incrementally makes the product more competitive. Examples are the limited initial functionality of Windows compared to the Macintosh operating system, Windows NT compared to Novell's NetWare, Excel and Word compared to other spreadsheets and word processors available at the time, and Money compared to Intuit's Quicken. "Over time, continually adding new features and changes results in increasingly competitive products" [5].

Acquisition Strategy

Another strategy Microsoft uses is that of acquisition. Microsoft acquires companies who produce software for markets Microsoft wants to enter. In the past three years, Microsoft has bought 45 firms [2]. Among these are Vxtreme, Inc. who has data streaming technology for use on the internet, and WebTV Network, Inc., the creator of a technology for integrating the Web with television displays [7].

Partnership Strategy

Although generally preferring to dominate markets on its own, sometimes Microsoft will partner with other companies. In October, 1997, Microsoft invested $150 million in Apple to make Internet Explorer the default browser on Macintosh computers. Benefits of this partnership for Microsoft include: increased market share for Internet Explorer, insurance in Washington for the antitrust issue with the Justice Department, and a new market for Mac Office sales [14]. Other partners include Intel and NBC.

Marketing Strategy

The essential marketing strategies to maintain leadership in the authority stage are similar to the way a tornado behaves: [12]

- Attack your competitors ruthlessly.

It is not enough that we win—all others must lose. The market in the mature stage is a *zero-sum game*. Every new customer I win is one you lose. It does not mean that you lose just your current revenue but all future revenue. For example, Microsoft's "download free" strategy for promoting their Internet Explorer was not to serve their customer, but was just the means to kill their competitor, Netscape.

- Be as fast to market as possible.

  In the high-tech markets, it is really important to distribute your product as fast as possible. The customer's demand is at its most intense, and if you are not there to take their orders, then someone else will get them. Microsoft brings its products to market very quickly, though the functionality and quality of its initial offerings are low. After the product is available to customers, it is repeatedly upgraded by making functionality and quality improvements. This creates a continuous stream of new releases which generates revenue for Microsoft and keeps the customers interested in the product.

- Get the customer on your way.

  This strategy is set up because the customers do not want to change or to be courted. Thus, you have to train them to become familiar with your products. Microsoft does this by providing a common user interface for its products. A customer who has used one can easily understand how to use a different Microsoft product.

Microsoft uses its market power and large number of consumers to control the world market. It has positioned itself as the leader of the U.S. software industry by monopolizing the industry, proving ruinous for competition and innovation. [6]

When Window 95 appeared in the market, Microsoft established a new market of the Windows 95 computer operating system with an estimated $700 million advertising and promotion campaign that used all media and encompassed 22 countries. It also tried to sell 62 million Windows 95 systems in one year, which means the installation of Windows 95 in every major personal computer sold in one year. [8]

Strategic Elements of the Authority Stage

There are three major potential elements of corporate strategy—innovation, criticality, and embeddedness—for gaining and sustaining power in the authority stage. [13]

In this context, *innovation* means looking to the future of the ecosystem, broadening one's product line and developing economies of scale. Although Microsoft is primarily an imitator in technology management, it is quite innovative in its marketing and competitive strategies, as shown above in the product strategy list.

Criticality means making sure that your contribution is valued by end customers as well as by other members of the ecosystem. For example, Intel saw that faster chip demand would shrink, so it stimulated the market demand for fast processors by pursuing the multimedia personal computers that required powerful microprocessors. Microsoft is continually watching the market for new software products. For those that appear to have potential for high customer demand, Microsoft moves into the product line either by acquiring the company that developed the

technology or by copying the product. Examples in the past include Microsoft's development of Money and their (unsuccessful) move to acquire Quicken from Intuit. Now, Microsoft is investing in web technologies such as streaming media as can be seen by their purchase of Vxtreme, Inc.

Embeddedness means deeply marrying your own business processes and formal and informal organization with those of the rest of the ecosystem. Embedding can also be accomplished by working with other member firms in joint development and co-marketing. As this occurs, the framework of cooperation is improved. This concept is called *coevolution*. Examples of Microsoft's use of this element are its alliances with Intel its partnership with NBC for the MSNBC online news network.

Ecosystem leadership requires creating a framework for participation: Microsoft, Intel and other associated companies have made their framework available for anyone who wants to join their ecosystem. On the other hand, Apple made its framework more closed and difficult to join by not licensing its operating system software to run on other machines. Ironically, this caused the failure of Apple.

Critical Issues

The following is a list of some critical issues that face Microsoft and the computer industry.

- Are Microsoft's competitive practices ethical?
- Is the imitation strategy good enough? Can Microsoft continue to succeed with it in the long term?
- Does Microsoft's competitiveness provide a benefit to the industry and/or the consumer? E.g., does it make the products better or cheaper?
- What will be the impact on Microsoft of the Justice Department's prosecutions for unfair practices?
- Should the government get involved in the competition that occurs within the software industry?
- Will other companies work together to overcome Microsoft's dominance?
- What will it take to oust Microsoft from its leadership position in software markets?
- Might Microsoft's ruthless competition ultimately kill innovation in the software industry? As soon as other company's innovations are shown to be viable products, Microsoft copies the product and takes over the market. If this continues, will other software companies decide they can no longer win in the industry and stop creating new products?

Conclusion

Microsoft's basic strategy has been: Attack The Future. Whether we agree or disagree with its tactics, we cannot deny that Microsoft has been hugely successful—the financial information above attests to this. The following is a list of factors that contributed to that success. [5]

First, Microsoft has *exceptional chief executive and senior management teams.* Bill Gates is an extraordinary leader and he has assembled many executive personnel to support him.

Second, Microsoft has thousands of *carefully screened and talented employees*, known for intelligence, technical skills and business savvy, as well as their aggressive, entrepreneurial spirit, high level of loyalty and commitment, and the never give up attitude.

Third, Microsoft exhibits *highly effective and coherent competitive strategies and organizational goals*. It is clear that Microsoft people do not value technology for technology's sake, rather they are interested in getting the most bang for the buck and in the mass market. They believe that delivering value to customers will make the most money. They replace obsolete technologies before the competition catches up.

Fourth, Microsoft has a *flexible, incremental approach to product development and organizational evolution*. The Microsoft system of product innovation enables teams and individuals to alter specifications and designs during a project and build products by incrementally evolving futures that target specific customer activities. Microsoft people manage the evolution of products, projects, and the overall organization with a remarkably low degree of politics and bureaucracy.

Fifth, Microsoft has *a clear process of product development and other operations that combines efficiency with the ability to work in parallel*. It has developed vast knowledge about the development and testing of a software product, and it now shares many components and tools across different projects. It also concentrates on processes for product development and other operations to promote efficiency and flexibility by organizing many tasks in parallel.

Sixth, Microsoft people have *an orientation toward self-critiquing, learning, and improving*. Product groups study past projects, looking for what went wrong and what went right, and see what can be improved for the next release of similar products. Microsoft is increasingly using quantitative measures or metrics to understand products, projects, and customers satisfaction.

Seventh, Microsoft people have *demonstrated a relentless pursuit of future markets.* The people continue to look several years into the future as they evaluate new ideas such as multimedia publishing, interactive television and other products and services for the information highway and novice customers.

References

[1] "Monopolies in cyberspace: hands off Microsoft - for now," *The Economist*, vol. 340, no. 7982, p.18, Sep 7, 1996.

[2] "Poor Mr. Gates: Microsoft's cash problem," *The Economist*, vol. 344, no. 8027, pp. 55-56, July 26, 1997.

[3] "The tyranny of success," *The Economist*, vol. 339, no. 7967 pp.9-12, May 25, 1996.

[4] David Allison, *Bill Gates Interview*, Smithsonian Institute

[5] Michael A. Cusumano and Richard W. Selby, *Microsoft Secrets: How the World's Most Powerful software Company Creates Technology, Shapes Markets, and Manages People.* The Free Press, N.Y., 1995.

[6] James Gleick, "Making Microsoft Safe for Capitalism," *Antitrust Law and Economics Review*, vol. 27, no. 2, pp. 71-96, Spring 1996.

[7] Connie Guglielmo, Will Rodger, Steven Vonder Haar, Charles Babcock and Tom Steinert-Threlked, *Inter@ctive Week Magazine*, pp. 67-69, October 27, 1997.

[8] Bradley Johnson, "Windows 95 opens with omnimedia blast," *Advertising Age*, vol. 66, no. 34, pp. 1-2, August 28, 1995.

[9] Microsoft annual report, 1997.

[10] Microsoft Home Page, Internet.

[11] Fred Moody, March 19, 1997, *Wonder Women in the Rude Boys Paradise*

[12] Geoffrey A. Moore, "Inside the Tornado: Marketing Strategies from Silicon Valley's cutting edge," *HarperBusiness*, pp.63-100, 1995.

[13] James F. Moore, "The Death of Competition: Leadership and Strategy in the age of Business Ecosystems," *HarperBusiness*, pp.189-229, 1996.

[14] Jim Seymour, "Microsoft/Apple: a win-win deal," *PC Magazine*, vol. 16, no. 17, pp. 93-94, Oct 7, 1997.

[15] Michael J. Sniffen, "Feds: Microsoft should pay $1-million-day fine," *The Oregonian*, p. 1, Monday Oct 20,1997.

[16] Randall E. Stross, *The Microsoft Way: The Real Story of How the Company Outsmarts its Competition*, Addison-Wesley Publishing Company, Inc., 1996.

[17] United States Securities and Exchange Commission, Washington, D.C. 20549 (Justice Department**),** Internet, http://www.sec.gov/Archives/edgar/data/789019/0001017062-97-001764.txt

Exhibit A: Four Stages of Business Development

Stage of development of the business	Definition	Overall leadership challenges	Cooperative Challenges	Competitive Challenge
Pioneering	The basic paradigm is worked out	Value	Work with customers and suppliers to define the new value proposition and a paradigm for providing it that is dramatically more effective than what is available	Protect your ideas from others who might be working toward defining similar offers
Expansion	Broadens your scope and consumes all types of resources	Critical mass	Bring the new offer to a large market by working with suppliers and partners to increase supply and to achieve maximum market coverage and critical mass	Defeat alternative implementations of similar ideas; ensure that your approach is the market standard in its class through dominating key market segments; tie up critical lead customers, key suppliers, and important channels
Authority	Becomes stable with competition for leadership and profit	Lead coevolution	Provide a compelling vision for the future that encourages suppliers and customers to work together to continue to improve the ecosystem	Maintain strong bargaining power in relation to other players in the ecosystem including key customers and valued suppliers
Renewal	Continuing innovation must take place for thriving	Continuous performance improvement	Work with innovators to bring new ideas to the existing ecosystem	Maintain high barriers to entry to prevent innovators from building alternative ecosystems. Maintain high customer switching costs in order to buy time to incorporate new ideas in your own products and services.