

What Road Ahead for Microsoft the Company?

Mapping the critical decisions involved in building the next version of the software company.

My July 2006 column discussed some of the problems Microsoft faced on the engineering front—how to continue building an increasingly large and complex Windows operating system, even after they get the next version, Vista, out the door. Despite the risks of product bundling and violating anti-trust laws, Microsoft has apparently broken up Windows into different product-like branches (much like the Word, Excel, and PowerPoint branches of Office) to make the coding and daily builds more manageable. It has also introduced a new generation of testing tools to check automatically for a wider variety of errors (code coverage and correctness, APIs/component architecture breakage, security, dependencies, memory use) and automatically reject code at desktop builds

and branch check-in points.¹ But dealing with monolithic software systems is only one hurdle. Microsoft faces other issues even more daunting.

Perhaps the most talked about challenge is the

threat to Microsoft's major revenue streams and the potential decline of the packaged software products business with the ongoing shift in "business models." The threat

¹For a description of Microsoft's testing tools, see J.R. Larus (Microsoft Research) et al., "Righting Software" in *IEEE Software* (May/June 2004), 92–100.

became obvious with the rising popularity of open source and free software products such as Linux, Apache, Open Office, and MySQL, as well as email and calendars from Yahoo!, Google, et al.—which challenge Windows desktop, Windows servers, Office, SQL Server, and Outlook. The free products still leave service opportunities for companies in the business of making money (for example, Red Hat, Oracle) or opportunities to sell complementary hardware and software platforms (IBM is a good example).

More broadly, as I discussed in an earlier column ("Finding Your Balance in the Products and Services Debate," March 2003) and in my book *The Business of Soft-*

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ware, this trend toward “free” has involved the transformation of enterprise software into mainly a services and maintenance business (for example, SAP). We also see the basic products, support, and maintenance bundled together as an ongoing service paid for over time (such as Salesforce.com) rather than in a large up-front license fee and then a variety of services along with annual (usually “perpetual”) maintenance payments. Meanwhile, we are starting to see more consumer software products, ranging from email and search functions to word processing and spreadsheets, as nominally “free” but paid for by eyeball time of the user and by indirect revenues such as advertising (for example, Google, Yahoo, AOL, MSN/Windows Live and Office Live).

A second widely talked about challenge is senior leadership. Bill Gates will be leaving his day-to-day role in less than two years from now, though he will remain as chairman of the board. Steve Ballmer will continue as CEO and preside over the Windows and Office money machines, as well as try to ease the company into another generation of leaders, products, and business models.

Names are surfacing of executives who have mostly been in the company for years but who will have much more important roles in the future, particularly after Jim Allchin, who has headed the Windows group, leaves with the deliv-

Robbie Bach (a former financial analyst) and Jay Allard (designer of the Xbox video game system) in home entertainment systems; and Craig Mundie (who focuses on government and international strategy) and Rick Rashid (a former professor of computer science at Carnegie Mellon who built Microsoft Research) in research.

A third challenge is more about culture, organization, and market presence, or what Netscape people used to call “mind share”—capturing the imaginations of users, actual and potential employees, and investors. Microsoft is now more than 70,000 employees

and is losing its dominant presence in the minds of many people. Its days of being a lean, mean, and focused software machine are over. Microsoft is now a mini-conglomerate of dozens of consumer and enterprise products and wannabe businesses —“wannabe” in the sense that the Windows product line (desktop and servers) and Office still generated about 85% of Microsoft’s \$44.3 billion in fiscal 2006 revenues and all but \$26 million of its \$16.6 billion in operating profits (see Table 1).

The “cool” place to work if you are in the software business these

FY06 Sales = \$44.3 billion, Op. Income = \$16.6 billion (37%)

Corporate Expenses = \$5 billion (11%)

R&D Expenditures = \$6.6 billion (15%)

- **Client (Windows):** \$13.2 billion revenue, \$10.2 billion op income
- **Office+:** \$11.8 billion revenue, \$8.2 billion op income
- **Server and Tools:** \$11.5 billion revenue, \$4.3 billion op income
- **Business Solutions:** \$919 million revenue, \$24 million op income
- **MSN:** \$2.3 billion revenue, **-\$77 million op income**
 - 30% Access
 - 10% Subscriptions and transactions
 - 60% Advertising
- **Mobile and Embedded:** \$37 million revenue, \$2 million op income
- **Xbox, PC Games:** \$4.3 billion revenue, **-\$1.3 billion op income**

Source: Microsoft 10K for FY2006

Table 1. Microsoft revenue breakdown.

ery of Vista. Among the new leaders is Ray Ozzie, the new-comer from Microsoft’s 2005 Groove acquisition, coordinating the initiatives around software as a service. Then we have the Microsoft veterans Kevin Johnson (a sales expert who used to work for IBM) and Steve Sinofsky (an engineer who formerly headed the Office group) in Windows; Jeff Raikes (a longtime Microsoft sales and marketing executive who once worked for Apple) in applications;

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days is Google. Its employees can work in a smaller company (about 8,000 people) with a much flatter hierarchy, and can spend a day a week on their own projects. Google engineers also do not have their legs tied to the monolithic Windows code base but can create new functionality and release new modules through the Web portal in small teams and practically as fast as they can conceive, build, and test the code. Their internal development style looks more like the open source movement than it does commercial software engineering. Web 2.0 companies like YouTube, recently acquired by Google, also seem like fascinating places to experiment with software that might meet the interests of young Web users.

In short, while the future of software may still be exciting, we have to ask if the business and the technology are still exciting at Microsoft. I think it depends on how well Microsoft faces up to these challenges.

With regard to its business model and revenue stream, Microsoft is still in excellent shape and likely to continue so for probably the next decade. Revolutions happen more slowly than you might think, even in high technology. Industry pundits have been predicting Microsoft's demise since the birth of Netscape in 1994. As seen in Table 2, unlike most public companies in the software

products business, Microsoft remains a healthy products company (91% of fiscal 2006 revenues, compared to 5% for MSN and 4% for services). This means it can take advantage of those enormous gross margins (poten-

and 20% of Windows, as well as 100% of the home entertainment business). True, these revenues are vulnerable to challenges from desktop versions of Linux as well as Google and other Web-delivered software. But they are a minority of sales. At the same time, 41% of Microsoft's revenues came from enterprise sales (50% of Office, 90% of Windows services, and 100% of Business Solutions—mainly the former Great Plains and Navision product lines). About 24% of 2006 revenues were also sold through multi-year licenses, presumably to enterprise customers or other large

organizations like governments. In addition, 34% of revenues came from original equipment manufacturers—the producers of personal computers, such as Hewlett-Packard, Dell, IBM, and dozens of other firms around the world. These companies are not likely to switch en masse to the only viable competitor—Linux—any time soon. Apple's share of the PC market is growing, but the Mac is not likely to replace Windows machines in the foreseeable future either. More people will also access the Web and do some computing through smart phones, but these devices will mainly be complements to the personal computer, not replacements.

In short, Microsoft's sales and profit machine is pretty well entrenched. The real problem is

<ul style="list-style-type: none"> • Products (91%) + MSN (5%), Services (4%) <ul style="list-style-type: none"> – Sales: Windows (30%), Office (27%), Servers (26%) – Gross Profits: Windows (47%), Office (38%), Servers (20%) – Gross Margins: Windows (77%), Office (70%), Servers (37%) • OEM Software Revenues = 34% of sales <ul style="list-style-type: none"> – 80% Windows, 20% Office, 10% servers, 100% mo/emb • Enterprise Software Revenues = 41% of sales <ul style="list-style-type: none"> – 50% Office, 90% servers, 100% BizSolutions – Multi-Year Software Licenses = 24% of total sales <ul style="list-style-type: none"> • 50% servers, 50% Office • Consumer Software Revenues = 27% of sales <ul style="list-style-type: none"> – 40% Office, 20% Windows, 100% Home/Entertainment
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Source: Microsoft 10K for FY2006

Table 2. How Microsoft makes money.

tially as high as 99%) that come from replicating a software product through what I have called the “printing-press model.” If Microsoft can apply some discipline to its enormous R&D costs, and stop throwing, for example, 7,000 programmers and test engineers at building the next version of Windows, it can become much more profitable. It may even become much more innovative.

Most importantly, Microsoft's revenues are reasonably well protected from free software and changing business models. Table 2 indicates that only 27% of its revenues, based on fiscal 2006 data, are from direct sales of consumer software (40% of Office revenues

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that its revenues may only grow with the overall PC market and sales abroad, with some additional upward momentum from the video game business (which loses money). Slow growth is why Microsoft's stock price has stalled in recent years. But the company's ability to make tons of money seems absolutely solid. It just needs to figure out how to invest this money more wisely rather than continue sprinkling billions of dollars over anything that seems promising. For example, Microsoft spent \$6.6 billion or 15% of 2006 revenues on R&D and has spent at this pace or higher for many years, with relatively little in the way of innovation to show for such enormous expenditures.

Investing more wisely is where the second and third challenges

become more important. Microsoft's "new" leadership really consists of "old" Microsoft veterans, with the exception of Ray Ozzie. Among the executives mentioned earlier, Kevin Johnson has spent 14 years in the company, Steve Sinofsky 17 years, Jeff Raikes 25 years, Robbie Bach 16 years, Jay Allard 15 years, Craig Mundie 14 years, and Rick Rashid 15 years.² This group of executives, and their lieutenants, as well as their boss, Steve Ballmer, do not lack smarts and talent. But can a veteran leadership team envision the future of the changing software business before it happens and make the foresighted kinds of investments that have

²Biographies of Microsoft executives are available on the company Web site. See www.microsoft.com/presspass/exec/execoverview.mspx.

brought so much recent attention to Google, Apple, and Web 2.0 entrants such as YouTube? Can the veteran leadership attract a different generation of employees to the company? These are open questions and the most serious challenges for the "new" veteran leaders of Microsoft. Figuring out how to build the next version of Windows the operating system, however difficult that may be, seems trivial in comparison to building the next version of Microsoft the company. **C**

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