Microsoft

MICROSOFT HOW IT BECAME STRONGER THAN EVER

The software Goliath has an arsenal of new monster products. Will the courts slow it down?

BY JAY GREENE

When 20,000 Microsofties streamed into Seattle's Safeco Field last September for the annual employee meeting, CEO Steven A. Ballmer knew he had to fire up the troops. It had been a stinker year for the software giant. Microsoft Corp.'s revenue growth had slowed to 8% from an average annual rate of 36% through the 1990s, a federal judge had ordered the company snapped in two for violating antitrust laws, and $250 billion had evaporated from Microsoft's market value. Worst of all, with the Internet moving to the center of computing, PC pioneer Microsoft seemed on the edge of irrelevance.

So Ballmer dipped deep into his bag of motivational tricks. On a huge video screen, he played a clip from a documentary about the epic 1974 title fight between Muhammad Ali and George Foreman. Foreman, seven years younger, was expected to win. But Ali was the people's choice, and the 60,000 fans in Zaire that night broke into spontaneous chants: "Ali, *bomaye!* Ali, *bomaye!*" meaning "Ali, kill him!" Ali leaned back against the ropes and absorbed blows from Foreman on his gloves and his forearms but gradually wore him out. Finally, Ali pounced, sending Foreman to the canvas. As the video ended, the loudspeakers resounded with a new chant: "Microsoft, *bomaye!* Microsoft, *bomaye!*"

JAMES BENNETT

Like Ali, Microsoft had absorbed some bruising body blows in its own Rumble in the Jungle, Ballmer told the crowd. "We were getting shots from everywhere. Maybe we even had a little fear in our eyes." Then his voice suddenly rose to a shout: "You know what I say? I say we're off the ropes!" The Microsofties roared.

Back then, Ballmer's rallying cry was mostly wishful thinking. Now it's starting to look like an understatement. Not only do Microsoft's over-the-hill days seem over, but it is emerging more powerful than ever. Instead of the Internet relegating Microsoft to the sidelines, the software maker has grown stronger in its core PC business, gained ground in the lucrative enterprise corporate market, and fought its way very nearly to the top of the Internet heap.

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All the while, it has been making mind-boggling amounts of money. While competitors are pinching pennies in this harsher economic environment, Microsoft is awash in cash: $30 billion, more than any other company in Corporate America. Moreover,

THE MONEY MACHINE

Microsoft is building on top of its huge and profitable franchises for desktop and server software by forging into such markets as game consoles, small-business software, and Web services. Its goal: To return to 20% revenue growth, up from 14% today.

THE CASH GENERATORS

THE NEW BETS

.NET SERVICES This technology lets unrelated Web sites talk with one another and with PC programs. One click can trigger a cascade of actions without the user having to open new programs or visit new Web sites. Microsoft hopes to use .Net to create Web services. First up: an alert service due next year.

XBOX Microsoft's leap into the $20 billion game-console business begins on Nov. 8 with Xbox. Its game box will be three times more powerful than rival consoles by Sony and Nintendo. Microsoft plans to spend $500 million in the first 18 months on advertising alone. But it may not be able to match rivals' game offerings.

it's adding $1 billion a month to its bank account, thanks to its Windows and Office monopolies. That gives it the luxury to invest in other companies and spend lavishly on new business ventures while stoking its product pipeline—all crucial for extending its dominance. This year, Microsoft will spend $4.2 billion on research and development, more than rivals America Online, Sun Microsystems, and Oracle combined.

Now, Microsoft is about to unleash the biggest onslaught of new products in its 25-year history. It starts on May 31 with the launch of Office XP, the latest version of its word processing and spreadsheet program that accounts for roughly a third of the company's revenue. Next up, Stinger, a new operating system for cell phones, followed by Xbox, Microsoft's bold leap into the game-console business. And on Oct. 25 comes the big kahuna: Windows XP, a potent new version of its desktop operating system that Chairman William H. Gates III says is Microsoft's most important product since Windows 95. "We've never had a year with this many new products," he crows.

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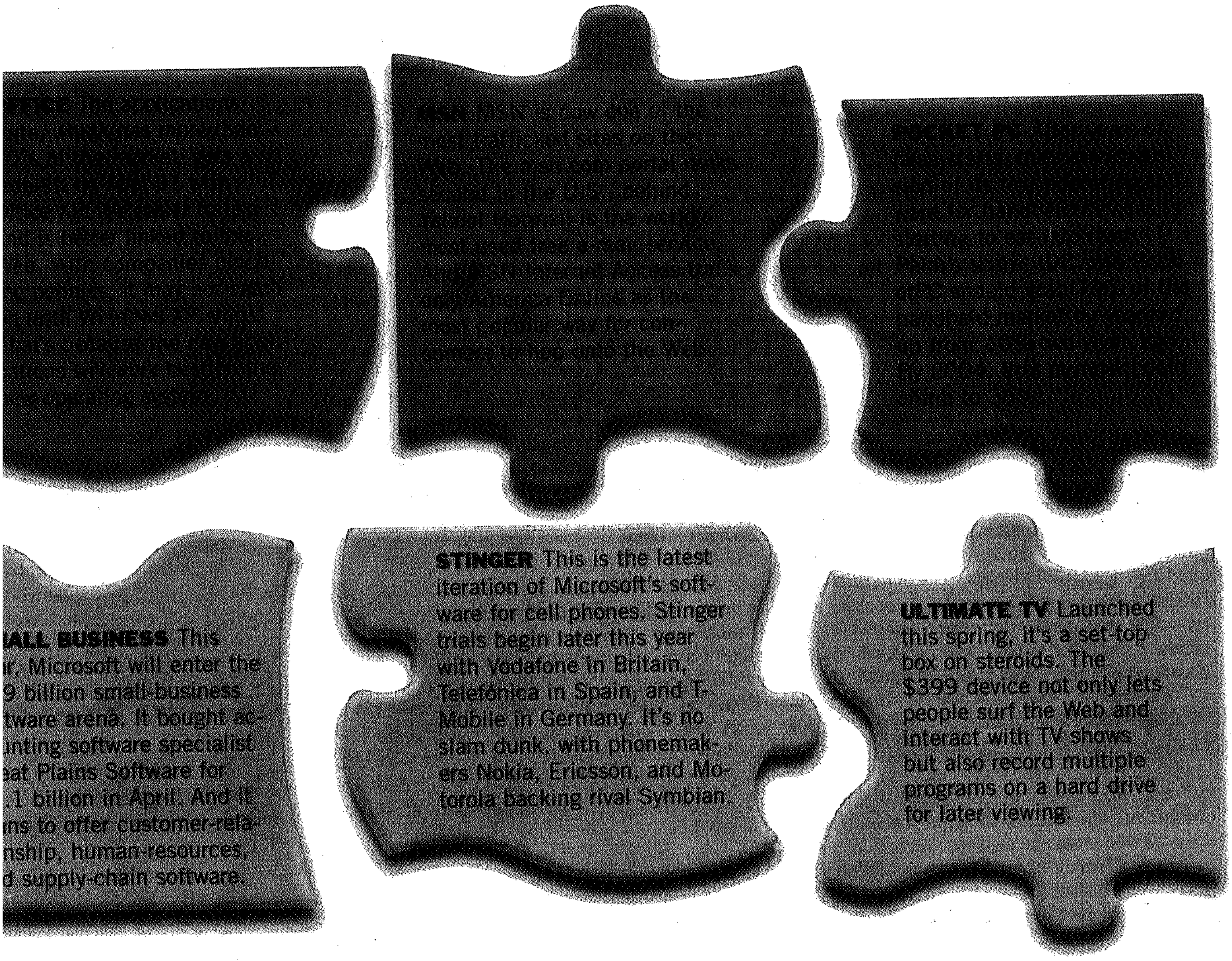
Windows XP is far more than just another spiffy rev of Windows software. With XP, Microsoft can finally harness its battery of products and Web sites, feeding customers from one product into another in a chain reaction with a potentially explosive result. Test versions of Windows XP include quick access to an easy-to-use browser that has a button that starts Microsoft's Windows Media Player. That browser zips you to Microsoft's MSN Web portal, which then offers simple ways to sign up for its instant-messaging and Internet mail service. What's more, Windows XP offers to plug you in to altogether new Internet services, such as Microsoft's alert system that e-mails or pages you when a flight is late or a stock dips low enough to buy.

HOOKS EVERYWHERE. Add it up, and Microsoft's ability to elbow aside rivals is staggering. Start with Windows. Analysts expect computer makers to sell 160 million PCs running Windows next year. On the Web, its MSN Internet-access service has 5 million subscribers. More than 50 million surfers hit its MSN portal each month. Its free e-mail service just landed its 100-millionth account. And its instant-messaging software is approaching 30 million users. Each product will feed on another. Its instant-messaging service will encourage users to sign up for Microsoft's Hotmail. Netizens who land on the MSN portal will be hawked to the access service. And Windows will push users to each piece of the empire. These hooks from one product to the next have rivals in a tizzy. "The threat that Microsoft poses is to turn the Internet into a company town—a Microsoft town," says Jonathan Schwartz, senior vice-president of corporate strategy and planning at Sun Microsystems Inc.

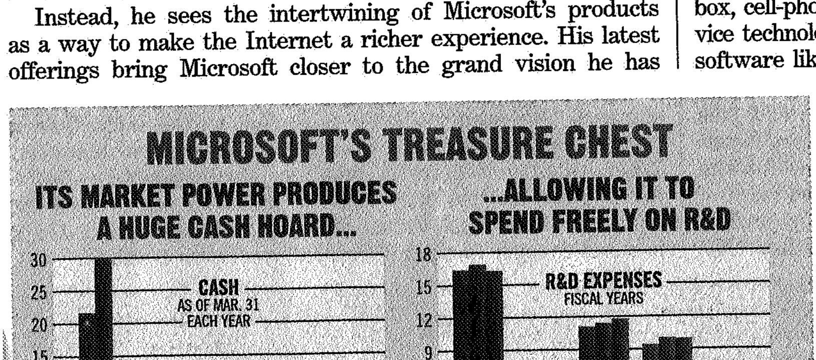
Nonsense, says Gates, the Web is too vast for one company to rule. He insists that the way he's handling Windows

If Passport's e-commerce software becomes ubiquitous,



doesn't stifle innovation by others. "There's no block to people putting features on Windows," he snaps. Indeed, there are dozens of markets where Microsoft doesn't play, such as online stock trading and e-tailing. And Microsoft has had its share of busts. Remember its Sidewalk hometown portals?

Instead, he sees the intertwining of Microsoft's products as a way to make the Internet a richer experience. His latest offerings bring Microsoft closer to the grand vision he has spun since he awoke to the Web six years ago. Gates sees a day when Microsoft software will run on any device, easily connecting people to the Internet wherever they happen to be. He's convinced that the way to achieve this "anytime, anywhere" computing is by weaving Microsoft's PC, server, set-top box, cell-phone, and handheld programs in with its Internet service technologies. Once that happens, Microsoft hopes to deliver software like a steady flow of electricity, collecting monthly or annual usage fees that will give it a lush, predictable revenue stream. "This era is one where we are certainly out front," says Gates, rocking in his chair with trademark intensity.



CHARTS BY ERIC HOFFMANN/BW

HOME FREE? If everything works as planned, Microsoft's software could be at nearly every point a consumer or corporation touches the Web. Since the Internet is now the backbone of most computing, that puts Microsoft at the center of all things digital. It's a huge turnabout for a company that was mocked for being late to the Net. "We're not playing catch-up," Gates says. "We're back in a pioneering position."

And, soon, Microsoft might not have a breakup order hanging over its head. The D.C. Circuit Court of Appeals is expected to rule any day now on the company's appeal (page 52). Based upon the questions asked at oral arguments,

...soft could become a tollbooth on the Internet

“We’ll have to live with the consequences [if

most legal experts believe the court will reverse at least one of Judge Thomas P. Jackson’s findings: that the company illegally “tied” a browser into its operating system, that it acted illegally to defend its Windows monopoly, and that it attempted to divide the browser market with Netscape Communications Corp. If any part is thrown out, it’s unlikely the breakup order will be sustained. Instead, the appeals court would probably send the case back to a lower court to determine remedies, which could trigger settlement talks. If the lower-court ruling is overturned, Microsoft is home free, pending an appeal to the U.S. Supreme Court by the state attorneys general who brought the suit along with the Justice Dept.

To competitors, there is no worse nightmare. It’s as if the appeals court is about to unleash a hungry rottweiler in a steakhouse. In an effort to keep the collar cinched, rival AOL Time Warner Inc. has launched a clandestine lobbying campaign, warning Senate staffers about new threats to competitors and consumers. A presentation prepared for the meetings that was obtained by *BusinessWeek* calls Microsoft’s Internet strategy “the boldest, most aggressive move in Microsoft’s history to leverage their [Windows] monopoly to create a bottleneck that will constrict the Internet.” Says AOL Executive Vice-President Kenneth B. Lerer: “It appears they’re doing all over again what they did when they previously went into foul territory.” Sun Microsystems CEO Scott G. McNealy says letting Microsoft off the hook will stifle innovation. “We’ll have to live with the consequences,” he warns.

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Already, many of the innovative Web software upstarts are in a mess, but of their own making. The Internet revolution promised a world where thousands of companies would flourish and the Web—not Microsoft—would be king, since it is built with industry-standard technology that everyone can use. The theory was that even while the antitrust case dragged on, market forces would keep Microsoft in restraints. But with the collapse of Net stock prices, the venture-capital well running dry, and not enough profits in the upstart’s coffers, these would-be revolutionaries are hard-pressed to continue their fight. More than 400 Net companies have gone out of business in the past year. Many of those that remain have seen their stock prices sink by 90% or more.

“THEIR VIETNAM.” Microsoft is a study in the opposite. Even with the Nasdaq off 9%, its stock price has soared 60% this year, to 70, outperforming the rest of the Dow Jones industrials. The company bested analysts’ expectations for the quarter that ended Mar. 31, earning $2.45 billion on sales of $6.46 billion. That led influential Goldman, Sachs & Co. analyst Rick Sherlund to add it back to his recommended list. “Microsoft has been playing defense for the last six years,” says Sherlund. Its Internet technology “is all about turning the tide and going on the offense.” Sherlund expects Microsoft to post revenue growth approaching 20% within a couple of years.

You can feel the old feistiness on the sprawling campus in Redmond, Wash. During the antitrust trial, Microsoft became an industry pariah, with only its most loyal partners coming to its defense. Burnt out or lured by the Net, about 20 top managers left, including Chief Financial Officer Greg Maffei and Paul Maritz, the architect of the new Net strategy. Microsoft often lost out on recruiting the brightest college grads. “It was their Vietnam,” says Roger S. Siboni, CEO of software maker E.piphany Inc. Now, the departures have slowed to a trickle. And Microsoft says that 86% of candidates offered jobs accept, vs. 79% during the dot-com craze. While industry stalwarts such as Cisco Systems, Yahoo!, and Dell Computer are laying off workers, Microsoft expects to hire 8,000 people in this fiscal year.

Still, the heavy lifting has only just begun. Much of Microsoft’s success will depend on its ambitious Internet strategy dubbed .Net. This year, Microsoft will spend $2 billion on .Net technology that will make it possible for unrelated Web sites to talk with one another and to programs on a PC. One click can trigger a cascade of actions without requiring the user to open new programs or visit other sites. The strategy relies on Microsoft persuading software programmers to use the technology, yet many tech companies still harbor a deep distrust of the company. At the same time, Windows 2000, its operating system for powerful server computers, has only begun to convince corporations that it’s ready to handle the most demanding jobs. And to succeed as a Web services company, Microsoft will have to get consumers to pay, while most experiences on the Web are free. Fierce competitors await: AOL in the Internet market. Sun Microsystems in servers. Oracle Corp. in heavy-duty corporate software. And IBM everywhere.

“There’s a buzz like we haven’t had in a few years”

—CEO Steve Ballmer

The new Microsoft is once again like the old Microsoft: undaunted. “We want to keep the pedal to the metal,” says Ballmer. Indeed, Microsoft seems more aggressive than ever. Windows XP is where its bundling strategy notches up a level. In test versions, when consumers start up a PC equipped with Windows XP for the first time, they’ll see a host of changes making Microsoft products available with

BILL GATES’S INNOVATION FACTORY

Critics say Microsoft doesn’t come up with innovations that change the face of computing. Still, its engineers have hatched scores of modest advances that are in nearly every new Microsoft product. Moreover, promising projects are in the pipeline:

TABLET PC

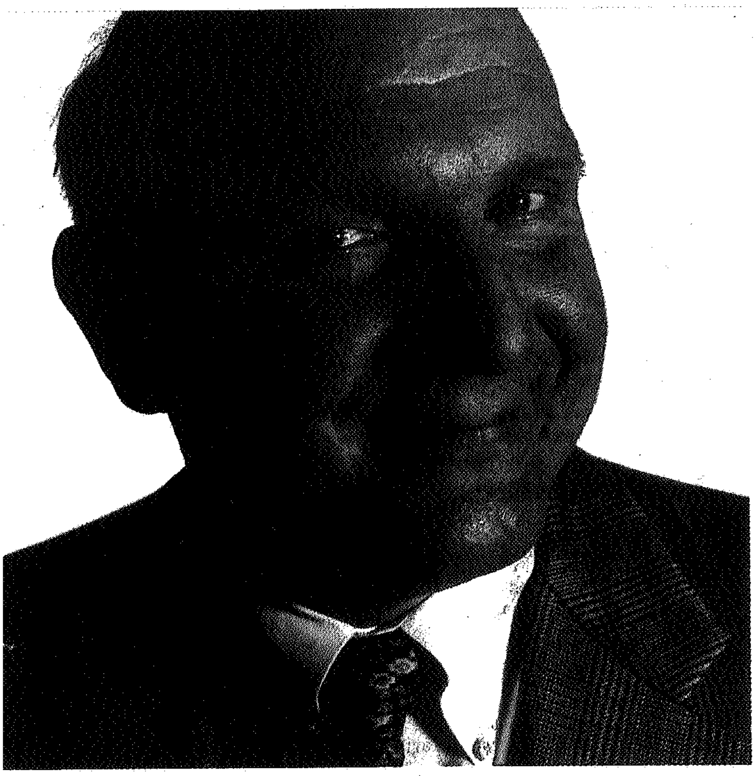
Long a favorite of Gates, the first tablet PCs will hit the market next year. Microsoft has signed up five companies to make laptops with a screen to scribble on. While the handwriting recognition is still imperfect, Microsoft believes that buyers will use the devices to store handwritten notes.

NATURAL-LANGUAGE PROCESSING

The idea is to communicate with a computer the way you talk to a person. Already, users can retrieve info from Microsoft’s SQL Server database software by typing in simple questions. The next version of Windows, due out two years ago, will use even more natural-language technology.

one or two clicks of a mouse. Consider the Passport service. Windows XP prompts consumers to sign up the first time they log on to the Web. If they agree, they'll be asked a series of questions about where they live, their e-mail address, and their credit-card numbers. Rather than fill out a new form every time a Web surfer visits a site or submit a password on sites requiring it, Passport transmits the information directly, saving time and hassles.

Sounds pro-consumer. But Microsoft's enemies are portraying Passport as the Trojan Horse that could allow the company to dominate much of the Internet. Because of the software maker's incredible distribution power, opponents fear that Microsoft will be able to turn it into the ubiquitous payment and identity-authentication system on the Net. Microsoft already boasts 160 million Passport accounts. Although many of those are duplicates, this base of customers will only get bigger, since 160 million new Windows PCs are expected to be sold next year. As sales grow, it will be easier for the company to convince Web-site owners that they ought to accept Passport. That, in turn, will trigger more consumers to sign up—the type of powerful cycle that winds up creating monopolies. That puts Microsoft in the position, if it wants, to charge online merchants a fee for its Passport service. Although the company now denies that's the plan, its executives in the past talked about collecting fees for every e-commerce transaction.



Microsoft executives bristle at talk of Trojan Horses and the suggestion that bundling its Net services into Windows is unfair. "We have behaved consistently," says Ballmer. "We believe the law entitles us and encourages us to continue to innovate and add new capability. We thought that five years ago, two years ago, one year ago, now. We have not varied in our craft. We haven't stopped adding things to Windows."

Once you're a Passport member, you're set up to subscribe to a new set of services called Hailstorm. These include everything from notifying users of specific events to automatically updating their calendars when they purchase tickets or make an appointment online. Already, a half-dozen corporations have signed up, including No. 1 Internet auctioneer eBay Inc., which is building a service that instantly notifies customers when their bid has been trumped.

"ALL THE PIECES." Other companies are expected to engineer similar technologies for linking Web sites, but Microsoft has tremendous advantages. It can mobilize the army of 5.5 million Windows developers. It has an array of now-mature server software handling everything from e-commerce to databases. And it has Windows. "Microsoft has all the pieces to make this thing go, and no one else does," says analyst Ted Schadler of Forrester Research Inc.

Hailstorm is the next step in Microsoft's monumental switch from selling software programs to offering a vast array of services over the Web. Gates and Ballmer foresee a time when most of their revenues will come from subscriptions. In addition to Web services, Microsoft is retooling its software programs so they, too, can be rented out via the Net. Consumers will be able to buy a basic package of services: word processing, say, for a few dollars a month. Or they could shell out $20 for a package that includes word processing, scheduling, and e-mail services, along with online storage to keep music collections and photos.

There's still a lot of packaged software to be sold, especially to corporations. Microsoft is just now becoming a major player in the upper reaches of corporate computing. For much of the past decade, Microsoft unsuccessfully tried to run the technical plumbing of huge organizations—the industrial-strength servers that kept corporate networks humming and handled their most important transactions. Windows 2000 Datacenter Server, released late last year, began to change all that. Now, J.P. Morgan Chase & Co. is running its commercial-loan processing system on Windows server software, and the electronic stock-trading network, Archipelago, handles 100 trades per second using Windows and Microsoft's database software. The market for Windows servers grew 32% last year, to $13.9 billion, while sales of servers running rival Unix grew only 14%, to $29 billion. The software impresses even former naysayers. "The giant is back," says Gary Bloom, the former No. 2 at Microsoft archrival Oracle who is now CEO of storage software company Veritas Inc.

The key to winning more corporate

FACE MAPPING

rchers are cooking up a way to digital camera to scan a PC head into a 3D image. re then adds a full range of ns. The point? Microsoft thinks mers will want to use their own in role-playing games.

INFORMATION AGENTS

Researchers are creating software agents that help you sort through the deluge of electronic information. One day, an agent will study what types of messages you read first and know your schedule. Then it will sort e-mail and voice mail, interrupting you with only key messages.

“The game business happens to be one thing they know nothing about” —NINTENDO'S HIROSHI YAMAUCHI

business will be .Net. Microsoft aims to provide the technology that will turn Web sites and software programs into virtual ɛgo pieces. If it comes together as planned, companies will able to snap sales, accounting, and inventory software ograms together so that customer orders automatically ɔdate balance sheets and set off requests to replenish supies. Today, each of those steps is handled separately. Miosoft is betting that customers will pony up for its server ɩftware and tools to build their own creations.

One of its first converts is Matthew W. Dunn, the chief inɪrmation officer at Intrawest Corp., a Vancouver (B.C.)-ɑsed skiing operator with 10 resorts, including Whistler [ountain in British Columbia and Copper Mountain in Col:ado. He wanted to set up a single Web site where skiers ɔuld book vacations to any of its resorts, arranging for ɩdging, lift tickets, ski rentals, and classes. But Dunn also ʼanted to tie those orders back into Intrawest's software prorams that track customer relationships and accounting.

LIPPERY SLOPE. It proved tricky. He ran into glitches with ɔftware from Oracle and e-commerce software maker Broad'ision Inc. But using early versions of Microsoft's .Net techology and e-business software from Vancouver-based Pivotal Corp., he got the system running in just 90 days. Intrawest booked about $1.5 million vorth of business online last winter, even though about half of ts destinations weren't tied into the new system for most of he season. With those properties available next season, Dunn ɛxpects the Intrawest site to generate $10 million. Equally imɔortant, Intrawest is creating a customer database that tracks ɛverything from the kind of lodging visitors like to resorts they ɑave visited. With this data, it can offer customers special leals they're likely to find appealing.

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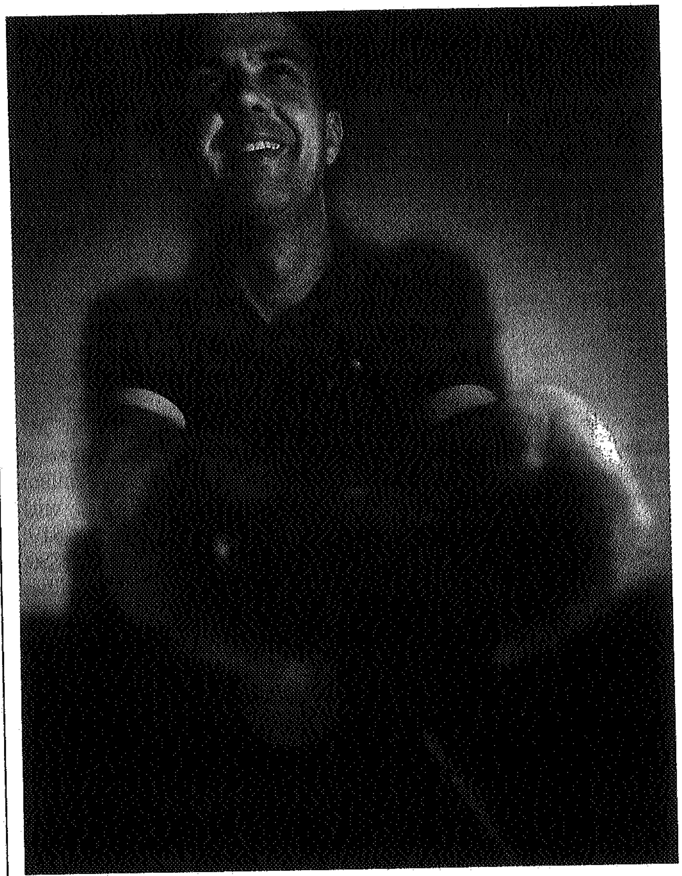
With Microsoft's girth and need to grow quickly, there's ardly a sizable market it can ignore. Next up: programs for mall and medium-size businesses. For years, Microsoft left ɑat market to others, content that the accounting, human-reɔurces, and procurement applications would run on top of 'indows. Microsoft jumped in headfirst last December when agreed to acquire Great Plains Software Inc. for $1.1 billion. ɪe Fargo (N.D.) company is a leader in finance and acunting software for smaller businesses. But accounting is st the first step for Microsoft. “It's good but not that in:esting,” says Jeffrey S. Raikes, group vice-president of the oductivity and business services division. “Steve [Ballmer] is telling me to build the multibillion-dollar business.”



“WE'RE VERY PERSISTENT” Xbox head Robbie Bach may have to eat considerable losses on the game console

So Microsoft is cobbling together an entire suite of business applications that handles everything from accounting to customers to procurement. What it doesn't build, it will buy, or it will partner with other software makers to fill in the gaps. This “suite” approach is how Microsoft conquered the market for desktop applications. Ultimately, Microsoft plans to plug these applications into bCentral, its small-business Web site, and offer the software as services. According to AMR Research, small and medium-size companies spent $19.3 billion on software last year. “It's quite

HOW MICROSOFT MUSCLES INTO NEW MARKETS

1 Start with an existing monopoly. Microsoft controls esktop computing. Vhen it ships its Vindows XP in ctober, the product ill be included ith most personal omputers sold.

2 Bundle a new service into your monopoly product. When consumers access the Web from Windows XP, they will be asked to join Passport, a service that packages their name, address, and credit-card numbers into a digital wallet. With Passport, they don't have to type in their vital data each time they go to a Web site.

3 Extend into a new market. By turning most PC users into Passport users, Microsoft hopes to build a large base of consumers using the service. That makes it attractive for more Web-site operators to adopt Passport for authenticating customer data.

4 Cash in. Once a large number of consumers and Web sites are using Passport, the company could be in a position to charge transaction fees for services based on Passport—such as alerts when a traveler's airplane flight is late.

“We’re not playing catch-up. We’re back in a pioneering position” —Bill Gates

compelling and quite frightening, I’m sure, in some quarters,” says analyst Dwight Davis of Summit Strategies.

Who should be scared? London-based Sage Group, for one. The niche software maker went *mano a mano* with Great Plains, a company its size, and did quite well. Now it faces a giant with the deepest pockets in tech. “Are they a gorilla? Absolutely,” says Sage CEO Paul Walker. He has confidence, though, in the ability of Sage’s products to succeed. But that’s what the execs at WordPerfect and Lotus thought when Microsoft set its sights on the word processing and spreadsheet markets.

Cover Story

Microsoft is tapping its war chest to attack new consumer markets, too. Take Xbox, the $299 game console that Microsoft plans to launch on Nov. 8. Microsoft will spend tens of millions developing the box. And it plans to spend $500 million more marketing it over the next 18 months, competing with Sony Corp.’s $299 PlayStation 2 and Nintendo Co.’s $199 Gamecube. Merrill Lynch estimates that Microsoft will lose $800 million on Xbox in the next fiscal year. But with a $20 billion market in its sights and with competing game consoles adding Web browsing and e-mail, Microsoft is running a marathon, not a sprint. “When we see a strategic need, we’re very persistent, we’re very committed,” says Xbox boss Robert J. Bach.

They’d better be. Although Xbox will deliver more than three times the processing speed of other consoles, it has a long way to go to match the competition’s hit games. Nintendo’s Pokémon and PlayStation’s Crash Bandicoot drive console sales. “Microsoft is an amazing company and Bill Gates is a great leader. But the people at Microsoft are human, and that means there are things they don’t know,” says Nintendo President Hiroshi Yamauchi. “The game business happens to be one thing they know nothing about.”

ONLY ONE TAKER. Microsoft has stumbled before. Take interactive TV. In the past three years, the company has invested more than $8 billion in cable companies to secure a spot for its set-top-box software. But after nearly a decade of tinkering with interactive TV, Microsoft’s set-top-box software is still hard to find. Only one cable company is using it: Globo Cabo in Brazil, which will begin a trial in 250 homes in Sorocaba later this month.

When Microsoft targets a market, it often perseveres. Its MSN portal and Internet-access service languished for nearly six years. Today, it’s the second-most popular portal on the Web, behind Yahoo! Inc. And its Web-access service is second only to AOL. Microsoft was able to dip into its war chest, investing $100 million in RadioShack Corp. and $200 million in Best Buy Co. in exchange for those retailers promoting MSN’s access service—something smaller competitors can’t afford to do. “MSN, through an incredible war of attrition, has built an

COMMENTARY

By Mike France

HOW MICROSOFT STAYS TWO STEPS AHEAD OF THE COURTS

Presidents come and go, antitrust policy waxes and wanes, and the Microsoft case gets passed from judge to judge. But one thing never changes: the company’s personality. Chairman William H. Gates III is still in charge, he still uses the same controversial techniques to expand his business, and he’s as aggressive as ever.

For evidence, look no further than Windows XP, the latest version of the company’s PC operating system, which is scheduled for release on Oct. 25. It’s a monopoly product. More than 95% of all PC buyers will get it. And it’s being packaged with a raft of Microsoft’s other products, including MSN Internet service, Windows Media Player 8.0, and the MSN Messenger instant-messaging service. The transparent goal: to push the vast installed base of Windows customers to use other Microsoft software as more and more aspects of their lives migrate to the Net.

This land grab raises an important question: Does Microsoft’s strategy violate antitrust law? Critics say yes. By weaving into the Windows interface software that other companies sell separately, such as its media player, they believe Microsoft is guilty of illegal “tying.” That’s the legal term used to describe a company that leverages a monopoly in one market into an adjacent area. Opponents also contend that Windows XP, when viewed in combination with Microsoft’s other aggressive actions, such as writing contracts that discourage PC makers from distributing rival products, could be construed as illegal monopolization. That’s when a company tries to kill rivals who threaten an existing monopoly.

NO VICTIM. Sound familiar? It should. These are the charges leveled against Microsoft in the current antitrust case. And they are the legal issues that will likely hang over the company for many years to come. Microsoft is committed to pushing its operating system ever outward, adding capabilities as new technologies emerge. And that means trustbusters are likely to keep monitoring whether the Windows behemoth is getting too big.

Whether a successful legal assault could be mounted against Windows XP depends, in large part, on how the District of Columbia Circuit Court of Appeals rules on the pending Microsoft case. This will mark the first time that a major appeals court has considered the application of tying and monopolization principles to the software industry. If the court finds that the government’s case was valid, then it probably wouldn’t be that hard to attack Windows XP.

But if, as expected, the appeals court takes a laissez-faire approach, then bringing a successful suit against Microsoft becomes much harder. Another factor could complicate any antitrust attack on Windows XP: the lack of an obvious poster child—a struggling young company like Netscape that is an innovative pioneer of the Web and faces destruction because of Microsoft’s conduct.

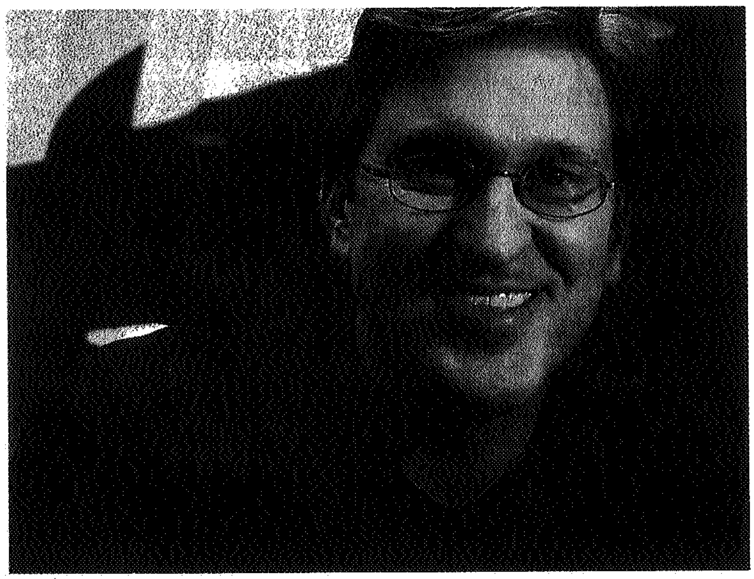
Bottom line: Reining in Microsoft could be an iffy proposition. Given the complexity and rapid changes in high-tech industries, most federal judges are “skeptical of [their] ability to make technological judgments,” says George Washington University antitrust scholar William E. Kovacic. “They’re unlikely to intervene in markets unless they

ncredibly powerful fran-
:hise," says Merrill Lynch
analyst Henry Blodget.

Microsoft shows the
same dogged persistence
when it comes to basic re-
search. Even while its lat-
est products are waiting on the launchpad, it continues to pour money into R&D in search of the Next Big Thing. Gates is so jazzed about the future of software that he stepped down as CEO 18 months ago to become Chief Software Architect. That lets him spend nore time with the company's 620 researchers. Walk hrough the warren of shoebox-size offices, and you'll ind engineers working on the most vexing problems, uch as getting computers to understand what you say. lates gets wound up like a kid over stuff like creating computer that watches your actions with a small ideo camera and determines if you're too busy to e interrupted with a phone call or e-mail. "The whole ea of valuing the user's time, that's the Holy Grail," e says, jumping out of his seat with excitement.

Perhaps the most ambitious research foray is Microsoft's -year march toward solving natural-language processing. It's techie name, but the concept behind it is simple and quite owerful. It's the idea that computers will be able to reond to questions or commands in everyday language, not st computerese or a long series of mouse clicks. Combine at with speech recognition—another area where Microsoft searchers are plugging away—and one day you'll be able to lk to your computer the same way you do to another pern. Microsoft has woven rudimentary natural language into such products as Office. The next step is delivering more advanced capabilities in the version of Windows due out in two years or so, code-named Blackcomb.

READY, SET...
Biz apps czar Jeff Raikes is shepherding the launch of several blockbuster products



A lot of these markets remain a gleam in Gates's eyes. Time and again, though, Microsoft has shown it has the focus and the financial staying power to get it right eventually. That could mean we'll hear echoes of "Microsoft, *bomaye!*" for years to come.

With Mike France in New York, Amy Borrus in Washington, D.C., and Peter Burrows in San Mateo, Calif.

e highly confident that they have a od reason for doing so."

Over the long term, if Microsoft's ponents want to defang Windows XP, ir best bet could be to work on an ument that the Justice Dept. raised in the antitrust trial: that the company is retarding innovation. In several briefs filed with Judge Thomas P. Jackson last year, the government argued that Microsoft was scaring rivals out of its path, thereby chasing away new ideas that could improve computing.

This reasoning impressed Judge Jackson, but it's still not widely accepted in the antitrust community. Why? Because Microsoft's XP operating system is clearly good for many consumers, who are grateful that the company bundles so many of the services they want into one easy package. Look for this debate—between consumer convenience, on the one hand, and innovation, on the other—to grow more urgent in coming years.

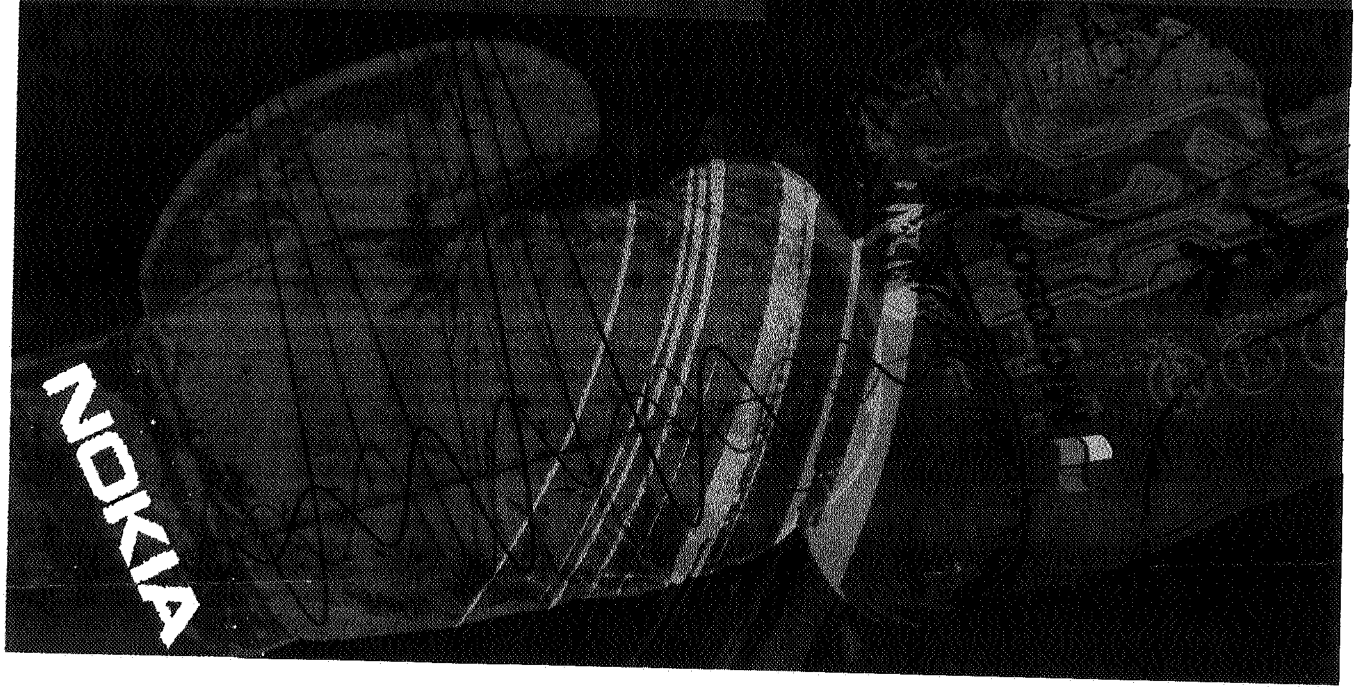
While the U.S. twiddles its thumbs over antitrust policy, Europe could take the issue into its own hands. Until recently, the European Commission let Washington take the lead in policing the software maker. That's changing. European Competition Commissioner Mario Monti has become alarmed by signs that U.S. courts could turn lenient against the software maker. He announced an investigation in August. Instead of duplicating the Justice Dept. attack on Microsoft's dominance of the browser market, however, Monti has zeroed in on its attempt to corner the server market. He could expand his inquiry at any time.

DIRE CONSEQUENCES. This is no fainthearted effort. Only one official is deployed in most EC antitrust inquiries. Against Microsoft, though, lawyers in Brussels say Monti has formed a "SWAT team" with more than half a dozen full-time investigators. Unlike the U.S., the EC isn't examining the possibility of breaking up Bill Gates's empire. But the European punishment could end up being quite severe—forcing Microsoft to reveal at least part of its Windows source code.

So don't be surprised if the Microsoft drama drags on for a while longer—in fact, quite a while longer. If regulators are to do much more than nip at Bill Gates's heels, it will take strong action in Europe or clear support in the U.S. for some of the novel theories raised in the Netscape case.

With William Echickson in Brussels

(L TO R) PHOTOGRAPHS BY ELAINE THOMPSON/AP/WIDE WORLD; CHRIS SCHRAMECK/ZUMA PRESS; ILLUSTRATION BY CAMPBELL LAIRD



The fight for digital dominance

The convergence of mobile phones and computers is bringing the giants of the two industries into direct conflict

IT MAY look like a mobile telephone, but the Orange SPV, launched last month, is much more than that. With its colour screen, garish icons and musical ringtones, it resembles other handsets on the market. But it has one far more significant feature: the software inside, indicated by a familiar-looking four-coloured logo on its screen. For the SPV is the first "Windows-powered smartphone"—in other words, it runs software from Microsoft. It is the software giant's attempt to stake its claim in the new market created by the convergence of mobile phones and computers. It is no less than a declaration of war.

The market for smartphones is still small. But it is growing fast, as new features are added to handsets, making them ever smarter. Of the 400m mobile phones that will be sold this year, around 16m will have built-in cameras. Nokia, the world's largest handset maker, expects to sell 50m-100m colour-screen handsets next year. A new report from Analysys, an industry consultancy, predicts that by 2007 nearly 300m Europeans will be carrying handsets with colour screens, cameras, music players, support for downloadable games, and other features that are now available only in the most advanced models. Such features are already common in Japan and South Korea, and they are starting to appear in Europe and America. These advanced handsets are, in effect, pocket computers—but they have emerged from the consumer-electronics industry rather than the world of computing.

By putting new technologies, such as digital photography and electronic messaging, into consumers' hands in an easy-to-use form, the new handsets seem to be succeeding where the PC has failed. Mobile phones have a far broader appeal than PCs (see chart 1, overleaf). The lone exception is North America, where PC ownership exceeds mobile-phone ownership. But even there phones are catching up.

In Europe, more people now send and receive short-text messages on their phones than use the Internet, according to figures from Gartner, another consultancy. This year, users of mobile phones around the world passed the 1 billion mark. The number of mobile phones is now greater than the number of fixed-line ones.

The walkie-talkie PC

PC sales, meanwhile, have stagnated, and innovation has slowed: today's PCs are really just like those of a year ago, or two years ago, only faster. Sales of handheld computers, or personal digital assistants (PDAs), at around 10m a year, are dwarfed by sales of mobile phones. It looks increasingly as though the "personal computer" was a misnomer. The truly personal digital device today is the phone.

That does not mean that PCs will vanish. Just as mainframes continue to hum in companies' back offices 20 years after the emergence of the PC, so too PCs will continue to have an important role. But their appeal is far from universal; no matter how cheap they become, there are limits to the number of people who want to buy one. Microsoft's once-visionary mission statement—"a computer on every desk and in every home"—now seems dated. Instead, the company talks of "empowering people through great software, any time, any place and on any device". This is an acknowledgment, concedes Ed Suwanjindar of Microsoft's mobility division, that the PC is no longer king, and that "mobile devices are totally critical to the new extended vision for the company."

It might seem an odd time to enter this market, given the uncertainty and technical difficulties surrounding the switch to "third-generation" (3G) mobile networks. But the possibility that mobile phones might be taking over from PCs as the focus of the entire technology industry means that Microsoft has no choice. Hence the launch of the SPV.

With its Windows-based software, the SPV is, in effect, a PC crammed into the casing of a mobile phone, complete with scaled-down versions of Microsoft's web browser, e-mail and media-playback software. It is the first of a new range of devices intended to extend Microsoft's dominance of the computer industry into the new mobile realm. Microsoft is hoping for a replay of what happened in the PC market, where hardware became a commodity and Microsoft established an enormously profitable monopoly with its Windows software. (Figures that emerged for the first ▸▸

time this week show that Microsoft's profit margins on its Windows software are 85%, whereas many of its other divisions are making losses.)

Yet even as Microsoft tries to get into this new market, the established mobile-phone makers, chief among them Nokia, are determined to stop it. They have seen how Microsoft's Windows monopoly turned PC makers into commoditised box-shifters, and they are determined not to suffer the same fate.

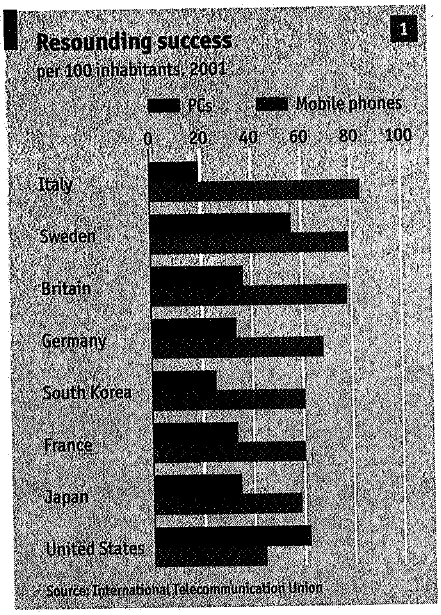
Symbianics

The first obstacle thrown into Microsoft's path by the handset makers was their refusal to license its software—a complete reversal of what happened in the computer industry. There, PC makers queued up to license Windows. The largest mobile-phone makers, on the other hand, established a software consortium called Symbian to produce smartphone software of their own. Their aim was to achieve the benefits of Windows (a single, common software standard) without what they regard as its chief drawback: that the predatory Microsoft owns it. "We want to fend off Microsoft—we don't want to go the way of the PC business," says a spokesman at one handset maker.

Several Symbian-powered handsets have already come to market. The latest is the Nokia 7650, with a built-in camera and colour screen. It was launched in the summer and sales are expected to exceed 2m by the end of the year. More Symbian handsets will appear over the next few months. Besides Nokia, Symbian's backers include Motorola, the world's second-largest handset maker, Siemens, the number two in Europe, SonyEricsson, Panasonic and Samsung. Between them, Symbian licensees account for almost 80% of all handsets sold (see chart 2).

Quite how the market will evolve, and what sorts of devices will prove popular, is not yet clear, says David Levin, Symbian's chief executive. But just as car makers can make several entirely different models on the same "platform", or chassis, the Symbian software is flexible enough to allow handset makers to try out many different designs without having to start from scratch every time. Some phones will focus on photography and picture messaging; others on playing music or games; yet others on corporate e-mail access. When Henry Ford launched the Model T, notes Mr Levin, he had no idea that the sport-utility vehicle or the Winnebago would follow. The handset business, he suggests, will also evolve in unexpected ways.

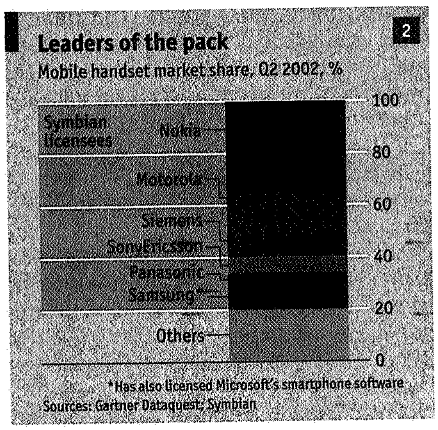
An interesting twist on the Symbian model has already emerged. The Symbian software provides the underlying features that are essential to a smartphone operating system, such as support for telephony, graphics, security and Internet access. But



Resounding success 1
per 100 inhabitants, 2001
Source: International Telecommunication Union

Symbian licensees and software developers are able to examine and modify its innards, unlike handset makers who use Microsoft's software. Licensees may also change the software's on-screen menus and graphics, or "user interface". Nokia, for instance, has developed a user interface called Series 60, and has licensed it to other phone makers, including Samsung, Siemens and Panasonic.

Series 60 could end up as the standard user interface for smartphones—much as Windows has for PCs. Microsoft is sceptical, of course. "Every one of Nokia's Series 60 licensees is a competitor in the hardware arena," Mr Suwanjindar observes. "If you're Siemens, does Nokia have your best interest at heart?" Yet the only large handset maker to have licensed Microsoft's competing smartphone software is Samsung. And Samsung is well-known for licensing everything: it has Symbian and Microsoft licences, and it has also launched phones that use the Palm operating system, the dominant software in the niche PDA market. So Samsung's support for Microsoft's software is not the ringing endorsement it might seem.



Leaders of the pack 2
Mobile handset market share, Q2 2002, %
*Has also licensed Microsoft's smartphone software
Sources: Gartner Dataquest; Symbian

Worse, Microsoft suffered a setback this month when one of the few licensees of its smartphone software, a tiny British handset maker called Sendo, defected to the Symbian/Nokia camp, announcing that its forthcoming phones would use Series 60. Sendo cited its inability to gain access to the source-code of Microsoft's software as one reason for switching.

Microsoftly, softly

Having failed to sign up the large handset makers, Microsoft has decided instead to get round them by going directly to their customers: the mobile-network operators, which buy handsets in bulk and sell them to their subscribers. Microsoft is able to do this because a significant proportion of mobile phones (26% this year, according to figures from Strategy Analytics, a consultancy) are made by contract manufacturers, to which handset makers outsource some or all of their manufacturing. Some contract manufacturers, such as HTC of Taiwan, also design products and are known as "original design manufacturers" (ODMs). The SPV phone is a joint venture between Microsoft, HTC and Orange, a European mobile-network operator. HTC designed and built the hardware, Microsoft provided the software, and Orange agreed to buy the phones.

For operators such as Orange, the appeal of this approach is that they can customise the phone and brand it with their own logo, differentiating themselves from rival operators. For Microsoft, the appeal is that it can get phones into the marketplace without the support of the large handset makers. In the long run, it hopes that the industry will develop as the computer industry did: away from a vertically integrated model, in which the same companies make hardware and software, and towards a horizontally layered model in which software is supplied by Microsoft and hardware becomes a commodity made by firms such as HTC.

But there are a number of problems with this vision. The main one is that the economics are skewed in favour of the large handset makers, which produce far bigger volumes. Nokia, Motorola and Samsung produce handsets in quantities measured in millions. An operator placing an order with an ODM, in contrast, will order a few hundred thousand handsets at best. With fewer economies of scale, this makes the handsets more expensive.

Matti Alahuhta, president of Nokia's handset division, insists that his company has nothing to fear from contract manufacturers. About 20% of Nokia's production is outsourced, and this provides a reference, enabling Nokia to ensure that its own manufacturing facilities stay competitive.

Vertical integration will continue to make sense in such a fast-moving industry, says Mr Alahuhta. He concedes that handsets are becoming a commodity—but only at the very bottom of the market, and even there he claims that Nokia's superior logistics mean it has better margins than its smaller competitors. At the top end of the market, though, where Microsoft is trying to compete, Mr Alahuhta insists there is no sign of commoditisation.

It is too early to conclude that Microsoft's attempt to by-pass the handset makers will fail. But the omens from its previous joint venture with HTC, a hybrid PDA-phone running Microsoft's Pocket PC software, are not good. Sales of the device, known as the XDA in Britain, the MDA in Germany, and the "T-Mobile Pocket PC Phone Edition" in America, have been slow. A British operator, O2, has sold only 12,000 XDAs since its launch this summer, despite a massive advertising campaign. This may reflect a lack of enthusiasm for PDA-like devices, but it also highlights another problem with the ODM approach: the lack of a strong brand.

Mobile phones are fashion items, and branding matters to their users. Once again the large handset makers, and Nokia in particular, have the upper hand. Surveys show that consumers rate Nokia above all other mobile-phone brands, whether or not their present phone is a Nokia. Its customers are also more loyal to Nokia than to their mobile operator, although operators such as Vodafone are now doing their best to promote their brands above those of the handset makers.

The powerful pull of monopoly

So far, then, Microsoft's plan to invade the mobile-phone market is not going well. "Microsoft have their work cut out to have any major impact on this market as things stand," says Ben Wood of Gartner. The company's best hope, he suggests, is to use its traditional weapon for attacking new markets: its Windows monopoly. By tightly integrating its smartphone software with its desktop and server software, Microsoft might be able to appeal to corporate users. For example, the SPV can, with the help of Microsoft's software, gain access to e-mail, calendars and databases on both PCs and servers.

But there could be legal problems with this strategy. Microsoft's competitors have already complained to the European Commission, which is investigating the company, that its next-generation e-mail server, codenamed Titanium, is being designed to favour those mobile devices that are running Windows.

It is far too early to count Microsoft out. It is nothing if not determined. Its lucrative Windows franchise will be able to fund its forays into loss-making new markets for years to come, and it is sitting on $40 billion in cash. The troubled switch to 3G technology means that the mobile-telecoms industry is in turmoil, and Microsoft may be able to capitalise on the confusion. If all other strategies fail, it could always resort to the drastic step of buying an operator or handset maker.

Mr Suwanjindar insists that it is still early days, and that Microsoft continues to negotiate with handset makers about using its software. As for Nokia, which he agrees is Microsoft's biggest competitor in this arena, Mr Suwanjindar admits that "we have a tremendous amount of respect for them as a handset manufacturer"—in other words, only as a hardware company.

Smartphones, says Mr Suwanjindar, are an entirely new class of device. Although they resemble phones, that does not give Nokia and other handset makers a "birthright" to the market. "There is a contribution we can make to the mix," he says.

In Nokia, however, Microsoft may have met its most Microsoft-like competitor to date. Comparisons between the two firms are difficult to avoid. Mobile-network operators grumble that Nokia has too much clout, much as PC makers grumble about Microsoft. They also worry that with Club Nokia, its loyalty programme, Nokia is encroaching on the operators' own turf, just as Microsoft was wont to do. Club Nokia offers Nokia-specific features, such as ringtones, games and logos, which customers can take with them from one network provider to another.

Moreover, Nokia's Series 60 software could yet emerge as the mobile equivalent of Windows. "Nokia is the Microsoft of mobile phones, the gorilla of the industry," says Gartner's Mr Wood. (It is also, he might have added, the equivalent of Dell, whose superior logistics have made it the number one PC maker.)

Yet, for all their similarities, Microsoft and Nokia differ in one crucial respect. Microsoft's dominance stems from its closely guarded ownership of Windows. But the mobile-phone industry, in which Nokia is top dog, is based on open standards. The use of common standards that are not owned by any particular vendor has benefits. For example, it enables handsets based on the GSM standard to be used in most parts of the world. But it also has drawbacks: Europe's proposed standard for 3G does not work yet. Nokia has achieved its dominance not through ownership of proprietary technology, but from its ability to innovate around open standards, from its strong brand, and from its impressive logistics. In other words, in several respects it is not like Microsoft at all.

Nokia's attitude to Microsoft is revealing. "We are not in competition, but approach convergence from different sides," says Mr Alahuhta, choosing his words carefully. He is right: Microsoft is so insignificant in the mobile-phone market that it is not a competitor—at least, not yet. But as their industries collide, the firms are sure to become opponents in what promises to be a long and bitter fight. ■