7. There are many differing opinions about Microsoft's current dominance of the software industry and how it has come about and whether it is good or bad for us. Accordingly, this dominance may or may not be sustainable. Imagine that anti-trust pressures continue to build and that Bill gates comes to consider breaking up Microsoft before the feds do it for him. You are called in as a consultant. How should Microsoft be broken up so as to maximize value to shareholders?

The answer will be structured as follows: first, the three most likely scenarios for the future of Microsoft will be outlined; and second, the alternative of breaking up Microsoft as a self-taken decision will be described, with a main proposition and some potential alternatives. I will conclude with an economic characterization of the companies resulting from the split-up and some final considerations about potential problems and rewards of such alternative.

Three scenarios for the future of Microsoft

<u>**Scenario 1**</u>: No further action is taken against Microsoft. All practices, including OS-browser bundling, are determined to be within the law.

This scenario represents the worst case for Microsoft's competitors. They say that if no action is taken to deter Microsoft, the giant will extend the use of its monopolistic techniques and it will use the bundling strategy to wipe any competitor out of the Internet scene. Additionally, Microsoft will control the standards for streaming audio and video, and will relentlessly attack services such as travel and banking, as it pulls the world to its content and e-commerce sites. Consumers will lose control of their computers and TVs as Microsoft comes to control the standards by which services are delivered. Due to Microsoft Sidewalk, half of the American newspapers could go out of business. The impact will be also affecting foreign governments and trade, with an increase in protectionism and trade barriers to protect local industries against the US based techno-giant.

In the other hand, some analysts say that government intervention is out of scope, that it means to hamper the pace of innovation and to penalize somebody for its success. Since users need technology, any delay in the development of technologies such as Windows NT 5.0 or WinSock 2.0 caused by legal action is likely to be highly problematic for business over the next few years.

<u>**Scenario 2**</u>: Microsoft is ordered to stop bundling applications with its OS whenever ❶ an independent market exists for the application, ❷ Microsoft sells the application independently of its OS, or ❸ Microsoft maintains its OS dominance.

This scenario is premised on a determination that Microsoft commands an overall OS monopoly that combines PC and server, based on the interdependencies of client/server systems and Microsoft's desktop evolution to NT. According to many observers, the legal support for such decision is weak, and such decision will delay critical innovations by casting legal uncertainty over its new functionality. From a common sense perspective, if every time Microsoft wants to launch an innovation, it has to first check with the Federal government, it will end up in a bureaucratic nightmare. The evolution has been extremely steady these years: add-ons to DOS are now part of Windows, and smaller competitors have had to find new business models. To some extent, this process represents the Darwinian model of a free market economy in which only the fittest survive. An additional argument is given by those attempting to reduce piracy: tying applications to the OS reduces the need for illegal copies, and creates economies of scale in production and distribution.

Other observers say that bundling practices are a predatory pricing technique that is driving competitors out of the market. This benefits customers only in the short run, until competitors are eliminated. If people want OS synergy, they will need to buy necessarily from Microsoft, and any other product attempting to compete with a Microsoft application will face problems since the Microsoft application will be bundled with the operating system and offered for free. Some observers say that bundling attracts the novice user, while a free product attracts the experienced user, so Microsoft in fact would not be able to survive without this sort of monopolistic practices. Defenders of this viewpoint would propose to break up the company to restore its incentives to compete in the way companies do in a competitive market.

Scenario 3: Microsoft is ordered to make all of its existing and future client and server OS APIs generally available within a reasonable time frame for as long as it maintains its monopoly in the OS market. Hidden calls are expressly prohibited. Microsoft must erect an impermeable wall (preventing the flow of money and information) between its OS and applications businesses.

This action is strongly resisted by Microsoft, arguing that "APIs are valuable and it will be unfair to allow others to get a free ride at Microsoft's expenses." On the other hand, some say that it is in Microsoft interest to make APIs available. This would also create more competition and innovation, although it would take longer to create new APIs without the help of the people in the application's side of the business. Another possibility is that other competitors, such as Oracle or Intel could also be facing similar actions to open up their architectures.

Nobody knows for sure the significance of such implications, and how much time it will take to make the first decision, but undoubtedly, it will be an important one.

Microsoft decides to split up based on its own criteria

Let's start by reminding that the pretended overall OS monopoly that according to the Department of Justice Microsoft possesses is based on the fact that Microsoft domination combines PC and server, based on the interdependencies of client/server systems and Microsoft's desktop evolution to NT. Therefore, any alternative that does not include separating the OS from the applications business will be considered as not legally feasible since it does not fulfill Janet Reno's requirements.

The initial movement will be, accordingly, to split Microsoft into an OS company and an applications company. For the sake of the argument, let's call the OS company Windows (this will probably be the best way to maximize the value of such a huge intangible asset). The applications business, following the same line of reasoning, will stick with the name of Microsoft.

In order to define the boundaries, we need to precise what is an application and what is an OS. An application runs in an OS. Anything that Microsoft has offered on more than one computing platform such as DOS, Windows 3.1, Windows 95, Windows NT, IBM OS/2 or Apple's Macintosh OS is therefore an application. That would put, e.g., Internet Explorer in the applications business, since Microsoft does an Explorer version for the Mac. Same for Word, Excel or PowerPoint. Suites of packages will also be within the applications boundary. An OS, then, is the platform. The limits get a little bit blurred when we think about the dynamic of incorporating functions into the OS. For instance, Stac Applications developed some years ago an application that compressed files in the hard disk, leaving more free space. Microsoft appropriated it and subsumed this function as a free utility in the OS. In such cases, laws of free market should come into play. If an innovator comes up with a new technology, the Windows company will have to compete for buying this technology with the remaining companies, including other OS manufacturers or perhaps applications companies. It represents a way to get innovators rewarded.

The decision will be, in legal terms, to consider the OS as an "essential facility". The two companies would be publicly quoted and owned, and existing US laws would prevent wide cross ownership. They will have separate staff, locations and ownership.

The first decision to make then is how the companies will split up. Bill Gates owns 22.3% of Microsoft, and he is so linked with the company he co-founded 23 years ago that it is hard to imagine any part of this company not being run by him. However, according to him and to many corporate executives, it is obvious where Microsoft's soul resides: in the case of a split up, Bill Gates will most likely go to the Windows company. Both companies will then be in a very good position: Windows possesses 97% of the OS market, while Microsoft Office claims about a 94% of the applications market (a $5.2 billion market).

Aside form this main proposition, some small alternatives arise. Some argue that there is another potentially independent business at Microsoft, although it is somehow obscured by the magnitudes of these two: Microsoft Media. The boundaries for such company are easy to define, anything the user can access without even using a Microsoft company product. HotMail, a free e-mail service, is obviously media, since the Internet is generally considered as media. MSNBC is media too, and so are Microsoft's content sites such as Expedia, CarPoint or SideWalk. The size of this company will be tiny compared to the other two, although its market value as a media company could be very interesting.

Other potential alternatives could include splitting the hardware business or even the networking business, although I do not visualize them as value generators. Hardware is a very small product line, and it will be competing against giants such as Logitech, Hewlett Packard or IBM. Networking is, again from my viewpoint, a key and strategic part of the OS, and any attempt of partialling it out will detract value from the OS company.

Characterization of the two resulting companies

A Microsoft split would be as complicated, if not more, than the ATT split-up in 1984. The company's 17,700 US employees are concentrated in two locations in suburban Redmond, Wash.: a main campus with 30 buildings, and another, "RedWest," down the road, with just five. Some 8,000 additional sales, marketing, and development employees are scattered across offices in 60 countries. In the event of a split-up, the Windows company would be a company generating about $5.97 billions, with $2 billions in profits, about 10,000 employees and located most likely in the emblematic Building #8 in Redmond. Bill Gates would be chairman and CEO, and its main products would be Windows 98, Windows NT, Windows CE and the Visual family of programming languages. The products manufactured by this company would become publicly available at the same time for all applications company, without giving privileged information to the Microsoft Applications business and without any hidden calls or programming tricks. The absence of such calls would be in the best interest of the OS company, which would like to have as many applications available for its OS as possible.

The applications business, for which I have preserved the name of Microsoft, would then generate $5.39 billion in revenues, $1.4 billions in profits and it would have about 15,000 employees in RedWest. Its main products will be Microsoft Office, Encarta, Expedia, SideWalk, CarPoint and MSN, although maybe the content business could also be partialled out as a separated business as indicated above.

Final considerations

There are signs that Bill Gates could be in fact designing such move. Lately, he appointed three executives to the Microsoft's Office of the President, one from the OS part of the company, another from the applications part and a third from the content part. These persons would be in charge of Microsoft if anything happened to Bill Gates, but they could also be the ones appointed to manage the company in the event of a split-up.

The decision of whether Microsoft Media – the contents company – should be a separated company or not is mainly a financial one. The company would be very small in comparison to the other two, but in the other hand, financial markets have been having very enthusiastic reactions to this kind of companies. Up to now, the Media division at Microsoft has been characterized by a strong demand of resources associated to a weak flow of revenues, and such indicators are not certainly the best for venturing alone in the financial markets. However, the potential growth of such a company could be extremely high, and the generation of a stable flow of revenues could not take long.

Splitting Microsoft is undoubtedly a radical measure, but on the other hand it would ensure innovation and free market in the high-tech industry. Innovators would be again rewarded for their creations, the OS business could be finally regulated and Microsoft will not be able to leverage its domination to create new monopolies in related markets. Some analysts say that even though the split-up solution is the most resisted by Microsoft, the company would be better off in the long run: Bill Gates would receive a huge amount of resources for his participation in the separated companies, the new Windows company would be more free to act without being closely monitored by the Department of Justice, and incentives for innovation would be higher for everyone.

Interestingly enough, some researchers argue that Microsoft itself is a product of an anti-trust law: IBM used to buy any small collaborating company such as Microsoft before it was hit by the anti-trust law. Whatever happens to the technology giant is likely to influence users, developers, competitors and consumers, and even global trade, national economies and the pace of technological innovations.