

“US v. MS AND THE FUTURE OF THE US COMPUTING INDUSTRY”

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THE ALLEGATIONS

In *United States v. Microsoft*, Microsoft (“MS”) was mainly accused of:

1. Monopolization of the market for operating systems (“OSs”) for PCs; (§ 2, Sherman Act)
2. Anti-competitive contractual arrangements with various vendors of related goods such as with computer manufacturers and Internet Service Providers (“ISPs”) and other actions taken to preserve and enhance its monopoly; (§ 2, Sherman Act)
3. Attempting monopolize the market for Internet browsers (but failing to succeed); (§ 2, Sherman Act)
4. Anti-competitive bundling of the Internet Explorer (“IE”), the MS Internet browser, with the Windows operating systems; (§ 1, Sherman Act)

THE LAW (1)

The US antitrust law, as presently interpreted, implies:

- **“Monopolization”** under ¶ 2 of the Sherman Act is illegal if the offender took anti-competitive actions to acquire, preserve, or enhance its monopoly

Sherman Act ¶ 2: “Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony.”

- For “monopolization,” plaintiffs have to prove that the defendant
 1. Possesses market power
 2. Willfully acquired or maintained this monopoly power as distinguished from acquisition through a superior product, business acumen, or historical accident

THE LAW (2)

- **“Attempting to monopolize”** is illegal (Sherman Act, ¶ 2)
- Bundling, and, more generally, price discrimination could be illegal if it has anti-competitive consequences
- Exclusionary contracts could be illegal if they have anti-competitive effects
- To prove “attempting to monopolize” (under Sherman Act ¶ 2), plaintiffs have to prove that the defendant
 1. Engaged in predatory or anti-competitive conduct
 2. with specific intent to monopolize
 3. and that there was a “dangerous probability” that the defendant would succeed in achieving monopoly power

THE LAW (3)

- Unreasonable “**restraint of competition**” is illegal under ¶ 1 of the Sherman Act; this may include tying of products or exclusive arrangements

Sherman Act ¶ 1: “Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal.”

CALENDAR

EARLY FIGHTS

- 1991-93: FTC investigates MS twice, but does not take action
- 1994-95: DOJ's investigation ends in a 1995 settlement
 - Key provisions:
 1. Microsoft agrees to end “per-processor” (zero marginal price) contracts with OEMs but can use unrestricted quantity discounts
 2. “Microsoft shall not enter into any License Agreement in which the terms of that agreement are expressly or impliedly conditioned upon the licensing of any other Covered Product, Operating System Software product or other product (provided, however, that this provision in and of itself shall not be construed to prohibit Microsoft from developing integrated products); or the OEM not licensing, purchasing, using or distributing any non-Microsoft product.”
 - That is, no product bundling allowed by contract, but Microsoft can keep expanding the functions of its products, including Windows

MAIN (U.S.) FIGHT (1)

- 1997: Senator Orin Hatch (R-Utah) holds congressional hearings on Microsoft featuring Gates, Barksdale, Dell.
- Senator Hatch takes the position that if present antitrust law cannot deal with Microsoft, Congress should change or enhance the antitrust laws
- Sun, Oracle, IBM, Netscape, and Novell form a loose coalition lobbying for antitrust action
- 1997: DOJ alleges anti-competitive bundling of IE with Windows (violation of 1995 decree)
- Dec. 1997: Judge Thomas Penfield Jackson issues preliminary injunction barring bundling of IE with Windows
- May 12, 1998: Court of Appeals (DC Circuit) decides that 1995 decree doesn't apply to Windows 98, which was shipped with integrated IE and IE icon on desktop
- May 18, 1998: DOJ and 20 states and the District of Columbia file present antitrust case
- June 23, 1998: Court of Appeals voids 1997 injunction, arguing that “courts are ill equipped to evaluate the benefits of high-tech product design”

MAIN (U.S.) FIGHT (2)

- Oct. 1998 – June 1999: Present Microsoft trial takes place with an accelerated schedule
- Nov. 5, 1999: Judge Jackson issues “findings of fact,” siding very strongly with the plaintiffs
- Dec. 1999: Prominent antitrust scholar, Judge Richard Posner appointed mediator for settlement discussions
- April 1, 2000: Settlement talks break down after States hold out in proposed agreement.
- April 3, 2000: Judge Jackson issues “conclusions of law”
- June 7, 2000: Judge Jackson orders breakup of Microsoft into two companies
- September 26, 2000: Supreme Court refuses to hear case
- February 27, 2001: DC appeals court hears appeal
- June 28, 2001: DC appeals court reverses breakup
- September 6, 2001: DOJ seeks quick settlement without breakup

MAIN (U.S.) FIGHT (3)

- November 2, 2001: DOJ and Microsoft propose settlement; nine states settle and nine do not
- March 18, 2002: Nine litigating states start remedies trial in front of Judge Colleen Kollar-Kotelly
- November 1, 2002: Judge Colleen Kollar-Kotelly rules that the proposed settlement serves the public's interest and rejects positions of litigating states
- November 29, 2002: All states except Massachusetts and West Virginia accept the settlement

MICROSOFT'S BUSINESS (THEN)

- Microsoft sold
 - Software
 - Operating systems for PC (Windows 95, 98, NT, 2000)
 - Operating systems for local network and Internet servers (Windows NT, 2000)
 - “Back-office” products for network and Internet servers
 - Internet Clients
 - Internet Servers
 - Desktop applications (Office, Word, Excel, Access, PowerPoint, MS-Money, etc.)
 - Games
 - Programming languages (Visual Basic, Java)
 - Hardware
 - Mice, keyboards
 - Services
 - Internet service (MSN, WebTV)
 - Internet content (MSN)
 - Product support
- Not yet in Video Games

FINDINGS OF FACT AND CONCLUSIONS OF LAW

- The judge's "findings of fact" (Nov. 1999) and "conclusions of law" (April 2000) found for the plaintiffs (US Department of Justice and 19 States) in almost all the allegations against MS
- The judge found:
 - Microsoft has a monopoly in the PC operating systems market (for Intel-based computers) "where it enjoys a large and stable market share"
 - Microsoft used its monopoly power in the PC operating systems market and harmed competitors
 - Microsoft hobbled the innovation process
 - Microsoft actions harmed consumers
- Various Microsoft contracts had anti-competitive implications, but MS is not guilty of anti-competitive exclusive dealing contracts hindering the distribution of Navigator
- June 7, 2000, after an extremely short hearing, Judge Jackson issues his remedies decision, splitting Microsoft into two companies, and imposing severe business conduct restrictions.

ESSENCE OF THE JUDGE'S ARGUMENT ON MONOPOLIZATION OF OPERATING SYSTEMS MARKET (1)

1. MS has monopoly power in the OS market for Intel-compatible PCs

[Problem: Low price of OS; if Microsoft is able to exercise monopoly power, why does it not exercise it through price? Most economists would agree that it is more profitable to exercise market power through price]

If the price of PC hardware is p_H and the demand elasticity is $|\epsilon|$, the monopoly price of Windows is

$$p_W = p_H / (|\epsilon| - 1)$$

If $p_H = \$1,800$ and $|\epsilon| = 2$, $p_W = \$1,800$, while the actual price to OEMs was \$40-60

Requires a very large demand elasticity of $|\epsilon| = 31$ to get a monopoly price of $p_W = \$60$

Possible explanations for the low price of Windows:

- To hook consumers ... but when will MS increase the price?
- Competition from installed base of Windows ... but (i) very difficult to uninstall Windows; (ii) consumers buy much better new PCs faster than traditional obsolescence rates would imply; and (iii) Windows price is small compared to the PC+Windows bundle
- To reduce pirating ... but why is then MS-Office price high?
- Because it allows for higher prices of complementary goods ...but MS does not monopolize *all* the complementary goods markets, therefore it would be optimal to charge the monopoly price on Windows
- Because of the existence of actual and potential competition

- [Problem: Market definition should be based on substitution considerations; market should include computers based on other chips]

[General problem for antitrust: Monopoly may maximize social surplus when there are network externalities present under conditions of incompatibility; value of *de facto* standardization]

Table: Profits, Consumers' and Total Surplus Under Incompatibility

Number of firms	Π_1	Π_2	Π_3	Total Industry Profits $\sum_{j=1}^I \Pi_j$	Consumers' surplus CS	Total Surplus TS
1	0.1481			0.1481	0.148197	0.29629651
2	0.1097	7.159e-3		0.1168	0.173219	0.29001881
3	0.1077	5.377e-3	3.508e-4	0.1135	0.175288	0.28878819

REMEDIES PROPOSED BY DOJ AND IMPOSED BY THE JUDGE

- Break up Microsoft according to lines of business into two companies, one for operating systems (Windows 98, NT, and 2000), and one for all the rest (MS-Office, MS-Money, etc.)
- Conduct restrictions, to last three years:
 1. Microsoft would create a pricing schedule that would apply to all buyers, so that price would not be conditioned on the sale of other Microsoft products.
 2. Microsoft would not be allowed to have exclusive contracts that do not allow the other party to use, display, or feature its opponents' products.
 3. APIs and other technical information of Windows should be shared with outsiders as it is shared within Microsoft.
 4. Microsoft is not allowed to take actions against manufacturers who feature competitors' software.
 5. Microsoft will allow OEMs to alter Windows in significant ways.
 6. Microsoft is not allowed to design Windows to disable or compromise rivals' products.

- Microsoft appealed, and was granted a stay of all parts of the District Court decisions until the appeal is heard
- Judge Jackson recommended that the appeal be heard by the Supreme Court
- October 2000, Supreme Court decided not to take the case but allow the case to be heard by the Court of Appeals first
- Appeals Court ruled on June 28, 2001

SUMMARY OF COURT OF APPEALS DECISION

- Microsoft's breakup and other remedies imposed by the District Court were vacated
- Microsoft was found liable of monopolization of the operating systems market for PCs
- Microsoft was found not liable of bundling
- Microsoft was found not liable of attempting to monopolize the Internet browser market
- The district court judge Thomas Penfield Jackson was taken out of the case for improper behavior
- The case was remanded to the District Court for remedies determination for the monopolization charge
- The Appeals Court instructed the District Court to examine the bundling of IE and Windows (if plaintiffs bring it up) under "a rule of reason" where the consumer benefits of bundling are balanced against the damage of anti-competitive actions
- In face of the Appeals Court decision, DOJ decided not to pursue the bundling issue and announces that it will not ask for a breakup of Microsoft

THE SETTLEMENT

- On November 6, 2001, the United States, the states of New York, Illinois, North Carolina, Kentucky, Michigan, Louisiana, Wisconsin, Maryland and Ohio, and Microsoft announced a settlement
- California, Connecticut, Iowa, Massachusetts, Minnesota, West Virginia, Florida, Kansas, Utah, and the District of Columbia pursued the suit further to a full remedies trial (started March 11, 2002) in front of U.S. District Judge Colleen Kollar-Kotelly
- These States proposed making the source code of Windows and IE public, “freezing Windows” so that additional functionality would be sold as an additional good, making all APIs public, and other severe remedies.
- On November 12, 2002, Judge Colleen Kollar-Kotelly imposed the final judgment that had only small differences from the original proposed settlement

SETTLEMENT TERMS

A. Provisions seen as favorable to Microsoft

1. **No breakup**
2. **Microsoft can expand functions of Windows**
3. **No general restrictions on bundling**
4. **No wide disclosure of source code**

B. Provisions seen as favorable to the plaintiffs

1. **Broad scope of definition of middleware products**
(including browser, e-mail clients, media players, instant messaging software, etc.)

2. **Requirement to partially disclose middleware interfaces**

Microsoft will be required to provide software developers with the interfaces used by Microsoft's middleware to interoperate with the operating system.

3. **Requirement to partially disclose server protocols**

The settlement imposes interoperability between Windows and non-Microsoft servers of the same level as between Windows and Microsoft servers.

4. Freedom to install middleware software

Computer manufacturers and consumers will be free to substitute competing middleware software on Microsoft's operating system.

5. Ban on retaliation

Microsoft will be prohibited from retaliating against computer manufacturers or software developers for supporting or developing certain competing software.

6. Uniform pricing of Windows for same volume sale

Microsoft will be required to license its operating system to key computer manufacturers on uniform terms for five years. Microsoft will be allowed to provide quantity discounts.

7. Ban on exclusive agreements; contract restrictions

Microsoft will be prohibited from entering into agreements requiring the exclusive support or development of certain Microsoft software

8. Compliance and enforcement

A panel of three independent, on-site, full-time computer experts will help enforce the settlement. One panel member will be selected by Microsoft, one by the Justice Department, and one by both. The panel will have full access to all of Microsoft's books, records, systems, and personnel, including source code, and will help resolve disputes about Microsoft's compliance with the disclosure provisions of the settlement.

C. Duration

The settlement conditions will last for five years with the possibility of a two-year extension if Microsoft is found to found to willfully and systematically violate the agreement.

Presently, the settlement restrictions have been extended to 2012 by mutual consent.

D. Conclusion

This is a fair settlement. It seems that DOJ got a bit more than what it would have gotten in a full remedies trial. It is unlikely that the dissenting States will, in the end, be able to get anything substantially different from this settlement.

My detailed position at

http://www.usdoj.gov/atr/cases/ms_tuncom/major/mtc-00022465.htm

OTHER REMEDIES PROPOSALS (REJECTED)

1. Break up Microsoft in three “identical” parts (“Baby Bills”), with each part acquiring the source code of all the programs the company presently sells, and 1/3 of all employees
2. “Hybrid remedy”: first Microsoft is broken into three companies according to type of program produced, and then the operating systems company is broken into three parts, creating five “baby Bills” (named after the “baby Bells” created at the breakup of AT&T in 1981 and the name of Bill Gates
3. Force MS to give away, auction, or license
 - (i) the Windows source code; or
 - (ii) the Internet Explorer source code

PROBLEMS WITH BREAKUP REMEDIES (1)

- A breakup would hurt both shareholders and consumers
- 1. Microsoft is an entrepreneurial company that is run by very few top executives (about twenty) with very fluid divisions
 - This makes it flexible and efficient, qualities that the DOJ should try to preserve (although Microsoft's competitors would probably like to extinguish)
 - Big difference from AT&T's breakup, since AT&T was a mature company with plenty of managers, and the long lines division was run separately from the local telephone companies
 - Moreover, AT&T's long lines was *not* divided as originally proposed by DOJ

PROBLEMS WITH BREAKUP REMEDIES (2)

2. “Baby Bills” will have incentives to create *incompatible* versions of Windows
 - a. Baby Bills will try to differentiate their operating systems to avoid strong competition leading to small price-cost margins; this is true even in industries without network externalities
 - D’Aspremont *et al.* *Econometrica* (1979)
 - Economides, *EER* (1984)
 - Shaked and Sutton, *RES* (1982)
 - b. Baby Bills will try to make their operating systems incompatible with each other in a race to become the dominant OS, since the dominant firm receives the lion’s share of profits in a winner-takes-most world
 - Economides and Flyer (1998)
 - Economides (2000)
- This would inevitably reduce the range of software that would be compatible with each user’s computer; consumers’ surplus will decrease
- Emerging incompatibilities would also hurt shareholders, since the combined value of the resulting Baby Bills will be smaller than that of the original Microsoft

PROBLEMS WITH AUCTION REMEDY

- MS may be forced to give away, auction, or license
 - (i) the Windows source code; or
 - (ii) the Internet Explorer source code
- Severe remedy that takes away the intellectual property of MS
 - Present value of Windows code may be as high as \$150 billion
 - No firm has that much cash to bid -- highest reported cash is with: Microsoft \$36; W. Buffet \$11 billion
 - Will amount to confiscation
 - Reduces the incentives for innovation
- Is likely to also create incompatibilities and reduce consumers' and total surplus.
- Both the hybrid breakup and auctioning of code remedies would be a huge headache remedies for corporate IT departments

OTHER POSSIBLE REMEDIES

Regulation

- Regulation requires a stable product
- Regulation of AT&T did not occur until 35 years had passed after the invention of the telephone, despite the fact that
 1. Telecommunications had stronger externalities than software
 2. During its first 40 years, AT&T took much more aggressive actions than Microsoft, including refusal to deal and refusal to interconnect with competitors

AFTER THE US TRIAL

- In February 2002, AOL (having acquired Netscape) sued Microsoft; settled for \$750 million
- Some class action suits for overpricing Windows are settled for about \$1 billion in software and hardware aid to schools
- Other class action suits have been filed; almost all settled
- MS is expected to have legal fees and damages of up to \$6 billion; but biggest loss to MS is continuous antitrust scrutiny that does not allow it to make significant acquisitions in telecommunications and the Internet
- Sun sued Microsoft over Java; settled for \$1.6 billion

EUROPEAN UNION CASES

- Multi-year investigation of Microsoft on, among others,
 - interoperability between non-Microsoft servers and Windows clients
 - Bundling of Windows Media Player with Windows
- The EU
 - (i) Found Microsoft liable on both issues
 - (ii) Imposed a \$609 million fine
 - (iii) Required MS to produce a version of Windows without WMP (called Windows-N) but without a requirement to sell it less than Windows
 - (iv) Required MS to make public and license at a low price the communications protocols between Windows clients and non-Windows servers
- Less than 2000 copies of Windows-N were sold
- The decision is upheld on appeal
- EU imposes additional fines for non-compliance with the decision on communications protocols

- In December 2007, Opera (an Internet browser) brings the issue of Microsoft bundling IE with Windows to the EU
- In January 2009, the EU issues a “statement of objections” to Microsoft, alleging a violation of Article 82 EC for tying IE to Windows
- Given the previous decision on WMP, liability of Microsoft seems certain
- Microsoft offers to sell Windows 7 without any browser pre-installed (users would use FTP to download browser)
- Proposal rejected by the EU in favor of a “choice screen” approach
- Choice screen, imposed through Windows update on all users in the EU who are using IE as a default (on all Windows products), will allow users choice among IE, Firefox, Safari, Opera, and Chrome

- On December 16, 2009, the Commission accepted the final choice screen proposal, and the matter ended
- Choice screen should have been made available to all, not just IE users
- Present solution gives incentive to “bribe” OEMs to choose a non-IE default browser, so the choice screen does not appear
- Benefits the non-open-source non-IE browsers