EXHIBIT 25
(part 1)

EXHIBIT 25

Briefs and Other Related Documents
U.S. v. Microsoft Corp C.A.D.C.,2001.
United States Court of Appeals,District of Columbia Circuit.
UNITED STATES of America, Appellee,
v.
MICROSOFT CORPORATION, Appellant.
Nos. 00-5212 and 00-5213.

Argued Feb. 26 and 27, 2001.
Decided June 28, 2001.
Rehearing Denied Aug. 2, 2001.

United States and individual states brought antitrust action against manufacturer of personal computer operating system and Internet web browser. The United States District Court for the District of Columbia, Thomas Penfield Jackson, J., concluded that manufacturer had committed monopolization, attempted monopolization, and tying violations of the Sherman Act, 87 F.Supp.2d 30, and issued remedial order requiring manufacturer to submit proposed plan of divestiture, 97 F.Supp.2d 59. Manufacturer appealed, and states petitioned for certiorari. The Supreme Court declined to hear direct appeal, denied petition, and remanded, 530 U.S. 1301, 121 S.Ct. 25, 147 L.Ed.2d 1048. The Court of Appeals held that: (1) manufacturer committed monopolization violation; (2) manufacturer did not commit attempted monopolization violation; (3) rule of reason, rather than per se analysis, applied to tying claim; (4) remand was required to determine if manufacturer committed tying violation; (5) vacation of remedies decree was required; and (6) district judge's comments to the press while the case was pending required his disqualification on remand.

Affirmed in part, reversed in part, and remanded in part.

West Headnotes

[1] Antitrust and Trade Regulation 29T ⚖621

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(A) In General
29Tk619 Elements in General
29Tk621 k. Intent. Most Cited Cases
(Formerly 265k12(1.3))

Antitrust and Trade Regulation 29T ⚖644

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(C) Market Power; Market Share
29Tk643 Relevant Market
29Tk644 k. In General. Most Cited Cases
(Formerly 265k12(1.3))

Offense of monopolization under Sherman Act has two elements: (1) possession of monopoly power in relevant market and (2) willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[2] Federal Courts 170B ⚖776

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(K) Scope, Standards, and Extent
170BVIII(K)1 In General
170Bk776 k. Trial De Novo. Most Cited Cases

Court of Appeals reviews legal questions de novo.

[3] Antitrust and Trade Regulation 29T ⚖641

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(C) Market Power; Market Share
29Tk641 k. In General. Most Cited Cases
(Formerly 265k12(1.3))

While merely possessing monopoly power is not itself an antitrust violation, it is a necessary element of a monopolization charge. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[4] Antitrust and Trade Regulation 29T ⚖641

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(C) Market Power; Market Share
29Tk641 k. In General. Most Cited Cases
(Formerly 265k12(1.3))

Firm is a "monopolist" if it can profitably raise prices substantially above the competitive level. Sherman Act, §

2, as amended, 15 U.S.C.A. § 2

[5] Antitrust and Trade Regulation 29T ⚖644

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(C) Market Power; Market Share
29Tk643 Relevant Market
29Tk644 k. In General. Most Cited Cases
(Formerly 265k12(1.3))

Antitrust and Trade Regulation 29T ⚖647

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(C) Market Power; Market Share
29Tk643 Relevant Market
29Tk647 k. Entry Barriers. Most Cited Cases
(Formerly 265k12(1.3))
Monopoly power may be inferred from a firm's possession of a dominant share of a relevant market that is protected by entry barriers; "entry barriers" are factors, such as certain regulatory requirements, that prevent new rivals from timely responding to an increase in price above the competitive level. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[6] Antitrust and Trade Regulation 29T ⚖645

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(C) Market Power; Market Share
29Tk643 Relevant Market
29Tk645 k. Product Market. Most Cited Cases
(Formerly 265k12(1.3))
Because the ability of consumers to turn to other suppliers restrains a firm from raising prices above competitive level, the relevant market in monopolization case must include all products reasonably interchangeable by consumers for the same purposes. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[7] Federal Courts 170B ⚖763.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(K) Scope, Standards, and Extent
170BVIII(K)1 In General
170Bk763 Extent of Review Dependent on Nature of Decision Appealed from
170Bk763.1 k. In General. Most Cited Cases
Court of Appeals would adhere to district court's decision to exclude non-Intel compatible operating systems, and operating systems for non-PC devices from relevant market for purposes of monopolization claim against manufacturer of personal computer (PC) operating system, where manufacturer did not point to evidence contradicting district court's findings or allege that supporting record evidence was insufficient. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[8] Antitrust and Trade Regulation 29T ⚖672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.3))
Relevant market for monopolization claim against manufacturer of personal computer operating system did not include "middleware" products that could eventually take over operating system functions; consumers could not abandon their operating systems and switch to middleware in response to sustained price for manufacturer's operating system above competitive level, and it was unlikely that middleware would overtake manufacturer's operating system as primary platform for software development in near future. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[9] Antitrust and Trade Regulation 29T ⚖977(3)

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk973 Evidence
29Tk977 Weight and Sufficiency
29Tk977(3) k. Monopolization or Attempt to Monopolize. Most Cited Cases
(Formerly 265k28(7.5))
Evidence that manufacturer of operating system for personal computers had more than 95% market share and that consumer preference for operating systems for which

substantial number of applications had been written and software developer preference for operating systems with substantial consumer base created barrier to entry into operating system market was sufficient to support finding that manufacturer possessed monopoly power, as required to support monopolization claim. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[10] Antitrust and Trade Regulation 29T ⚿644

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(C) Market Power; Market Share
29Tk643 Relevant Market
29Tk644 k. In General. Most Cited Cases
(Formerly 265k12(1.3))

Although existence of monopoly power ordinarily may be inferred from the predominant share of the market, because of the possibility of competition from new entrants, looking to current market share alone can be misleading when evaluating monopolization claim. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[11] Antitrust and Trade Regulation 29T ⚿977(3)

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk973 Evidence
29Tk977 Weight and Sufficiency
29Tk977(3) k. Monopolization or Attempt to Monopolize. Most Cited Cases
(Formerly 265k28(7.5))

Direct proof of monopoly power was not required to support monopolization claim against manufacturer of operating system for personal computers, even assuming that software market was uniquely dynamic in the long term, where no prompt substitutes for manufacturer's operating system were available. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[12] Antitrust and Trade Regulation 29T ⚿650

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(D) Illegal Restraints or Other Misconduct
29Tk650 k. In General. Most Cited Cases
(Formerly 265k12(1.3))

Antitrust and Trade Regulation 29T ⚿713

29T Antitrust and Trade Regulation
29TVIII Attempts to Monopolize
29TVIII(A) In General
29Tk712 Elements in General
29Tk713 k. In General. Most Cited Cases
(Formerly 265k12(1.3))

A firm violates Sherman Act's monopolization provision only when it acquires or maintains, or attempts to acquire or maintain, a monopoly by engaging in exclusionary conduct as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[13] Antitrust and Trade Regulation 29T ⚿650

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(D) Illegal Restraints or Other Misconduct
29Tk650 k. In General. Most Cited Cases
(Formerly 265k12(1.2))

To be condemned as exclusionary, a monopolist's act must have an "anticompetitive effect," that is, it must harm the competitive process and thereby harm consumers. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[14] Antitrust and Trade Regulation 29T ⚿620

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(A) In General
29Tk619 Elements in General
29Tk620 k. In General. Most Cited Cases
(Formerly 265k12(1.3))

Antitrust and Trade Regulation 29T ⚿963(1)

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk959 Right of Action; Persons Entitled to Sue; Standing; Parties
29Tk963 Injury to Business or Property
29Tk963(1) k. In General. Most Cited Cases
(Formerly 265k28(1.4))

Harm to one or more competitors will not suffice to establish anticompetitive effect under Sherman Act's monopolization provision. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[15] Antitrust and Trade Regulation 29T ⚖614

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(A) In General
29Tk611 Constitutional and Statutory Provisions
29Tk614 k. Purpose. Most Cited Cases
(Formerly 265k12(1.3))
Sherman Act directs itself not against conduct which is competitive, even severely so, but against conduct which unfairly tends to destroy competition itself. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[16] Antitrust and Trade Regulation 29T ⚖976

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk973 Evidence
29Tk976 k. Presumptions and Burden of Proof. Most Cited Cases
(Formerly 265k28(7.2))
Plaintiff in monopolization case, on whom the burden of proof rests, must demonstrate that the monopolist's conduct indeed has the requisite anticompetitive effect. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[17] Antitrust and Trade Regulation 29T ⚖963(1)

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk959 Right of Action; Persons Entitled to Sue; Standing; Parties
29Tk963 Injury to Business or Property
29Tk963(1) k. In General. Most Cited Cases
(Formerly 265k28(1.4))
In monopolization case brought by a private plaintiff, the plaintiff must show that its injury is of the type that the statute was intended to forestall; no less in a case brought by the Government, it must demonstrate that the monopolist's conduct harmed competition, not just a competitor. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[18] Antitrust and Trade Regulation 29T ⚖976

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk973 Evidence
29Tk976 k. Presumptions and Burden of Proof. Most Cited Cases
(Formerly 265k28(7.2))
If a plaintiff successfully establishes a prima facie case under Sherman Act's monopolization provision by demonstrating anticompetitive effect, then the monopolist may proffer a procompetitive justification for its conduct. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[19] Antitrust and Trade Regulation 29T ⚖976

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk973 Evidence
29Tk976 k. Presumptions and Burden of Proof. Most Cited Cases
(Formerly 265k28(7.1))
If monopolist asserts a procompetitive justification for its conduct, a nonpretextual claim that its conduct is indeed a form of competition on the merits because it involves, for example, greater efficiency or enhanced consumer appeal, then the burden shifts back to the plaintiff to rebut that claim. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[20] Antitrust and Trade Regulation 29T ⚖976

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk973 Evidence
29Tk976 k. Presumptions and Burden of Proof. Most Cited Cases
(Formerly 265k28(7.1))
If monopolist's procompetitive justification for its conduct stands unrebutted, then plaintiff in monopolization case must demonstrate that the anticompetitive harm of the

conduct outweighs the procompetitive benefit. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[21] Antitrust and Trade Regulation 29T ⚖650

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(D) Illegal Restraints or Other Misconduct
29Tk650 k. In General. Most Cited Cases
(Formerly 265k12(1.8))

In considering whether monopolist's conduct on balance harms competition and is therefore condemned as exclusionary for purposes of Sherman Act's monopolization provision, court's focus is upon the effect of that conduct, not upon the intent behind it; evidence of the intent behind the conduct of a monopolist is relevant only to the extent it helps courts understand the likely effect of the monopolist's conduct.

[22] Antitrust and Trade Regulation 29T ⚖672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.8))

Licensing restrictions imposed on original equipment manufacturers by manufacturer of operating system for personal computers, including the prohibition of the removal of desktop icons, folders, and Start menu entries, and modifications to initial boot sequence, had anticompetitive effect, supporting monopolization claim; restrictions prevented promotion of multiple Internet access providers and browsers and reduced rival browsers' usage share. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[23] Antitrust and Trade Regulation 29T ⚖585

29T Antitrust and Trade Regulation
29TVI Antitrust Regulation in General
29TVI(E) Particular Industries or Businesses
29Tk584 Intellectual Property
29Tk585 k. In General. Most Cited Cases
(Formerly 265k12(15), 265k12(5))

Intellectual property rights do not confer a privilege to violate the antitrust laws.

[24] Antitrust and Trade Regulation 29T ⚖672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.8))

License restriction imposed on original equipment manufacturers by manufacturer of operating system for personal computers which prohibited automatically launching a substitute user interface upon completion of the boot process was necessary to prevent substantial alteration of operating system manufacturer's copyrighted work, and was not an exclusionary practice that violated Sherman Act's monopolization provision. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[25] Antitrust and Trade Regulation 29T ⚖977(3)

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk973 Evidence
29Tk977 Weight and Sufficiency
29Tk977(3) k. Monopolization or Attempt to Monopolize. Most Cited Cases
(Formerly 265k28(7.5))

Evidence was insufficient to establish that licensing restrictions imposed on original equipment manufacturers by manufacturer of operating system for personal computers, including altering the appearance of the desktop or promoting programs in the boot sequence, were necessary to prevent actions that would substantially reduce value of its copyrighted work, as defense to monopolization claim. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[26] Antitrust and Trade Regulation 29T ⚖672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.8))

Licensing restrictions imposed on original equipment manufacturers by manufacturer of operating system for personal computers which made it more difficult to distribute competing Internet browser violated Sherman

Act's monopolization provision, even though restrictions did not completely bar competitor from distributing its browser, where restrictions barred rivals from all cost-efficient means of distribution. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[27] Antitrust and Trade Regulation 29T ⚿682

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk679 Intellectual Property
29Tk682 k. Patents. Most Cited Cases
(Formerly 265k12(1.4))

Judicial deference to product innovation does not mean that a monopolist's product design decisions are per se lawful.

[28] Antitrust and Trade Regulation 29T ⚿672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.8))

Manufacturer's integration of its Internet browser into its operating system for personal computers had an anticompetitive effect, for purposes of Sherman Act's monopolization provision; excluding manufacturer's browser from operating system's "Add/Remove Programs" utility had effect of significantly reducing usage of rivals' products, system's override feature deterred consumers from using rival browsers, and its commingling of browsing and non-browsing code deterred original equipment manufacturers from pre-installing rival browsers. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[29] Antitrust and Trade Regulation 29T ⚿977(2)

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk973 Evidence
29Tk977 Weight and Sufficiency
29Tk977(2) k. Restraints and Misconduct in General. Most Cited Cases
(Formerly 265k28(7.5))

Evidence in antitrust action was sufficient to support finding that manufacturer of operating system for personal computers placed code specific to Web browsing in the same files as code that provided operating system functions, prohibiting original equipment manufacturers from removing manufacturer's Internet browser; government expert testified that manufacturer designed its browser so that some of the code it used co-resided in same library files as other code needed for the operating system.

[30] Antitrust and Trade Regulation 29T ⚿672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.8))

Manufacturer's exclusion of its Internet browser from the "Add/Remove Programs" utility in its personal computer operating system and its commingling of browser and operating system code was exclusionary conduct, in violation of Sherman Act's monopolization provision; such actions increased manufacturer's browser usage share, and manufacturer failed to show that its conduct served a purpose other than protecting its operating system monopoly. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[31] Antitrust and Trade Regulation 29T ⚿672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.8))

Manufacturer of operating system for personal computers did not violate Sherman Act's monopolization provision by developing software package that allowed Internet access providers to customize title bar for manufacturer's Internet browser and offering the package to providers free of charge. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[32] Antitrust and Trade Regulation 29T ⚿650

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(D) Illegal Restraints or Other Misconduct

29Tk650 k. In General. Most Cited Cases
(Formerly 265k12(1.4))
Antitrust laws do not condemn even a monopolist for offering its product at an attractive price.

[33] Antitrust and Trade Regulation 29T ⚖672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k17(2.2))
Personal computer operating system manufacturer's exclusive dealing agreements with Internet access providers, under which providers agreed not to promote Internet browsers of manufacturer's competitors, violated Sherman Act's monopolization provision; by ensuring that majority of all providers' subscribers were offered manufacturer's browser either as default browser or as the only browser, manufacturer's deals with the providers had significant effect in preserving manufacturer's operating system monopoly. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[34] Antitrust and Trade Regulation 29T ⚖564

29T Antitrust and Trade Regulation
29TVI Antitrust Regulation in General
29TVI(D) Illegal Restraints or Other Misconduct
29Tk562 Refusals to Deal
29Tk564 k. Exclusive Dealing Arrangements/Agreements/Distributorships. Most Cited Cases
(Formerly 265k17(2.2))
When exclusive deal is challenged in antitrust action, plaintiff must both define relevant market and prove the degree of foreclosure.

[35] Antitrust and Trade Regulation 29T ⚖659

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(D) Illegal Restraints or Other Misconduct
29Tk657 Refusals to Deal
29Tk659 k. Exclusive Dealing Arrangements/Agreements/Distributorships. Most Cited Cases
(Formerly 265k17(2.2))
Monopolist's use of exclusive contracts, in certain circumstances, may give rise to a monopolization violation under Sherman Act even though the contracts foreclose less than the roughly 40% or 50% share usually required in order to establish a restraint of trade violation. Sherman Act, §§ 1, 2, as amended, 15 U.S.C.A. §§ 1, 2.

[36] Antitrust and Trade Regulation 29T ⚖672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k17.5(1))
Manufacturer of operating system for personal computers did not violate Sherman Act's monopolization provision by granting Internet content providers free licenses to bundle manufacturer's Internet browser and offering inducements not to offer competitor's browser, absent evidence that such restrictions had substantial deleterious impact on competitor's usage share. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[37] Antitrust and Trade Regulation 29T ⚖672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.3))
Agreements between manufacturer of operating system for personal computers and independent software vendors, under which developers agreed to use manufacturer's Internet browser as default browsing software for any software they developed with hypertext-based user interface, violated Sherman Act's monopolization provision; by keeping rival browsers from gaining widespread distribution, the deals had a substantial effect in preserving manufacturer's operating system monopoly, and manufacturer offered no procompetitive justification. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[38] Antitrust and Trade Regulation 29T ⚖672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k17(2.3), 265k17(2.2))

Personal computer operating system manufacturer's exclusive dealing arrangement with computer company, under which operating system manufacturer agreed to release up-to-date versions of business productivity software compatible with company's computers in exchange for company's agreement to make manufacturer's Internet browser the default browser on its computers, violated Sherman Act's monopolization provision; arrangement had substantial effect in restricting distribution of rival browsers, and manufacturer offered no procompetitive justification. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[39] Antitrust and Trade Regulation 29T ⚿672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.3))

Manufacturer's development and promotion of a "Java Virtual Machine" (JVM) which translated bytecode into instructions for manufacturer's personal computer operating system and allowed Java applications to run faster on its operating system than competitor's JVM did not violate Sherman Act's monopolization provision; although manufacturer's JVM was incompatible with competitor's product, it allowed applications to run more swiftly and did not itself have any anticompetitive effect. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[40] Antitrust and Trade Regulation 29T ⚿672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.8))

Personal computer operating system manufacturer's contracts with independent software vendors, which required use of manufacturer's "Java Virtual Machine" (JVM) as default in their Java applications, were exclusionary, in violation of Sherman Act's monopolization provision; agreements were anticompetitive because they foreclosed a substantial portion of the field for JVM distribution and, in so doing, protected manufacturer's operating system monopoly from a middleware threat, and manufacturer offered no procompetitive justification. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[41] Antitrust and Trade Regulation 29T ⚿672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.8))

Personal computer operating system manufacturer's deception of Java developers regarding the operating system-specific nature of software development tools it created to assist independent software vendors in designing Java applications was exclusionary conduct, in violation of Sherman Act's monopolization provision; manufacturer's conduct served to protect its monopoly in its operating system in manner not attributable either to superiority of the operating system or the acumen of its makers. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[42] Antitrust and Trade Regulation 29T ⚿672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.8))

Personal computer operating system manufacturer's threat to retaliate against microprocessor manufacturer if it did not stop developing a fast, cross-platform "Java Virtual Machine" (JVM) was exclusionary conduct, in violation of Sherman Act's monopolization provision; development of such a JVM would have threatened operating system manufacturer's monopoly in operating system market, and manufacturer offered on procompetitive justification for its conduct. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[43] Antitrust and Trade Regulation 29T ⚿672

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(E) Particular Industries or Businesses
29Tk672 k. Computer and Internet. Most Cited Cases

(Formerly 265k12(1.3))
Personal computer operating system manufacturer could not be held liable under Sherman Act's monopolization provision based on its general "course of conduct," where specific acts by manufacturer that harmed competition were not identified. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[44] Antitrust and Trade Regulation 29T ⚿995

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk994 Injunction
29Tk995 k. In General. Most Cited Cases
(Formerly 265k24(7.1))
Causal link between maintenance of manufacturer's personal computer operating system monopoly and its anticompetitive conduct in foreclosing distribution channels for rival Internet browser and Java technologies was not required to hold manufacturer liable for monopolization violation in action seeking injunctive relief. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[45] Antitrust and Trade Regulation 29T ⚿713

29T Antitrust and Trade Regulation
29TVIII Attempts to Monopolize
29TVIII(A) In General
29Tk712 Elements in General
29Tk713 k. In General. Most Cited Cases
(Formerly 265k12(1.3))

Antitrust and Trade Regulation 29T ⚿714

29T Antitrust and Trade Regulation
29TVIII Attempts to Monopolize
29TVIII(A) In General
29Tk712 Elements in General
29Tk714 k. Chance of Success in the Relevant Market. Most Cited Cases
(Formerly 265k12(1.3))

Antitrust and Trade Regulation 29T ⚿715

29T Antitrust and Trade Regulation
29TVIII Attempts to Monopolize
29TVIII(A) In General
29Tk712 Elements in General
29Tk715 k. Intent. Most Cited Cases
(Formerly 265k12(1.3))
To establish a Sherman Act violation for attempted monopolization, a plaintiff must prove (1) that the defendant has engaged in predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[46] Antitrust and Trade Regulation 29T ⚿713

29T Antitrust and Trade Regulation
29TVIII Attempts to Monopolize
29TVIII(A) In General
29Tk712 Elements in General
29Tk713 k. In General. Most Cited Cases
(Formerly 265k12(1.3))
Because the Sherman Act does not identify the activities that constitute the offense of attempted monopolization, the court must examine the facts of each case, mindful that the determination of what constitutes an attempt is a question of proximity and degree. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[47] Antitrust and Trade Regulation 29T ⚿722

29T Antitrust and Trade Regulation
29TVIII Attempts to Monopolize
29TVIII(B) Particular Industries or Businesses
29Tk722 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.3))
Manufacturer of personal computer operating systems could not be held liable for attempted monopolization of the Internet browser market, absent determination of relevant market; no evidence was identified as to what constituted a browser and why other products were not reasonable substitutes. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[48] Antitrust and Trade Regulation 29T ⚿713

29T Antitrust and Trade Regulation
29TVIII Attempts to Monopolize
29TVIII(A) In General
29Tk712 Elements in General
29Tk713 k. In General. Most Cited Cases
(Formerly 265k12(1.3))

A court's evaluation of an attempted monopolization claim must include a definition of the relevant market; such a definition establishes a context for evaluating the defendant's actions as well as for measuring whether the challenged conduct presented a dangerous probability of monopolization. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[49] Antitrust and Trade Regulation 29T ⚿980

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk978 Trial, Hearing and Determination
29Tk980 k. Questions of Law and Fact. Most Cited Cases
(Formerly 265k28(8))
Determination of a relevant market is a factual question to be resolved by the District Court in attempted monopolization action. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[50] Antitrust and Trade Regulation 29T ⚿647

29T Antitrust and Trade Regulation
29TVII Monopolization
29TVII(C) Market Power; Market Share
29Tk643 Relevant Market
29Tk647 k. Entry Barriers. Most Cited Cases
(Formerly 265k12(1.3))
Because a firm cannot possess monopoly power in a market unless that market is also protected by significant barriers to entry, a firm cannot threaten to achieve monopoly power in a market, for purposes of attempted monopolization claim, unless that market is, or will be, similarly protected. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[51] Antitrust and Trade Regulation 29T ⚿722

29T Antitrust and Trade Regulation
29TVIII Attempts to Monopolize
29TVIII(B) Particular Industries or Businesses
29Tk722 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.3))
Even assuming that Internet browser market was adequately defined, manufacturer of personal computer operating system could not be held liable for attempted monopolization of browser market, absent evidence that manufacturer would likely erect significant barriers to entry into that market upon acquisition of a dominant market share. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[52] Antitrust and Trade Regulation 29T ⚿577

29T Antitrust and Trade Regulation
29TVI Antitrust Regulation in General
29TVI(E) Particular Industries or Businesses
29Tk577 k. Computer and Internet. Most Cited Cases
(Formerly 265k12(1.10))
Rule of reason, rather than per se analysis, should govern the legality of tying arrangements involving platform software products. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[53] Antitrust and Trade Regulation 29T ⚿577

29T Antitrust and Trade Regulation
29TVI Antitrust Regulation in General
29TVI(E) Particular Industries or Businesses
29Tk577 k. Computer and Internet. Most Cited Cases
(Formerly 265k17.5(2))
Rule of reason, rather than per se analysis, applied to claim that manufacturer's contractual and technological bundling of its Internet browser with its personal computer operating system resulted in a tying arrangement. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[54] Antitrust and Trade Regulation 29T ⚿569

29T Antitrust and Trade Regulation
29TVI Antitrust Regulation in General
29TVI(D) Illegal Restraints or Other Misconduct
29Tk568 Tying Agreements
29Tk569 k. In General. Most Cited Cases
(Formerly 265k17.5(2))

Antitrust and Trade Regulation 29T ⚿570

29T Antitrust and Trade Regulation
29TVI Antitrust Regulation in General
29TVI(D) Illegal Restraints or Other Misconduct
29Tk568 Tying Agreements
29Tk570 k. Separate or Distinct Products.

Most Cited Cases
(Formerly 265k17.5(2))

Antitrust and Trade Regulation 29T ⚿571

29T Antitrust and Trade Regulation
29TVI Antitrust Regulation in General
29TVI(D) Illegal Restraints or Other Misconduct
29Tk568 Tying Agreements
29Tk571 k. Economic Power. Most Cited Cases
(Formerly 265k17.5(2))

There are four elements to a per se tying violation: (1) the tying and tied goods are two separate products; (2) the defendant has market power in the tying product market; (3) the defendant affords consumers no choice but to purchase the tied product from it; and (4) the tying arrangement forecloses a substantial volume of commerce. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

[55] Federal Courts 170B ⚿951.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(L) Determination and Disposition of Cause
170Bk951 Powers, Duties and Proceedings of Lower Court After Remand
170Bk951.1 k. In General. Most Cited Cases

To show on remand that manufacturer's contractual and technological bundling of its Internet browser with its personal computer operating system resulted in a tying arrangement under rule of reason, plaintiffs were precluded from arguing any theory of harm that depended on a precise definition of browsers or barriers to entry other than what may have been implicit in the alleged tying arrangement, where plaintiffs had failed to provide both a definition of the browser market and barriers to entry to that market as part of their attempted monopolization claim. Sherman Act, §§ 1, 2, as amended, 15 U.S.C.A. §§ 1, 2

[56] Federal Courts 170B ⚿951.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(L) Determination and Disposition of Cause
170Bk951 Powers, Duties and Proceedings of Lower Court After Remand
170Bk951.1 k. In General. Most Cited Cases

To show on remand that manufacturer's contractual and technological bundling of its Internet browser with its personal computer operating system resulted in a tying arrangement under rule of reason, plaintiffs were required to demonstrate that benefits, if any, of manufacturer's practices were outweighed by the harms in the tied product market. Sherman Act, § 1, as amended, 15 U.S.C.A. § 1.

[57] Antitrust and Trade Regulation 29T ⚿577

29T Antitrust and Trade Regulation
29TVI Antitrust Regulation in General
29TVI(E) Particular Industries or Businesses
29Tk577 k. Computer and Internet. Most Cited Cases
(Formerly 265k17.5(13))

Manufacturer's alleged price bundling of its Internet browser with its personal computer operating system could result in a tying arrangement under rule of reason if it were determined on remand that there was a positive price increment in operating system associated with browser and that anticompetitive effects of price bundling outweighed any procompetitive justifications. Sherman Act, § 1, as amended, 15 U.S.C.A. § 1.

[58] Federal Civil Procedure 170A ⚿1992

170A Federal Civil Procedure
170AXV Trial
170AXV(B) Time for Trial; Dockets, Lists and Calendars
170Ak1992 k. Discretion of Court. Most Cited Cases

Federal Civil Procedure 170A ⚿2251

170A Federal Civil Procedure
170AXV Trial
170AXV(K) Trial by Court
170AXV(K)1 In General
170Ak2251 k. In General. Most Cited Cases

Adopting an expedited trial schedule and receiving evidence through summary witnesses were with District Court's discretion in antitrust action against manufacturer of personal computer operating system, where case was tried to court.

[59] Federal Civil Procedure 170A ⚿2251

170A Federal Civil Procedure
170AXV Trial
170AXV(K) Trial by Court
170AXV(K)1 In General
170Ak2251 k. In General. Most Cited Cases
Trial courts have extraordinarily broad discretion to determine the manner in which they will conduct trials; this is particularly true in a case where the proceedings are being tried to the court without a jury.

[60] Federal Courts 170B ⚿891

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(K) Scope, Standards, and Extent
170BVIII(K)6 Harmless Error
170Bk891 k. Necessity That Error Be Prejudicial. Most Cited Cases
Where the proceedings are being tried to the court without a jury, an appellate court will not interfere with the trial court's exercise of its discretion to control its docket and dispatch its business except upon the clearest showing that the procedures have resulted in actual and substantial prejudice to the complaining litigant.

[61] Federal Civil Procedure 170A ⚿1951

170A Federal Civil Procedure
170AXV Trial
170AXV(A) In General
170Ak1951 k. In General. Most Cited Cases
Factual disputes must be heard in open court and resolved through trial-like evidentiary proceedings.

[62] Antitrust and Trade Regulation 29T ⚿979

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk978 Trial, Hearing and Determination
29Tk979 k. In General. Most Cited Cases
(Formerly 265k28(8))
Evidentiary hearing was required during remedies phase of antitrust action against manufacturer of personal computer operating system, where parties disputed a number of facts during remedies phase, including the feasibility of dividing manufacturer, the likely impact on consumers, and the effect of divestiture on shareholders, and manufacturer repeatedly asserted its right to an evidentiary hearing and submitted two offers of proof.

[63] Federal Civil Procedure 170A ⚿1951

170A Federal Civil Procedure
170AXV Trial
170AXV(A) In General
170Ak1951 k. In General. Most Cited Cases
Party has the right to judicial resolution of disputed facts not just as to the liability phase, but also as to appropriate relief.

[64] Federal Civil Procedure 170A ⚿1951

170A Federal Civil Procedure
170AXV Trial
170AXV(A) In General
170Ak1951 k. In General. Most Cited Cases
A hearing on the merits-i.e., a trial on liability-does not substitute for a relief-specific evidentiary hearing unless the matter of relief was part of the trial on liability, or unless there are no disputed factual issues regarding the matter of relief.

[65] Federal Courts 170B ⚿932.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(L) Determination and Disposition of Cause
170Bk932 Reversal or Vacation of Judgment in General
170Bk932.1 k. In General. Most Cited Cases
Remedies decree in antitrust case must be vacated whenever there is a bona fide disagreement concerning substantive items of relief which could be resolved only by trial.

[66] Federal Courts 170B ⚿893

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(K) Scope, Standards, and Extent
170BVIII(K)6 Harmless Error
170Bk893 k. Particular Errors as Harmless or Prejudicial. Most Cited Cases

Claimed surprise at the district court's decision to consider permanent injunctive relief does not, alone, merit reversal.

[67] Antitrust and Trade Regulation 29T ⚖979

29T Antitrust and Trade Regulation
29TXVII Antitrust Actions, Proceedings, and Enforcement
29TXVII(B) Actions
29Tk978 Trial, Hearing and Determination
29Tk979 k. In General. Most Cited Cases
(Formerly 265k28(8))

Remedies decree requiring divestiture of personal computer operating system manufacturer found to violate antitrust laws was not supported by adequate explanation, where decree did not discuss relevant objectives for such decrees.

[68] Federal Courts 170B ⚖932.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(L) Determination and Disposition of Cause
170Bk932 Reversal or Vacation of Judgment in General
170Bk932.1 k. In General. Most Cited Cases

Determination on appeal that manufacturer of personal computer operating system did not commit attempted monopolization violation and that remand was required on tying claim required vacation of remedies decree requiring manufacturer's divestiture, where decree was based in part on findings that manufacturer had committed attempted monopolization and tying violations. Sherman Act, §§ 1, 2, as amended, 15 U.S.C.A. §§ 1, 2

[69] Federal Courts 170B ⚖932.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(L) Determination and Disposition of Cause
170Bk932 Reversal or Vacation of Judgment in General
170Bk932.1 k. In General. Most Cited Cases

Where sweeping equitable relief is employed to remedy multiple antitrust violations, and some of the findings of remediable violations do not withstand appellate scrutiny, it is necessary to vacate the remedy decree since the implicit findings of causal connection no longer exist to warrant deferential affirmance.

[70] Federal Civil Procedure 170A ⚖2582

170A Federal Civil Procedure
170AXVII Judgment
170AXVII(D) On Trial of Issues
170Ak2582 k. Nature and Extent of Relief in General. Most Cited Cases

Generally, a district court is afforded broad discretion to enter that relief it calculates will best remedy the conduct it has found to be unlawful.

[71] Federal Courts 170B ⚖612.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(D) Presentation and Reservation in Lower Court of Grounds of Review
170BVIII(D)1 Issues and Questions in Lower Court
170Bk612 Nature or Subject-Matter of Issues or Questions
170Bk612.1 k. In General. Most Cited Cases

Motion to disqualify district judge who presided over antitrust action against manufacturer of personal computer operating system could be considered for first time on appeal, even though motion was based on press accounts of judge's comments about case, rather than on record evidence, where plaintiffs did not dispute comments attributed to judge in the press, and did not request evidentiary hearing.

[72] Judges 227 ⚖49(1)

227 Judges
227IV Disqualification to Act
227k49 Bias and Prejudice
227k49(1) k. In General. Most Cited Cases

Federal disqualification provisions reflect a strong federal policy to preserve the actual and apparent impartiality of the federal judiciary; judicial misconduct may implicate that policy regardless of the means by which it is disclosed to the public.

[73] Federal Courts 170B ⚖611

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(D) Presentation and Reservation in Lower Court of Grounds of Review
170BVIII(D)1 Issues and Questions in Lower Court
170Bk611 k. Necessity of Presentation in General. Most Cited Cases
Matter of what questions may be taken up and resolved for the first time on appeal is one left primarily to the discretion of the courts of appeals, to be exercised on the facts of individual cases.

[74] Judges 227 ⇐11(2)

227 Judges
227I Appointment, Qualification, and Tenure
227k11 Removal or Discipline
227k11(2) k. Standards, Canons, or Codes of Conduct, in General. Most Cited Cases
District Judge who presided over antitrust action against manufacturer of personal computer operating system violated Code of Conduct for United States Judges by making comments about factual and legal aspects of case in secret interviews with reporters while case was pending; comments violated canons forbidding judges from commenting publicly on merits of a pending or impending action, from considering ex parte communications, and requiring the avoidance of an appearance of impropriety. ABA Code of Jud.Conduct, Canons 2, 3, subd. A(4, 6)

[75] Judges 227 ⇐49(2)

227 Judges
227IV Disqualification to Act
227k49 Bias and Prejudice
227k49(2) k. Statements and Expressions of Opinion by Judge. Most Cited Cases
District judge's interviews with reporters, during which he commented about pending antitrust action against manufacturer of personal computer operating system, created appearance that he was not acting impartially, within meaning of disqualification statute; members of public could reasonably question whether judge's desire for press coverage influenced his judgments. 28 U.S.C.A. § 455(a).

[76] Judges 227 ⇐49(2)

227 Judges
227IV Disqualification to Act
227k49 Bias and Prejudice
227k49(2) k. Statements and Expressions of Opinion by Judge. Most Cited Cases

Judges 227 ⇐56

227 Judges
227IV Disqualification to Act
227k56 k. Effect on Acts and Proceedings of Judge. Most Cited Cases
Appearance that district judge was not acting impartially, created when he commented about pending antitrust action against manufacturer of personal computer operating system during secret interviews with reporters, required judge's disqualification retroactive to date he entered remedial order, rather than retroactive to an earlier part of the proceedings; full retroactive disqualification would have unduly penalized plaintiffs, who were unaware of the misconduct, and manufacturer neither alleged nor demonstrated that judge's misconduct rose to level of actual bias or prejudice. 28 U.S.C.A. § 455(a).

[77] Judges 227 ⇐56

227 Judges
227IV Disqualification to Act
227k56 k. Effect on Acts and Proceedings of Judge. Most Cited Cases
At a minimum, statute making disqualification mandatory for conduct that calls a judge's impartiality into question requires prospective disqualification of the offending judge, that is, disqualification from the judge's hearing any further proceedings in the case. 28 U.S.C.A. § 455(a).

[78] Judges 227 ⇐56

227 Judges
227IV Disqualification to Act
227k56 k. Effect on Acts and Proceedings of Judge. Most Cited Cases
There need not be a draconian remedy for every violation of statute making disqualification mandatory for conduct that calls a judge's impartiality into question. 28 U.S.C.A. § 455(a).

[79] Federal Civil Procedure 170A ⇐1969

170A Federal Civil Procedure

170AXV Trial
170AXV(A) In General
170Ak1969 k. Judge's Remarks and Conduct. Most Cited Cases

Federal Courts 170B ⚖856

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(K) Scope, Standards, and Extent
170BVIII(K)5 Questions of Fact, Verdicts and Findings
170Bk855 Particular Actions and Proceedings, Verdicts and Findings
170Bk856 k. Antitrust Cases. Most Cited Cases
District judge's findings of fact in antitrust action against manufacturer of personal computer operating system were subject to clearly erroneous review, although judge's comments during interviews with reporters while case was still pending created appearance that he was not acting impartially. Fed.Rules Civ.Proc.Rule 52(a), 28 U.S.C.A.

[80] Federal Courts 170B ⚖776

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(K) Scope, Standards, and Extent
170BVIII(K)1 In General
170Bk776 k. Trial De Novo. Most Cited Cases

Federal Courts 170B ⚖850.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(K) Scope, Standards, and Extent
170BVIII(K)5 Questions of Fact, Verdicts and Findings
170Bk850 Clearly Erroneous Findings of Court or Jury in General
170Bk850.1 k. In General. Most Cited Cases
There is no de novo appellate review of fact findings and no intermediate level between de novo and clear error, not even for findings the Court of Appeals may consider subpar. Fed.Rules Civ.Proc.Rule 52(a), 28 U.S.C.A.

[81] Federal Courts 170B ⚖850.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(K) Scope, Standards, and Extent
170BVIII(K)5 Questions of Fact, Verdicts and Findings
170Bk850 Clearly Erroneous Findings of Court or Jury in General
170Bk850.1 k. In General. Most Cited Cases

Federal Courts 170B ⚖932.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(L) Determination and Disposition of Cause
170Bk932 Reversal or Vacation of Judgment in General
170Bk932.1 k. In General. Most Cited Cases

Federal Courts 170B ⚖941

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(L) Determination and Disposition of Cause
170Bk937 Necessity for New Trial or Further Proceedings Below
170Bk941 k. Insufficiency or Lack of Verdict or Findings. Most Cited Cases
Mandatory nature of rule requiring review of district court's fact findings for clear error does not compel Court of Appeals to accept fact findings that result from the district court's misapplication of governing law or that otherwise do not permit meaningful appellate review, nor must Court of Appeals accept findings that are utterly deficient in other ways; in such a case, Court of Appeals vacates and remands for further factfinding. Fed.Rules Civ.Proc.Rule 52(a), 28 U.S.C.A.

[82] Federal Courts 170B ⚖850.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(K) Scope, Standards, and Extent
170BVIII(K)5 Questions of Fact, Verdicts and Findings
170Bk850 Clearly Erroneous Findings of Court or Jury in General

170Bk850.1 k. In General. Most Cited Cases

Federal Courts 170B ⟹932.1

170B Federal Courts
170BVIII Courts of Appeals
170BVIII(L) Determination and Disposition of Cause
170Bk932 Reversal or Vacation of Judgment in General
170Bk932.1 k. In General. Most Cited Cases
When there is fair room for argument that the district court's fact findings should be vacated in toto, the Court of Appeals should be especially careful in determining that the findings are worthy of the deference the clear error standard of review prescribes. Fed.Rules Civ.Proc.Rule 52(a), 28 U.S.C.A.

*43 **339 Appeals from the United States District Court for the District of Columbia (No. 98cv01232) (No. 98cv01233)

*44 **340 Richard J. Urowsky and Steven L. Holley argued the causes for appellant. With them on the briefs were John L. Warden, Richard C. Pepperman, II, William H. Neukom, Thomas W. Burt, David A. Heiner, Jr., Charles F. Rule, Robert A. Long, Jr., and Carter G. Phillips. Christopher J. Meyers entered an appearance.
Lars H. Liebeler, Griffin B. Bell, Lloyd N. Cutler, Louis R. Cohen, C. Boyden Gray, William J. Kolasky, William F. Adkinson, Jr., Jeffrey D. Ayer, and Jay V. Prabhu were on the brief of amici curiae The Association for Competitive Technology and Computing Technology Industry Association in support of appellant.
David R. Burton was on the brief for amicus curiae Center for the Moral Defense of Capitalism in support of appellant.
Robert S. Getman was on the brief for amicus curiae Association for Objective Law in support of appellant.
Jeffrey P. Minear and David C. Frederick, Assistants to the Solicitor General, United States Department of Justice, and John G. Roberts, Jr., argued the causes for appellees. With them on the brief were A. Douglas Melamed, Acting Assistant Attorney General, United States Department of Justice, Jeffrey H. Blattner, Deputy Assistant Attorney General, Mary Jean Moltenbrey, Director, Catherine G. O'Sullivan, Robert B. Nicholson, Adam D. Hirsh, Andrea Limmer, David Seidman, and Christopher Sprigman, Attorneys, Eliot Spitzer, Attorney General, State of New York, Richard L. Schwartz, Assistant Attorney General, and Kevin J. O'Connor, Office of the Attorney General, State of Wisconsin.
John Rogovin, Kenneth W. Starr, John F. Wood, Elizabeth Petrela, Robert H. Bork, Theodore W. Ullyot, Jason M. Mahler, Stephen M. Shapiro, Donald M. Falk, Mitchell S. Pettit, Kevin J. Arquit, and Michael C. Naughton were on the brief for amici curiae America Online, Inc., et al., in support of appellee. Paul T. Cappuccio entered an appearance.
Lee A. Hollaar, appearing pro se, was on the brief for amicus curiae Lee A. Hollaar.
Carl Lundgren, appearing pro se, was on the brief for amicus curiae Carl Lundgren.

Before: EDWARDS, Chief Judge, WILLIAMS, GINSBURG, SENTELLE, RANDOLPH, ROGERS and TATEL, Circuit Judges.
Opinion for the Court filed PER CURIAM.

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*45 **341 PER CURIAM:

Microsoft Corporation appeals from judgments of the District Court finding the company in violation of §§ 1 and 2 of the Sherman Act and ordering various remedies.

The action against Microsoft arose pursuant to a complaint filed by the United States and separate complaints filed by individual States. The District Court determined that Microsoft had maintained a monopoly in the market for Intelcompatible PC operating systems in violation of § 2; attempted to gain a monopoly in the market for internet browsers in violation of § 2; and illegally tied two purportedly separate products, Windows and Internet Explorer ("IE"), in violation of § 1. *United States v. Microsoft Corp.*, 87 F.Supp.2d 30 (D.D.C.2000) ("*Conclusions of Law*"). The District Court then found that the same facts that established liability under §§ 1 and 2 of the Sherman Act mandated findings of liability under analogous state law antitrust provisions. *Id.* To remedy the Sherman Act violations, the District Court issued a Final Judgment requiring Microsoft to submit a proposed plan of divestiture, with the company to be split into an operating systems business and an applications business. *United States v. Microsoft Corp.*, 97 F.Supp.2d 59, 64-65 (D.D.C.2000) ("*Final Judgment*"). The District Court's remedial order also contains a number of interim restrictions on Microsoft's conduct. *Id.* at 66-69.

*46 **342 Microsoft's appeal contests both the legal conclusions and the resulting remedial order. There are three principal aspects of this appeal. First, Microsoft challenges the District Court's legal conclusions as to all three alleged antitrust violations and also a number of the procedural and factual foundations on which they rest. Second, Microsoft argues that the remedial order must be set aside, because the District Court failed to afford the company an evidentiary hearing on disputed facts and, also, because the substantive provisions of the order are flawed. Finally, Microsoft asserts that the trial judge committed ethical violations by engaging in impermissible *ex parte* contacts and making inappropriate public comments on the merits of the case while it was pending. Microsoft argues that these ethical violations compromised the District Judge's appearance of impartiality, thereby necessitating his disqualification and vacatur of his Findings of Fact, Conclusions of Law, and Final Judgment.

After carefully considering the voluminous record on appeal-including the District Court's Findings of Fact and Conclusions of Law, the testimony and exhibits submitted at trial, the parties' briefs, and the oral arguments before this court-we find that some but not all of Microsoft's liability challenges have merit. Accordingly, we affirm in part and reverse in part the District Court's judgment that Microsoft violated § 2 of the Sherman Act by employing anticompetitive means to maintain a monopoly in the operating system market; we reverse the District Court's determination that Microsoft violated § 2 of the Sherman Act by illegally attempting to monopolize the internet browser market; and we remand the District Court's finding that Microsoft violated § 1 of the Sherman Act by unlawfully tying its browser to its operating system. Our judgment extends to the District Court's findings with respect to the state law counterparts of the plaintiffs' Sherman Act claims.

We also find merit in Microsoft's challenge to the Final Judgment embracing the District Court's remedial order. There are several reasons supporting this conclusion. First, the District Court's Final Judgment rests on a number of liability determinations that do not survive appellate review; therefore, the remedial order as currently fashioned cannot stand. Furthermore, we would vacate and remand the remedial order even were we to uphold the District Court's liability determinations in their entirety, because the District Court failed to hold an evidentiary hearing to address remedies-specific factual disputes.

Finally, we vacate the Final Judgment on remedies, because the trial judge engaged in impermissible *ex parte* contacts by holding secret interviews with members of the media and made numerous offensive comments about Microsoft officials in public statements outside of the courtroom, giving rise to an appearance of partiality. Although we find no evidence of actual bias, we hold that the actions of the trial judge seriously tainted the proceedings before the District Court and called into question the integrity of the judicial process. We are therefore constrained to vacate the Final Judgment on remedies, remand the case for reconsideration of the remedial order, and require that the case be assigned to a different trial judge on remand. We believe that this disposition will be

adequate to cure the cited improprieties.

In sum, for reasons more fully explained below, we affirm in part, reverse in part, and remand in part the District Court's judgment assessing liability. We vacate in full the Final Judgment embodying the remedial order and remand the case to a *47 **343 different trial judge for further proceedings consistent with this opinion.

I. Introduction

A. Background

In July 1994, officials at the Department of Justice ("DOJ"), on behalf of the United States, filed suit against Microsoft, charging the company with, among other things, unlawfully maintaining a monopoly in the operating system market through anticompetitive terms in its licensing and software developer agreements. The parties subsequently entered into a consent decree, thus avoiding a trial on the merits. *See* United States v. Microsoft Corp., 56 F.3d 1448 (D.C.Cir.1995) ("*Microsoft I*"). Three years later, the Justice Department filed a civil contempt action against Microsoft for allegedly violating one of the decree's provisions. On appeal from a grant of a preliminary injunction, this court held that Microsoft's technological bundling of IE 3.0 and 4.0 with Windows 95 did not violate the relevant provision of the consent decree. United States v. Microsoft Corp., 147 F.3d 935 (D.C.Cir.1998) ("*Microsoft II*"). We expressly reserved the question whether such bundling might independently violate §§ 1 or 2 of the Sherman Act. *Id.* at 950 n. 14.

On May 18, 1998, shortly before issuance of the *Microsoft II* decision, the United States and a group of State plaintiffs filed separate (and soon thereafter consolidated) complaints, asserting antitrust violations by Microsoft and seeking preliminary and permanent injunctions against the company's allegedly unlawful conduct. The complaints also sought any "other preliminary and permanent relief as is necessary and appropriate to restore competitive conditions in the markets affected by Microsoft's unlawful conduct." Gov't's Compl. at 53, *United States v. Microsoft Corp.*, No. 98-1232 (D.D.C.1999). Relying almost exclusively on Microsoft's varied efforts to unseat Netscape Navigator as the preeminent internet browser, plaintiffs charged four distinct violations of the Sherman Act: (1) unlawful exclusive dealing arrangements in violation of § 1; (2) unlawful tying of IE to Windows 95 and Windows 98 in violation of § 1; (3) unlawful maintenance of a monopoly in the PC operating system market in violation of § 2; and (4) unlawful attempted monopolization of the internet browser market in violation of § 2. The States also brought pendent claims charging Microsoft with violations of various State antitrust laws.

The District Court scheduled the case on a "fast track." The hearing on the preliminary injunction and the trial on the merits were consolidated pursuant to Fed.R.Civ.P. 65(a)(2). The trial was then scheduled to commence on September 8, 1998, less than four months after the complaints had been filed. In a series of pretrial orders, the District Court limited each side to a maximum of 12 trial witnesses plus two rebuttal witnesses. It required that all trial witnesses' direct testimony be submitted to the court in the form of written declarations. The District Court also made allowances for the use of deposition testimony at trial to prove subordinate or predicate issues. Following the grant of three brief continuances, the trial started on October 19, 1998.

After a 76-day bench trial, the District Court issued its Findings of Fact. United States v. Microsoft Corp., 84 F.Supp.2d 9 (D.D.C.1999) ("*Findings of Fact*"). This triggered two independent courses of action. First, the District Court established a schedule for briefing on possible legal conclusions, inviting Professor Lawrence Lessig to participate as *amicus curiae*. Second, the District Court referred the case to mediation to afford the parties an opportunity to settle their differences. The *48 **344 Honorable Richard A. Posner, Chief Judge of the United States Court of Appeals for the Seventh Circuit, was appointed to serve as mediator. The parties concurred in the referral to mediation and in the choice of mediator.

Mediation failed after nearly four months of settlement talks between the parties. On April 3, 2000, with the parties' briefs having been submitted and considered, the District Court issued its conclusions of law. The District Court found Microsoft liable on the § 1 tying and § 2 monopoly maintenance and attempted monopolization claims, *Conclusions of Law*, at 35-51, while ruling that there was insufficient evidence to support a § 1 exclusive dealing violation, *id.* at 51-54. As to the pendent State actions, the District Court found the State antitrust laws conterminous with §§ 1 and 2 of the Sherman Act,

thereby obviating the need for further State-specific analysis. *Id.* at 54-56. In those few cases where a State's law required an additional showing of *intrastate* impact on competition, the District Court found the requirement easily satisfied on the evidence at hand. *Id.* at 55.

Having found Microsoft liable on all but one count, the District Court then asked plaintiffs to submit a proposed remedy. Plaintiffs' proposal for a remedial order was subsequently filed within four weeks, along with six supplemental declarations and over 50 new exhibits. In their proposal, plaintiffs sought specific conduct remedies, plus structural relief that would split Microsoft into an applications company and an operating systems company. The District Court rejected Microsoft's request for further evidentiary proceedings and, following a single hearing on the merits of the remedy question, issued its Final Judgment on June 7, 2000. The District Court adopted plaintiffs' proposed remedy without substantive change.

Microsoft filed a notice of appeal within a week after the District Court issued its Final Judgment. This court then ordered that any proceedings before it be heard by the court sitting *en banc*. Before any substantive matters were addressed by this court, however, the District Court certified appeal of the case brought by the United States directly to the Supreme Court pursuant to 15 U.S.C. § 29(b), while staying the final judgment order in the federal and state cases pending appeal. The States thereafter petitioned the Supreme Court for a *writ of certiorari* in their case. The Supreme Court declined to hear the appeal of the Government's case and remanded the matter to this court; the Court likewise denied the States' petition for *writ of certiorari*. *Microsoft Corp. v. United States*, 530 U.S. 1301, 121 S.Ct. 25, 147 L.Ed.2d 1048 (2000). This consolidated appeal followed.

B. Overview

Before turning to the merits of Microsoft's various arguments, we pause to reflect briefly on two matters of note, one practical and one theoretical.

The practical matter relates to the temporal dimension of this case. The litigation timeline in this case is hardly problematic. Indeed, it is noteworthy that a case of this magnitude and complexity has proceeded from the filing of complaints through trial to appellate decision in a mere three years. *See, e.g.*, *Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 1155 (1st Cir.1994) (six years from filing of complaint to appellate decision); *Transamerica Computer Co., Inc. v. IBM*, 698 F.2d 1377, 1381 (9th Cir.1983) (over four years from start of trial to appellate decision); *United States v. United Shoe Mach. Corp.*, 110 F.Supp. 295, 298 (D.Mass.1953) (over five years from filing of complaint to trial court decision).

***49 **345** What is somewhat problematic, however, is that just over six years have passed since Microsoft engaged in the first conduct plaintiffs allege to be anticompetitive. As the record in this case indicates, six years seems like an eternity in the computer industry. By the time a court can assess liability, firms, products, and the marketplace are likely to have changed dramatically. This, in turn, threatens enormous practical difficulties for courts considering the appropriate measure of relief in equitable enforcement actions, both in crafting injunctive remedies in the first instance and reviewing those remedies in the second. Conduct remedies may be unavailing in such cases, because innovation to a large degree has already rendered the anticompetitive conduct obsolete (although by no means harmless). And broader structural remedies present their own set of problems, including how a court goes about *restoring* competition to a dramatically changed, and constantly changing, marketplace. That is just one reason why we find the District Court's refusal in the present case to hold an evidentiary hearing on remedies-to update and flesh out the available information before seriously entertaining the possibility of dramatic structural relief-so problematic. *See infra* Section V.

We do not mean to say that enforcement actions will no longer play an important role in curbing infringements of the antitrust laws in technologically dynamic markets, nor do we assume this in assessing the merits of this case. Even in those cases where forward-looking remedies appear limited, the Government will continue to have an interest in defining the contours of the antitrust laws so that law-abiding firms will have a clear sense of what is permissible and what is not. And the threat of private damage actions will remain to deter those firms inclined to test the limits of the law.

The second matter of note is more theoretical in nature. We decide this case against a backdrop of significant de-

bate amongst academics and practitioners over the extent to which "old economy" § 2 monopolization doctrines should apply to firms competing in dynamic technological markets characterized by network effects. In markets characterized by network effects, one product or standard tends towards dominance, because "the utility that a user derives from consumption of the good increases with the number of other agents consuming the good." Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 am. Econ. Rev. 424, 424 (1985). For example, "[a]n individual consumer's demand to use (and hence her benefit from) the telephone network . . increases with the number of other users on the network whom she can call or from whom she can receive calls." Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 u. Chi. L. RevV. 1, 8 (2001). Once a product or standard achieves wide acceptance, it becomes more or less entrenched. Competition in such industries is "for the field" rather than "within the field." *See* Harold Demsetz, *Why Regulate Utilities*?, 11 j L. & econ. 55, 57 & n.7 (1968) (emphasis omitted).

In technologically dynamic markets, however, such entrenchment may be temporary, because innovation may alter the field altogether. *See* joseph A. Schumpeter, Capitalism, Socialism and Democracy 81-90 (Harper Perennial 1976) (1942). Rapid technological change leads to markets in which "firms compete through innovation for temporary market dominance, from which they may be displaced by the next wave of product advancements." Shelanski & Sidak, at 11-12 (discussing Schumpeterian competition, which proceeds "sequentially over time rather than ***50 **346** simultaneously across a market"). Microsoft argues that the operating system market is just such a market.

Whether or not Microsoft's characterization of the operating system market is correct does not appreciably alter our mission in assessing the alleged antitrust violations in the present case. As an initial matter, we note that there is no consensus among commentators on the question of whether, and to what extent, current monopolization doctrine should be amended to account for competition in technologically dynamic markets characterized by network effects. *Compare* Steven C. Salop & R. Craig Romaine, *Preserving Monopoly: Economic Analysis, Legal Standards, and Microsoft*, 7 geo. Mason L. Rev. 617, 654-55, 663-64 (1999) (arguing that exclusionary conduct in high-tech networked industries deserves heightened antitrust scrutiny in part because it may threaten to deter innovation), *with* Ronald A. Cass & Keith N. Hylton, *Preserving Competition: Economic Analysis, Legal Standards and Microsoft*, 8 geo. Mason L. Rev. 1, 36-39 (1999) (equivocating on the antitrust implications of network effects and noting that the presence of network externalities may actually encourage innovation by guaranteeing more durable monopolies to innovating winners). Indeed, there is some suggestion that the economic consequences of network effects and technological dynamism act to offset one another, thereby making it difficult to formulate categorical antitrust rules absent a particularized analysis of a given market. *See* Shelanski & Sidak, at 6-7 ("High profit margins might appear to be the benign and necessary recovery of legitimate investment returns in a Schumpeterian framework, but they might represent exploitation of customer lock-in and monopoly power when viewed through the lens of network economics.... The issue is particularly complex because, in network industries characterized by rapid innovation, both forces may be operating and can be difficult to isolate.").

Moreover, it should be clear that Microsoft makes no claim that anticompetitive conduct should be assessed differently in technologically dynamic markets. It claims only that the measure of monopoly power should be different. For reasons fully discussed below, we reject Microsoft's monopoly power argument. *See infra* Section II.A.

With this backdrop in mind, we turn to the specific challenges raised in Microsoft's appeal.

II. Monopolization

[1][2] Section 2 of the Sherman Act makes it unlawful for a firm to "monopolize." 15 U.S.C. § 2. The offense of monopolization has two elements: "(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident." *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71, 86 S.Ct. 1698, 16 L.Ed.2d 778 (1966). The District Court applied this test and found that Microsoft possesses monopoly power in the market for Intel-compatible PC operating systems. Focusing primarily on Microsoft's efforts to

suppress Netscape Navigator's threat to its operating system monopoly, the court also found that Microsoft maintained its power not through competition on the merits, but through unlawful means. Microsoft challenges both conclusions. We defer to the District Court's findings of fact, setting them aside only if clearly erroneous. Fed. R. Civ. P. 52(a). We review legal questions *de novo*. ***51**347***United States ex rel. Modern Elec., Inc. v. Ideal Elec. Sec. Co.*, 81 F.3d 240, 244 (D.C.Cir.1996).

We begin by considering whether Microsoft possesses monopoly power, *see infra* Section II.A, and finding that it does, we turn to the question whether it maintained this power through anticompetitive means. Agreeing with the District Court that the company behaved anticompetitively, *see infra* Section II.B, and that these actions contributed to the maintenance of its monopoly power, *see infra* Section II.C, we affirm the court's finding of liability for monopolization.

A. Monopoly Power

[3][4][5] While merely possessing monopoly power is not itself an antitrust violation, *see Northeastern Tel. Co. v. AT & T.*, 651 F.2d 76, 84-85 (2d Cir.1981), it is a necessary element of a monopolization charge, *see Grinnell*, 384 U.S. at 570, 86 S.Ct. 1698. The Supreme Court defines monopoly power as "the power to control prices or exclude competition." *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 391, 76 S.Ct. 994, 100 L.Ed. 1264 (1956). More precisely, a firm is a monopolist if it can profitably raise prices substantially above the competitive level. 2A Phillip E. Areeda et al., Antitrust Law ¶ 501, at 85 (1995); *cf. Ball Mem'l Hosp., Inc. v. Mut. Hosp. Ins., Inc.*, 784 F.2d 1325, 1335 (7th Cir.1986) (defining market power as "the ability to cut back the market's total output and so raise price"). Where evidence indicates that a firm has in fact profitably done so, the existence of monopoly power is clear. *See Rebel Oil Co. v. Atl. Richfield Co.*, 51 F.3d 1421, 1434 (9th Cir.1995); *see also FTC v. Indiana Fed'n of Dentists*, 476 U.S. 447, 460-61, 106 S.Ct. 2009, 90 L.Ed.2d 445 (1986) (using direct proof to show market power in Sherman Act § 1 unreasonable restraint of trade action). Because such direct proof is only rarely available, courts more typically examine market structure in search of circumstantial evidence of monopoly power. 2A Areeda et al., Antitrust Law ¶ 531a, at 156; *see also, e.g., Grinnell*, 384 U.S. at 571, 86 S.Ct. 1698. Under this structural approach, monopoly power may be inferred from a firm's possession of a dominant share of a relevant market that is protected by entry barriers. *See Rebel Oil*, 51 F.3d at 1434. "Entry barriers" are factors (such as certain regulatory requirements) that prevent new rivals from timely responding to an increase in price above the competitive level. *See S. Pac. Communications Co. v. AT & T.*, 740 F.2d 980, 1001-02 (D.C.Cir.1984).

The District Court considered these structural factors and concluded that Microsoft possesses monopoly power in a relevant market. Defining the market as Intel-compatible PC operating systems, the District Court found that Microsoft has a greater than 95% share. It also found the company's market position protected by a substantial entry barrier. *Conclusions of Law*, at 36.

Microsoft argues that the District Court incorrectly defined the relevant market. It also claims that there is no barrier to entry in that market. Alternatively, Microsoft argues that because the software industry is uniquely dynamic, direct proof, rather than circumstantial evidence, more appropriately indicates whether it possesses monopoly power. Rejecting each argument, we uphold the District Court's finding of monopoly power in its entirety.

1. Market Structure

a. Market definition

[6][7] "Because the ability of consumers to turn to other suppliers restrains a firm from raising prices above the competitive level," ***52**348***Rothery Storage & Van Co. v. Atlas Van Lines, Inc.*, 792 F.2d 210, 218 (D.C.Cir.1986), the relevant market must include all products " reasonably interchangeable by consumers for the same purposes." *du Pont*, 351 U.S. at 395, 76 S.Ct. 994. In this case, the District Court defined the market as "the licensing of all Intel-compatible PC operating systems worldwide," finding that there are "currently no products-and ... there are not likely to be any in the near future-that a significant percentage of computer users worldwide could substitute for [these operating systems] without incurring substantial costs." *Conclusions of Law*, at 36. Calling this market definition "far too narrow," Appellant's Opening Br. at 84, Microsoft argues that the District Court improperly excluded three types of products:

non-Intel compatible operating systems (primarily Apple's Macintosh operating system, Mac OS), operating systems for non-PC devices (such as handheld computers and portal websites), and "middleware" products, which are not operating systems at all.

We begin with Mac OS. Microsoft's argument that Mac OS should have been included in the relevant market suffers from a flaw that infects many of the company's monopoly power claims: the company fails to challenge the District Court's factual findings, or to argue that these findings do not support the court's conclusions. The District Court found that consumers would not switch from Windows to Mac OS in response to a substantial price increase because of the costs of acquiring the new hardware needed to run Mac OS (an Apple computer and peripherals) and compatible software applications, as well as because of the effort involved in learning the new system and transferring files to its format. *Findings of Fact* ¶ 20. The court also found the Apple system less appealing to consumers because it costs considerably more and supports fewer applications. *Id.* ¶ 21. Microsoft responds only by saying: "the district court's market definition is so narrow that it excludes Apple's Mac OS, which has competed with Windows for years, simply because the Mac OS runs on a different microprocessor." Appellant's Opening Br. at 84. This general, conclusory statement falls far short of what is required to challenge findings as clearly erroneous. *Pendleton v. Rumsfeld*, 628 F.2d 102, 106 (D.C.Cir.1980); *see also Terry v. Reno*, 101 F.3d 1412, 1415 (D.C.Cir.1996) (holding that claims made but not argued in a brief are waived). Microsoft neither points to evidence contradicting the District Court's findings nor alleges that supporting record evidence is insufficient. And since Microsoft does not argue that even if we accept these findings, they do not support the District Court's conclusion, we have no basis for upsetting the court's decision to exclude Mac OS from the relevant market.

Microsoft's challenge to the District Court's exclusion of non-PC based competitors, such as information appliances (handheld devices, etc.) and portal websites that host serverbased software applications, suffers from the same defect: the company fails to challenge the District Court's key factual findings. In particular, the District Court found that because information appliances fail far short of performing all of the functions of a PC, most consumers will buy them only as a supplement to their PCs. *Findings of Fact* ¶ 23. The District Court also found that portal websites do not presently host enough applications to induce consumers to switch, nor are they likely to do so in the near future. *Id.* ¶ 27. Again, because Microsoft does not argue that the District Court's findings do not support its conclusion that information appliances and portal websites are outside the relevant market, we adhere to that conclusion.

*53 [8] **349 This brings us to Microsoft's main challenge to the District Court's market definition: the exclusion of middleware. Because of the importance of middleware to this case, we pause to explain what it is and how it relates to the issue before us.

Operating systems perform many functions, including allocating computer memory and controlling peripherals such as printers and keyboards. *See* Direct Testimony of Frederick Warren-Boulton ¶ 20, *reprinted in* 5 J.A. at 3172-73. Operating systems also function as platforms for software applications. They do this by "exposing"-*i.e.*, making available to software developers-routines or protocols that perform certain widely-used functions. These are known as Application Programming Interfaces, or "APIs." *See* Direct Testimony of James Barksdale ¶ 70, *reprinted in* 5 J.A. at 2895-96. For example, Windows contains an API that enables users to draw a box on the screen. *See* Direct Testimony of Michael T. Devlin ¶ 12, *reprinted in* 5 J.A. at 3525. Software developers wishing to include that function in an application need not duplicate it in their own code. Instead, they can "call"-*i.e.*, use the Windows API. *See* Direct Testimony of James Barksdale ¶ ¶ 70-71, *reprinted in* 5 J.A. at 2895-97. Windows contains thousands of APIs, controlling everything from data storage to font display. *See* Direct Testimony of Michael Devlin ¶ 12, *reprinted in* 5 J.A. at 3525.

Every operating system has different APIs. Accordingly, a developer who writes an application for one operating system and wishes to sell the application to users of another must modify, or "port," the application to the second operating system. *Findings of Fact* ¶ 4. This process is both timeconsuming and expensive. *Id.* ¶ 30.

"Middleware" refers to software products that expose their own APIs. *Id.* ¶ 28; Direct Testimony of Paul Maritz ¶ ¶ 234-36, *reprinted in* 6 J.A. at 3727-29. Because of this, a middleware product written for Windows could

take over some or all of Windows's valuable platform functions-that is, developers might begin to rely upon APIs exposed by the middleware for basic routines rather than relying upon the API set included in Windows. If middleware were written for multiple operating systems, its impact could be even greater. The more developers could rely upon APIs exposed by such middleware, the less expensive porting to different operating systems would be. Ultimately, if developers could write applications relying exclusively on APIs exposed by middleware, their applications would run on any operating system on which the middleware was also present. *See* Direct Testimony of Avadis Tevanian, Jr. ¶ 45, *reprinted in* 5 J.A. at 3113. Netscape Navigator and Java-both at issue in this case-are middleware products written for multiple operating systems. *Findings of Fact* ¶ 28.

Microsoft argues that, because middleware could usurp the operating system's platform function and might eventually take over other operating system functions (for instance, by controlling peripherals), the District Court erred in excluding Navigator and Java from the relevant market. The District Court found, however, that neither Navigator, Java, nor any other middleware product could now, or would soon, expose enough APIs to serve as a platform for popular applications, much less take over all operating system functions. *Id.* ¶ ¶ 28-29. Again, Microsoft fails to challenge these findings, instead simply asserting middleware's "potential" as a competitor. Appellant's Opening Br. at 86. The test of reasonable interchangeability, however, required the District Court to consider only substitutes that constrain pricing in the reasonably foreseeable**54 **350** future, and only products that can enter the market in a relatively short time can perform this function. *See* Rothery, 792 F.2d at 218 ("Because the ability of consumers to turn to other suppliers restrains a firm from raising prices above the competitive level, the definition of the 'relevant market' rests on a determination of available substitutes."); *see also Findings of Fact* ¶ 29 ("[I]t would take several years for middleware ... to evolve" into a product that can constrain operating system pricing.). Whatever middleware's ultimate potential, the District Court found that consumers could not now abandon their operating systems and switch to middleware in response to a sustained price for Windows above the competitive level. *Findings of Fact* ¶ ¶ 28, 29. Nor is middleware likely to overtake the operating system as the primary platform for software development any time in the near future. *Id.*

Alternatively, Microsoft argues that the District Court should not have excluded middleware from the relevant market because the primary focus of the plaintiffs' § 2 charge is on Microsoft's attempts to suppress middleware's threat to its operating system monopoly. According to Microsoft, it is "contradict[ory]," 2/26/2001 Ct. Appeals Tr. at 20, to define the relevant market to exclude the "very competitive threats that gave rise" to the action. Appellant's Opening Br. at 84. The purported contradiction lies between plaintiffs' § 2 theory, under which Microsoft preserved its monopoly against middleware technologies that threatened to become viable substitutes for Windows, and its theory of the relevant market, under which middleware is not presently a viable substitute for Windows. Because middleware's threat is only nascent, however, no contradiction exists. Nothing in § 2 of the Sherman Act limits its prohibition to actions taken against threats that are already well-developed enough to serve as present substitutes. *See infra* Section II.C. Because market definition is meant to identify products "reasonably interchangeable by consumers," *du Pont*, 351 U.S. at 395, 76 S.Ct. 994, and because middleware is not now interchangeable with Windows, the District Court had good reason for excluding middleware from the relevant market.

b. Market power

[9] Having thus properly defined the relevant market, the District Court found that Windows accounts for a greater than 95% share. *Findings of Fact* ¶ 35. The court also found that even if Mac OS were included, Microsoft's share would exceed 80%. *Id.* Microsoft challenges neither finding, nor does it argue that such a market share is not predominant. *Cf. Grinnell*, 384 U.S. at 571, 86 S.Ct. 1698 (87% is predominant); *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 481, 112 S.Ct. 2072, 119 L.Ed.2d 265 (1992) (80%); *du Pont*, 351 U.S. at 379, 391, 76 S.Ct. 994 (75%).

[10] Instead, Microsoft claims that even a predominant market share does not by itself indicate monopoly power. Although the "existence of [monopoly] power ordinarily may be inferred from the predominant share of the market," *Grinnell*, 384 U.S. at 571, 86 S.Ct. 1698, we agree

with Microsoft that because of the possibility of competition from new entrants, *see* Ball Mem'l Hosp., Inc., 784 F.2d at 1336, looking to current market share alone can be "misleading." *Hunt-Wesson Foods, Inc. v. Ragu Foods, Inc.*, 627 F.2d 919, 924 (9th Cir.1980); *see also* Ball Mem'l Hosp., Inc., 784 F.2d at 1336 ("Market share reflects current sales, but today's sales do not always indicate power over sales and price tomorrow.") In this case, however, the District Court was not misled. Considering*55 **351 the possibility of new rivals, the court focused not only on Microsoft's present market share, but also on the structural barrier that protects the company's future position. *Conclusions of Law*, at 36. That barrier-the "applications barrier to entry"-stems from two characteristics of the software market: (1) most consumers prefer operating systems for which a large number of applications have already been written; and (2) most developers prefer to write for operating systems that already have a substantial consumer base. *See Findings of Fact* ¶ ¶ 30, 36. This "chicken-and-egg" situation ensures that applications will continue to be written for the already dominant Windows, which in turn ensures that consumers will continue to prefer it over other operating systems. *Id.*

Challenging the existence of the applications barrier to entry, Microsoft observes that software developers do write applications for other operating systems, pointing out that at its peak IBM's OS/2 supported approximately 2,500 applications. *Id.* ¶ 46. This misses the point. That some developers write applications for other operating systems is not at all inconsistent with the finding that the applications barrier to entry discourages many from writing for these less popular platforms. Indeed, the District Court found that IBM's difficulty in attracting a larger number of software developers to write for its platform seriously impeded OS/2's success. *Id.* ¶ 46.

Microsoft does not dispute that Windows supports many more applications than any other operating system. It argues instead that "[i]t defies common sense" to suggest that an operating system must support as many applications as Windows does (more than 70,000, according to the District Court, *id.* ¶ 40) to be competitive. Appellant's Opening Br. at 96. Consumers, Microsoft points out, can only use a very small percentage of these applications. *Id.* As the District Court explained, however, the applications barrier to entry gives consumers reason to prefer the dominant operating system even if they have no need to use all applications written for it:

> The consumer wants an operating system that runs not only types of applications that he knows he will want to use, but also those types in which he might develop an interest later. Also, the consumer knows that if he chooses an operating system with enough demand to support multiple applications in each product category, he will be less likely to find himself straitened later by having to use an application whose features disappoint him. Finally, the average user knows that, generally speaking, applications improve through successive versions. He thus wants an operating system for which successive generations of his favorite applications will be released-promptly at that. The fact that a vastly larger number of applications are written for Windows than for other PC operating systems attracts consumers to Windows, because it reassures them that their interests will be met as long as they use Microsoft's product.

Findings of Fact ¶ 37. Thus, despite the limited success of its rivals, Microsoft benefits from the applications barrier to entry.

Of course, were middleware to succeed, it would erode the applications barrier to entry. Because applications written for multiple operating systems could run on any operating system on which the middleware product was present with little, if any, porting, the operating system market would become competitive. *Id.* ¶ ¶ 29, 72. But as the District Court found, middleware will not expose a sufficient number of APIs to erode the applications barrier to entry in the foreseeable future. *See id.* ¶ ¶ 28-29.

*56 **352 Microsoft next argues that the applications barrier to entry is not an entry barrier at all, but a reflection of Windows' popularity. It is certainly true that Windows may have gained its initial dominance in the operating system market competitively-through superior foresight or quality. But this case is not about Microsoft's initial acquisition of monopoly power. It is about Microsoft's efforts to maintain this position through means other than competition on the merits. Because the applications barrier to entry protects a dominant operating system irrespective of quality, it gives Microsoft power to stave off even superior new rivals. The barrier is thus a characteristic of the operating system market, not of Microsoft's popularity, or, as asserted by a Microsoft witness, the

company's efficiency. *See* Direct Testimony of Richard Schmalensee ¶ 115, *reprinted in* 25 J.A. at 16153-14.

Finally, Microsoft argues that the District Court should not have considered the applications barrier to entry because it reflects not a cost borne disproportionately by new entrants, but one borne by all participants in the operating system market. According to Microsoft, it had to make major investments to convince software developers to write for its new operating system, and it continues to "evangelize" the Windows platform today. Whether costs borne by all market participants should be considered entry barriers is the subject of much debate. *Compare* 2A areeda & hovenkamp, Antitrust Law § 420c, at 61 (arguing that these costs are entry barriers), *and* joe S. Bain, Barriers to New Competition: Their Character and Consequences in Manufacturing Industries 6-7 (1956) (considering these costs entry barriers), *with* L.A. Land Co. v. Brunswick Corp., 6 F.3d 1422, 1428 (9th Cir.1993) (evaluating cost based on "[t]he disadvantage of new entrants as compared to incumbents"), *and* george Stigler, The Organization of Industry 67 (1968) (excluding these costs). We need not resolve this issue, however, for even under the more narrow definition it is clear that there are barriers. When Microsoft entered the operating system market with MS-DOS and the first version of Windows, it did not confront a dominant rival operating system with as massive an installed base and as vast an existing array of applications as the Windows operating systems have since enjoyed. *Findings of Fact* ¶ ¶ 6, 7, 43. Moreover, when Microsoft introduced Windows 95 and 98, it was able to bypass the applications barrier to entry that protected the incumbent Windows by including APIs from the earlier version in the new operating systems. *See id.* ¶ 44. This made porting existing Windows applications to the new version of Windows much less costly than porting them to the operating systems of other entrants who could not freely include APIs from the incumbent Windows with their own.

2. Direct Proof

[11] Having sustained the District Court's conclusion that circumstantial evidence proves that Microsoft possesses monopoly power, we turn to Microsoft's alternative argument that it does not behave like a monopolist. Claiming that software competition is uniquely "dynamic," Appellant's Opening Br. at 84 (quoting *Findings of Fact* ¶ 59), the company suggests a new rule: that monopoly power in the software industry should be proven directly, that is, by examining a company's actual behavior to determine if it reveals the existence of monopoly power. According to Microsoft, not only does no such proof of its power exist, but record evidence demonstrates the absence of monopoly power. The company claims that it invests heavily in research and development, *id.* at 88-89 (citing*57 **353 Direct Testimony of Paul Maritz ¶ 155, *reprinted in* 6 J.A. at 3698 (testifying that Microsoft invests approximately 17% of its revenue in R&D)), and charges a low price for Windows (a small percentage of the price of an Intel-compatible PC system and less than the price of its rivals, *id.* at 90 (citing *Findings of Fact* ¶ ¶ 19, 21, 46)).

Microsoft's argument fails because, even assuming that the software market is uniquely dynamic in the long term, the District Court correctly applied the structural approach to determine if the company faces competition in the short term. Structural market power analyses are meant to determine whether potential substitutes constrain a firm's ability to raise prices above the competitive level; only threats that are likely to materialize in the relatively near future perform this function to any significant degree. Rothery, 792 F.2d at 218 (quoting lawrence Sullivan, Antitrust § 12, at 41 (1977)) (only substitutes that can enter the market "promptly" should be considered). The District Court expressly considered and rejected Microsoft's claims that innovations such as handheld devices and portal websites would soon expand the relevant market beyond Intel-compatible PC operating systems. Because the company does not challenge these findings, we have no reason to believe that prompt substitutes are available. The structural approach, as applied by the District Court, is thus capable of fulfilling its purpose even in a changing market. Microsoft cites no case, nor are we aware of one, requiring direct evidence to show monopoly power in any market. We decline to adopt such a rule now.

Even if we were to require direct proof, moreover, Microsoft's behavior may well be sufficient to show the existence of monopoly power. Certainly, none of the conduct Microsoft points to-its investment in R&D and the relatively low price of Windows-is inconsistent with the possession of such power. *Conclusions of Law*, at 37. The R&D expenditures Microsoft points to are not simply for Windows, but for its entire company, which most likely

does not possess a monopoly for all of its products. Moreover, because innovation can increase an already dominant market share and further delay the emergence of competition, even monopolists have reason to invest in R&D. *Findings of Fact* ¶ 61. Microsoft's pricing behavior is similarly equivocal. The company claims only that it never charged the short-term profit-maximizing price for Windows. Faced with conflicting expert testimony, the District Court found that it could not accurately determine what this price would be. *Id.* ¶ 65. In any event, the court found, a price lower than the short-term profit-maximizing price is not inconsistent with possession or improper use of monopoly power. *Id.* ¶ ¶ 65-66. *Cf.* Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 274 (2d Cir.1979) ("[I]f monopoly power has been acquired or maintained through improper means, the fact that the power has not been used to extract [a monopoly price] provides no succor to the monopolist."). Microsoft never claims that it did not charge the long-term monopoly price. Micosoft does argue that the price of Windows is a fraction of the price of an Intel-compatible PC system and lower than that of rival operating systems, but these facts are not inconsistent with the District Court's finding that Microsoft has monopoly power. *See Findings of Fact* ¶ 36 ("Intel-compatible PC operating systems other than Windows [would not] attract[ ] significant demand ... even if Micosoft held its prices substantially above the competitive level.").

More telling, the District Court found that some aspects of Microsoft's behavior are difficult to explain unless Windows is a monopoly product. For instance, according***58 **354** to the District Court, the company set the price of Windows without considering rivals' prices, *Findings of Fact* ¶ 62, something a firm without a monopoly would have been unable to do. The District Court also found that Microsoft's pattern of exclusionary conduct could only be rational "if the firm knew that it possessed monopoly power." *Conclusions of Law*, at 37. It is to that conduct that we now turn.

B. Anticompetitive Conduct

[12] As discussed above, having a monopoly does not by itself violate § 2. A firm violates § 2 only when it acquires or maintains, or attempts to acquire or maintain, a monopoly by engaging in exclusionary conduct "as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident." *Grinnell*, 384 U.S. at 571, 86 S.Ct. 1698; *see also United States v. Aluminum Co. of Am.*, 148 F.2d 416, 430 (2d Cir.1945) (Hand, J.) ("The successful competitor, having been urged to compete, must not be turned upon when he wins.").

In this case, after concluding that Microsoft had monopoly power, the District Court held that Microsoft had violated § 2 by engaging in a variety of exclusionary acts (not including predatory pricing), to maintain its monopoly by preventing the effective distribution and use of products that might threaten that monopoly. Specifically, the District Court held Microsoft liable for: (1) the way in which it integrated IE into Windows; (2) its various dealings with Original Equipment Manufacturers ("OEMs"), Internet Access Providers ("IAPs"), Internet Content Providers ("ICPs"), Independent Software Vendors ("ISVs"), and Apple Computer; (3) its efforts to contain and to subvert Java technologies; and (4) its course of conduct as a whole. Upon appeal, Microsoft argues that it did not engage in any exclusionary conduct.

Whether any particular act of a monopolist is exclusionary, rather than merely a form of vigorous competition, can be difficult to discern: the means of illicit exclusion, like the means of legitimate competition, are myriad. The challenge for an antitrust court lies in stating a general rule for distinguishing between exclusionary acts, which reduce social welfare, and competitive acts, which increase it.

[13][14][15] From a century of case law on monopolization under § 2, however, several principles do emerge. First, to be condemned as exclusionary, a monopolist's act must have an "anticompetitive effect." That is, it must harm the competitive *process* and thereby harm consumers. In contrast, harm to one or more *competitors* will not suffice. "The [Sherman Act] directs itself not against conduct which is competitive, even severely so, but against conduct which unfairly tends to destroy competition itself." Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 458, 113 S.Ct. 884, 122 L.Ed.2d 247 (1993); *see also* Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 225, 113 S.Ct. 2578, 125 L.Ed.2d 168 (1993) ("Even an act of pure malice by one business competitor against another does not, without more, state a claim under the federal antitrust laws ...").

[16][17] Second, the plaintiff, on whom the burden of proof of course rests, *see, e.g.*, *Monsanto Co. v. Spray-Rite Serv. Corp.*, 465 U.S. 752, 763, 104 S.Ct. 1464, 79 L.Ed.2d 775 (1984); *see also United States v. Arnold, Schwinn & Co.*, 388 U.S. 365, 374 n. 5, 87 S.Ct. 1856, 18 L.Ed.2d 1249 (1967), *overruled on other grounds, Cont'l T.V., Inc. v. GTE Sylvania Inc.*, 433 U.S. 36, 97 S.Ct. 2549, 53 L.Ed.2d 568 (1977), must demonstrate that the monopolist's conduct indeed has the requisite anticompetitive***59 **355** effect. *See generally Brooke Group*, 509 U.S. at 225-26, 113 S.Ct. 2578. In a case brought by a private plaintiff, the plaintiff must show that its injury is "of 'the type that the statute was intended to forestall,' " *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 487-88, 97 S.Ct. 690, 50 L.Ed.2d 701 (1977) (quoting *Wyandotte Transp. v. United States*, 389 U.S. 191, 202, 88 S.Ct. 379, 19 L.Ed.2d 407 (1967)); no less in a case brought by the Government, it must demonstrate that the monopolist's conduct harmed competition, not just a competitor.

[18][19] Third, if a plaintiff successfully establishes a *prima facie* case under § 2 by demonstrating anticompetitive effect, then the monopolist may proffer a "procompetitive justification" for its conduct. *See Eastman Kodak*, 504 U.S. at 483, 112 S.Ct. 2072. If the monopolist asserts a procompetitive justification-a nonpretextual claim that its conduct is indeed a form of competition on the merits because it involves, for example, greater efficiency or enhanced consumer appeal-then the burden shifts back to the plaintiff to rebut that claim. *Cf. Capital Imaging Assocs., P.C. v. Mohawk Valley Med. Assocs., Inc.*, 996 F.2d 537, 543 (2d Cir.1993).

[20] Fourth, if the monopolist's procompetitive justification stands unrebutted, then the plaintiff must demonstrate that the anticompetitive harm of the conduct outweighs the procompetitive benefit. In cases arising under § 1 of the Sherman Act, the courts routinely apply a similar balancing approach under the rubric of the "rule of reason." The source of the rule of reason is *Standard Oil Co. v. United States*, 221 U.S. 1, 31 S.Ct. 502, 55 L.Ed. 619 (1911), in which the Supreme Court used that term to describe the proper inquiry under both sections of the Act. *See id.* at 61-62, 31 S.Ct. 502 ("[W]hen the second section [of the Sherman Act] is thus harmonized with ... the first, it becomes obvious that the criteria to be resorted to in any given case for the purpose of ascertaining whether violations of the section have been committed, is the rule of reason guided by the established law...."). As the Fifth Circuit more recently explained, "[i]t is clear ... that the analysis under section 2 is similar to that under section 1 regardless whether the rule of reason label is applied...." *Mid-Texas Communications Sys., Inc. v. AT & T.*, 615 F.2d 1372, 1389 n. 13 (5th Cir.1980) (citing *Byars v. Bluff City News Co.*, 609 F.2d 843, 860 (6th Cir.1979)); *see also Cal. Computer Prods., Inc. v. IBM Corp.*, 613 F.2d 727, 737 (9th Cir.1979).

[21] Finally, in considering whether the monopolist's conduct on balance harms competition and is therefore condemned as exclusionary for purposes of § 2, our focus is upon the effect of that conduct, not upon the intent behind it. Evidence of the intent behind the conduct of a monopolist is relevant only to the extent it helps us understand the likely effect of the monopolist's conduct. *See, e.g.*, *Chicago Bd. of Trade v. United States*, 246 U.S. 231, 238, 38 S.Ct. 242, 62 L.Ed. 683 (1918) ("knowledge of intent may help the court to interpret facts and to predict consequences"); *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 603, 105 S.Ct. 2847, 86 L.Ed.2d 467 (1985).

With these principles in mind, we now consider Microsoft's objections to the District Court's holding that Microsoft violated § 2 of the Sherman Act in a variety of ways.

1. Licenses Issued to Original Equipment Manufacturers

The District Court condemned a number of provisions in Microsoft's agreements licensing Windows to OEMs, because it ***60 **356** found that Microsoft's imposition of those provisions (like many of Microsoft's other actions at issue in this case) serves to reduce usage share of Netscape's browser and, hence, protect Microsoft's operating system monopoly. The reason market share in the browser market affects market power in the operating system market is complex, and warrants some explanation.

Browser usage share is important because, as we explained in Section II.A above, a browser (or any middleware product, for that matter) must have a critical mass of users in order to attract software developers to write applications relying upon the APIs it exposes, and away

from the APIs exposed by Windows. Applications written to a particular browser's APIs, however, would run on any computer with that browser, regardless of the underlying operating system. "The overwhelming majority of consumers will only use a PC operating system for which there already exists a large and varied set of ... applications, and for which it seems relatively certain that new types of applications and new versions of existing applications will continue to be marketed ..." *Findings of Fact* ¶ 30. If a consumer could have access to the applications he desired-regardless of the operating system he uses-simply by installing a particular browser on his computer, then he would no longer feel compelled to select Windows in order to have access to those applications; he could select an operating system other than Windows based solely upon its quality and price. In other words, the market for operating systems would be competitive.

Therefore, Microsoft's efforts to gain market share in one market (browsers) served to meet the threat to Microsoft's monopoly in another market (operating systems) by keeping rival browsers from gaining the critical mass of users necessary to attract developer attention away from Windows as the platform for software development. Plaintiffs also argue that Microsoft's actions injured competition in the browser market-an argument we will examine below in relation to their specific claims that Microsoft attempted to monopolize the browser market and unlawfully tied its browser to its operating system so as to foreclose competition in the browser market. In evaluating the § 2 monopoly maintenance claim, however, our immediate concern is with the anticompetitive effect of Microsoft's conduct in preserving its monopoly in the operating system market.

In evaluating the restrictions in Microsoft's agreements licensing Windows to OEMs, we first consider whether plaintiffs have made out a *prima facie* case by demonstrating that the restrictions have an anticompetitive effect. In the next subsection, we conclude that plaintiffs have met this burden as to all the restrictions. We then consider Microsoft's proffered justifications for the restrictions and, for the most part, hold those justifications insufficient.

a. *Anticompetitive effect of the license restrictions*

[22] The restrictions Microsoft places upon Original Equipment Manufacturers are of particular importance in determining browser usage share because having an OEM pre-install a browser on a computer is one of the two most cost-effective methods by far of distributing browsing software. (The other is bundling the browser with internet access software distributed by an IAP.) *Findings of Fact* ¶ 145. The District Court found that the restrictions Microsoft imposed in licensing Windows to OEMs prevented many OEMs from distributing browsers other than IE. ***61 **357** *Conclusions of Law*, at 39-40. In particular, the District Court condemned the license provisions prohibiting the OEMs from: (1) removing any desktop icons, folders, or "Start" menu entries; (2) altering the initial boot sequence; and (3) otherwise altering the appearance of the Windows desktop. *Findings of Fact* ¶ 213.

The District Court concluded that the first license restriction-the prohibition upon the removal of desktop icons, folders, and Start menu entries-thwarts the distribution of a rival browser by preventing OEMs from removing visible means of user access to IE. *Id.* ¶ 203. The OEMs cannot practically install a second browser in addition to IE, the court found, in part because "[p]re-installing more than one product in a given category ... can significantly increase an OEM's support costs, for the redundancy can lead to confusion among novice users." *Id.* ¶ 159; *see also id.* ¶ 217. That is, a certain number of novice computer users, seeing two browser icons, will wonder which to use when and will call the OEM's support line. Support calls are extremely expensive and, in the highly competitive original equipment market, firms have a strong incentive to minimize costs. *Id.* ¶ 210.

Microsoft denies the "consumer confusion" story; it observes that some OEMs do install multiple browsers and that executives from two OEMs that do so denied any knowledge of consumers being confused by multiple icons. *See* 11/5/98 pm Tr. at 41-42 (trial testimony of Avadis Tevanian of Apple), *reprinted in* 9 J.A. at 5493-94; 11/18/99 am Tr. at 69 (trial testimony of John Soyring of IBM), *reprinted in* 10 J.A. at 6222.

Other testimony, however, supports the District Court's finding that fear of such confusion deters many OEMs from pre-installing multiple browsers. *See, e.g.*, 01/13/99 pm Tr. at 614-15 (deposition of Microsoft's Gayle McClain played to the court) (explaining that redundancy of icons may be confusing to end users); 02/18/99 pm Tr. at

46-47 (trial testimony of John Rose of Compaq), *reprinted in* 21 J.A. at 14237-38 (same); 11/17/98 am Tr. at 68 (deposition of John Kies of Packard Bell-NEC played to the court), *reprinted in* 9 J.A. at 6016 (same); 11/17/98 am Tr. at 67-72 (trial testimony of Glenn Weadock), *reprinted in* 9 J.A. at 6015-20 (same). Most telling, in presentations to OEMs, Microsoft itself represented that having only one icon in a particular category would be "less confusing for endusers." *See* Government's Trial Exhibit ("GX") 319 at MS98 0109453. Accordingly, we reject Microsoft's argument that we should vacate the District Court's Finding of Fact 159 as it relates to consumer confusion.

As noted above, the OEM channel is one of the two primary channels for distribution of browsers. By preventing OEMs from removing visible means of user access to IE, the license restriction prevents many OEMs from preinstalling a rival browser and, therefore, protects Microsoft's monopoly from the competition that middleware might otherwise present. Therefore, we conclude that the license restriction at issue is anticompetitive. We defer for the moment the question whether that anticompetitive effect is outweighed by Microsoft's proffered justifications.

The second license provision at issue prohibits OEMs from modifying the initial boot sequence-the process that occurs the first time a consumer turns on the computer. Prior to the imposition of that restriction, "among the programs that many OEMs inserted into the boot sequence were Internet sign-up procedures that encouraged users to choose from a list of IAPs assembled by the OEM." *Findings of Fact* ¶ 210. Microsoft's prohibition on any alteration of the boot sequence thus ***62 **358** prevents OEMs from using that process to promote the services of IAPs, many of which-at least at the time Microsoft imposed the restriction-used Navigator rather than IE in their internet access software. *See id.* ¶ 212; GX 295, *reprinted in* 12 J.A. at 14533 (Upon learning of OEM practices including boot sequence modification, Microsoft's Chairman, Bill Gates, wrote: "Apparently a lot of OEMs are bundling non-Microsoft browsers and coming up with offerings together with [IAPs] that get displayed on their machines in a FAR more prominent way than MSN or our Internet browser."). Microsoft does not deny that the prohibition on modifying the boot sequence has the effect of decreasing competition against IE by preventing OEMs from promoting rivals' browsers. Because this prohibition has a substantial effect in protecting Microsoft's market power, and does so through a means other than competition on the merits, it is anticompetitive. Again the question whether the provision is nonetheless justified awaits later treatment.

Finally, Microsoft imposes several additional provisions that, like the prohibition on removal of icons, prevent OEMs from making various alterations to the desktop: Microsoft prohibits OEMs from causing any user interface other than the Windows desktop to launch automatically, from adding icons or folders different in size or shape from those supplied by Microsoft, and from using the "Active Desktop" feature to promote third-party brands. These restrictions impose significant costs upon the OEMs; prior to Microsoft's prohibiting the practice, many OEMs would change the appearance of the desktop in ways they found beneficial. *See, e.g., Findings of Fact* ¶ 214; GX 309, *reprinted in* 22 J.A. at 14551 (March 1997 letter from Hewlett-Packard to Microsoft: "We are responsible for the cost of technical support of our customers, including the 33% of calls we get related to the lack of quality or confusion generated by your product.... We must have more ability to decide how our system is presented to our end users. If we had a choice of another supplier, based on your actions in this area, I assure you [that you] would not be our supplier of choice.").

The dissatisfaction of the OEM customers does not, of course, mean the restrictions are anticompetitive. The anticompetitive effect of the license restrictions is, as Microsoft itself recognizes, that OEMs are not able to promote rival browsers, which keeps developers focused upon the APIs in Windows. *Findings of Fact* ¶ 212 (quoting Microsoft's Gates as writing, "[w]inning Internet browser share is a very very important goal for us," and emphasizing the need to prevent OEMs from promoting both rival browsers and IAPs that might use rivals' browsers); *see also* 01/13/99 Tr. at 305-06 (excerpts from deposition of James Von Holle of Gateway) (prior to restriction Gateway had pre-installed non-IE internet registration icon that was larger than other desktop icons). This kind of promotion is not a zero-sum game; but for the restrictions in their licenses to use Windows, OEMs could promote multiple IAPs and browsers. By preventing the OEMs from doing so, this type of license restriction, like the first two restrictions, is anticompetitive: Microsoft reduced rival browsers' usage share not by improving its