APPENDIX B

This Appendix explains why the Findings of Fact ("Findings") of the United States District Court for the District of Columbia in the case *United States v. Microsoft Corp.*, 84 F. Supp. 2d 9 (D.D.C. 1999) (the "Government case"), that the United States Court of Appeals for the District of Columbia Circuit affirmed in *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001), for which Novell seeks preclusion are (1) material to the issues in this case and (2) necessary to the determinations from the Government case that were affirmed by the D.C. Circuit. The text of the Findings is quoted in Appendix C.

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 (1966). The D.C. Circuit affirmed the D.C. District Court's determination that Microsoft Corporation ("Microsoft") engaged in illegal acts of monopolization for the purpose of thwarting the threat posed by middleware software applications to Microsoft's monopoly in the personal computer ("PC") operating systems market. The D.C. District Court based its determination on rulings, also affirmed by the D.C. Circuit, regarding: the definition of the relevant market; Microsoft's dominant share in the relevant market; the existence of a barrier to entry; Microsoft's possession of monopoly power; the exclusionary effect of Microsoft's conduct; the lack of procompetitive justification for Microsoft's conduct; and the harm caused to competition and consumers. Each

of the Findings discussed below was critical and essential to the D.C. District Court's judgment that the D.C. Circuit affirmed.[1]

I. Findings 2, 4, 6-10, 17, 18, 20, 28-29, 30-39, 42, 44, 55-56, 59-60, 66, and 67 Are Material to the Issue in This Case of Microsoft's Monopoly Power in the PC Operating Systems Market and Were Necessary to the Ruling That Microsoft Possessed Monopoly Power

The D.C. Circuit "uph[e]ld the District Court's finding of monopoly power *in its entirety*." *Microsoft Corp.*, 253 F.3d at 51 (emphasis added). To reach this finding, the D.C. District Court was required first to define "the relevant market [to] include all products 'reasonably interchangeable by consumers for the same purposes,'" *id.* at 52 (quoting *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 395 (1956)), and then to determine whether Microsoft had monopoly power within that market, *see id.* at 54. To reach its findings regarding Microsoft's monopoly power, the D.C. District Court was required to define the attributes of the "relevant market" that established the existence of monopoly power. *See id.* At 50-51 (noting that the possession of monopoly power in the relevant market is an element of proving the "offense of monopolization" and that "monopoly power may be inferred from a firm's possession of a dominant share of a relevant market that is protected by entry barriers"). On appeal to the D.C. Circuit, Microsoft conceded that it held a dominant market share, but contended that "even a predominant market share does not by itself indicate monopoly power," and "because of the possibility of competition from new entrants, looking to current market share alone can be 'misleading.'" *Id.* at 54 (citations omitted). The D.C. Circuit rejected Microsoft's contention, holding that "the District Court was not misled. Considering 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" – i.e., the applications barrier to entry. *Id.*

[1] The statement of liability rulings made by the D.C. Circuit (referred to, collectively, as the "Rulings") are listed in Appendix A.

at 54-55. The Findings regarding the relevant market and the applications barrier to entry, therefore, were necessary to the Rulings affirmed by the D.C. Circuit.

In its opposition to Novell's Motion Seeking Collateral Estoppel of April 11, 2008 and the appendix to that opposition, Microsoft conceded that Findings 18, 33, and 34 (defining the relevant market and concluding based on other Findings that Microsoft had monopoly power in that market) were both material and "critical and necessary" to the judgment affirmed by the D.C. Circuit. *See* Microsoft's Memorandum in Opposition to Novell's Motion Seeking Collateral Estoppel at 27 (May 2, 2008). Given this concession, any Findings in the Government case that were critical and essential to the determinations regarding the relevant market and Microsoft's monopoly power therein are likewise material to the issues in this case. Furthermore, those Findings in the Government case that are probative of Microsoft's intent, motive, and knowledge for its anticompetitive conduct and/or the purpose or character of that conduct are material to the issue of Microsoft's intent, motive, and knowledge with respect to the anticompetitive acts against Novell and of the purpose and character of those acts.

In its December 3, 2008 Order, this Court determined that Findings 2, 4, 6-10, 30, 31, and 33-39 clearly were "critical and essential" to the judgment affirmed by the D.C. Circuit. *See* Order at 2 (Dec. 3, 2008) (attached as Exhibit 1 to Novell's memorandum in support of its renewed collateral estoppel motion). Given Microsoft's concession that collateral estoppel should apply to Findings 18, 33, and 34, the Court should grant preclusive effect to those Findings. Furthermore, in light of the fact that Findings 17, 20, 28, 29, 32, 42, 44, 55, 56, 59, 60, 66, and 67 similarly were critical and essential to the D.C. District Court's determination that Microsoft had monopoly power in the PC operating systems market, the Court should give those Findings preclusive effect.

Finding 17

Finding 17 defines "Netscape" and was cited by the D.C. District Court on remand for that very purpose. *See New York v. Microsoft Corp.*, 224 F. Supp. 2d 76, 90 n.15 (D.D.C. 2002). Given that Netscape's Navigator browser (along with Sun's Java software, *see* discussion regarding Findings 73-77 *infra*) was the primary focus of the anticompetitive conduct that the D.C. Circuit affirmed in the Government case, the Findings defining Netscape were necessary to the D.C. courts' determinations.

Finding 20

Finding 20 explains why the "relevant market" for the Government case, which is the same as in this case, was limited to Intel-compatible PC operating systems. The D.C. Circuit cited Finding 20 in rejecting Microsoft's arguments as to why the D.C. District Court incorrectly defined the "relevant market." *See Microsoft*, 253 F.3d at 52. To reach their determinations regarding the "relevant market," it was critical and essential that the D.C. courts determine that non-Intel-compatible PC operating systems were not reasonably interchangeable with Microsoft's operating system software and, therefore, should not be included in the relevant market, as Microsoft had argued they should. *See id.* at 53-54.

Findings 28 and 29

Findings 28 and 29 were necessary because they provide additional essential information about the applications barrier to entry, middleware, and the nascent threat that middleware software applications like Netscape's Navigator and Sun's Java posed to Microsoft's operating systems monopoly. On appeal, Microsoft's "main challenge" to the D.C. District Court's definition of the relevant market was "the exclusion of middleware." *Microsoft*, 253 F.3d at 53.

"Because of the importance of middleware to this case," the D.C. Circuit explained in detail what middleware is and how it related to the case. *Id.* Findings 28 and 29 were critical to this explanation. Citing Finding 28, the D.C. Circuit explained that "'[m]iddleware' refers to software products that expose their own [application programming interfaces]." *Id.* In its discussion of the D.C. District Court's definition of the relevant market, the D.C. Circuit found that the D.C. District Court correctly determined that middleware products, such as Netscape's Navigator and Sun's Java, should not be included in the "relevant market" in which Microsoft obtained and maintained monopoly power. *See id.* at 53-54 (citing Findings 28 and 29).

Finding 32

Finding 32 is critical as well to the D.C. District Court's and the D.C. Circuit's conclusions that the applications barrier to entry protected Microsoft's Windows monopoly. The D.C. District Court cited Finding 32 in its Conclusions of Law for the proposition that the applications barrier to entry prevented a competitor from beginning to sell PCs that would present a viable alternative to the PC operating systems market. *See United States v. Microsoft Corp.*, 87 F. Supp. 2d 30, 36 (D.D.C. 2000), *aff'd in part and rev'd in part*, 253 F.3d 34 (D.C. Cir. 2001). This Finding was critical and essential to the D.C. courts' determination that Microsoft maintained monopoly power in the PC operating systems market. *See Microsoft*, 253 F.3d at 51 ("monopoly power may be inferred from a firm's possession of a dominant share of a relevant market that is protected by entry barriers").

Findings 42 and 44

Also essential to the holding that the applications barrier to entry protected Microsoft's Windows monopoly are Findings 42 and 44. In affirming the D.C. District Court's holding that the applications barrier to entry protected Microsoft's Windows monopoly, the

D.C. Circuit relied on Findings 30 and 36 (which this Court has concluded were clearly necessary, *see* Order at 2 (Dec. 3, 2008) (Exhibit 1 to Novell's memorandum in support of its renewed collateral estoppel motion)) to describe the barrier. *Microsoft*, 253 F.3d at 55. Finding 36 – the introductory, summary paragraph of a section of the Findings titled "Description of the Applications Barrier to Entry" – summarizes essential information about the applications barrier to entry found in other Findings in the same section, including Findings 42 and 44. *Microsoft*, 84 F. Supp. 2d at 19. Findings 42 and 44 detail the evidence and determinations of the D.C. District Court that explain in more detail Finding 36's summary statement that the applications barrier to entry "would prevent an aspiring entrant into the relevant market from drawing a significant number of customers away from a dominant incumbent even if the incumbent priced its products substantially above competitive levels for a significant period of time." *Id.* at 21-22. The D.C. Circuit cited Finding 44 for its conclusion that "when Microsoft introduced Windows 95 and 98, it was able to bypass the applications barrier to entry that protected the incumbent Windows by including application programming interfaces ("APIs") from the earlier version in the new operating systems." *Microsoft*, 253 F.3d at 56. Absent these and other critical and essential Findings, the D.C. courts would have been unable to determine that an applications barrier to entry existed in the PC operating systems market. The existence of the applications barrier to entry and Microsoft's dominant share of the PC operating systems market in the 1990s were bases for the D.C. courts' determination that Microsoft had monopoly power. *See id.* at 54-55 ("the court focused not only on Microsoft's present market share, but also on the structural barrier that protects the company's future position").

Findings 55 and 56

In Findings 55 and 56, for purposes of demonstrating the existence of Microsoft's monopoly power in the relevant market, the D.C. District Court explained that no viable alternatives to Windows exist or are likely to exist for several years and as a result, original equipment manufacturers ("OEMs") "have no choice but to load Windows." *Microsoft*, 84 F. Supp. 2d at 24-25. These Findings were critical and essential to the D.C. courts' determination of the relevant market, because "the relevant market must include all products 'reasonably interchangeable by consumers for the same purposes,'" *Microsoft*, 253 F.3d at 52 (citation omitted). The D.C. courts' determinations that middleware and server-based applications should not be included in the "relevant market," which rejected Microsoft's arguments to the contrary, were necessary to the courts' legal conclusions.

Findings 59 and 60

Findings 59 and 60 are critical and essential because, in showing the lack of any price restraints posed by long-term threats to Microsoft, they explain the importance of the applications barrier to entry to the existence and maintenance of Microsoft's monopoly in the PC operating systems market and the threat posed by middleware. The D.C. Circuit also cited Findings 59 and 60 to support its causation conclusion that it is particularly inappropriate to interpret the Sherman Act to allow monopolists such as Microsoft to squash nascent threats like Netscape's Navigator and Sun's Java in an industry "marked by rapid technological advance and frequent paradigm shifts." *Microsoft*, 253 F.3d at 79.

Findings 66 and 67

Finding 66 discusses Microsoft's pricing behavior and how Microsoft used its monopoly power to perpetuate and maintain the applications barrier to entry, including using that

power to restrict OEMs from promoting software that could weaken the applications barrier. The D.C. Circuit determined that the pricing behavior described in Finding 66 was consistent with Microsoft's possession of monopoly power. *Microsoft*, 253 F.3d at 57.

Like Finding 36, which is the introductory, summary paragraph of the D.C. District Court's Findings regarding the "Description of the Applications Barrier to Entry," Finding 67 is an introductory, summary paragraph for the D.C. District Court's Findings regarding anticompetitive conduct that evidences the existence of Microsoft's monopoly power in the PC operating systems market. The D.C. Circuit cited this very concept (i.e., that Microsoft's anticompetitive conduct itself evidenced that it had monopoly power) in its concluding paragraph of its discussion of the D.C. District Court's monopoly power holding,[2] which the D.C. Circuit upheld "in its entirety." *Id.* at 51.

II. Findings 68-78, 80, 84, 90-95, 99-102, 115-116, 119-125, 132, 141-145, 148, 156-161, 164, 166, 203-206, 208, 213-215, 221-222, 227, 239, 241, 337, 339-340, 377, 386, 394-395, 407, and 409-412 Are Material to the Issues in This Case and Were Necessary to the Rulings That Microsoft Engaged in Illegal Anticompetitive Conduct to Protect Its Monopoly Power from Middleware Threats and Thereby Harmed Competition

The remaining Findings that Novell asks the Court to preclude Microsoft from relitigating relate to the anticompetitive actions that the D.C. Circuit determined Microsoft took (and the reasons Microsoft took those actions) to eliminate the middleware threat posed by Netscape's Navigator, Sun's Java, and other companies' applications. *See, e.g.*, *Microsoft*, 253 F.3d at 67 ("Plaintiffs plainly made out a *prima facie* case of harm to competition in the operating system market by demonstrating that Microsoft's actions increased its browser usage share and thus protected its operating system monopoly from a middleware threat . . . ."). These

[2] *See id.* at 57-58 ("More telling, the District Court found that some aspects of Microsoft's behavior are difficult to explain unless Windows is a monopoly product. . . . 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.'" (quoting *Microsoft*, 87 F. Supp. 2d at 37)).

Findings evidence a strategy of Microsoft in the 1990s to "maintain[] and enhance[] its market power in the markets for operating systems and [Graphic User Interfaces] through anticompetitive actions aimed at middleware and applications programs that in the mid 1990s posed a threat to the operating system monopoly." Declaration of Roger G. Noll at 9 (attached as Exhibit 2 to Novell's memorandum in support of its renewed collateral estoppel motion). As Dr. Roger G. Noll's expert report explains:

> An important background to [Novell's] case is that around the time of the development and introduction of Windows 95, Microsoft engaged in numerous anticompetitive acts that were aimed at a variety of competing products, ranging from operating systems, middleware to applications, many of which were not aimed at Novell. . . . [B]ecause these products were complements to Novell's applications and middleware products, Microsoft's actions to undermine these products affected competition in the markets for Novell's products. The over-arching economic conclusion to be inferred from these actions was that Microsoft would destroy any product that it regarded as a threat to its core business assets . . . .

Id. at 9-10.

In this case, evidence of Microsoft's conduct against Netscape's Navigator, Sun's Java, and other middleware threats is material because it demonstrates the weakened state of those other independent software vendors ("ISVs") which is part of the required inquiry in assessing the harm to competition in the operating systems market caused by Microsoft's anticompetitive actions against Novell. *Novell, Inc. v. Microsoft Corp.*, No. 10-1482, 2011 WL 1651225, at *7 (4th Cir. May 3, 2011) ("Novell's expert's opinion about a hypothetical market leaves ample room for 'a finding that Microsoft's actions toward Novell were a significant contributor to anticompetitive harm in the PC operating system market *in light of the weakened state of other applications and [independent software vendors]*.'" (alteration in original) (citation omitted)). This evidence of a course of conduct of anticompetitive acts over a period of years also is material to the issues of Microsoft's intent and motive and the purpose and character of

Microsoft's conduct against Novell. Where, as here, an antitrust defendant has engaged in a series of acts, the defendant's pattern of conduct should be looked at as a whole. *See Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 602 (1985) (holding that a court may look to the "synergy" of Microsoft's pattern of conduct as a whole "to demonstrate anticompetitive intent and effect"); *LePage's Inc. v. 3M*, 324 F.3d 141, 162 (3d Cir. 2003) (holding the court must "look to the monopolist's conduct taken as a whole rather than considering each aspect in isolation"); *United States v. U.S. Gypsum Co.*, 438 U.S. 422, 436 n.13 (1978) ("[C]onsideration of intent may play an important role in divining the actual nature and effect of the alleged anticompetitive conduct.").

The D.C. Circuit identified at least twelve different ways in which Microsoft violated Section 2 of the Sherman Act for the purpose of thwarting the threats posed by Netscape's Navigator, Sun's Java, and other middleware applications to Microsoft's operating systems monopoly:

1. Preventing OEMs from removing visible means of user access to Internet Explorer ("IE") (i.e., desktop icons, folders, and Start menu entries), *see Microsoft*, 253 F.3d at 61;

2. Prohibiting OEMs from modifying the initial boot sequence of Windows, *see id.* At 61-62;

3. Prohibiting OEMs from adding to the Windows desktop icons or folders different in size or shape from those supplied by Microsoft, *see id.* at 62;

4. Prohibiting OEMs from using the "Active-Desktop" feature of Windows to promote third-party brands, *see id.*;

5. Excluding IE from the "Add/Remove Programs" utility in Windows, *see id.* at 64-65;

6. Commingling code related to browsing and other code in the same files in Windows, *see id.*;

7. Agreeing to provide easy access to the services of internet access providers ("IAPs") from the Windows desktop in return for the IAPs' agreement to promote IE exclusively and to keep shipments of internet access software using Navigator under a specific percentage, *see id.* at 68;

8. Agreeing to give certain ISVs preferential support in return for their agreement to use IE as the default browsing software for any software they develop with a hypertext-based user interface, *see id.* at 71-72;

9. Agreeing to release new versions of Office for the Apple Macintosh in return for Apple's agreement to pre-install IE and make it the default web browser on Apple's Macintosh operating system, *see id.* at 72-74;

10. Agreeing to give certain ISVs access to Windows technical information in return for their agreement to use Microsoft's Java Virtual Machine ("JVM") as the default JVM for their software, *see id.* at 74-76;

11. Deceiving Java developers about the Windows-specific nature of Microsoft's Java developer tools, *see id.* at 74; and

12. Coercing Intel to stop aiding Sun in improving the Java technologies, *see id.*

As demonstrated below, the remaining Findings to which Novell asks the Court to grant preclusive effect also were critical and essential to the D.C. Circuit's determination that Microsoft had violated Section 2 by maintaining its monopoly power in the operating systems market through this conduct against middleware applications.

A. Findings 68-78 Were Necessary to the Rulings That Microsoft Willfully Engaged in Anticompetitive Conduct for the Purpose of Eliminating the Software Threats Posed by Navigator, Java, and Other Middleware

Finding 68 is the introductory paragraph to the D.C. District Court's discussion of "The Middleware Threats." *Microsoft*, 84 F. Supp. 2d at 28. Findings 69-72 discuss Netscape's browser software, Navigator, and the potential threat Navigator posed to the applications barrier to entry that protected Microsoft's operating systems monopoly. Findings 73-77 discuss Sun's Java, and the potential threat to Microsoft of Java and its relationship with Netscape. Finding 78 discusses other middleware threats to Microsoft's monopoly and why Microsoft feared software such as Navigator, Java, and other middleware, i.e., "because they facilitated the development of user-oriented software that would be indifferent to the identity of the underlying operating system." *Id.* at 30; *see also Microsoft*, 253 F.3d at 53 ("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.").

These Findings were critical and essential to the judgment affirmed by the D.C. Circuit. Throughout its decision, the D.C. Circuit cited the D.C. District Court's holdings regarding the threat to Microsoft's monopoly in the operating systems market posed by Netscape's Navigator, Sun's Java, and other middleware applications, i.e., the possibility that middleware would erode the applications barrier to entry. *See, e.g.*, *id.* at 53, 55, 60. Furthermore, the D.C. Circuit specifically cited Findings 68-77 when it rejected Microsoft's argument that the Government had failed to establish causation between Microsoft's anticompetitive conduct against Netscape's Navigator and Sun's Java and the maintenance of Microsoft's monopoly. The D.C. Circuit found that it could infer causation "when exclusionary conduct is aimed at producers of nascent competitive technologies" and that the D.C. District Court's "*ample findings*," in Findings 68-77, demonstrated that "both Navigator and Java showed potential as middleware platform threats." *Id*. at 79 (emphasis added).

The D.C. Circuit also relied on the Findings related to Java (Findings 73-77) in affirming the D.C. District Court's holdings that Microsoft illegally entered into contracts with major ISVs which required them to promote Microsoft's Java product exclusively, deceived Java developers, and coerced Intel to stop aiding Sun in improving Java technologies. *See id.* at 74, 75-78. Findings 73-76, which describe Java, the threat that Java posed to Microsoft's Windows monopoly, and Microsoft's efforts to eliminate the threat, were critical and essential to the D.C. Circuit's conclusions. Citing Findings 73, 74, and 76, the D.C. Circuit explained:

> Java, a set of technologies developed by Sun Microsystems, is another type of middleware posing a potential threat to Windows' position as the ubiquitous platform for software development. . . . Programs calling upon the Java APIs will run on any machine with a "Java runtime environment," that is, Java class libraries [which expose Java APIs] and a

> JVM [which translates Java commands into instructions to the operating system]. [Findings] ¶¶ 73, 74.
>
> In May 1995 Netscape agreed with Sun to distribute a copy of the Java runtime environment with every copy of Navigator, and "Navigator quickly became the principal vehicle by which Sun placed copies of its Java runtime environment on the PC systems of Windows users." *Id.* ¶ 76. Microsoft, too, agreed to promote the Java technologies – or so it seemed. For at the same time, Microsoft took steps "to maximize the difficulty with which applications written in Java could be ported from Windows to other platforms, and vice versa." *Conclusions of Law*, at 43.

Id. at 74.

B. Findings 80, 84, 90-95, 99-102, 115-116, 119-125, and 132 Were Necessary to the Rulings That Microsoft Violated the Sherman Act for the Purpose of Illegally Maintaining Its Monopoly by Eliminating Software Threats to the Applications Barrier to Entry

The D.C. Circuit affirmed the D.C. District Court's holding that, in response to the threat posed by Netscape's Navigator, Microsoft illegally forced OEMs to accept Windows license restrictions. *See Microsoft*, 253 F.3d at 64. Facts essential to the D.C. District Court's holding included not only evidence of the license restrictions' exclusionary effect on Navigator, but also "[p]roof that [Microsoft's] conduct was motivated by a desire to prevent other firms from competing on the merits." *Microsoft*, 87 F. Supp. 2d at 37 n.1. Such proof "can contribute to a finding that the conduct has had, or will have, the intended, exclusionary effect." *Id.*

Findings 80 and 84 describe the development of Microsoft's anticompetitive strategy to address the threat posed by Netscape's Navigator and other middleware to the applications barrier to entry that protected Microsoft's operating systems monopoly. This strategy began with Microsoft's attempt to prevent Netscape's Navigator from presenting alternatives to the internet-related APIs in Windows 95. *See* Finding 80 (describing the motivation behind Microsoft's "June 1995 proposal that Netscape abstain from releasing platform-level browsing software for 32-bit versions of Windows," *Microsoft*, 87 F. Supp. 2d at 39); Finding 84 (describing the

"'special relationship'" Microsoft offered Netscape to execute Microsoft's strategy). When Microsoft's initial efforts failed, it resorted to more drastic measures such as withholding critical technical information regarding Windows 95 from Netscape. *See* Findings 90-92 (describing in detail "the punitive measures that Microsoft inflicted on Netscape when it rebuffed [Microsoft's] overture," *Microsoft*, 87 F. Supp. 2d at 39, such as withholding crucial technical information).

The D.C. District Court explained the connection between Microsoft's efforts to pressure Netscape, IBM, Intel, and others and its illegal use of monopoly power in Finding 93 ("These interactions demonstrate that it is Microsoft's corporate practice to pressure other firms to halt software development that either shows the potential to weaken the applications barrier to entry or competes directly with Microsoft's most cherished software products."), which the D.C. District Court expressly cited in its Conclusions of Law, *see Microsoft*, 87 F. Supp. 2d at 39, and Finding 132 ("Microsoft's interactions with Netscape, IBM, Intel, Apple, and RealNetworks all reveal Microsoft's business strategy of directing its monopoly power toward inducing other companies to abandon projects that threaten Microsoft and toward punishing those companies that resist."). In determining that Microsoft's actions against the middleware threats were anticompetitive, the D.C. District Court concluded:

> The same ambition that inspired Microsoft's efforts to induce Intel, Apple, RealNetworks and IBM to desist from certain technological innovations and business initiatives – namely, the desire to preserve the applications barrier – motivated the firm's June 1995 proposal that Netscape abstain from releasing platform-level browsing software for 32-bit versions of Windows. *See* [Findings] ¶¶ 79-80, 93-132. This proposal, together with the punitive measures that Microsoft inflicted on Netscape when it rebuffed the overture, illuminates the context in which Microsoft's subsequent behavior toward [OEMs], [IAPs], and other firms must be viewed.

Microsoft, 87 F. Supp. 2d at 39.

In other words, the D.C. District Court found that Microsoft initially responded to the threats posed by companies like Netscape, IBM, and Intel by pressuring them to halt software development that could erode the applications barrier to entry. Although this conduct was not found to be illegal, it was a "necessary component," *R.I. Hosp. Trust Nat'l Bank v. Bogosian (In re Belmont Realty Corp.)*, 11 F.3d 1092, 1097 (1st Cir. 1993) (citation omitted) (internal quotation marks omitted), of the Ruling that Microsoft's subsequent conduct towards OEMs and IAPs "had, or will have, the intended, exclusionary effect" and therefore was illegal, *Microsoft*, 87 F. Supp. 2d at 37 n.1. Consequently, the referenced Findings 94, 95, 99-102, 115-116, 119-125, and 132 were necessary because they provide proof of Microsoft's efforts to interfere with Intel's and IBM's development of software that could threaten the applications barrier to entry.

Findings 94-95 and 99-102 provide essential evidentiary findings concerning Intel and its development of platform-level software that Microsoft saw as a threat. Finding 115 provides essential evidentiary information about IBM and its business relationships with Microsoft. Findings 116, 119-125, and 132 detail how Microsoft tried to pressure IBM away from competing with Microsoft products, and punished IBM when it refused to do so.

C. Findings 141-143, 156-158, 160-161, 164, 166, 203-206, 208, 213-215, 221-222, 227, and 241 Were Necessary to the Rulings That Microsoft Illegally Forced OEMs to Accept Windows License Restrictions

The D.C. Circuit affirmed the D.C. District Court's holdings that, in response to the threat posed by Netscape's Navigator, Microsoft illegally forced OEMs to accept Windows licenses that prohibited OEMs from (1) removing visible means of user access to IE, (2) modifying the initial Windows boot sequence to promote services of IAPs, (3) promoting web browsing software that rivaled IE by adding to the Windows desktop icons or folders different in size or shape from those supplied by Microsoft, and (4) using the "Active Desktop" feature of Windows 98 to promote rival web browsing software. *Microsoft*, 253 F.3d at 61-62.

Microsoft has conceded that Finding 213 was necessary to these rulings. Finding 213, however, only states in summary fashion that Microsoft sought to "thwart the practice of OEM customization," and only provides summary descriptions of Microsoft's illegal conduct. A number of other, more detailed Findings also were necessary.

1. Findings 141-143, 156-158, 160-161, 164, 166, 203-206, 208, and 213-215 Were Necessary to the Rulings That Microsoft's Acts of Requiring OEMs to Accept Windows Licensing Restrictions and Binding IE to Windows Were Anticompetitive

The D.C. District Court employed a two-step analysis of the license restrictions and other challenged conduct:

> The threshold question in this analysis is whether the defendant's conduct is "exclusionary" – that is, whether it has restricted significantly, or threatens to restrict significantly, the ability of other firms to compete in the relevant market on the merits of what they offer customers.
>
> If the evidence reveals a significant exclusionary impact in the relevant market, the defendant's conduct will be labeled "anticompetitive" – and liability will attach – unless the defendant comes forward with specific, procompetitive business motivations that explain the full extent of its exclusionary conduct.

Microsoft, 87 F. Supp. 2d at 37-38 (footnote omitted) (citation omitted). The D.C. District Court held, and the D.C. Circuit affirmed, that "like many of Microsoft's other actions at issue in this case," Microsoft's imposition of the Windows license restrictions was anticompetitive because it "serve[d] to reduce usage share of Netscape's browser and, hence, protect Microsoft's operating system monopoly." *Microsoft*, 253 F.3d at 59-60.

Findings 141, 142, and 143 provide critical and essential details regarding Microsoft's motivations and considerations in developing its strategy to address the nascent threat to the applications barrier to entry that Netscape's Navigator posed – a strategy that the D.C. courts determined included choking off the channels for distribution that Netscape could pursue. Similarly, Findings 156-158, 160-161, 164, and 166 provide details regarding Microsoft's motivation and considerations for binding IE to Windows 95. As Microsoft

conceded with respect to Findings 161 and 164, *see* Microsoft's Memorandum in Opposition to Novell's Motion Seeking Collateral Estoppel at 27 (May 2, 2008), these detailed Findings were critical and essential to the D.C. courts' finding that Microsoft's integration of IE with Windows 95 by its "exclusion of IE from the Add/Remove Programs utility and its commingling of browser and operating system code" was anticompetitive and violated Section 2 of the Sherman Act. *Microsoft*, 253 F.3d at 66-67.[3] The D.C. Circuit also relied on Findings 161 and 164, quoting them in part in concluding that Microsoft anticompetitively commingled browsing and non-browsing code:

> [T]he District Court condemned Microsoft's decision to bind IE to Windows 98 "by placing code specific to Web browsing in the same files as code that provided operating system functions." [Findings] ¶ 161; *see also* [Findings] ¶¶ 174, 192. Putting code supplying browsing functionality into a file with code supplying operating system functionality "ensure[s] that the deletion of any file containing browsing-specific routines would also delete vital operating system routines and thus cripple Windows. . . ." [Findings] ¶ 164. As noted above, preventing an OEM from removing IE deters it from installing a second browser because doing so increases the OEM's product testing and support costs; by contrast, had OEMs been able to remove IE, they might have chosen to pre-install Navigator alone. *See* [Findings] ¶ 159.

Id. at 65-66 (ellipsis in original).

Findings 203-206, 208, and 213-215 also were critical to the D.C. courts' determination that Microsoft's restrictions on OEMs were anticompetitive. The D.C. Circuit cited Finding 203 twice in concluding that the prohibition against removal of desktop icons, folders, and start menu entries was anticompetitive because it "thwart[ed] the distribution of a rival browser by preventing OEMs from removing visible means of user access to IE." *Id.* at 61;

[3] The D.C. District Court relied on Findings 160, 161, and 164 in finding that "Microsoft bound Internet Explorer to Windows with contractual and, later, technological shackles in order to ensure the prominent (and ultimately permanent) presence of Internet Explorer on every Windows user's PC system, and to increase the costs attendant to installing and using Navigator on any PCs running Windows. [Findings] ¶¶ 155-74." *Microsoft*, 87 F. Supp. 2d at 39.

see id. at 96 (noting that "Microsoft's refusal to allow OEMs to uninstall IE or remove it from the Windows desktop, *Findings of Fact* ¶¶ 158, 203, 213, and its removal of the IE entry from the Add/Remove Programs utility in Windows 98, [Findings] ¶ 170" were a basis for the court's finding of liability under Section 2 of the Sherman Act). In Findings 204-206 and 208, the D.C. District Court explained the lengths to which Microsoft went to enforce its anticompetitive agreements with OEMs and to execute its strategy of cutting off the channels of distribution for middleware products that might erode the applications barrier to entry.

Microsoft has conceded that Finding 213, which explains Microsoft's efforts to "force OEMs to accept a series of restrictions on their ability to reconfigure the Windows 95 desktop and boot sequence," *Microsoft*, 84 F. Supp. 2d at 61, was necessary to the judgment affirmed by the D.C. Circuit. *See* Microsoft's Memorandum in Opposition to Novell's Motion Seeking Collateral Estoppel at 27 (May 2, 2008). Findings 214 and 215 contain the D.C. District Court's determinations regarding the impact and competitive nature of the restrictions described in Finding 213. The D.C. Circuit Court specifically cited Finding 214 to show the impact on OEMs of Microsoft's restrictive licensing agreements, *see Microsoft*, 253 F.3d at 62, and the D.C. District Court specifically cited Finding 215 as evidence of Microsoft's ability to exercise monopoly power in the operating systems market, *see Microsoft*, 87 F. Supp. 2d at 37. These Findings were critical and essential to the D.C. courts' determination regarding the anticompetitive nature of Microsoft's agreements with OEMs.

2. Findings 221-222 and 227 Were Necessary to the Rulings That the Windows License Restrictions Lacked Procompetitive Justification

The second step in the D.C. District Court's analysis of the Windows license restrictions was to determine whether there were "specific, procompetitive business motivations that explain the full extent of [Microsoft's] exclusionary conduct." *Microsoft*, 87 F. Supp. 2d at 38. The D.C. District Court held that the license restrictions lacked procompetitive

justification, and the D.C. Circuit affirmed. *Microsoft*, 253 F.3d at 64 ("[T]he OEM license restrictions at issue represent uses of Microsoft's market power to protect its monopoly, unredeemed by any legitimate justification.").

Findings 221 and 222 were necessary because they set forth the specific justifications made by Microsoft that the D.C. District Court and the D.C. Circuit rejected in finding that there were no quality-related or technical justifications for Microsoft's refusal to license Windows 95 to OEMs without IE, to permit OEMs to uninstall versions 3.0 or 4.0 of IE, or to offer a browserless version of Windows to consumers and OEMs. So too is Finding 227, which the D.C. District Court cited in finding that Microsoft's motive for the license restrictions was not concern about the quality or integrity of Windows, as Microsoft claimed, but rather "its foreboding that OEMs would pre-install and give prominent placement to middleware like Navigator that could attract enough developer attention to weaken the applications barrier to entry." *Microsoft*, 87 F. Supp. 2d at 41. The D.C. Circuit also relied on Finding 227 in rejecting Microsoft's attempt to justify the license restrictions as protecting its copyrighted work. *Microsoft*, 253 F.3d at 63-64 (citing Finding 227 for the conclusion that the stability and consistency of Windows are not affected by OEMs' altering the appearance of the desktop or promoting programs in the boot sequence).

3. Finding 241 Was Necessary to the D.C. District Court's Determination That Microsoft Possessed and Exercised Monopoly Power

In Finding 241, the D.C. District Court summarized its findings with respect to Microsoft's efforts to eliminate OEMs as a viable distribution channel for Netscape's Navigator software for the purpose of preserving the applications barrier to entry that protected Microsoft's monopoly in the PC operating systems market. The D.C. District Court specifically cited Finding 241 as evidence showing Microsoft's motivation for its actions and supporting the

court's finding that Microsoft exercised its monopoly power. *See Microsoft*, 87 F. Supp. 2d at 37.

D. Findings 337, 339, and 340 Were Necessary to the Ruling That Microsoft's Exclusive Deals with ISVs Violated the Sherman Act

Findings 337, 339, and 340 address Microsoft's efforts to foreclose middleware's ability to use ISVs as a channel for distribution. These Findings detail the efforts Microsoft made to enlist the efforts of ISVs "to maximize Internet Explorer's share of browser usage at Navigator's expense." Finding 337. These efforts included giving preferential treatment to ISVs who agreed to use IE as their default browser. *See* Finding 339. The D.C. Circuit specifically cited Findings 339 and 340 in affirming the D.C. District Court's determination that Microsoft's ISV agreements were anticompetitive. *Microsoft*, 253 F.3d at 71-72.

E. Finding 377 Was Necessary to the Ruling That Microsoft Eliminated Netscape's Ability to Distribute Navigator to Forestall a Serious Potential Threat to the Applications Barrier to Entry

In Finding 377, the D.C. District Court cited key evidence demonstrating that the intent behind the majority of Microsoft's actions against Netscape's Navigator was to eliminate the potential threat that middleware posed to Microsoft's monopoly in the PC operating systems market. As Finding 377 indicates and the D.C. courts found, Microsoft feared that Netscape would "'dictate standards and control'" the browser APIs, and it was Microsoft's mission to eliminate that threat to its monopoly. Finding 377; *see Microsoft*, 253 F.3d at 53.

F. Findings 386, 394-395, and 407 Were Necessary to the Rulings That Microsoft Engaged in Exclusionary Conduct Against Java

The D.C. Circuit affirmed holdings by the D.C. District Court that Microsoft illegally "enter[ed] into contracts, the so-called 'First Wave Agreements,' requiring major ISVs to promote Microsoft's JVM exclusively; . . . deceiv[ed] Java developers about the Windows-

specific nature of the tools it distributed to them; and . . . coerc[ed] Intel to stop aiding Sun in improving the Java technologies." *Microsoft*, 253 F.3d at 74, 75-78.

1. Findings 386 and 407 Were Necessary to the Ruling That Microsoft Engaged in Anticompetitive Conduct Against Java

Findings 386 and 407, which describe the exclusionary design and effect of Microsoft's efforts against Java, were necessary to these rulings. The D.C. Circuit quoted Finding 386 in part when it quoted the D.C. District Court's Conclusions of Law: "Microsoft took steps 'to maximize the difficulty with which applications written in Java could be ported from Windows to other platforms, and vice versa.'" *Id.* at 74 (quoting *Microsoft*, 87 F. Supp. 2d at 43). The D.C. District Court paraphrased it: "As part of its grand strategy to protect the applications barrier, Microsoft employed an array of tactics designed to maximize the difficulty with which applications written in Java could be ported from Windows to other platforms, and *vice versa*." *Microsoft*, 87 F. Supp. 2d at 43.

The D.C. District Court relied on Finding 407 in concluding that "Microsoft's actions markedly impeded Java's progress" towards "facilitat[ing] porting between Windows and other platforms to a degree sufficient to render the applications barrier to entry vulnerable," and consequently that "Microsoft's actions with respect to Java have restricted significantly the ability of other firms to compete on the merits in the market for Intel-compatible PC operating systems." *Id.* The D.C. Circuit endorsed this conclusion, holding that "Microsoft's conduct related to its Java developer tools served to protect its monopoly of the operating system in a manner not attributable either to the superiority of the operating system or to the acumen of its makers, and therefore was anticompetitive." *Microsoft*, 253 F.3d at 77.

2. Finding 394 Was Necessary to the Ruling That Microsoft Illegally Deceived Java Developers

In affirming the D.C. District Court's ruling that Microsoft "deceiv[ed] Java developers about the Windows-specific nature of the tools it distributed to them," *Microsoft*, 253 F.3d at 74, the D.C. Circuit expressly relied on Finding 394:

> Microsoft deceived Java developers regarding the Windows-specific nature of the tools. Microsoft's tools included "certain 'keywords' and 'compiler directives' that could only be executed properly by Microsoft's version of the Java runtime environment for Windows." [Findings] ¶ 394. As a result, even Java "developers who were opting for portability over performance . . . unwittingly [wrote] Java applications that [ran] only on Windows." *Conclusions of Law*, at 43. That is, developers who relied upon Microsoft's public commitment to cooperate with Sun and who used Microsoft's tools to develop what Microsoft led them to believe were cross-platform applications ended up producing applications that would run only on the Windows operating system.

Id. at 76 (ellipsis in original) (citations omitted).

Microsoft has conceded that a portion of Finding 394 (boldfaced in the following quotation) was necessary:

> 394. In a further effort intended to increase the incompatibility between Java applications written for its Windows JVM and other Windows JVMs, and to increase the difficulty of porting Java applications from the Windows environment to other platforms, **Microsoft designed its Java developer tools to encourage developers to write their Java applications using certain "keywords" and "compiler directives" that could only be executed properly by Microsoft's version of the Java runtime environment for Windows. Microsoft encouraged developers to use these extensions by shipping its developer tools with the extensions enabled by default and by failing to warn developers that their use would result in applications that might not run properly with any runtime environment other than Microsoft's and that would be difficult, and perhaps impossible, to port to JVMs running on other platforms.** This action comported with the suggestion that Microsoft's Thomas Reardon made to his colleagues in November 1996: "[W]e should just quietly grow j++ [Microsoft's developer tools] share and assume that people will take more advantage of our classes without ever realizing they are building win32-only java apps." Microsoft refused to alter its developer tools until November 1998, when a court ordered it to disable its keywords and compiler directives by default and to warn

> developers that using Microsoft's Java extensions would likely cause incompatibilities with non-Microsoft runtime environments.

Microsoft, 84 F. Supp. 2d at 106-07 (alterations in original).

The admittedly necessary portion of Finding 394 describes Microsoft's efforts to restrict its Java tools to run properly only on Windows. In fact, all of Finding 394 was necessary. The initial portion that Microsoft would exclude is a factual predicate for – and was paraphrased in – the D.C. Circuit's conclusion that Microsoft's objective was "'to maximize the difficulty with which applications written in Java could be ported from Windows to other platforms, and vice versa.'" *Microsoft*, 253 F.3d at 74 (quoting *Microsoft*, 87 F. Supp. 2d at 43). The statement by Microsoft executive Thomas Reardon is part of the proof that Microsoft undertook, "by means of subterfuge," *Microsoft*, 87 F. Supp. 2d at 43, a "campaign to deceive developers" for which Microsoft "[u]nsurprisingly" offered no procompetitive justification. *Microsoft*, 253 F.3d at 77. The last sentence of Finding 394 establishes the time frame during which Microsoft's illegal conduct had an anticompetitive effect – i.e., until November 1998 when a court ordered Microsoft to change its ways. *Microsoft*, 84 F. Supp. 2d at 107.

3. Finding 395 Was Necessary to the Ruling That the First Wave Agreements Were Illegal

Finding 395 was necessary because the D.C. Circuit quoted it in part in concluding that:

> Microsoft's exclusive deals with the leading ISVs took place against a backdrop of foreclosure: the District Court found that "[w]hen Netscape announced in May 1995 [prior to Microsoft's execution of the First Wave Agreements] that it would include with every copy of Navigator a copy of a Windows JVM that complied with Sun's standards, it appeared that Sun's Java implementation would achieve the necessary ubiquity on Windows." *Findings of Fact* [¶ 395]. As discussed above, however, Microsoft undertook a number of anticompetitive actions that seriously reduced the distribution of Navigator, and the District Court found that those actions thereby seriously impeded distribution of Sun's JVM.

Microsoft, 253 F.3d at 75-76 (alteration to paragraph number added).[4]

G. Findings 409-412 Were Necessary to the Rulings That Microsoft's Illegal Conduct Caused Harm to Competition for the Purpose of Protecting Microsoft's PC Operating Systems Monopoly from the Erosion of the Applications Barrier to Entry

"[T]o 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." *Microsoft*, 253 F.3d at 58. In the Government case, the Government was required to "demonstrate that the monopolist's conduct harmed competition, not just a competitor." *Id.* at 59. The D.C. District Court concluded that the Government satisfied this burden when it demonstrated that Microsoft, "[t]o the detriment of consumers, . . . engaged in a concerted series of actions designed to protect the applications barrier to entry, and hence [Microsoft's] monopoly power, from a variety of middleware threats, including Netscape's Web browser and Sun's implementation of Java." Finding 409. The D.C. District Court determined that many of Microsoft's "actions have harmed consumers in ways that are immediate and easily discernible" and that those actions "have also caused less direct, but nevertheless serious and far-reaching, consumer harm by distorting competition." *Id.*

In Findings 410, 411, and 412, the D.C. District Court detailed the harm to consumers and competition caused by Microsoft's anticompetitive conduct, which included, among other things:

> "forc[ing] OEMs to ignore consumer demand for a browserless version of Windows," Finding 410;
>
> "forc[ing] OEMs either to ignore consumer preferences for Navigator or to give them a Hobson's choice of both browser products at the cost of

[4] The D.C. Circuit opinion cited Finding 394, but this appears to be a typographical error because the quoted passage comes from Finding 395.

> increased confusion, degraded system performance, and restricted memory," Finding 410;
>
> "foreclos[ing] an opportunity for OEMs to make Windows PC systems less confusing and more user-friendly, as consumers desired," Finding 410;
>
> "forc[ing] those consumers who otherwise would have elected Navigator as their browser to either pay a substantial price (in the forms of downloading, installation, confusion, degraded system performance, and diminished memory capacity) or content themselves with Internet Explorer," Finding 410;
>
> "depriv[ing] consumers of software innovation that they very well may have found valuable, had the innovation been allowed to reach the marketplace," Finding 410;
>
> "hobbl[ing] a form of innovation that had shown the potential to depress the applications barrier to entry sufficiently to enable other firms to compete effectively against Microsoft in the market for Intel-compatible PC operating systems," which "would have conduced to consumer choice and nurtured innovation," Finding 411;
>
> "retard[ing], and perhaps altogether extinguish[ing], the process by which these two middleware technologies [Netscape's Navigator and Sun's Java] could have facilitated the introduction of competition into an important market," Finding 411; and
>
> "deter[ing] investment in technologies and businesses that exhibit the potential to threaten Microsoft," which results in "some innovations that would truly benefit consumers never occur[ring] for the sole reason that they do not coincide with Microsoft's self-interest," Finding 412.

The D.C. Circuit affirmed the D.C. District Court's determination that Microsoft engaged in anticompetitive conduct that harmed consumers and competition. As the D.C. Circuit noted, proving harm to consumers and competition was an essential element of the Government's case. *See Microsoft*, 253 F.3d at 59. Findings 409, 410, 411, and 412, which describe how Microsoft harmed consumers and competition, therefore, were critical and essential to the Rulings in the Government case that the D.C. Circuit affirmed regarding Microsoft's anticompetitive conduct.