

Barksdale that the way in which the two companies concluded the meeting would determine whether Netscape received the RNA API immediately or in three months.

91. Although Netscape declined the special relationship with Microsoft, its executives continued, over the weeks following the June 21 meeting, to plead for the RNA API. Despite Netscape's persistence, Microsoft did not release the API to Netscape until late October, i.e., as Allard had warned, more than three months later. The delay in turn forced Netscape to postpone the release of its Windows 95 browser until substantially after the release of Windows 95 (and Internet Explorer) in August 1995. As a result, Netscape was excluded from most of the holiday selling season.

92. Microsoft similarly withheld a scripting tool that Netscape needed to make its browser compatible with certain dial-up ISPs. Microsoft had licensed the tool freely to ISPs that wanted it, and in fact had cooperated with Netscape in drafting a license agreement that, by mid-July 1996, needed only to be signed by an authorized Microsoft executive to go into effect. There the process halted, however. In mid-August, a Microsoft representative informed Netscape that senior executives at Microsoft had decided to link the grant of the license to the resolution of all open issues between the companies. Netscape never received a license to the scripting tool, and as a result, was unable to do business with certain ISPs for a time.

C. The Similar Experiences of Other Firms in Dealing with Microsoft

93. Other firms in the computer industry have had encounters with Microsoft similar to the experiences of Netscape described above. 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.

1. Intel

94. At the same time that Microsoft was trying to convince Netscape to stop developing cross-platform APIs, it was trying to convince Intel to halt the development of software that presented developers with a set of operating-system-independent interfaces.

95. Although Intel is engaged principally in the design and manufacture of microprocessors, it also develops some software. Intel's software development efforts, which take place at the Intel Architecture Labs ("IAL"), are directed primarily at finding useful ways to consume more microprocessor cycles, thereby stimulating demand for advanced Intel microprocessors. By early 1995, IAL was in the advanced stages of developing software that would enable Intel 80x86 microprocessors to carry out tasks usually performed by separate chips known as "digital signal processors." By enabling this migration, the software, called Native Signal Processing ("NSP") software, would endow Intel microprocessors with substantially enhanced video and graphics performance.

96. Intel was eager for software developers and hardware manufacturers to write software and build peripheral devices that would implement the enhanced capabilities that its microprocessors and its NSP software together offered. Intel did not believe, however, that the set of APIs and device

driver interfaces (“DDIs”) in Windows had kept pace with the growing ability of Intel’s microprocessors to deliver audio/visual content. Consequently, IAL designed its NSP software to expose Intel’s own APIs and DDIs that, when invoked by developers and hardware manufacturers, would demonstrate the multimedia capabilities of an Intel microprocessor utilizing NSP.

97. Microsoft reacted to Intel’s NSP software with alarm. First of all, the software threatened to offer ISVs and device manufacturers an alternative to waiting for Windows to provide system-level support for products that would take advantage of advances in hardware technology. More troubling was the fact that Intel was developing versions of its NSP software for non-Microsoft operating systems. The different versions of the NSP software exposed the same set of software interfaces to developers, so the more an application took advantage of interfaces exposed by NSP software, the easier it would be to port that application to non-Microsoft operating systems. In short, Intel’s NSP software bore the potential to weaken the barrier protecting Microsoft’s monopoly power.

98. Over time, Microsoft developed additional qualms about Intel’s NSP software. For instance, Intel initially designed the NSP software to be compatible with only Windows 3.1. At the time, Microsoft was preparing to release Windows 95, and the company did not want anything rekindling the interest of ISVs, equipment manufacturers, and consumers in the soon-to-be obsolescent version of Windows. More acute was Microsoft’s concern that users who received NSP software on their Windows 3.1 systems would have difficulty upgrading those systems to Windows 95. By June 1995, Intel had completed a pre-release, or “beta,” version of its NSP software for Windows 95, but Microsoft worried that a commercial version would not be ready by the time OEMs began loading Windows 95.

99. Along with its concerns about contemporaneous compatibility, Microsoft also complained that Intel had not subjected its software to sufficient quality-assurance testing. Microsoft was quick to point out that if Windows users detected problems with the software that came pre-installed on their PC systems, they would blame Microsoft or the OEMs, even if fault lay with Intel. Microsoft's concerns with compatibility and quality were genuine. Both pre-dating and overshadowing these transient and remediable concerns, however, was a more abiding fear at Microsoft that the NSP software would render ISVs, device manufacturers, and (ultimately) consumers less dependent on Windows. Without this fear, Microsoft would not have subjected Intel to the level of pressure that it brought to bear in the summer of 1995.

100. Microsoft began complaining to Intel about its NSP software in inter-company communications sent in the spring of 1995. In May, Microsoft raised the profile of its complaints by sending some of its senior executives to Intel to discuss the latter's incursion into Microsoft's platform territory. Returning from the May meeting, one Microsoft employee urged his superiors to refuse to allow Intel to offer platform-level software, even if it meant that Intel could not innovate as quickly as it would like. If Intel wished to enable a new function, the employee wrote, its only "winning path" would be to convince Microsoft to support the effort in its platform software. At any rate, "[s]ometimes Intel would have to accept the outcome that the time isn't right for [Microsoft]." In the first week of July, Gates himself met with Intel's CEO, Andrew Grove, to discuss, among other things, NSP. In a subsequent memorandum to senior Microsoft executives, Gates reported that he had tried to convince Grove "to basically not ship NSP" and more generally to reduce the number of people working on software at Intel.

101. The development of an alternative platform to challenge Windows was not the primary objective of Intel's NSP efforts. In fact, Intel was interested in providing APIs and DDIs only to the extent the effort was necessary to ensure the development of applications and devices that would spark demand for Intel's most advanced microprocessors. Understanding Intel's limited ambitions, Microsoft hastened to assure Intel that if it would stop promoting NSP's interfaces, Microsoft would accelerate its own work to incorporate the functions of the NSP software into Windows, thereby stimulating the development of applications and devices that relied on the new capabilities of Intel's microprocessors. At the same time, Microsoft pressured the major OEMs to not install NSP software on their PCs until the software ceased to expose APIs. NSP software could not find its way onto PCs without the cooperation of the OEMs, so Intel realized that it had no choice but to surrender the pace of software innovation to Microsoft. By the end of July 1995, Intel had agreed to stop promoting its NSP software. Microsoft subsequently incorporated some of NSP's components into its operating-system products. Even as late as the end of 1998, though, Microsoft still had not implemented key capabilities that Intel had been poised to offer consumers in 1995.

102. Microsoft was not content to merely quash Intel's NSP software. At a second meeting at Intel's headquarters on August 2, 1995, Gates told Grove that he had a fundamental problem with Intel using revenues from its microprocessor business to fund the development and distribution of free platform-level software. In fact, Gates said, Intel could not count on Microsoft to support Intel's next generation of microprocessors as long as Intel was developing platform-level software that competed with Windows. Intel's senior executives knew full well that Intel would have difficulty selling PC microprocessors if Microsoft stopped cooperating in making them compatible with Windows and if

Microsoft stated to OEMs that it did not support Intel's chips. Faced with Gates' threat, Intel agreed to stop developing platform-level interfaces that might draw support away from interfaces exposed by Windows.

103. OEMs represent the primary customers for Intel's microprocessors. Since OEMs are dependent on Microsoft for Windows, Microsoft enjoys continuing leverage over Intel. To illustrate, Gates was able to report to other senior Microsoft executives in October 1995 that "Intel feels we have all the OEMs on hold with our NSP chill." He added:

This is good news because it means OEMs are listening to us. Andy [Grove] believes Intel is living up to its part of the NSP bargain and that we should let OEMs know that some of the new software work Intel is doing is OK. If Intel is not sticking totally to its part of the deal let me know.

2. Apple

104. QuickTime is Apple's software architecture for creating, editing, publishing, and playing back multimedia content (e.g., audio, video, graphics, and 3-D graphics). Apple has created versions of QuickTime to run on both the Mac OS and Windows, enabling developers using the authoring software to create multimedia content that will run on QuickTime implementations for both operating systems. QuickTime competes with Microsoft's own multimedia technologies, including Microsoft's multimedia APIs (called "DirectX") and its media player. Because QuickTime is cross-platform middleware, Microsoft perceives it as a potential threat to the applications barrier to entry.

105. Beginning in the spring of 1997 and continuing into the summer of 1998, Microsoft tried to persuade Apple to stop producing a Windows 95 version of its multimedia playback software, which presented developers of multimedia content with alternatives to Microsoft's multimedia APIs. If Apple

acceded to the proposal, Microsoft executives said, Microsoft would not enter the authoring business and would instead assist Apple in developing and selling tools for developers writing multimedia content. Just as Netscape would have been free, had it accepted Microsoft's proposal, to market a browser shell that would run on top of Microsoft's Internet technologies, Apple would have been permitted, without hindrance, to market a media player that would run on top of DirectX. But, like the browser shell that Microsoft contemplated as acceptable for Netscape to develop, Apple's QuickTime shell would not have exposed platform-level APIs to developers. Microsoft executives acknowledged to Apple their doubts that a firm could make a successful business out of marketing such a shell. Apple might find it profitable, though, to continue developing multimedia software for the Mac OS, and that, the executives from Microsoft assured Apple, would not be objectionable. As was the case with the Internet technologies it was prepared to tolerate from Netscape, Microsoft felt secure in the conviction that developers would not be drawn in large numbers to write for non-Microsoft APIs exposed by platforms whose installed bases were inconsequential in comparison with that of Windows.

106. In their discussions with Apple, Microsoft's representatives made it clear that, if Apple continued to market multimedia playback software for Windows 95 that presented a platform for content development, then Microsoft would enter the authoring business to ensure that those writing multimedia content for Windows 95 concentrated on Microsoft's APIs instead of Apple's. The Microsoft representatives further stated that, if Microsoft was compelled to develop and market authoring tools in competition with Apple, the technologies provided in those tools might very well be inconsistent with those provided by Apple's tools. Finally, the Microsoft executives warned, Microsoft

would invest whatever resources were necessary to ensure that developers used its tools; its investment would not be constrained by the fact that authoring software generated only modest revenue.

107. If Microsoft implemented technologies in its tools that were different from those implemented in Apple's tools, then multimedia content developed with Microsoft's tools would not run properly on Apple's media player, and content developed with Apple's tools would not run properly on Microsoft's media player. If, as it implied it was willing to do, Microsoft then bundled its media player with Windows and used a variety of tactics to limit the distribution of Apple's media player for Windows, it could succeed in extinguishing developer support for Apple's multimedia technologies. Indeed, as the Court discusses in Section VI of these findings, Microsoft had begun, in 1996, to use just such a strategy against Sun's implementation of the Java technologies.

108. The discussions over multimedia playback software culminated in a meeting between executives from Microsoft and Apple executives, including Apple CEO, Steve Jobs, at Apple's headquarters on June 15, 1998. Microsoft's objective at the meeting was to secure Apple's commitment to abandon the development of multimedia playback software for Windows. At the meeting, one of the Microsoft executives, Eric Engstrom, said that he hoped the two companies could agree on a single configuration of software to play multimedia content on Windows. He added, significantly, that any unified multimedia playback software for Windows would have to be based on DirectX. If Apple would agree to make DirectX the standard, Microsoft would be willing to do several things that Apple might find beneficial. First, Microsoft would adopt Apple's ".MOV" as the universal file format for multimedia playback on Windows. Second, Microsoft would configure the Windows Media Player to display the QuickTime logo during the playback of ".MOV" files. Third, Microsoft

would include support in DirectX for QuickTime APIs used to author multimedia content, and Microsoft would give Apple appropriate credit for the APIs in Microsoft's Software Developer Kit.

109. Jobs reserved comment during the meeting with the Microsoft representatives, but he explicitly rejected Microsoft's proposal a few weeks later. Had Apple accepted Microsoft's proposal, Microsoft would have succeeded in limiting substantially the cross-platform development of multimedia content. In addition, Apple's future success in marketing authoring tools for Windows 95 would have become dependent on Microsoft's ongoing cooperation, for those tools would have relied on the DirectX technologies under Microsoft's control.

110. Apple's surrender of the multimedia playback business might have helped users in the short term by resolving existing incompatibilities in the arena of multimedia software. In the long run, however, the departure of an experienced, innovative competitor would not have tended to benefit users of multimedia content. At any rate, the primary motivation behind Microsoft's proposal to Apple was not the resolution of incompatibilities that frustrated consumers and stymied content development. Rather, Microsoft's motivation was its desire to limit as much as possible the development of multimedia content that would run cross-platform.

3. RealNetworks

111. RealNetworks is the leader, in terms of usage share, in software that supports the "streaming" of audio and video content from the Web. RealNetworks' streaming software presents a set of APIs that competes for developer attention with APIs exposed by the streaming technologies in Microsoft's DirectX. Like Apple, RealNetworks has developed versions of its software for multiple operating systems. In 1997, senior Microsoft executives viewed RealNetworks' streaming software

with the same apprehension with which they viewed Apple's playback software — as competitive technology that could develop into part of a middleware layer that could, in turn, become broad and widespread enough to weaken the applications barrier to entry.

112. At the end of May 1997, Gates told a group of Microsoft executives that multimedia streaming represented strategic ground that Microsoft needed to capture. He identified RealNetworks as the adversary and authorized the payment of up to \$65 million for a streaming software company in order to accelerate Microsoft's effort to seize control of streaming standards. Two weeks later, Microsoft signed a letter of intent for the acquisition of a streaming media company called VXTreme.

113. Perhaps sensing an impending crisis, executives at RealNetworks contacted Microsoft within days of the VXTreme deal's announcement and proposed that the two companies enter a strategic relationship. The CEO of RealNetworks told a senior vice president at Microsoft that if RealNetworks were presented with a profitable opportunity to move to value-added software, the company would be amenable to abandoning the base streaming business. On July 10, a Microsoft executive, Robert Muglia, told a RealNetworks executive that it would indeed be in the interests of both companies if RealNetworks limited itself to developing value-added software designed to run on top of Microsoft's fundamental multimedia platform. Consequently, on July 18, Microsoft and RealNetworks entered into an agreement whereby Microsoft agreed to distribute a copy of RealNetworks' media player with each copy of Internet Explorer; to make a substantial investment in RealNetworks; to license the source code for certain RealNetworks streaming technologies; and to develop, along with RealNetworks, a common file format for streaming audio and video content.

Muglia, who signed the agreement on Microsoft's behalf, believed that RealNetworks had in turn agreed to incorporate Microsoft's streaming media technologies into its products.

114. RealNetworks apparently understood import of the agreement differently, for just a few days after it signed the deal with Microsoft, RealNetworks announced that it planned to continue developing fundamental streaming software. Indeed, RealNetworks continues to do so today. Thus, the mid-summer negotiations did not lead to the result Microsoft had intended. Still, Microsoft's intentions toward RealNetworks in 1997, and its dealings with the company that summer, show that decision-makers at Microsoft were willing to invest a large amount of cash and other resources into securing the agreement of other companies to halt software development that exhibited discernible potential to weaken the applications barrier.

4. IBM

115. IBM is both a hardware and a software company. On the hardware side, IBM manufactures and licenses, among other things, Intel-compatible PCs. On the software side, IBM develops and sells, among other things, Intel-compatible PC operating systems and office productivity applications. The IBM PC Company relies heavily on Microsoft's cooperation to make a profit, for few consumers would buy IBM PC systems if those systems did not work well with Windows and, further, if they did not come with Windows included. IBM's software division, on the other hand, competes directly with Microsoft in other respects. For instance, IBM has in the past marketed OS/2 as an alternative to Windows, and it currently markets the SmartSuite bundle of office productivity applications as an alternative to Microsoft's Office suite. The fact that IBM's software division markets products that compete directly with Microsoft's most profitable products has frustrated the efforts of

the IBM PC Company to maintain a cooperative relationship with the firm that controls the product (Windows) without which the PC Company cannot survive.

116. Whereas Microsoft tried to convince Netscape to move its business in a direction that would not facilitate the emergence of products that would compete with Windows, Microsoft tried to convince IBM to move its business away from products that themselves competed directly with Windows and Office. Microsoft leveraged the fact that the PC Company needed to license Windows at a competitive price and on a timely basis, and the fact that the company needed Microsoft's support in many more subtle ways. When IBM refused to abate the promotion of those of its own products that competed with Windows and Office, Microsoft punished the IBM PC Company with higher prices, a late license for Windows 95, and the withholding of technical and marketing support.

117. In the summer of 1994, the IBM PC Company told Microsoft that, with respect to licensing Microsoft's operating-system products, it wanted to be quoted terms just as favorable as those extended to IBM's competitor, Compaq. It was IBM's belief that Compaq paid the lowest rate in the industry for Windows and enjoyed unparalleled marketing and technical support from Microsoft. In response to the IBM PC Company's request, Microsoft proposed that the companies enter into a "Frontline Partnership" similar to the one that existed between Microsoft and Compaq. Pursuant to that proposal, Microsoft and the IBM PC Company would perform joint sales, marketing, and development work, and the PC Company would receive future Microsoft products at the lowest rates in the industry.

118. At the same time that it offered the IBM PC Company the rather general terms in the Frontline Partnership Agreement, Microsoft also offered the PC Company specific reductions in the

royalty rate for Windows 95 if the company would focus its marketing and distribution efforts on Microsoft's new operating system. Specifically, the PC Company would receive an \$8 reduction in the per-copy royalty for Windows 95 if it mentioned no other operating systems in advertisements for IBM PCs, adopted Windows 95 as the standard operating system for its employees, and ensured that it was shipping Windows 95 pre-installed on at least fifty percent of its PCs two months after the release of Windows 95. Given the volume of IBM's PC shipments, the discount would have amounted to savings of between \$40 million and \$48 million in one year. Of course, accepting the terms would have required IBM, as a practical matter, to abandon its own operating system, OS/2. After all, IBM would have had difficulty convincing customers to adopt its own OS/2 if the company itself had used Microsoft's Windows 95 and had featured that product to the exclusion of OS/2 in IBM PC advertisements.

119. Representatives from IBM and Microsoft, including Bill Gates, met to discuss the relationship between their companies at an industry conference in November 1994. At that meeting, IBM informed Microsoft that, rather than enter into the Frontline Partnership with Microsoft, IBM was going to pursue an initiative it called "IBM First." Consistent with the title of the initiative, IBM would aggressively promote IBM's software products, would not promote any Microsoft products, and would pre-install OS/2 Warp on all of its PCs, including those on which it would also pre-install Windows. IBM thus rejected the terms that would have resulted in an \$8 reduction in the per-copy royalty price of Windows 95.

120. True to its word, IBM began vigorous promotion of its software products. This effort included an advertising campaign, starting in late 1994, that extolled OS/2 Warp and disparaged

Windows. IBM's drive to best Microsoft in the PC software venue intensified in June 1995, when IBM reached an agreement with the Lotus Development Corporation for the acquisition of that company. As a consequence of the acquisition, IBM took ownership of the Lotus groupware product, Lotus Notes, and the Lotus SmartSuite bundle of office productivity applications. Microsoft had already identified Notes as a middleware threat, because it presented users with a common interface, and ISVs with a common set of APIs, across multiple platforms. For its part, SmartSuite competed directly with Microsoft Office. In mid-July 1995, IBM announced that it was going to make SmartSuite its primary desktop software offering in the United States.

121. Microsoft did not intend to capitulate. In July, Gates called an executive at the IBM PC Company to berate him about IBM's public statements denigrating Windows. Just a few days later, Microsoft began to retaliate in earnest against the IBM PC Company.

122. The IBM PC Company had begun negotiations with Microsoft for a Windows 95 license in late March 1995. For the first two months, the negotiations had progressed smoothly and at an expected pace. After IBM announced its intention to acquire Lotus, though, the Microsoft negotiators began canceling meetings with their IBM counterparts, failing to return telephone calls, and delaying the return of marked-up license drafts that they received from IBM. Then, on July 20, 1995, just three days after IBM announced its intention to pre-install SmartSuite on its PCs, a Microsoft executive informed his counterpart at the IBM PC Company that Microsoft was terminating further negotiations with IBM for a license to Windows 95. Microsoft also refused to release to the PC Company the Windows 95 "golden master" code. The PC Company needed the code for its product planning and development, and IBM executives knew that Microsoft had released it to IBM's OEM

competitors on July 17. Microsoft's purported reason for halting the negotiations was that it wanted first to resolve an ongoing audit of IBM's past royalty payments to Microsoft for several different operating systems.

123. Prior to the call on July 20, neither company's management had ever linked the ongoing audit to IBM's negotiations for a license to Windows 95. IBM was dismayed by the abrupt halt in the license negotiations and the prospect that it might not get a license for Windows 95 until the audit process concluded. IBM's executives surmised that all of its major competitors had already signed licenses for Windows 95. The PC Company would lose a great deal of business to those competitors during the crucial back-to-school season if it could not begin pre-installing Windows 95 on its PCs immediately. The conclusion of the audit appeared to be weeks, if not months, away. The PC Company thus faced the prospect of missing the holiday selling season as well. IBM executives pleaded with Microsoft to uncouple the license negotiations from the ongoing audit and offered Microsoft a \$10 million bond that Microsoft could use to indemnify itself against any discrepancies that the audit might ultimately reveal. IBM also offered to add a term to any Windows 95 license agreement whereby IBM would pay penalties and interest if any future audit disclosed under-reporting of royalties by IBM.

124. On August 9, 1995, a senior executive at the IBM PC Company went to Redmond to meet with Joachim Kempin, the Microsoft executive in charge of the firm's sales to OEMs. At the meeting, Kempin offered to accept a single, lump-sum payment from IBM that would close all outstanding audits. The amount of this payment would be reduced if IBM offered a concession that Kempin could take back to Gates. As one possibility, Kempin suggested that IBM agree to not bundle

SmartSuite with its PCs for a period of six months to one year. He explained that the prospect of IBM bundling SmartSuite with its PCs threatened the profit margins that Microsoft derived from Office and constituted a core issue in the relationship between the two companies. The IBM executive rejected Kempin's suggestion. In a follow-up letter, Kempin stated that Microsoft would require approximately \$25 million from IBM in order to settle all outstanding audits. Kempin reiterated that,

If you believe that the amount I am asking for is too much, I would be willing to trade certain relationship improving measures for the settlement charges and/or convert some of the amounts into marketing funds if IBM too agrees to promote Microsoft's software products together with their hardware offerings.

The message was clear: IBM could resolve the impasse ostensibly blocking the issuance of a Windows 95 license — the royalties audit — by de-emphasizing those products of its own that competed with Microsoft and instead promoting Microsoft's products.

125. IBM never agreed to renounce SmartSuite or to increase its support for Microsoft software, and in the end, Microsoft did not grant IBM a license to pre-install Windows 95 until fifteen minutes before the start of Microsoft's official launch event on August 24, 1995. That same day, the firms brought the audit issue to a close with a settlement agreement under which IBM ultimately paid Microsoft \$31 million. The release of Windows 95 had been postponed more than once, and many consumers apparently had been postponing buying PC systems until the new operating system arrived. The pent-up demand caused an initial surge in the sales of PCs loaded with Windows 95. IBM's OEM competitors reaped the fruits of this surge, but because of the delay in obtaining a license, the IBM PC Company did not. The PC Company also missed the back-to-school market. These lost opportunities cost IBM substantial revenue.

126. Even once the companies had resolved the audit dispute, Microsoft continued to treat the IBM PC Company less favorably than it did the other major OEMs, and Microsoft executives continued to tell PC Company executives that the treatment would improve only if IBM refrained from competing with Microsoft's software offerings. On January 5, 1996, Kempin sent a letter to a counterpart at the IBM PC Company. In it, Kempin expressed his belief that the PC Company would enjoy a closer, more cooperative relationship with Microsoft if only IBM's software arm did not compete as aggressively with the products that comprised the core of Microsoft's business:

As long as IBM is working first on their competitive offerings and prefers to fiercely compete with us in critical areas, we should just be honest with each other and admit that such priorities will not lead to a most exciting relationship and might not even make IBM feel good when selling solutions based on Microsoft products. . . . You are a valued OEM customer of Microsoft, with whom we will cooperate as much as your self-imposed restraints allow us to do. Please understand that this is neither my choice or preferred way of doing business with an important company like IBM. In addition, we would like to see the IBM PC company being more actively involved in assisting Microsoft to bring key products to market To date the IBM PC company has not always been an active participant in these areas - understandable given your own internal product priorities. I hope you can help me to change this.

In closing, Kempin wrote, "You get measured in selling more hardware and I firmly believe if you had less conflict with IBM's software directions you actually could sell more of it."

127. When Kempin spoke to the same executive at the end of the month, he repeated a message he had delivered more than once before: The fact that the IBM PC Company pre-installed SmartSuite on its PC systems made Microsoft reluctant to help IBM sell more PC systems. After all, the more PC systems IBM sold with SmartSuite, the fewer copies of Office Microsoft could sell. For this reason, as Kempin explained to a group of IBM PC Company representatives in August 1996, Microsoft refused to provide IBM press releases with quotes endorsing any PC system that IBM

shipped with SmartSuite. Microsoft later expanded that rule to cover any IBM PCs shipped with the World Book electronic encyclopedia instead of Microsoft's Encarta. IBM might have been less concerned about Microsoft's refusal to offer endorsements if such quotes did not appear frequently and prominently in press releases announcing new PC systems from other OEMs such as Compaq. Microsoft's conspicuous silence with respect to IBM PCs sent the message to customers that IBM's PCs did not support Windows as well as PCs manufactured by other OEMs did.

128. Microsoft also denied the IBM PC Company access to the so-called "enabling programs" that Microsoft ran for the benefit of OEMs such as Compaq, Hewlett-Packard, and DEC, even though IBM met the prescribed objective criteria for admission. Like the absence of public endorsements, IBM's exclusion from Microsoft's enabling programs led customers to question whether the Microsoft software they needed would work optimally with IBM's PCs. IBM learned through surveys it conducted that the firm had lost between seven and ten large accounts, representing about \$180 million in revenue for IBM, because the tension between Microsoft and IBM led customers to doubt that Windows would not work as well with IBM PCs as with PCs produced by firms with which Microsoft was on cordial terms. Microsoft justified its exclusion of the PC Company from the enabling programs with its suspicion that IBM might use the programs to gain entrée with customers and then attempt to sell those customers IBM software instead of Microsoft products. At the same time, a Microsoft executive told a counterpart at IBM that the PC Company would be admitted to the programs when IBM's CEO repaired his relationship with Bill Gates.

129. Microsoft's executives were persistent despite IBM's repeated refusals to sacrifice its own software ambitions to improve its relations with Microsoft. In February 1997, one executive from

Microsoft told a group of IBM PC Company executives that Gates might relent in his reluctance to cooperate with their company if IBM moderated its support for Notes and SmartSuite. In a meeting held the next month, Microsoft representatives conditioned fulfillment of two objects of IBM's desires on the company's willingness to pre-install Microsoft's products in the place of competing applications, such as SmartSuite, and objectionable middleware, such as Notes. The first inducement that the Microsoft representatives blandished before the PC Company was early access to Windows source code, which Compaq and a handful of other OEMs enjoyed. IBM wanted this early access in order to ensure its hardware's contemporaneous compatibility with Microsoft's operating system products. Next, Microsoft offered IBM permission to certify itself as being compliant with certain hardware requirements that Microsoft imposed (and that customers had come to look for as a sign of an OEM's ability to support Windows). Self-certification would have decreased the time it took IBM PCs to reach the market, and IBM knew that the privilege was already being extended to some of its main OEM competitors. With respect to both benefits, the representatives from Microsoft explained that Microsoft would extend them to the PC Company on the condition that it stop loading its PC systems with software that threatened Microsoft's interests.

130. The discriminatory treatment that the IBM PC Company received from Microsoft on account of the "software directions" of its parent company also manifested itself in the royalty price that IBM paid for Windows. In the latter half of the 1990s, IBM (along with Gateway) paid significantly more for Windows than other major OEMs (like Compaq, Dell, and Hewlett-Packard) that were more compliant with Microsoft's wishes.

131. Finally, Microsoft made its frustration known to IBM by reducing, from three to one, the number of Microsoft OEM account managers handling Microsoft's operational relationship with the IBM PC Company. This reduced support impaired still further IBM's ability to test, manufacture, and ship its PCs on schedule, further delaying IBM's efforts to bring its PC products to market against the competition in a timely manner.

132. In sum, from 1994 to 1997 Microsoft consistently pressured IBM to reduce its support for software products that competed with Microsoft's offerings, and it used its monopoly power in the market for Intel-compatible PC operating systems to punish IBM for its refusal to cooperate. Whereas, in the case of Netscape, Microsoft tried to induce a company to move its business away from offering software that could weaken the applications barrier to entry, Microsoft's primary concern with IBM was to reduce the firm's support for software products that competed directly with Microsoft's most profitable products, namely Windows and Office. That being said, it must be noted that one of the IBM products to which Microsoft objected, Notes, was like Navigator in that it exposed middleware APIs. In any event, 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.

D. Developing Competitive Web Browsing Software

133. Once it became clear to senior executives at Microsoft that Netscape would not abandon its efforts to develop Navigator into a platform, Microsoft focused its efforts on ensuring that few developers would write their applications to rely on the APIs that Navigator exposed. Developers