

**B. Microsoft engaged in anticompetitive conduct to induce Intel to abandon or restrict platform-level software**

342. Microsoft used anticompetitive conduct to pressure Intel into abandoning or restricting Intel's own platform-level software efforts.

**1. Microsoft repeatedly objected to Intel's efforts to develop platform-level software**

343. Intel, the world's leading supplier of microprocessors (Maritz Dir. ¶ 308), also developed software in order to improve the performance of personal computers and thereby to stimulate demand for its microprocessors.

- i. Intel Vice-President Steven McGeady testified that the Intel Architecture Lab's "agenda at that time was to make PC's sing and dance, make them audio-aware, video-aware, in support of our move to get more people to buy PCS for their homes." McGeady, 11/9/98pm, at 18:13 - 19:15, 41:2-6 (same); see also Maritz Dir. ¶ 313 (Intel's software development is typically aimed at stimulating demand for newer and faster Intel microprocessors).

344. Intel was eager to develop such software because Microsoft's operating system had not kept pace with advances in microprocessors and other hardware, especially in the audio/visual or multimedia area.

- i. Microsoft employees admitted that Microsoft had "completely missed the boat on developing a compelling state of the art media subsystem for Windows95." GX 563.
- ii. Microsoft's Eric Engstrom testified that Microsoft support for game software had stagnated for 10 years. Engstrom, 2/23/99am, at 39:10-14.
- iii. Microsoft's Carl Stork wrote that Intel did not "want to rely on us to meet our commitments. They have a list of commitments we have missed." GX 921 (Carl Stork 5/12/95 e-mail).
- iv. Microsoft Senior Vice-President Brad Silverberg wrote that "certainly we have been remiss in not advancing the hw platform faster." Intel was "understandably impatient with our pace." GX 921, at MS98 0168652, (Brad Silverberg 5/10/95 e-

mail).

- v. Microsoft Vice-President David Cole wrote about Intel: “These guys are tired of waiting for Windows releases to make advances in hardware. They feel the need to write system extensions to do this. We don’t want em to.” GX 921, at MS98 0168652 (David Cole 5/10/95 e-mail).

345. Despite Microsoft’s admitted failures, when Intel attempted to introduce its own software to improve the performance of the PC, Microsoft pressured Intel to withdraw or drastically scale back every Intel software initiative that encroached on what Microsoft considered the “platform” level.

- i. McGeady testified: “It had been made very clear to us on multiple occasions when we tried to establish these application programming interfaces . . . . Every time we tried to establish one of those in the marketplace, we got a fight from Microsoft.” McGeady, 11/9/98pm, at 35:17 - 36:1, 41:21 - 43:17. McGeady also testified that Intel “had for a number of years been trying to innovate . . . in system software. We had a long series of initiatives aimed at mostly multimedia optimization on the platform . . . . After Microsoft sort of fought us one by one on those, they finally got frustrated and just told us we had no business writing software at that level. They owned software down to the metal. That was Microsoft’s position.” McGeady, 11/10/98am, at 17:4 - 18:7.
- ii. An Intel presentation by Craig Kinnie, dated May 4, 1995, reported: “Microsoft firmly believes that the largest developer of Pentium Processor based platforms has no business developing platform level software.” GX 920; see also McGeady, 11/10/98am, at 23:8 - 24:25 (Kinnie was pointing out that “he was being pressured and Intel was being pressured at other levels not to develop any software that would exist at the same level as the operating system, [at] platform level”).
- iii. Before the NSP initiative, Intel had developed a technology called video display interface (VDI). VDI would have improved the performance of digital video on the PC platform. McGeady, 11/10/98pm, at 14:4-9. Microsoft called each and every one of the “manufacturers and persuaded them not to adopt the software and deliver it into the marketplace.” McGeady, 11/10/98pm, at 14:10-16. This delayed introduction of the technology approximately a year and a half until Microsoft could incorporate it into Windows 95. McGeady, 11/10/98pm, at 14:10-22.

346. Microsoft sought to induce Intel not to offer “platform level” software (and pressured third parties not to install it) because Microsoft viewed such software as a potential threat that might

eventually “commoditize” the PC operating system and thereby reduce Microsoft’s monopoly power.

- i. Paul Maritz explicitly acknowledged that Microsoft’s objection to Intel’s NSP software was the establishment of “middleware APIs.” GX 1309 (7/28/95 Maritz e-mail).
- ii. Steven McGeady explained that Intel needed to expose APIs and device driver interfaces (DDIs) in order to allow applications developers to take advantage of new capabilities in the hardware. Microsoft did not want applications developers to reduce their dependence on operating system interfaces in favor of interfaces provided by others. McGeady, 11/9/98pm, at 36:1 - 39:3.
- iii. Bill Gates made clear to Intel that “MS doesn’t want to relinquish control over APIs” and that he believed that “‘Today’s API is tomorrow’s DDI.’” GX 283 (Russell Barck and Frank Ehrig memorandum summarizing 11/7/95 Intel/Microsoft meeting); GX 282 (Barck’s contemporaneous notes of Gates’ remarks at 11/7/95 meeting record that Gates would “rather not allow others to promote API.”).
- iv. Microsoft’s Paul Osborne wrote: “Microsoft doesn’t want Intel to be in the system software business for the very same reason we don’t want the operating system to become a commodity.” GX 921, at MS98 0168650 (5/15/95 Paul Osborne e-mail); Maritz, 1/27/99am, at 15:12-17. Paul Maritz explained that “commodity” means “in the software business, when you have lots of competitors, each with roughly the same product, then the value of your software is diminished. So by ‘commodity,’ we mean here where the operating system wouldn’t have the same value because” there are reasonable alternatives. Maritz, 1/27/99am, at 16:9 - 19.

**2. Microsoft engaged in predatory conduct designed to block Intel from distributing its platform-level NSP software**

**a. Microsoft viewed Intel’s platform-level NSP software as a potential threat to its operating system monopoly**

347. One of the platform-level technologies Intel developed was Native Signal Processing (NSP); NSP was designed to offer consumers “substantially improved video and graphics performance.” McGeady, 11/10/98pm, at 13:24.

- i. Intel designed NSP to allow the PC platform to process multimedia data (*i.e.*, audio, video, 3D, graphics), often in real time, in order to improve and accelerate the performance of multimedia content on PCs. McGeady, 11/9/98pm, at 18:9 - 19:15,

45:13 - 46:17.

- ii. In addition to NSP's performance benefits, NSP also provided an interface that would have allowed additional innovation in both hardware and software by third-party vendors. McGeady, 11/9/98pm, at 46:18 - 47:20.
- iii. Microsoft understood Intel's two goals with NSP to be: "(1) to grow the PC market; and (2) to let Intel advance hardware faster than Microsoft would." GX 921, at MS98 0168653.

348. Microsoft believed that NSP had the potential to be a significant software platform that eventually could pose a threat to Microsoft's monopoly power in PC operating systems.

- i. NSP exposed APIs that developers could use. Maritz, 1/27/99am, at 12:2-17.
- ii. Maritz acknowledged that NSP had the potential to become a significant software platform. Maritz, 1/27/99am, at 11:23 - 12:22. This testimony is corroborated by Microsoft e-mail: "What makes Intel unusual is they actually stand a chance of being successful" at establishing platform level software. GX 921, at MS98 0168650.

**b. Microsoft blocked platform-level NSP through predatory conduct**

349. In order to stem the NSP threat, Microsoft took steps to prevent Intel from shipping NSP.

349.1. First, Microsoft told Intel that it objected to NSP's platform-level software and made clear that, if Intel persisted in distributing NSP, Intel's relationship with Microsoft would suffer.

- i. In April 1995, three Microsoft executives, Carl Stork, Marshall Brumer, and Eric Engstrom, met with Gerald Holzhammer and other Intel executives and discussed NSP. The Microsoft executives expressed displeasure at Intel entering "'their' OS space." The Microsoft contingent also said that Microsoft needed "to own ALL driver software 'to the metal', i.e., silicon." GX 563.
- ii. Microsoft intensified the pressure to drop NSP over the next few months. In May 1995, Microsoft vice-presidents Paul Maritz and Brad Silverberg, along with Microsoft's Stork, met with Intel executives to discuss Intel's NSP

program. The Microsoft executives complained that Intel was shifting the software boundary with its NSP project by writing software that Microsoft considered to be part of its operating system space. GX 275; McGeady, 11/9/98pm, at 23:3 - 26:23. In Microsoft's view, NSP made Intel a competitor in Microsoft's operating system space. GX 275; McGeady, 11/9/98pm, at 26:25 - 27:11.

- iii. Stork summarized Microsoft's reaction to NSP in his report of the May 1995 meeting. GX 921, at MS98 0168653. Stork noted that Kinnie of Intel "frankly admits that NSP is a system software platform that they want people to write to, and that lets them put in new function without dependency on us." Stork concluded: "The bottom line is that Intel wants to enable new hardware function in our OSs and to set 'underware' system standards, without being dependent on MS' inclination or execution." Stork recommended that Microsoft should not allow others to offer platform level software, even if that meant a slower rate of innovation. If Intel wished to enable a new function, Stork wrote, Intel's only "winning path" should be to convince Microsoft to support the effort and sometimes "to accept the outcome that the timing isn't right" for Microsoft. GX 921, at MS98 0168653.
- iv. Bill Gates explained to Intel's Andy Grove that Intel's attempts to compete with, rather than follow, Microsoft in software were unacceptable: "The problem we have is that we have to sort of choose in software related issues which company will lead and which will follow. In chips its very clear. In software you have a group that won't allow us to lead and has all the prestide (sic) and profits of Intel to drive them forward." GX 277. Gates later elaborated that Microsoft is the "software company here and we will not have any kind of equal relationship with Intel on software." GX 278.
- v. In early July 1995, Gates reported that he had tried to convince Grove "to basically not ship NSP." GX 278; Maritz Dir. ¶ 320. Gates predicted that Intel would exert less pressure to ship NSP in 1995 but that it "will take a major effort for us to convince them to back off from this for 1996." GX 278.

349.2. Second, Microsoft succeeded in blocking Intel from distributing NSP by pressuring OEMs not to install it.

349.2.1. OEMs provided the only channel through which Intel could distribute NSP because NSP could not feasibly be installed by end users.

- i. McGeady testified that NSP “was a piece of system software. It wasn’t an application like a normal end user would install on their personal computer. It really needed to be installed by the PC manufacturer at the time they loaded the operating system for everything to work smoothly, and so it was very important to us that that channel of getting those PC OEM’s to adopt this technology” was available. McGeady, 11/9/98pm, at 20:9 - 20:22. The “two viable ways” to distribute NSP were thus through the Microsoft operating system or through OEMs. McGeady, 11/9/98pm, at 21:4-12.

349.2.2. Microsoft choked off this essential channel by using its monopoly power over PC operating systems to pressure OEMs not to presinstall NSP.

- i. On May 31, 1995, Stork articulated the “plan of record” based on his conversation with Maritz: “meet with compaq next week, and the most important partners the week following” in order “to keep evangelizing” the OEMs not to install NSP. GX 923.
- ii. On June 6, 1995, Maritz reported the plan’s success to Gates: “We should continue to do what we have done which is to tell the OEMs and ISVs that we don’t agree with them using or installing NSP. Thanks to the Internet that message is already out. No major OEM is now going to install NSP. In that sense it is already dead.” GX 924.

349.2.3. Microsoft succeeded not only in inhibiting OEMs from shipping NSP, but also in making OEMs reluctant to adopt other Intel innovations without Microsoft’s expressed permission.

- i. On October 18, 1995, Gates reported to Maritz and Jim Allchin: “Intel feels we have all the OEMs on hold with our NSP chill. For example, they feel HP is unwilling to do anything relative to MMX exploitation or the new audio software Intel is doing using Windows 95 unless we say its ok.” GX 281.
- ii. Steven McGeady testified that it was “common knowledge” that Microsoft was having a “chilling effect” on OEMs and on the acceptance of Intel’s Internet technology. McGeady, 11/9/98pm, at 32:18 - 33:17; see also McGeady, 11/12/98pm, at 36:11-17

(discussing GX 281).

349.3. Third, Microsoft, in addition to wielding these sticks, held out to Intel the carrot of including some components of NSP in subsequent releases of Windows, if Intel stopped promoting NSP's interfaces -- in other words, if Intel stopped positioning NSP as a platform.

- i. Maritz testified that Microsoft and Intel agreed that Microsoft would accelerate work with Intel to incorporate NSP functions into Windows 95, provided that Intel limited NSP distribution for Windows 3.1 to a "few specific hardware manufacturers" to whom Intel had existing commitments. Maritz, 1/27/99am, at 37:1-8; Maritz Dir. ¶¶ 317-321.
- ii. On May 31, 1995, Stork reported that Maritz had proposed to Intel's Ronald Whittier "that if they would hold off on pushing OEMs to install NSP," then Microsoft "would hold off on selling against" NSP. GX 923.
- iii. McGeady testified: "They wanted us to stop delivering this stuff, back it out of the marketplace, and wait until we could give it to them to integrate into future operating system, the timing of which was undefined." McGeady, 11/10/98pm, at 44:13-22.

350. As a result of Microsoft's pressure, Intel abandoned NSP as a platform-level technology and agreed to Microsoft's offer to incorporate some aspects of NSP into Windows, thereby eliminating NSP's potential to threaten Microsoft's operating system monopoly.

- i. On July 28, 1995, Paul Maritz wrote that Intel had "given up on our original major objections which were that they were trying to establish middleware APIs" and jam "random, unrelated stuff" under NSP. GX 1309.
- ii. Steven McGeady explained Intel's motivation for abandoning NSP: "Intel did fail to introduce NSP into the marketplace because, as a primary cause, Microsoft, in particular Bill Gates, told Andy Grove that Microsoft did not want NSP in the marketplace" and because "Microsoft helped us late in our business interests by threatening to withhold support for other microprocessors in the meantime." McGeady, 11/10/98pm, at 81:6-23. McGeady further testified that, although some components of NSP were given to Microsoft for incorporation into later releases of Windows, the "key capability of NSP, which was realtime multimedia management below the

operating system was never released,” nor were some other key components, such as its 3D rendering system. McGeady, 11/10/98pm, at 76:5-22, 11:24 - 13:9 (although Microsoft did incorporate some NSP components in later operating system releases, key capabilities that “NSP would have brought to bear still are not present on the PC today”).

- iii. Rob Sullivan of Intel testified to the same effect: “Microsoft opposed it on every front. . . In that time frame, we were looking at multiple billion-dollar investment streams for Merced and MMX . . . . The successful launch of those products was critical [to] our core strategy. It just wasn’t worth it . . . to try to go and fight this issue. We had products in the marketplace . . . without operating systems support . . . having borne the cost of creating those products. We gave in.” Sullivan Dep. (played 11/12/98pm), at 47:10 - 48:12.
- iv. An October 1995 Gates e-mail to some of his top staff also corroborates McGeady’s testimony: “Intel feels we have all the OEMs on hold with our NSP chill. For example they feel HP is unwilling to do anything relative to MMX exploitation or the new audio software Intel is doing using Windows 95 unless we say its ok. . . . Andy 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.” GX 281.

**3. Microsoft used its monopoly power to ensure that Intel did not resume developing or supporting platform-level software**

351. In addition to pressuring Intel into abandoning NSP, Microsoft used its operating system monopoly to ensure that Intel did not resume developing or supporting rival platform-level software.

351.1. At an August 2, 1995, meeting at Intel’s headquarters with Andy Grove and other high-level Intel representatives, Bill Gates again attacked Intel’s software efforts and expressly threatened to withhold Microsoft’s support for Intel’s next generations of microprocessors if Intel continued to develop or support rival platform-level software or assisted Netscape or Sun in such efforts.

- i. Gates expressed outrage that Intel had 600-700 engineers, in his view, competing with Microsoft (McGeady, 11/9/98pm, at 10:20 - 11:5), and that



Intel used its profits from microprocessors to write software that competed against Microsoft's. McGeady, 11/9/98pm at 13:11 - 14:3; GX 279 (Intel Vice-President Ron Whittier's 8/2/95 minutes of the meeting: "Gates issue: fundamental problem with 'free' software from IAL cross-subsidized by processor revenues."); GX 280 (8/28/95 McGeady memorandum: "On August 2 1995, in a meeting of Intel and Microsoft executives, Bill Gates told Intel CEO Andy Grove to shut down the Intel Architecture Labs."). Gates was upset that Intel was "making investments in software of any sort." McGeady, 11/9/98pm, at 11:1-5. Gates "felt that anything" Intel "did in software was competitive or would harm Microsoft and felt that we shouldn't be using our profits from our micro processor business to write software that compete with them." McGeady, 11/9/98pm, at 13:11 - 14:3; DX 1805 (Fred Pollock memorandum re 8/2/95 meeting: "We then had about 1-hour 'interlude' of Bill Gates bashing IAL.").

- ii. Gates went on to make clear that "Microsoft would not support" Intel's "next processor offerings if we did not get alignment between Intel and Microsoft on platform issues" and on communications issues, i.e., Internet issues. McGeady, 11/9/98pm, at 14:14 - 15:4; GX 279 (Whittier's minutes: "Gates would not agree to let processors/OS's programs to progress unencumbered by platform, communications program issues."). At this time Intel was seeking Microsoft support for its planned MMX processors and its 64-bit microprocessor (then code-named "P7"). McGeady, 11/9/98pm, at 15:9-22.
- iii. In addition to setting limits on Intel's software efforts, Gates raised "Internet issues." GX 279. Gates cautioned that Microsoft was "very sensitive to what Intel might do on the client side. Example: JAVA, a show stopper." GX 279. By "client," Gates meant "browser." Maritz, 1/27/99am, at 27:12-21.
- iv. Whittier's minutes of the meeting reflect Gates' explanation of what Microsoft expected from Intel: "On the 30/70 use of 3<sup>rd</sup> party technologies, Intel using Netscape in Windows environment is not a problem (provided we do not set up the 'positive feedback loop' for Netscape that allows it to grow to de facto std.)." GX 279. As McGeady testified, Microsoft agreed to Intel's internal use of Netscape browser as stand-alone application on Windows, but anything Intel did to encourage applications developers to use the Netscape browser as a platform, including any Intel/Netscape development or technical work, would be a problem with Microsoft. McGeady, 11/12/98pm, at 19:5 - 20:20; GX 279 (Whittier's minutes: "BG: Supporting certain third party deals will be problem . . . we need to consider in the context of their (pervasive) internet program to assure we are not unknowingly stepping on one of their key strategies!").

- v. Gates also told Intel to devote its Internet resources to a high-end web server (GX 279, at 3), a product that would have little impact in the web client market. McGeady, 11/9/98pm, at 12:13 - 13:10.
- vi. At this time, Intel had been engaged in an effort to work with Unix vendors to increase compatibility among the various versions of Unix. McGeady, 11/12/98pm, at 33:6 - 34:4. At the August 2, 1995, meeting, Gates objected to any effort by Intel to increase compatibility among Unix vendors: "Gates was very concerned that Intel was back in the business of 'unifying Unix.' He does not like us trying to unify Microsoft's competitors." DX 1805 (Fred Pollock memorandum regarding the 8/2/95 meeting, noting that Gates' objection arose in the context of discussions regarding Intel's next generation of microprocessors); GX 279 ("UNIX: big flap -- MS wants lots of UNIXes.").

351.2. Intel found Bill Gates' threat not to support Intel's next generations of processors "credible and fairly terrifying" because its processor business is dependent on Microsoft's support.

- i. McGeady explained the import of this threat: "It was clear to us that if those processors didn't run Windows, they would be useless in the marketplace, so the threat was both credible and fairly terrifying. . . . The Windows operating system commands a very large share of the operating system market. If our processors aren't supported by that operating system, very few people would buy them. They wouldn't run the software most widely used by our customers." McGeady, 11/9/98pm, at 15:19 - 16:5.
- ii. McGeady further explained that, if Intel "didn't tow (sic) the line on at least some of these software programs, that Microsoft would continue bad-mouthing not only Intel software, but perhaps more specifically fail to support MMX. The effect of this would be slow or no adoption of it by the PC manufacturers, and the result of that would be a failed chip introduction from us, and a big problem." McGeady, 11/9/98pm, at 44:2-11. See also McGeady, 11/9/98pm, at 43:2 - 45:12 (describing the impact of Microsoft's withholding of support for MMX, a technology in which Intel had invested approximately \$500 million).

352. Microsoft's use of its operating system monopoly to threaten Intel had its intended effect: Intel did not resume platform-level NSP and recognized that it should seek alignment with Microsoft before supporting or offering alternative platform-level technologies.

- i. McGeady testified that Intel withdrew NSP “because the cumulative value of the various threats that MS could bring to bear was a greater risk than we were willing to take.” McGeady, 11/12/98pm, at 48:23 - 49:3. McGeady further testified: “For some time we continued to look for a way to ship the overall integrated version of the NSP technologies. We were never able to do that.” McGeady, 11/12/98pm, at 36:1-3. Although some components of NSP were given to Microsoft for incorporation into Windows 95, the “key capability of NSP, which was realtime multimedia management below the operating system was never released, and other key components, including the 3-D rendering system, was never released . . . .” McGeady, 11/10/98pm, at 76:18-22.
- ii. Intel’s notes of a November 7, 1995, meeting between Intel and Microsoft executives, including Gates and Maritz, report: “PM [Paul Maritz]: Agreed to release RL DDI under gentlemen’s agreement that we [Intel] pull-out of 3DR assuming RL meets Intel desired requirements.” GX 282. RL stands for Reality Labs, Microsoft’s 3D rendering engine, and 3DR was Intel’s competitive 3D rendering software. Prior to the meeting, Intel had been seeking but was unable to obtain Reality Labs DDI from Microsoft. Intel pulled back its 3DR and API evangelism efforts after the meeting. Barck Dep., 8/25/98, at 36:13 - 37:21, 28:19 - 29:5 (DX 2556).

**352A. Microsoft’s contention that it did not threaten to withhold support for Intel’s microprocessors at the August 2, 1995, meeting (MPF ¶ 933) is contradicted by the evidence.**

**352A.1. First, Microsoft grossly mischaracterizes Mr. McGeady’s testimony and wholly ignores the corroborated evidence showing that Bill Gates threatened to withhold support for Intel’s microprocessors at the August 2, 1995 meeting.**

- i. **Microsoft cites McGeady, 11/9/98pm, at 42, for the proposition that McGeady was unaware of Microsoft making “specific threats.” MPF ¶ 933. What McGeady actually said was: “I know of no specific threats that were made, per se, in this meeting.” McGeady, 11/9/98pm, at 42:11-12 (emphasis added). It is clear from the context that McGeady gave this testimony during an extended discussion of GX 283, the write-up of the November 7, 1995 meeting, and that he was referring to the November 7 meeting (rather than the August 2, 1995, meeting) in this testimony. McGeady, 11/9/98pm, at 33:18 - 42:18.**
- ii. **In fact, McGeady made clear that Gates threatened at the August 2, 1995, meeting to cease supporting Intel’s future’s microprocessor**

offerings if Intel engaged in activities that Microsoft found competitively unacceptable. See *supra* Part VI.B.2.b.; ¶¶ 350-352 (summarizing McGeady’s testimony and other corroborating evidence, most notably Whittier’s minutes (GX 279) regarding the August 2, 1995 meeting).

- iii. Intel’s Rob Sullivan also corroborates McGeady. Sullivan testified: “Gates was making it clear here that if we were working in other areas in ways in his opinion were contrary to Microsoft’s objectives or their business needs, that he was not prepared to allow our ongoing cooperation . . . basically enabling the continued value of our core value propositions of the two companies . . . to proceed normally . . . .” Sullivan Dep., 8/25/98, at 21:12 - 23:6 (DX 2595). Although Sullivan could not recall Gates exact words, he testified that “the context of that comment was pretty specific.” Intel was “deeply engaged” in negotiations for Microsoft support for the “Merced” 64-bit chip and MMX, and when Gates made the statement he was aware of the “multi billion dollar investments” Intel had made in these technologies. Sullivan Dep., 8/25/98, at 74:1 -75:5 (DX 2595).

352A.2. Second, Microsoft’s argument that Microsoft’s support for Intel’s MMX initiative was not essential to MMX’s success (MPF ¶ 934) is incorrect as both a technical and a commercial matter. It is clear that Microsoft possessed the power to prevent OEMs from utilizing technology that Microsoft opposed.

- i. McGeady testified that, “without software support in the operating system and libraries and elsewhere,” the MMX “instructions would be very difficult to use, if not impossible.” McGeady, 11/10/98pm, at 85:3 - 88:6. Microsoft admits that it did eventually provide operating system support for MMX. Maritz Dir. ¶ 330.
- ii. GX 281 (Gates memorandum explaining that HP and other OEMs are reluctant to utilize MMX extensions without Microsoft approval, instructing Microsoft personnel to support MMX because Intel had lived up to its part of the “NSP bargain.”).

352A.3 Third, Microsoft’s purported reasons for its delay in supporting MMX

(see MPF ¶¶ 934, 936-37), and the facts that Microsoft ultimately supported MMX and that MMX was a commercial success are unrelated to, and do not justify, Microsoft threatening to withhold support for MMX if Intel developed platform-level software or supported others engaging in such development and do not contradict the fact that Microsoft's threat achieved its intended result.

i. See supra Part VI.B.2.b.; ¶¶ 350-352.

4. **The effect of Microsoft's conduct was further to entrench its operating system monopoly, hamper innovation, and deprive consumers of the benefits of Intel's platform-level software**

353. By forcing Intel to abandon platform-level NSP and other software initiatives that Microsoft did not approve, Microsoft impeded innovation by denying to consumers the benefits of hardware and software advances not controlled by Microsoft.

- i. Microsoft's Carl Stork bluntly explained Microsoft's position: If Intel wants to enable a new function, the only "winning path" is convince Microsoft to resource the effort. If the proposal does not fit with Microsoft's priorities, Intel has no choice but to "accept the outcome that the time isn't right for us." GX 921, at MS98 0168652 (5/10/95 Stork e-mail).
- ii. Steven McGeady testified: "The hardware vendors . . . both at the time and now, continue to be frustrated . . . because they had more ideas about new ways and interesting ways to do things that would have benefit for the end user than they were able to get pushed up through the operating system layers." McGeady, 11/9/98pm, at 47:4-10; see also McGeady, 11/9/98pm, at 45:13 - 47:20 (detailing the benefits NSP offered consumers); McGeady, 11/9/98am, at 36:2 - 41:8 (explaining how alternate platform-level interfaces can foster innovation and deliver greater performance to consumers); GX 563 (4/13/95 Holzhammer e-mail explaining that if Microsoft controls all driver level software, "innovation at the HW level would grind to a halt since silicon vendors would need to rely on MS to get driver support for their new stuff.").
- iii. McGeady further testified: "The more competitive and diverse a software environment - application development environment is, the more innovation occurs and the more different options are presented to consumers. Correspondingly, as the software environment has

become more of a monoculture around Microsoft, the rate of innovation appears to be slowing, and the number of different and varied options presented to the consumer is diminishing.” McGeady, 11/9/98pm, at 61:24 - 62:7.

- iv. Professor Fisher testified that Microsoft’s pervasive control over innovation harms consumers because, if “we’re going to live in a Microsoft world” that “may be a nice world, but it’s not a competitive world, and it’s not a world that’s ultimately consumer-driven.” Fisher, 1/7/99am, at 27:11 -28:17. “Microsoft has been giving out very, very, strong signals that innovation is fine and they will cooperate with it. They will even assist it, if what you’re doing is producing simply complements for Microsoft products. But they will take very, very aggressive action against you if what you’re doing is producing innovations that might lead to something that threatens their operating system monopoly. . . . It rather discourages, I should think, people from thinking of ways to . . . innovate in ways that would threaten” Microsoft’s operating system monopoly. Fisher, 6/2/99am, at 25:7-26:3.
- v. With regard to Intel, Netscape’s Marc Andreessen wrote: “if they only have Microsoft as a single channel to innovate on the PC platform, then Microsoft controls the rate of innovation and slows things down to suit Microsoft’s interests, which is not in Intel’s best interest.” DX 1619 (9/18/95 Marc Andreessen e-mail to other Netscape executives).

354. Microsoft’s efforts to blunt Intel’s platform-level software also eliminated a potential threat to Microsoft’s control over APIs, and thus a potential threat to its monopoly power, and deterred other threats from arising in the future.

- i. Intel abandoned NSP’s platform-level aspects because of pressure from Microsoft. See supra VI.B.2.b.; ¶ 350.
- ii. Professor Fisher testified: “Microsoft has given signals to the world, both through these [its actions with regard to browsers and Java] and through its actions as regards Apple and Intel, Microsoft cares a lot about whether there are going to be innovations that might, in one way or another, present a platform threat; and that if you want to make innovations in that direction, you’re going to have to deal with Microsoft in a very, very serious way. That is also a way of blunting or preventing future platform threats.” Fisher, 1/12/99pm, at 22:10-18; see also Fisher, 6/2/99am, at 25:7 - 26:3 (expanding on same concept).

**5. Microsoft’s contention that technical considerations explain its objections to NSP is pretextual, and the testimony of its witnesses regarding NSP is not credible**

355. Microsoft argued that it objected to NSP because it was originally designed for Windows 3.1 and thus would slow the adoption of, or could at some point cause technical problems with, Windows 95 (Maritz Dir. ¶¶ 316-322). But this argument cannot explain Microsoft’s conduct.

355.1. First, contemporaneous Microsoft documents make clear that Microsoft’s overriding objection to NSP software was its platform-level attributes, rather than the fact it was initially designed to work only with Windows 3.1 or any technical issues.

- i. Early records of Microsoft’s reaction to NSP show that Microsoft’s major problem with NSP was not the technical merit of the software, which Microsoft had not at that point evaluated, but rather that Intel was entering Microsoft’s “OS space,” which conflicted with its goal of owning “ALL driver software ‘to the metal’, i.e., silicon. . . .” GX 563.
- ii. Microsoft’s Paul Osborne candidly explained: “Microsoft doesn’t want Intel to be in the system software business for the very same reason — we don’t want the operating system to be a commodity.” GX 921, at MS98 0168650, (Osborne 5/15/95 e-mail) . For that reason, Osborne wrote, it was important to “neutralize this situation with Intel” regardless whether it was “Good code or bad, competitors or not.” GX 921, at MS98 0168650 (Osborne 5/15/95 e-mail); see also GX 921, at MS98 0168652 (5/10/95 Stork e-mail expressing dissatisfaction that NSP would allow Intel to “put in new function without dependency on us”).
- iii. Microsoft’s David Cole did not mince words on this subject of making advances in hardware: Intel “feels the need to write system extensions to do this. We don’t want em to.” GX 921, at MS98 0168652 (5/10/95 David Cole e-mail).
- iv. After Intel had agreed to cease promoting the NSP APIs and DDIs, Paul Maritz explained that he was now giving Intel “the benefit of the doubt” because “they have given on our original major objections, which were that they were trying to establish middleware APIs, and that they were using NSP to jam

all sorts of random, unrelated stuff. Now they are just purveyors of big, slow software.” GX 1309 (7/28/95 Maritz e-mail) (emphasis added).

355.2. Second, Microsoft’s contention is pretextual because technical concerns about NSP cannot explain either (i) Microsoft’s threats relating to Intel’s next generation of microprocessors or (ii) Microsoft’s insistence that Intel not compete in platform software even after Intel had abandoned NSP for Windows 3.1.

- i. See supra Part VI.B.3.; ¶ 351.1.
- ii. See supra Part VI.B.3.; ¶ 351.

355.3. Third, Microsoft’s contention that encouraging Windows 95's adoption justified its efforts to kill NSP is belied by Microsoft’s own continued support of Windows 3.1.

- i. Microsoft continues to offer Windows 3.1. E.g., GX 1188, at MS98 0128327 (sealed)
- ii. Dr. Warren-Boulton testified that continuing to support older versions of Windows is “a normal profit-maximizing thing” for Microsoft to do. Warren-Boulton, 11/19/98am, at 64:7-17.

355.4. Fourth, Microsoft’s contention that it simply had technical objections to NSP is belied by the fact that Microsoft insisted that Intel abandon NSP’s platform-level efforts even though Intel was prepared to solve any technical problems and to offer a Windows 95 version.

355.4.1. Intel had developed by June 1995, and was about to begin testing, a beta version of NSP for Windows 95 and, absent Microsoft’s predatory efforts to block it, likely could have solved any remaining technical issues.

- i. In June 1995, Intel had a running beta version that was about to begin the quality assurance testing process. McGeady, 11/10/98pm, at 24:5 - 25-11.



- ii. **On June 29, 1995, Kinnie of Intel proposed to Microsoft that Intel would limit distribution of NSP for Windows 3.1 and develop, with Microsoft's support and advice a Windows 95 optimized version of segments of NSP by the first quarter of 1996. DX 1837. In an internal Microsoft memorandum preparing Gates for his July 1995 dinner with Grove, Carl Stork recommended that Microsoft oppose Intel's accommodation because it would mean Intel "basically establishing this software defacto," which, Stork cautioned, might or might not go away. DX 1836, at 5 (7/3/95 Stork e-mail to Gates). In his proposed talking points for Gates to deliver to Grove, Stork insisted that the only solution was for Microsoft, not Intel, to ship the needed components in future versions of Windows. DX 1836, at 2. Gates succeeded in achieving this result. GX 281.**

355.4.2. PC OEMs would not have installed Windows 95 and NSP for Windows 3.1 on the same machines.

- i. NSP could be installed only by OEMs (McGeady, 11/10/98pm, at 25:17 - 26:4), who have every incentive to ensure that the software they select properly functions, as that reduces their support expenses. See supra V.C.1.b.(1); ¶ 178.1; McGeady, 11/10/98pm, at 55:3 - 56:1.

355.4.3. To the extent that potential risks may have arisen with subsequent customer upgrades to Windows 95, there are a number of means that Intel, the OEMs and Microsoft commonly employed to deal with potential problems with upgrades. There is no reason to believe that NSP presented unsolvable or unusual difficulties.

- i. Since OEMs would not preinstall NSP on a Windows 95 PC (until Intel released the Windows 95 version of NSP), the only scenario that could potentially pose a compatibility problem is that a customer with an NSP/Windows 3.1 PC might later decide to install a retail version of Windows 95 or Windows NT on the PC (McGeady, 11/10/98pm, at 25:17 - 26:4). McGeady testified about several methods commonly

employed to deal with problems of this type (McGeady, 11/10/98pm, at 35:20 - 36:22; 37:7-16), that Intel and the OEMs had arrangements for technical support for NSP (McGeady, 11/10/98pm, at 38:15 - 39:5; 55:9 - 56:1), and that NSP did not present unusual risks compared to other PC software and device drivers (McGeady, 11/10/98pm, at 40:7-24).

**355.4A. Microsoft’s argument that it worked with Intel to make NSP suitable for commercial release and that elements of NSP were later incorporated into Windows (MPF ¶ 930-32) is beside the point because it is clear that Microsoft insisted in return that Intel cease promoting NSP’s APIs or DDIs (platform-level software interfaces) and that Microsoft would control all the resulting APIs and DDIs.**

- i. Although Maritz did not acknowledge it in his testimony, it is also clear from Microsoft’s own exhibits that part of what Gates called the “NSP bargain” was Intel’s agreement to “not evangelize OEMs/ISVs to write drivers and/or applications that hook into [portions of NSP], i.e., don’t ship software (SDKs) or device drivers (DDKs) kits to ISVs/OEMs.” DX 965; McGeady, 11/12/98pm, at 71:7-18 (explaining that Microsoft wanted to maintain control of all application interfaces).**
- ii. In support of its position, Microsoft relies largely on DX 1835, entitled “Microsoft NSP Analysis and Recommendation,” a Microsoft attack on the “Native Audio” component of NSP. MPF ¶¶ 928-930.**

**C While Microsoft’s proposed findings quote the document’s statements alleging Microsoft’s purported concerns about quality and testing issues, the document in fact corroborates Microsoft’s demand that Intel permit Microsoft to define the APIs and DDIs and drop all efforts to promote NSP APIs or DDIs via software development kits, device driver kits, or evangelization. DX 1835, at 1 (“Microsoft will define the APIs and DDIs for audio drivers and other drivers.”); id. at 2 (Intel will drop “plans to provide a Native Audio/IA-SPOX SDK, DDK, and evangelization effort.”), id. at 3 (complaining about NSP’s scope and scale, and that many APIs are duplicative or redundant of Windows 95); id. at 6 (“Intel must stop evangelization efforts for IA-SPOX and Native Audio as an applications platform” and as the “preferred device driver model**

for sound.”).

**C McGeady rebutted all the portions of DX 1835 with which Microsoft confronted him during his testimony. McGeady, 11/10/98pm, at 27:12 - 44:22. For example, that NSP did not support Windows NT is of little significance because Windows NT had no media subsystem and was not used as a desktop operating system at that time. McGeady, 11/10/98pm, at 30:29 - 31:24.**

356. Testimony offered by Paul Maritz and Bill Gates regarding Microsoft’s efforts to induce Intel to cease developing platform-level software is either unreliable or incredible.

356.1. Mr. Maritz’ testimony that Microsoft simply told Intel what was in Intel’s best interest (Maritz, 1/27/98am, at 28:17 - 29:22, 34:15 - 25) and that the discussions regarding NSP were merely a benign part of an ongoing dialogue resulting from the close relationship between the companies’ products (Maritz Dir. ¶¶ 308-309) is not credible.

- i. The threat Microsoft made to Intel at the August 2, 1995, meeting was not a procompetitive, routine discussion between producers of complementary products; it was, rather, a blunt warning that Intel should not continue to pursue developments that could threaten Microsoft’s monopoly power. See supra Part VI.B.3.; ¶ 351.
- ii. The contemporaneous documents explicitly show that Maritz offered to stop “selling against” Intel if Intel held “off on pushing OEMs to install NSP.” GX 923.
- iii. By contrast to the picture he painted at trial, the documents Maritz authored in the course of his work make clear that Microsoft’s principal concern with NSP was the possibility that Intel might control a new set of “middleware APIs.” GX 1309 (7/28/95 Maritz e-mail).

356.2. Mr. Maritz’ testimony that, after Intel agreed to limit its distribution of NSP with Windows 3.1 in return for certain Microsoft assistance regarding Windows 95, Intel later withdrew NSP “without further communication, to my knowledge, from Microsoft” (Maritz Dir. ¶ 322) is

inconsistent with the contemporaneous evidence of further Microsoft/Intel communications.

- i. Gates wrote to Maritz and other top Microsoft executives that Andy Grove “believes Intel is living up to its part of the NSP bargain” and asked the recipients to let Gates know if “Intel is not sticking totally to its part of the deal.” GX 281 (10/18/95 Gates e-mail).

356.3. Mr. Gates’s testimony that Microsoft did not express concern to Intel about Intel’s platform-level software development work and that Gates did not even know about Intel’s software development work (Gates Dep. (played 11/9/98am), at 69:8-19) is not credible in light of both Steven McGeady’s testimony and the contemporaneous evidence.

- i. McGeady testified that Intel had briefed Microsoft and Gates on its Internet software effort several times and that he had personally briefed Gates at the August 2, 1995 meeting. McGeady, 11/9/98pm, at 8:3-13; 9:7 - 10:19.
- ii. Gates himself wrote on July 7, 1995, that Intel had an Internet software group of 100 people working under McGeady. GX 278 (7/7/95 Gates e-mail).
- iii. Whittier’s minutes of the August 2, 1995, meeting reflect that Gates warned Intel against supporting Netscape or Java as a alternate platform or stepping on any of Microsoft’s key Internet strategies. GX 279.

356.4. Mr. Gates’ testimony that Microsoft did not threaten to withhold support for Intel if Intel failed to cooperate with Microsoft (Gates Dep. (played 11/9/98 am) at 70:22 - 73:10) is also not credible in light of the evidence.

- i. See supra Part VI.B.2.b.; ¶ 351 (summarizing McGeady’s and Sullivan’s testimony and Whittier’s minutes (GX 279) regarding the August 2, 1995, meeting).
- ii. In discussing Intel’s request that Microsoft tell OEMs that some of Intel’s software is okay to install, Gates asked his executives to let him know if “Intel is not sticking totally to its part of the deal.” GX 281.

**356.4A. Mr. McGeady’s testimony was credible and is amply corroborated by**

many contemporaneous documents written by others at Intel and Microsoft.

- i. **E.g., GX 279 (Whittier minutes); GX 563 (Holzhammer e-mail); GX 566 (Holzman e-mail); GX 920 (Kinnie presentation); DX 1805 (Pollock memorandum); GXs 281, 289 (Gates e-mails); GX 921 (Microsoft e-mail string re 5/9/95 NSP meeting).**
- ii. **Microsoft attacks McGeady by pointing out that he did not attend the November 7, 1995, meeting. Curiously, Microsoft now describes this as one of the “most significant meetings” between Intel and Microsoft relating to NSP (MPF ¶ 915), yet Maritz did not even mention this meeting in his testimony and in fact testified that Intel “without further communication” from Microsoft unilaterally discontinued efforts to promote NSP for Windows 3.1 close to the time of the Windows 95 launch (which occurred in August 1995). Maritz Dir. ¶¶ 316-22. In any event, the exhibit cited by Microsoft (GX 283) along with the raw notes of the meeting (GX 282) demonstrate that, at the November 7, 1995, meeting, Gates once again made clear that Microsoft would not allow others to promote APIs. GX 283, at MS CID 00128; GX 282, at MS CID 00126.**
- iii. **Microsoft’s contention that McGeady is “an Intel vice-president with no involvement in Intel’s core microprocessor business” (MPF ¶ 914) is misplaced. McGeady was in fact involved in Intel’s microprocessor strategy (McGeady, 11/10/98pm, at 72:3-20) and demonstrated a firm grasp of all aspects of Intel’s business throughout an exhaustive cross examination. In any case, Microsoft’s efforts to stop potential competition from Intel focused on Intel’s software efforts, not on its microprocessors, except as a means to convince Intel to cease software competition. See supra Part VI.B.1.; ¶¶ 345-352.**

**356.4B. To the extent that there is any appearance of inconsistency between**

**Mr. McGeady’s testimony and Ron Whittier’s deposition testimony, Mr. McGeady’s**

**testimony is more complete and reliable.**

- i. **McGeady’s testimony is consistent with Whittier’s own contemporaneous minutes of the August 2, 1995, meeting (GX 279); Whittier remembered little, if anything, of what occurred at that meeting, although he testified that he tried to reflect the meeting**

accurately in his minutes. Whittier Dep, (played 11/12/98pm), at 15:12 - 18:7; Whittier Dep., 8/25/98, at 13:18 - 16:6, 17:8-14 (DX 2599). For example, Whittier's testimony that he does not remember Microsoft attempting to discourage Intel from working with Netscape is directly contradicted by his own memorandum summarizing the meeting. GX 279; Whittier Dep., 8/25/98, at 26:13 - 31:13 (DX 2599); see also Fisher, 1/6/99pm, at 65:18-20 ("I noticed that Mr. Whittier, on the whole, found it hard to remember very precisely any events during this period.").