

**B. Microsoft’s proposal of market-division agreements to eliminate other potentially threatening middleware confirms the anticompetitive character of its course of conduct against the browser**

**2. Microsoft similarly attempted to divide markets with Apple**

73. Microsoft made other efforts to divide markets with platform-level competitors.

Those efforts establish a pattern and practice of attempts to eliminate competition by agreement with rivals.

74. Microsoft sought to divide markets with Apple for the purpose of eliminating competing platform-level technology.

**a. Apple’s QuickTime multimedia software, like the browser, is platform-level software that Microsoft viewed as a potential threat to its operating system monopoly**

75. Apple Computer’s QuickTime is its software architecture for the creation, editing, publishing, and playback of multimedia content (e.g., audio, video, graphics, and 3D) on the Macintosh and Windows operating systems. QuickTime is cross-platform; developers using QuickTime technology can create multimedia content that will run on QuickTime implementations for both Windows and Macintosh.

v. Tevanian Dir. ¶¶ 47, 50-51, 54, 57-59, 67-68; Tevanian, 11/5/99am, at 27:1-7; 11/4/99am, at 45:3 - 46:6 (testifying concerning QuickTime’s API and cross platform capabilities).

76. Apple, through QuickTime, competes against Microsoft, among other firms, in providing multimedia functionality to Windows users.

i. Tevanian testified that QuickTime competes with Microsoft’s multimedia technologies, including Microsoft’s multimedia APIs (DirectX) and media player (Windows Media Player). Tevanian Dir. ¶¶ 69-70. See generally Tevanian ¶¶ 57, 60-65.

- ii. Eric Engstrom, Microsoft's former general manager for multimedia, acknowledged that Apple competes to varying degrees with Microsoft in trying to convince developers to target their respective multimedia APIs, codecs and file formats suitable for their respective players. Engstrom, 2/23/99pm, at 35:24 - 36:10, 79:4 - 84:6 See also Tevanian Dir. ¶¶ 57, 60-65 (explaining APIs, file formats, protocols, codecs). Engstrom also acknowledged that Apple's QuickTime multimedia player is cross-platform, while Microsoft's Direct X multimedia technology is not. Engstrom, 2/23/99pm, at 97:18 - 98:2.

77. Because QuickTime is cross-platform middleware, Microsoft perceived QuickTime as a potential -- albeit somewhat distant -- threat to its control over platform-level interfaces and standards that developers invoke and, therefore, to its monopoly power.

- i. Microsoft's Ben Slivka testified that Microsoft considered audio/visual streaming technologies to be part of a "growing collection of technologies" that "were a threat to the Windows platform" because they could reduce the applications advantage that Windows has today. Slivka Dep., 9/3/98, at 243:20 - 245:8 (DX 2591).
- ii. Dr. Avadis Tevanian, Senior Vice President of Software Engineering at Apple Computer, also recognized the threat that QuickTime could pose to Microsoft's operating system monopoly, testifying that: "The widespread popularity and use of QuickTime pose a significant threat to Microsoft. The cross-platform capability of QuickTime holds the promise of weakening the symbiotic relationship between the operating system and application programs that is the foundation of Microsoft's monopoly position and that poses such a substantial barrier to competition in the operating systems market." Tevanian Dir. ¶ 75; see also Tevanian Dir. ¶¶ 51, 57-59 (describing QuickTime's cross-platform capabilities).
- iii. In his May 1995 "Internet Tidal Wave" memo to his staff on the threat the Internet posed to Microsoft's operating system position, Bill Gates specifically expressed his concern about the popularity of QuickTime formats on the Internet, which he attributed in part to QuickTime being cross platform, and the difficulty of dislodging established formats, and directed his staff to develop a competitive strategy. GX 20 at 4, 6.
- iv. Professor Fisher testified that, with Apple's QuickTime technology, "Microsoft was confronted with platform-level software to which applications programs could be written" and that the "platform-level APIs threatened to erode the applications programming barrier to entry into the PC operating systems by

supporting applications programs that could be used with multiple operating systems.” Fisher Dir. ¶ 118, at (a) and (b).

- v. Warren-Boulton testified that it is “now more the combination of browsers with cross-platform technologies” that are “seen as a threat . . . .” Warren-Boulton, 11/19/98am, at 48:13-24.
- vi. See infra ¶ 84.

**b. Just as with Netscape, Microsoft sought to divide markets with Apple in order to eliminate the threat that QuickTime’s platform-level components might pose**

78. In order to eliminate the possibility that QuickTime’s platform-level components would become part of a platform that could threaten Microsoft’s operating system monopoly, Microsoft sought to allocate markets with Apple in a manner strikingly similar to its attempt to divide markets with Netscape.

- i. Professor Fisher expressly drew the parallel between Microsoft’s conduct with regard to Netscape and Apple: Faced with platform level software that developers could target and thus reduce barriers to entry in the operating system market, Microsoft responded “by attempting to get the supplier of the alternative platform to withdraw from offering it and to concentrate instead on products that did not offer platform potential,” and “was prepared to act to preclude the supplier . . . from succeeding in offering the platform, ‘even if such actions did not make sense from a business standpoint.’” Fisher Dir. ¶ 118, at (c) and (d).

78.1. In a series of communications with Apple in 1997 and 1998, Microsoft pressured Apple to cease competing with Microsoft in multimedia playback on Windows in exchange for Microsoft’s supporting QuickTime as a multimedia authoring solution. Microsoft’s proposal was strikingly similar to its proposal to Netscape: In both instances, Microsoft offered the firm producing platform-level software Microsoft’s support and a free hand in a complementary product in return for abandoning platform-level client software for

Windows; and in both instances, Microsoft threatened to injure the other firm's business if it did not agree to the proposal.

78.1.1. Microsoft first proposed its market-division scheme to Apple in 1997 and continued its efforts to secure Apple's acquiescence throughout the year.

- i. In April 1997, Microsoft's Eric Engstrom and Christopher Phillips suggested to Apple that they cede the multimedia playback market to Microsoft and focus solely on the "authoring" area of multimedia, i.e., the development of software tools used to create multimedia content and the APIs to enable such tools. Tevanian Dir. ¶ 78; Schaaff Dep., 1/13/99, at 192:8 - 196:1 (at a meeting between Tim Schaaff of Apple and Eric Engstrom and Chris Phillips of Microsoft, MS proposed that Apple scale back its efforts in multimedia playback on Windows in return for MS support for QuickTime as a multimedia authoring solution). Microsoft did not at that time offer multimedia authoring capabilities or APIs. Schaaff Dep., 1/13/99, at 193:13-21.
- ii. Later in 1997, Microsoft repeatedly pressured Apple to cede the multimedia playback market to Microsoft. In an August 1997 meeting between Apple and Microsoft, Microsoft urged "Apple to withdraw from the market for multimedia playback capability." Tevanian Dir. ¶ 80.
- iii. The following month, Mr. Engstrom "again urged Apple to focus on the authoring segment and to cede the playback business to Microsoft." Tevanian Dir. ¶¶81-83; Schaaff Dep., 1/13/99, at 196:3 - 199:4; see infra ¶ 78.2.
- iv. In October 1997, at another meeting between Apple and Microsoft, Microsoft stated that it "would allow Apple to continue with QuickTime playback for the Mac operating system, but would require Apple to relinquish the QuickTime playback capability in Windows." Tevanian Dir. ¶ 84. At this meeting, Mr. Phillips again encouraged Apple to back off QuickTime as a playback technology for Windows. In return, Phillips offered support for QuickTime as an authoring technology. Schaaff Dep., 1/13/99, at 200:16 - 206:11. Phillips also offered to support QuickTime in some way on the Windows CE operating system. Schaaff Dep., 1/13/99, at 206:15 - 207:14.

- v. Engstrom admitted that one of his goals in all his discussions with Apple was to have Apple agree on a single audio/video playback runtime for Windows based on Microsoft's Direct X, and that he told Apple that Microsoft's support for QuickTime as an authoring solution on Windows was dependent on that agreement. Engstrom, 2/24/99am, at 25:16 - 28:12; 36:20 - 37:15. Engstrom also admitted that he hoped to "move the locus of competition upstream," in other words, away from competition in audio/visual playback on Windows. Engstrom, 2/24/99am, at 36:6-19. Engstrom also conceded that it would be pointless for Apple to continue to offer its own multimedia runtime on Windows if it accepted Microsoft's proposal. Engstrom, 2/24/99am, at 40:6 - 42:13; 55:6-23.

78.1.2. Microsoft continued to propose dividing the multimedia business between the companies -- including giving Apple a free hand in authoring -- well into 1998.

- i. On February 13, 1998, Dr. Tevanian met with Microsoft's Don Bradford to discuss the technical problems that Windows and Internet Explorer caused with QuickTime and to discuss threatening comments made by Microsoft employees. Tevanian Dir. ¶¶ 85-87. At that meeting, Mr. Bradford "conveyed the same proposal that Microsoft had presented in the past. Specifically, if Apple would abandon the playback segment of the business, Microsoft would be willing to endorse QuickTime as the solution for the authoring portion. Mr. Bradford told me that Mr. Gates thought that would be a way to resolve our dispute." Tevanian Dir. ¶¶ 88-89. Dr. Tevanian testified that Bradford's response to Tevanian "was very simple, and although he did it in a less threatening way, he said -- he basically said, 'Well, we want to fix this; we want to be able to work together, and Bill wonders if a way to solve this is for us to take playback and you to take authoring.' And I told him simply, 'No, that's not acceptable.'" Tevanian, 11/5/98am, 29:10-25.
- ii. Phillip Schiller, an Apple marketing vice-president, testified that, in an April 1998 telephone conversation with Eric Engstrom, Engstrom offered to support Apple in multimedia authoring but made clear that this support was conditioned on Apple ceasing competition in multimedia playback on Windows. Engstrom told Schiller that Apple had to "give up playback on Windows."

Schiller Dep., 1/13/99, at 240:19 - 242:22; see also Tevanian Dir. ¶¶ 90-92 (Engstrom tells Schiller that Apple would “have to give up multimedia playback on Windows” in order to work together with Microsoft on authoring.).

- iii. Mr. Engstrom admitted that he told Apple that, if Apple agreed to use Microsoft’s DirectX as their runtime for Windows, then Microsoft would support Apple’s authoring technology, and that if Apple did not agree to adopt the DirectX runtime, then Microsoft would enter the authoring business. Engstrom, 2/24/99am, at 37:16 - 39:25. Although Engstrom denied that he had offered to stay out of authoring, he admitted that he told Apple that if Apple targeted its authoring solution to Microsoft’s DirectX, that he “would probably not invest as rapidly in that solution as otherwise.” Engstrom, 2/24/99am, at 39:15-25.
  
- iv. At a June 15, 1998, meeting, attended by Eric Engstrom as well as Dr. Tevanian and Apple CEO Steve Jobs, Microsoft proposed that “Microsoft would take over the playback market for Windows, while allowing Apple to control the much smaller playback business for the Macintosh.” Tevanian Dir. ¶¶ 93-94. Microsoft’s proposal entailed, inter alia, Apple adopting (1) DirectX as the runtime for Windows, (2) Microsoft’s proprietary streaming technology, and (3) Microsoft’s AAF file format for authoring, all of which Dr. Tevanian believed were inferior. Tevanian Dir. ¶ 95. Dr. Tevanian testified that “Microsoft’s proposal amounted to a forced abandonment of one of Apple’s most successful and innovative products” and adoption of Microsoft’s playback, streaming, and authoring technology. Tevanian Dir. ¶ 96. Microsoft’s agenda for the meeting suggests that Microsoft’s Direct X will be the only runtime on Windows: “Run-Time is Direct X on Windows, QuickTime on the Mac.” GX 912; see also GX 908 (July 6, 1998 Waldman email to Gates et al.) (summarizing Mr. Jobs’ view of the proposal: “essentially ‘Apple should give up QT and use [Microsoft’s] stuff’”).

78.2. In order to coerce Apple’s acceptance of its market-division proposal, Microsoft told Apple that, if Apple did not agree to Microsoft’s offer of a free hand in authoring, Microsoft would engage in predatory conduct.

- i. In September 1997, Microsoft's Engstrom "again urged Apple to focus on the authoring segment and to cede the playback business to Microsoft." Tevanian Dir. ¶¶ 81-83. At a meeting at the Fairmont Hotel in San Jose, California, Mr. Engstrom told Apple's Schaaff that Microsoft intended to control multimedia playback on Windows and that Microsoft would devote 100-150 engineers to authoring if that was what was necessary to control multimedia playback. Engstrom also told Schaaff that Bill Gates did not think that authoring was a significant business opportunity for Microsoft, but that Microsoft would be willing to invest whatever was necessary to control multimedia playback, "even if it didn't make sense from a business standpoint." Schaaff, 1/13/99, at 196:3 - 199:24.
- ii. Schaaff took this as a threat that, if Apple did not "back off" from the Windows playback business, Microsoft would double or substantially increase the size of their team to compete both in playback and authoring. Schaaff Dep. 1/13/99, at 196:3 - 199:24; Tevanian Dir. ¶ 83 ("Mr. Engstrom noted at the meeting that Microsoft's Bill Gates was not interested in an authoring program because the market for this product was too small. He assured the Apple representatives, however, that if Microsoft needed to make an investment in providing authoring tools to push Apple out of the playback market, then Microsoft would devote all the necessary resources to accomplish this goal.").
- iii. Dr. Tevanian's interpretation was the same as Mr. Schaaff's: "What Mr. Engstrom was saying was that he made us an offer, which is, if we were to cede the playback market, he would give us the authoring market. And if we didn't take that offer, he would immediately deploy engineers to just kill us in that space, too." Tevanian, 11/5/98am, at 82:19-23. "The threat was that they would leverage their other advantages in the market and just pound on us in any way they possibly could." Tevanian, 11/5/98am, at 84:2-4. Engstrom admitted he had said that developing an authoring solution was "not the highest return for that particular investment." Engstrom, 2/24/99am, at 38:22-24.
- iv. Professor Fisher explained Microsoft's anticompetitive purpose in threatening to enter into the multimedia authoring business: "Microsoft was going to devote 100 to 150 engineers to competing against Apple on this, even though, said the Microsoft representative, it made no business sense. Sounds like a threat to me. It doesn't sound like the kind of thing that one company says to another and says, you know, we are going to hang tough on this. This says we are going to go out of our way to hurt you." Fisher, 1/6/99pm, at 70:14-21. Professor Fisher further noted: "If it doesn't make sense from a business standpoint, you have to ask what is the

possible motive for it, and here the motive is to get Apple to cooperate." Fisher, 1/6/99pm, at 73:11-14; see also Fisher Dir. ¶117, 118 (Microsoft's actions with regard to Apple's multimedia playback technology show that Microsoft was "prepared to act to preclude the supplier of a potential platform-level software from succeeding in offering the platform, even if such actions 'did not make sense from a business standpoint'" and "Microsoft will respond immediately to prevent any other firm from writing platform-level software. This is true even though this software could increase the functionality and performance of, and thus demand for, Windows-based PCs.").

- v. Engstrom conceded that he told Schiller that if Microsoft and Apple did not work together on multimedia software for Windows, then Microsoft would have to offer authoring solutions that might be incompatible with Apple's, that he was "mystified by Apple's insistence on going it alone in developing and marketing a multimedia runtime for Windows, and that "given Microsoft's resources and expertise," Microsoft was likely to be successful in authoring technology. Engstrom Dir. ¶ 68.

**c. Microsoft's purpose in proposing a division of markets to Apple was to ensure Microsoft's continued control over platform-level interfaces**

79. Microsoft's purpose in attempting to allocate markets with Apple, as with its attempt to allocate markets with Netscape, was to prevent Apple from successfully establishing platform-level software that might reduce Microsoft's control over interfaces and standards that developers use and thereby erode the barriers to entry to the operating system market.

79.1. First, Microsoft's purpose is evident from both its contemporaneous documents and the testimony of its witnesses.

- i. Engstrom's supervisor, David Cole, in an email to Gates, Engstrom and Waldman made clear that Microsoft's primary goal in its talks with Apple was to "get Apple to give up on having a runtime on Windows." GX 270 (4/28/98 Cole email).
- ii. Even Engstrom, who claimed that he never explicitly asked Apple to give up its Windows' runtime, admitted at trial that everyone knew it would make no sense for Apple to continue to offer its own multimedia runtime

on Windows if it accepted Microsoft's proposal to use Microsoft's Direct X runtime. Engstrom, 2/24/99am, at 40:6 - 42:13; 55:6-23 ("If they are going to adopt our runtime, they are going to have to, at some level, give up mentally and emotionally, on building this duplicative set of services, because it wouldn't make sense for them to build a service on top of ours that uses our services while they are still building a service that is -- you know, that they view as their hope for their future, you know, that sits next to this piece of Windows.").

79.2. Second, Microsoft expressly communicated its purpose of controlling platform-level software to Apple.

- i. Timothy Schaaff testified that Microsoft multimedia chief Eric Engstrom told him and other executives that "Microsoft wanted to have control over the user interface . . . and that Microsoft was determined that the essential APIs that were the foundation of the operating system should all come from Microsoft and not come from a third party." Schaaff Dep., 1/13/99, at 194:21 - 195:18; Schaaff Dep., 8/28/98, at 283:21 - 284:11 ("they stated that it was Microsoft's opinion, point of view, that they intended to control APIs for the playback of multimedia content on the Windows platform, and hence they did not wish to see proliferating or competing with Microsoft with a separate set of APIs . . . in the playback space") (DX 2506).
- ii. Dr. Tevanian testified that "Engstrom bluntly warned Mr. Schiller 'We're going to compete fiercely on multimedia playback and we won't let anyone have playback in Windows. We consider that part of the operating system, so you're going to have to give up multimedia playback on Windows.'" Tevanian Dir. ¶ 91; Schiller Dep., 1/13/99, at 240:19 - 242:22. Dr. Tevanian recounted that, "what they were proposing at every level -- and sometimes very direct threats -- was effectively killing QuickTime. . . . And Mr. Hoddie said, 'do you want us to knife the baby'? That was his words. 'Knife the baby' meaning kill QuickTime. And Mr. Phillips repeated back to him, 'Yes, we're talking about knifing the baby.'" Tevanian, 11/5/98am, at 28:15 - 30:4.
- iii. Steve Jobs confronted Microsoft about Microsoft's public messages that Microsoft would use its power in the PC operating systems market to kill QuickTime. In an e-mail to Bill Gates, Steve Jobs stated that "There is one thing that threatens to be quite divisive, and that is the Microsoft NetShow team's recent behavior. They are really going out of their way to say that they intend to kill QuickTime, and are being quite threatening and rude

about it. . . . We intend to fight and win with QuickTime, and I hope this honest and proper effort doesn't meet with down and dirty tactics and tough rhetoric from the NetShow group -- it could really tarnish our entire, budding relationship." GX 904; see also GX 897 (In a January 1998 email to Gates and others re "Steve Jobs Call," Don Bradford reported on a telephone call he received from Jobs. "Steve called back to express his concern over NetShow's public message about killing QuickTime."). Dr. Tevanian testified that Jobs' was referring to statements made by Microsoft's Netshow team that Microsoft would kill QuickTime because Microsoft's technology would be everywhere because it would be bundled with Windows and with Internet Explorer on the Macintosh, but Microsoft would never allow QuickTime to survive on Windows. Tevanian, 11/5/98am, at 94:16 - 95:8.

79.3. Third, Microsoft's purpose is evident from the nature of the proposal:

Microsoft wanted Apple to cease developing complementary software that runs well on Windows (an activity it usually encourages); Microsoft's proposal, if accepted, would have reduced demand for Windows and thus makes sense only as an effort to eliminate potential competition to Microsoft's operating system monopoly.

i. See infra ¶ 300.

80. Had Apple accepted Microsoft's proposal, Microsoft's efforts to pressure Apple to cease competing on the Windows platform would likely have reduced competition and innovation in multimedia playback, particularly in the development of cross-platform APIs.

ii. Dr. Tevanian testified: "Yes, it is true that the Microsoft proposal was that Apple cede the market for multimedia playback on Windows. But from our perspective, that was essentially ceding it for everything, because, let's remember, as we talked about yesterday, one of the goals for QuickTime was to be cross-platform, so you could develop content and run it on either Windows, or Macintosh, or any other operating system. If we couldn't put that technology on windows -- if we had to cede that to Microsoft, then it would have undermined one of the primary goals of the whole product. Having it on the Macintosh would have been irrelevant." Tevanian, 11/5/98am, at 27:1-11.

- iii. Microsoft's efforts to convince Apple to give up QuickTime multimedia playback on Windows not only would have required Apple to cease innovating in multimedia playback on Windows, but would have also impeded Apple's ability to innovate on the authoring side because they would be limited to using the Windows playback mechanism. Schaaff, 1/13/99, at 203:3 - 205:3.
- iv. Mr. Engstrom admitted that, if Apple had accepted Microsoft's proposal and had not continued shipping a multimedia runtime for Windows, Apple would have been dependent on Microsoft for execution of Apple's authoring solutions. Engstrom, 2/24/99am, at 48:5 - 49:1.

**d. Microsoft retaliated against Apple, just as it did with Netscape, when Apple refused to accept Microsoft's proposal**

81. When Apple refused to accept Microsoft's proposal to cease competition in multimedia on Windows, Microsoft retaliated against Apple. The retaliation ranged from inserting misleading error messages in Windows to offering or withholding assistance to Apple as it suited Microsoft's strategic goals.

81.1. Microsoft introduced misleading error messages into Windows that urged users to replace QuickTime with Microsoft technology.

- i. Dr. Tevanian testified that Microsoft has inserted misleading error messages in Windows informing users that they might not be able to play certain multimedia files and asking users if they wanted to reconfigure their systems to use Microsoft's Active Movie technology instead of Apple's QuickTime technology. Tevanian Dir. ¶¶ 108-110 and Attachment 5; GX 917; GX 918; Tevanian, 11/4/98am, at 27:12 - 28:22.
- ii. Dr. Tevanian, an experienced software engineer, testified that such error messages are unlikely to issue accidentally. Tevanian, 11/4/99am, at 61:17 - 62:5.

81.2. When Microsoft made changes to Internet Explorer 4.0 and Windows that resulted in impaired functioning of QuickTime, Microsoft opportunistically responded to Apple's

requests for assistance by fixing the problem when it suited Microsoft's strategic interests and refusing to provide meaningful assistance when it did not.

81.2.1. With the release of Internet Explorer 4.0, Microsoft changed the interaction between Windows and Internet Explorer so that data in certain media files were preferentially routed to Internet Explorer for playback. The changes prevented QuickTime from processing the data and frustrated users' attempts to access certain content. QuickTime also experienced additional difficulties operating with Internet Explorer 4.0 and Windows 98. These problems occurred at the very time that Microsoft tried to convince Apple to give up its multimedia platform-level software.

- i. Dr. Tevanian testified: "When Microsoft produced its first plug-in capable browser [Internet Explorer 3.0] and needed to compete in the Netscape-dominated market by being technologically compatible, Microsoft used and adhered to Netscape's plug-in architecture. With the growth of Microsoft's browser market share through the bundling of Internet Explorer and Microsoft multimedia software with Windows, Microsoft reduced the compatibility between its browser and the open Netscape standard, starting with the introduction of Internet Explorer 4.0." Tevanian Direct ¶ 102.
- ii. Tevanian further testified: "With the successive releases of Microsoft's Internet Explorer 4.0, Microsoft Windows 98, and Microsoft multimedia software, Apple has seen a steady degradation of QuickTime's capability to play back a variety of QuickTime compatible media file formats while operating with Microsoft's Internet Explorer running on the Windows operating system." Tevanian Dir. ¶ 100; see also Tevanian Direct ¶ 101 & Attachment 4 (chart of test results with various formats); Tevanian, 11/4/98am, at 28:23 - 29:13 (" In that case what would happen is when a user was browsing the web, looking at web pages, and would find QuickTime content, files that were based on QuickTime, instead of playing using QuickTime, even if QuickTime was installed, Internet Explorer would play -- would try to play it using Microsoft technology and would often fail. So QuickTime was not being allowed to actually access the data and play it correctly. The user wouldn't know it was broken, and often the web page would show that it required QuickTime, yet

QuickTime would not be invoked after release -- excuse me, after being installed. And we had no way to solve this that we knew of.”).

- iii. Schaaff testified that, when Microsoft introduced Internet Explorer 3.0, it promoted its compatibility with the Netscape browser plug-in APIs. Since QuickTime already supported the Netscape browser plug-in API, Apple was able to ensure that QuickTime was generally compatible and operated properly with both Navigator and Internet Explorer 3.0. With the release of Internet Explorer 4.0, certain file types that were previously routed to QuickTime were no longer routed to QuickTime. Apple’s investigation revealed that the mechanism for routing media types in the Windows operating system, the Windows registry, which is largely undocumented, was not routing media types to QuickTime as expected. Depending on the file type, this can result in the user not being able to access the content at all or in an impaired manner. Schaaff, 1/13/99, at 211:16 - 222:5; Tevanian Dir. ¶¶ 102-106. Apple’s efforts to reverse engineer the Windows registry software to correct the problem met with only limited success. Tevanian Dir. ¶ 105.
- iv. Dr. Tevanian testified that the introduction of incompatibilities could undermine the establishment of Apple’s multimedia platform. Tevanian, 11/4/98am, at 45:3 - 46:12. It is also clear that these problems were occurring at the same time as Microsoft’s public campaign to convince developers that Microsoft’s multimedia technology would “kill” QuickTime on the Windows platform. Tevanian, 11/5/98am, at 94:3 - 95:17.
- v. Microsoft email confirm that “support for the Windows file types are build (sic) into IE itself,” that the Windows registry gives a preference to Microsoft’s ActiveX controls, and that Microsoft discouraged Apple from writing its own ActiveX controls to route playback of both of Microsoft formats and industry standards like MIDI. GX 911; GX 274.

81.2.2. When Apple first requested Microsoft’s assistance, Microsoft

corrected one of the problems caused by its redesign because doing so suited its strategic objective of blunting other platform-level threats.

- i. In August 1997, Dr. Tevanian sent Bill Gates an e-mail explaining that Internet Explorer 4.0 disabled QuickTime and QuickTimeVR on Windows and that IE4 set the default for “.mov” media files to

Microsoft's ActiveMovie, rather than QuickTime. GX 265 (8/8/97 Tevanian email to Gates).

- ii. Unbeknownst to Dr. Tevanian, Mr. Gates forwarded Tevanian's e-mail to Paul Maritz. Mr. Gates sought to ensure that the problem was used to Microsoft's advantage; he instructed Mr. Maritz: "I want to get as much mileage as possible out of our browser and JAVA relationship here. In other words a real advantage against SUN and Netscape. Who should Avie be working with? Do we have a clear plan on what we want Apple to do to undermine SUN?" GX 265 (8/8/97 Gates email to Maritz).
- iii. Dr. Tevanian testified that Microsoft responded to his request to Gates by fixing the file associations for the specific file type he mentioned. Tevanian, 11/4/98am, at 29:14-22, 54:9-22.
- iv. Internal Microsoft email confirm that Microsoft provided a method that overrode the ActiveX preference for MOV and QT, (MOV is the format Dr. Tevanian asked Gates about), but that Microsoft did not wish to do this for any other file formats. GX 911 (8/5/98 Perry email; 8/6/98 Larkin email); GX 265 (8/8/97 Tevanian email to Gates).

81.2.3. By contrast, when Apple rejected Microsoft's proposal to allocate multimedia technology, Microsoft abandoned meaningful efforts to help Apple solve the compatibility problems.

- i. Dr. Tevanian testified that he could not understand why MS could and did correctly fix the .mov problem, but not the other problems. Tevanian, 11/4/98am, at 31:9 - 32:9, 54:9-22.
- ii. Dr. Tevanian also testified that Microsoft delayed responding to Apple's complaints. Tevanian, 11/4/98am, at 29:14-22 ("We contacted Microsoft. In fact, I recall at that time, the first time we noticed this, I contacted Bill Gates directly and asked him to fix it in one specific area, which he did. He got it fixed somehow. But in many other areas, it never got fixed. We tried to interact with Microsoft. We were getting close to shipping QuickTime 3. We weren't getting fast-enough responses. We did try to solve it ourselves. We couldn't solve it. And that was the end of that story."); Tevanian, 11/5/98pm, at 77:8-15 ("our engineers

questioned the data they received from Microsoft. Here we are now, again, in context, a full year -- in fact, it's almost a year to the date after which I first notified Mr. Gates that we were having problems, and with that notification, Microsoft was somehow able to fix one of the file types, and we just could not understand why if they fixed one of them they didn't fix all of them.”).

- iii. Dr. Tevanian testified that, after trying for months to obtain information or assistance from Microsoft to correct the problems and receiving an inadequate response, Apple received the beta for the Windows Media Player a few days before the final product was to ship, a grossly insufficient amount of time to detect and correct any problems that might exist. Tevanian, 11/4/98am, at 36:22 - 38:10.
- iv. Contemporaneous documents confirm Apple's repeated attempts to persuade Microsoft to correct the problem with Windows taking over the QuickTime file associations. For example, on July 21, 1998, Tim Schaaff sent a lengthy e-mail to Engstrom and Cristiano Pierry at Microsoft detailing the problems, and noting that the fixes Microsoft claimed to have provided Apple did not solve the problems. Schaaff explained in part that: “To the extent that Internet Explorer 4 relies on this undocumented info from the Windows Registry to determine which software should be invoked to process different MIME types on the web page, third-party developers, like Apple, are getting hurt. . . . It's unacceptable that every time a new version of the Media Player, or Direct X, or Windows itself is installed that QuickTime is getting overridden by your software.” GX 272. A week later, having received no response, Schaaff resent this mail. GX 272 (7/28/98 Schaaff email)
- v. Another week later, on August 4, 1998, still having received no response, Apple CEO Steve Jobs again requested Microsoft's assistance to solve the file association problem. GX 911 (8/4/98 Jobs email to Maffei).
- vi. On August 5, 1998, Microsoft's Pierry finally responded, suggesting only that Apple develop an ActiveX control, a Microsoft proprietary technology, but at the same time discouraging Apple from doing so. GX 272.
- vii. In an internal Microsoft e-mail to Jim Allchin, Pierry explained Microsoft's conduct. First, he noted that the reason that

QuickTime is able play .mov files was because Microsoft had gone out of its way to provide an overwrite method. GX 911. 8/5/98 Pierry email) Pierry stated, "I really do not want to provide a similar mechanism to enable them to" play other file types. GX 911. Pierry then explained that his "response to Apple right now is sorry, but support for the Windows file types are build (sic) into Internet Explorer itself. The only way to take over, and we discourage you from doing so, is to write your own active x control. It turns out that they can probably just delete our MIME types from the registry, then IE would have to use the plug-in. But this would be a very wrong thing for them to do and it would cause app compatibility problems for them." GX 911 (8/5/98 Pierry email) (emphasis added).

- viii. None of the email traffic with Apple mentions the undocumented "enable plug-in flag" which Microsoft wrote to enable .mov and .qt to play properly Engstrom, 2/24/99am, at 12:21-25. Nor does e-mail traffic mention the alleged defects in Apple's plug-in instruction that Microsoft proffered at trial as the cause of the problem. Engstrom, 2/24/99am, at 20:25 - 21:20.

81.3. Microsoft also retaliated against Apple by inducing third parties not to support QuickTime on Windows.

- i. Tevanian testified that a third party hardware vendor TrueVision was prohibited by Microsoft from marketing or promoting driver software for QuickTime for Windows, and from writing driver software for QuickTime for Windows that would operate with more than the Final Cut product. Tevanian Dir. ¶¶ 134-138; Schiller Dep., 1/13/99, at 243:15 - 247:12.
- ii. Engstrom admitted that Microsoft entered into a contract with TrueVision that prohibited TrueVision from developing or promoting non-Microsoft interfaces for its driver software for approximately four months. Engstrom Dir. ¶ 120.

**e. Just as with Netscape, Microsoft's proposal was unrelated to any efficiency-enhancing sharing of technology**

82. Microsoft's effort to force Apple to exit the playback market for Windows was unrelated to achieving any efficiency or proconsumer benefit.

82.1. First, Microsoft asserts that it was simply seeking a way to increase consumer satisfaction by providing uniform standards for multimedia. Engstrom Dir. ¶ 46-47. But forcing Apple to exit the playback market on Windows was not reasonably necessary to achieve workable standards, which could have been achieved through cross-licensing codecs (and other software) and/or cooperation on standards and protocols for data creation, storage and transfer, while maintaining the consumer benefits and innovation that competition provides.

- i. Tevanian testified that, through cross-licensing, Microsoft and Apple could “establish a level playing field where everyone can compete. We viewed it as important to have open standards where customers could buy technology and vendors could have different implementations of the technology.” Tevanian, 11/5/99am, at 60:4-13.
- ii. Tevanian explained that a “single approach” has benefits but ending competition was not necessary to achieve them: “we have a different view of how to achieve that than Microsoft does. In particular, we view the way to achieve that is to establish open standards where everyone can compete with different implementations, and they could compete based on the quality of the implementations or other metrics that would be important to consumers. In the Microsoft model, the goal was to control it, so not only would they control the interfaces, but they would control the implementations. . . . So while it may have appeared to have benefitted consumers, the way they were proposing to achieve it we did not agree with.” Tevanian, 11/5/99pm, at 31:8 - 32:11.
- iii. Timothy Schaaff testified that Apple personnel

DX 2586; Schaaff Dep., 8/28/98, at 508:7 - 512:10 (DX 2586A) (sealed). Mr. Schaaff also testified about discussions internally and with Microsoft about other arrangements with potential benefits for consumers that did not depend on eliminating competition in the playback market. DXs 2586; Schaaff Dep., 8/28/99, at 337:19 - 338:15 (DX 2586) (licencing codecs) (sealed), 353:15 - 354:3  
361:18 - 365:2 (same).

- iv. In its June 15 written proposal, Microsoft listed a number of items, such as cross licensing codecs, that would have improved compatibility and interoperability issues but do not inherently require that the two firms agree to cease competition. GX 912.

82.2. Second, the contemporaneous evidence demonstrates that, far from seeking to benefit consumers by improving the ensuring compatibility, Microsoft's overriding objective was to control the APIs to which developers write.

- i. See supra ¶ 78.
- ii. Engstrom wrote that it was important to convince Intel not to assist Sun in writing Java multimedia APIs, "esp. those that run well, ie native implementations, on Windows." GX 235.
- iii. Microsoft told Intel that it sought to eliminate platform-level threats through a strategy of "embracing" the platform-level standards, "extending" them in Microsoft-dependent ways, and thereby "extinguishing" the threat to Microsoft's control over standards. See supra Part V.A.3; ¶ 91
- iv. See infra ¶ 84.

83. Engstrom's testimony (Engstrom Dir. ¶ 49) that he never told Apple that it would have to give up its runtime on Windows is not credible.

83.1. Engstrom's testimony is contrary to the more reliable testimony of Schaaff and Schiller, as well as inconsistent with the contemporaneous documents.

- i. See supra ¶¶ 78.2, 79.2
- ii. Microsoft's David Cole clearly expressed to Mr. Gates and Mr. Engstrom that eliminating Apple's QuickTime runtime was Microsoft's ultimate goal: "If we can get Apple to give up on having a runtime on Windows . . ." GX 270.

83.2. Engstrom ultimately conceded that Apple would have little incentive to develop a runtime if it accepted Microsoft's offer.

- i. Engstrom testified that “none of the presentations . . . were predicated on the fact that they would have to stop” offering a QuickTime runtime on Windows (Engstrom, 2/24/99am, at 51:22-24) but later conceded that if Apple adopted the Microsoft runtime, “they are going to have to, at some level, give up, mentally and emotionally, on building this duplicative set of services because it wouldn’t make sense . . . .” Engstrom, 2/24/99am, at 55:6-23. What Mr. Engstrom appears to mean by duplicative is competitive. Engstrom, 2/24/99am, at 51:14-21; 35:24 - 36:13.
2. **Microsoft also attempted to divide markets with RealNetworks, using the same carrot and stick approach it used with other potential platform rivals**

84. Microsoft engaged in a similar attempt to divide markets with RealNetworks as part of its pattern and practice of seeking anticompetitive agreements to eliminate potential threats to the applications barrier to entry.

84.1. Microsoft perceived that RealNetworks (then known as Progressive Networks) multimedia streaming software had the potential to develop into a platform threat, at least in the multimedia area.

- i. On June 5, 1997, Microsoft’s Jim Durkin reported on an internal Microsoft strategy meeting attended by Messrs. Gates, Maritz and Muglia. GX 1576 (6/5/97 Durkin email). Durkin quoted Microsoft Vice-President Muglia as saying: RealNetworks “is like Netscape. The only difference is we have a chance to start this battle earlier in the game.” GX 1576. Durkin also reported that Gates and Maritz had made the decision that “Winning the streaming battle means three things - winning the file format war, winning the client architecture war, and winning the server wars.” GX 1576.
- ii. Mr. Maritz testified that, as of June 1997, Gates believed that streaming was a strategic area that Microsoft needed to win. Maritz, 1/27/99am, 56:25 - 57:10; GX 1576.
- iii. Mr. Maritz also admitted that, although he believed in June 1997 that RealNetworks did not pose the same sort of threat as Netscape, it “had the potential to grow, over time, into a software platform.” Maritz, 1/27/99am, 57:15 - 58:4.

- iv. Mr. Engstrom testified that RealNetworks presented some set of APIs that compete with Microsoft's APIs for developer attention (Engstrom, 2/23/99pm, at 35:24 - 36:10; 83:21 - 84:6) and that RealNetworks technology operates cross platform (Engstrom, 2/23/99pm, 98:3-25).

84.2. Microsoft told RealNetworks that it viewed the "core" multimedia streaming functionality on the client as part of the operating system and requested that RealNetworks cease competing with Microsoft in offering that functionality.

- i. Bruce Jacobsen, Chief Operating Officer of RealNetworks and a former Microsoft employee, testified that he met with Microsoft Vice-President Robert Muglia in the summer of 1997, to discuss, among other things, Microsoft's distribution of RealNetworks software with Windows and Internet Explorer. Jacobsen Dep., 1/13/99, at 153:2 - 158:25; cf. GX 1369 (sealed) (7/18/97 Agreement between Progressive Networks and Microsoft); GX 884 (sealed) (6/17/97 agreement between Progressive Networks and Microsoft).
- ii. Mr. Jacobsen recorded a summary of the meeting shortly after the meeting. GX 1368. Mr. Jacobsen summarized the meeting as follows: "Was cordial but pointed. His basic message was the [sic] wanted us out of core AV. He said that MSFT had concluded that fundamental datatypes like words and numbers were in essence a core part of the operating system . . . He said that he thought video was one of the most exciting datatypes -- since monitors were visual things, video had to be though [sic] like 'words'. and microsoft had to control this franchise. He said that anyone who competed against MSFT in the operating system 'lost' -- that there were only two people left in town who still competed against msft as a potential OS vendor -- Sun and Oracle -- and the rest had been obliterated, and MSFT was targeting these last two. He referenced their scalability day as part of killing Sun. So the message was that if we wanted to do value add on top of their video, fine; if not, we were an OS contender and msft would target us for obliteration. He cited PeopleSoft as ok -- he said adobe had pretensions of OS, but had basically backed off." GX 1368.

84.3. In order to induce RealNetworks to cease competing in core streaming, Microsoft proposed that, if RealNetworks stopped competing in base level streaming, Microsoft

would give its full support to RealNetworks as a value-added software provider; but if RealNetworks continued to compete, Microsoft would use its resources to injure it.

- i. Mr. Jacobsen testified that Muglia explained that Microsoft would seek to injure RealNetworks' business if RealNetworks continued to compete in the fundamentals of audio/visual streaming. Jacobsen Dep., 1/13/99, at 155:4 - 158:25. Mr. Jacobsen quotes Muglia as saying that Microsoft had won most of the operating system wars and the only remaining threats were Oracle and Sun. Jacobsen Dep., 1/13/99, at 156:22 - 157:4. Muglia said Microsoft was trying "to reduce the economic viability of those companies so they wouldn't have the wherewithal to invest and position themselves as operating system competitors of Microsoft." Jacobsen Dep., 1/13/99, at 156:22 - 157:4. Muglia told Jacobsen that a company like Adobe had at one point "operating system pretenses" or "pretensions" but had been chased out of that space. Jacobsen Dep., 1/13/99, at 157:5-10. Muglia told Jacobsen that Microsoft wanted RealNetworks to be like PeopleSoft, a value-added provider that builds applications on top of operating systems but does not threaten any core part of Microsoft's environment. Jacobsen Dep., 1/13/99, at 157:11 - 158:8. Muglia continued: "On the other hand, if you try to do the fundamentals of streaming audio and video, then we would view you as a core competitor and use all our resources to hurt you in your core businesses. " Jacobsen Dep., 1/13/99, at 157:18-22; 158:9-25 (Jacobsen asked Muglia whether Microsoft was asking RealNetworks to abandon core streaming audio and video and Muglia replied affirmatively).
- ii. Mr. Muglia warned RealNetworks, Jacobsen testified, that "Microsoft would aggressively target us as a company, using all of Microsoft's resources, if we stayed in the audio and video space . . . . Bob also said, and I agreed with him, that Microsoft had been successful prior in targeting companies and having severe economic effects on them. Bob did not use Borland as an example, but Borland certainly popped to my mind . . . . The phrase that runs through the industry is that Microsoft performed a cashectomy on Borland, that it lowered the prices of its product, which caused severe disruptions in Borland's cash flow and also in the stock price, which caused Borland to take a series of significant steps, including disposing of some products which historically had been significant competitors to Microsoft products . . . . The example he did use of Adobe . . . where Microsoft had had a very significant effort and success in changing the destiny of a company . . . . So, there was very clear message that they wanted us to leave the space, and that there would be consequences if we didn't. Jacobsen Dep., 1/13/99, at 161:20 - 163:1.

- iii. GX 1368 (quoted above).
- iv. Muglia Supp. Dir. ¶ 26 (Muglia denies mentioning PeopleSoft, but admits citing SAP, another software company that builds on top of, but does not compete with, Windows, as a model for what Microsoft expected from RealNetworks).

84.4. Microsoft induced RealNetworks to enter into a contract that restricted its ability to work with other potential platform-level competitors to Microsoft, Sun and Netscape.

- i. See infra Part V.F.2; ¶ 286.

84.5. As with Netscape and Apple, RealNetworks's product experienced new technical problems working with Windows when RealNetworks declined to abandon the core streaming business.

- i. Mr. Jacobsen testified that Microsoft's Windows Media Player took over MIME types without giving users a choice, overwrote Real Networks software without giving users a choice, essentially depriving the user of the use of the \$29.95 player that had previously been installed. Some but not all of these problems were patched following Mr. Glaser's testimony before the United States Senate. Jacobsen Dep., 1/13/99, at 163:3 - 167:21, 173:8 - 174:8.