

EXHIBIT H

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

EOLAS TECHNOLOGIES, INC.,)	Civil Action No. 6:09-cv-446
)	
Plaintiff,)	
)	HIGHLY CONFIDENTIAL –
vs.)	ATTORNEY’S EYES ONLY
)	
ADOBE SYSTEMS INC., et al.,)	
)	
Defendants.)	
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EXPERT REPORT OF DAVID M. MARTIN JR.

34. The patents-in-suit disclose inventions that make possible interactivity with web page embedded objects over the Internet. The technology claimed in the asserted patents is now so common and pervasive that it is very difficult to remember what the Internet was like before the inventions. To understand the significance of these inventions, it is helpful to take a step back and remember what the Internet looked like when the '906 patent was filed in 1994. The Internet was in its infancy then—there was no Netscape Navigator; no Microsoft Internet Explorer. It was a place of static text, blue-underlined hyperlinks, and the occasional static image. This reality is nicely captured in the following screenshot of Microsoft's first 1994-era website:

Responses to Eolas's Interrogatory Nos. 3-4 to be Answered by Defendant Apple; Oracle's Responses to Eolas's Interrogatory Nos. 4-5 to be Answered by Defendant Oracle. While Apple's current discovery responses indicate it did not participate in the PAG, other documents produced by the W3C indicate that Apple did in fact nominate its own personnel to represent it and participate in the PAG. MIT resp. to EOLAS subp. 0324.

66. On June 6, 2006, the PTO issued the reexamination certificate for the '906 patent, that expressly confirmed the validity of all claims in light of the "Viola" and other references. Faced with the PTO's explicit rejection of the exact same art on which Microsoft was relying, Microsoft settled the litigation with Eolas in 2007. *See* EOLASTX-0000009876-81. *See also* the file history for the first reexamination of the '906 patent.

67. Not long after losing the first re-examination, Microsoft urged a second reexamination of the '906 patent. This reexamination was completed on February 3, 2009. This second reexamination, like the first, reaffirmed the validity of the claims of the '906 patent in light of the "Viola" and other references. *See* the file history for the second reexamination of the '906 patent.

IV.E. Adobe, Apple, Oracle, Microsoft and Others form a Common Interest Group to Attempt to Invalidate Eolas's Patents and/or Work Around Them — Both Unsuccessful

68. In the fall of 2003, shortly following the jury's verdict in favor of Eolas in the Microsoft trial Adobe, Apple, Oracle (the former Sun Microsystems), Microsoft and others, formed an Eolas-specific common interest group. The group also maintained an email distribution list "eolas-concerns@sun.com." APPLE_EOLAS_0008_001927122. The group pursued three parallel courses of action. First, they mounted the aforementioned unsuccessful challenge to the validity of Eolas's '906 patent in the Patent Office. Second, they discussed potential workarounds to Eolas's patents, none of which they appear to have ever been successfully implemented or pursued. Third, they worked hand-in-hand with Microsoft to minimize the effect that Microsoft's click-to-activate purported workaround would have. In effect,

Adobe, Apple and Oracle designed around Microsoft's purported design around and continued to infringe Eolas's patents. Documents related to this group and its work were produced by Adobe at ADBE0193963-4059 and ADBE01934355-4014 and Apple at APPLE_EOLAS_0008_001927120-7193.⁶

69. As explained in a copy of their agreement, the parties to this group "have determined that they have common legal interests in connection with an existing or anticipated litigation relating to certain alleged patent rights of Eolas Technologies ('Patentee') in U.S. Patent No. 5,838,906, (the 'Patent Controversy')." ADBE0193983. This group included high-level in-house attorneys and technical personnel from each of Adobe, Apple, Oracle (the former Sun Microsystems). The participants included, among others:

- Meme Rasmussen, who is presently Adobe's Chief Privacy Officer (see: <http://blogs.adobe.com/conversations/tag/meme-jacobs-rasmussen>).
- Mike Sundermeyer, who was Senior Vice President of Product Design at Macromedia and then transitioned to Adobe as a Vice President of Product Design (see: <http://www.linkedin.com/in/sundy>).
- Chip Lutton, who is presently Apple's Chief Patent Counsel (see: <http://www.linkedin.com/pub/chip-lutton/6/521/957>).
- Darin Adler, who is presently Apple's engineering manager for Safari (see: http://en.wikipedia.org/wiki/Darin_Adler).
- Eric Carlson, who was in "QuickTime Engineering" at Apple (see: APPLE_EOLAS_0008_001927166).
- Lee Patch, who was a senior vice president at Sun Microsystems (see: <http://www.linkedin.com/pub/lee-patch/b/317/39a>).
- Eric Green, who was formerly Executive Vice President, Software Division, Sun Microsystems (see: <http://people.forbes.com/profile/richard-l-green/75338>)

70. See e.g. APPLE_EOLAS_0008_001927120. Other personnel from these companies also participated, and they are identified in the aforementioned documentation related to the operation of this group.

⁶ I understand that no documents related to the work of this group were produced by Oracle (the former Sun Microsystems). I also note that certain documents related to this work which appear in Adobe's production do not appear in Apple's even though Apple employees are listed as recipients of these documents (see e.g. ADBE0194362 and ADBE0194048-49) and visa-versa (see e.g. APPLE_EOLAS_0008_001927136-38). Accordingly, the production of materials from this timeframe may not be complete or may no longer exist.

71. First, this group had various discussions related to their efforts to challenge the validity of Eolas's '906 patent at the Patent Office. *See, e.g.*, ADBE0194054 and ADBE0194355-4371. These documents discuss the lobbying pressure that that the group collectively placed on the Patent Office to order the re-examination (*see, e.g.*, ADBE0194054) as well as meetings and conversations held between representatives of the group and high-level officials at the Patent Office, including Deputy Director Kunin (*see, e.g.*, ADBE0194362 and ADBE0194370) and their desire to keep their efforts at the Patent Office "confidential" because there were "[n]o reasons to think that Eolas knows of this development." ADBE0194371. These discussions also reveal that while appearing to act independently at the Patent Office, each of Adobe, Oracle (former Sun Microsystems), Apple, Microsoft and the W3C were in truth acting in consort in seeking reexamination of Eolas's '906 patent. *See* ADBE0194054 and ADBE0194355-4371. And, as mentioned previously, after completing this reexamination, the Patent Office confirmed the validity of the '906 patent.

72. Second, this group also had various discussions in the fall of 2003 related to potential workarounds to Eolas's '906 patent. *See, e.g.*, APPLE_EOLAS_0008_001927120-7192 and ADBE0193973-4052. This group maintained a website called "www.macromedia.com/906" which required the following credentials to log-in "login: design paswd: around906." APPLE_EOLAS_0008_001927120. The purpose of this website was "to track our combined technical fix/investigations for the 906 project." *Id.* As far as I have been able to tell, despite bringing together high-level in-house counsel and engineering personnel, this group was unable to devise a viable non-infringing alternative to Eolas's patents.

73. Several emails from the group discuss potential "JavaScript fix test cases" which were posted to the group's website. *See* APPLE_EOLAS_0008_001927124-133. However none of them "work on Mac OS X." *Id.* They also mention that these test cases were in a directory entitled "examples." *Id.* However, this directory does not appear on the ADBE018749 production DVD (which I understand included information posted to web address www.macromedia.com/906). Accordingly, I am unable to

review these specific “test cases.” However, nothing I have seen on any of Apple’s, Adobe’s, or Oracle’s websites or elsewhere in their production of documents in this case, shows or otherwise suggests that any test case which avoids infringement of Eolas’s patents was proposed by—let alone implemented by—these defendants (or anyone else). See the specific discussion of infringement for these defendants herein.

74. The group also discussed another “possible design-around” where they commented out the “‘movie’ parameter” of the “object tag.” APPLE_EOLAS_0008_001927155-64. Apparently, the group contended that this solution might avoid infringement of Eolas’s ‘906 patent because “the object tag has no reference to external data.” *Id.* However, even in this example, there is still an embed tag that refers an external Flash file. *Id.* (<embed id="myEmbedTag" src="flash/FlashPix.swf"...). For at least this reason, this proposed example would not avoid infringement of Eolas’s patents. In any event, not only would this example not avoid infringement, I have not seen any evidence that any defendant (or anyone else)—including Apple, Adobe or Oracle—has ever employed this example on their website.

75. Accordingly, I have seen no evidence that any member of this group (or any other entity)—other than Microsoft—proposed or implemented any design changes to their products or websites in an attempt to avoid infringement of Eolas’s patents. As explained in the sections that follow, Microsoft’s purported workaround (called “click to activate”) failed to avoid infringement of Eolas’s patents. I also explain in the following sections why Microsoft’s purported workaround was unacceptable to users of the Web in 2006, and would remain unacceptable today even if it did avoid infringement, which it does not.

IV.F. Adobe and Apple Introduced Workarounds to Microsoft’s Click-to-Activate Purported Workaround Because This Workaround Led to An Unacceptable User Experience

76. Having already started their attempt to invalidate Eolas’s patents, and not arriving at any effective non-infringing substitutes to the invention in Eolas’s patents, the group next turned their attention to

their third course of action: working with Microsoft to minimize the disruption that Microsoft's click-to-activate purported workaround would have on the "user experience." As described herein, the group pursued a method of dealing with Microsoft's workaround to make sure that the user experience would not be adversely affected. In effect, the group collectively proposed and introduced a workaround to Microsoft's workaround. The effect of this was that even after Microsoft implemented its workaround for Internet Explorer, infringement of the Eolas's patents would continue unabated.

77. The "presentations" directory on the ADBE018749 production DVD (which I understand included information posted to web address www.macromedia.com/906) indicate the motivation for each of the participants in the group—each of whom were ostensibly competitors with one another—to work together to minimize the disruption Microsoft's workaround would create. These presentations indicate concern that Microsoft's proposed changes (which came to be called "click-to-activate") would adversely affect the "user experience." For example, the presentations state that:

- "Due to some recent patent-related litigation, Microsoft is changing Internet Explorer to prevent the automatic invocation of ActiveX controls (Flash Player, Shockwave, QuickTime, Acrobat, Real Media Player, etc.). If an appropriate design-around technique is not employed for a given web site, the content will no longer automatically play and the user-experience will be completely broken for users with this new (patched) version of IE." See 906update_final_9_26.ppt.
- Microsoft's "changes may affect the user experience of websites that feature active content. Macromedia is working with Microsoft to provide tools and resources to help our customers update their sites. Once updated, websites using active content will continue to provide consistent user experiences across browsers and platforms previously supported." See 906BreezeLive_FINAL_Oct6.ppt.

78. The presentation entitled "906BreezeLive_wa_part1" also includes a screenshot of an early version of Microsoft's click-to-activate proposal:

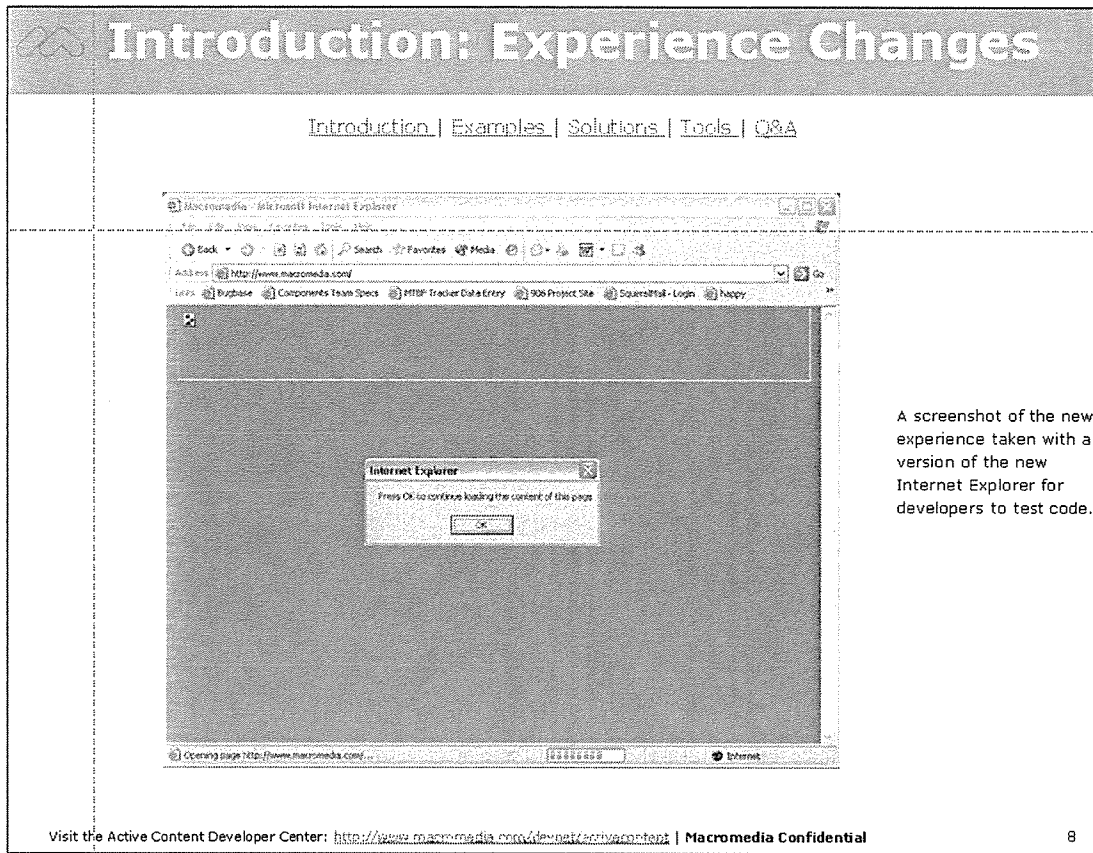


Figure 4: Example of early "click-to-activate" proposal

79. As this presentation explains, "active content technologies have long been tightly integrated with the browser – the invocation and interaction with active content is often indistinguishable from surrounding content in web pages." It further explains that the "user experience" will be negatively impacted because "the new version of Internet Explorer will prompt users to accept or cancel the invocation of each active content instance on a web page."

80. Against this backdrop, each of Apple, Adobe and Sun Microsystems (subsequently acquired by Oracle) worked with Microsoft to minimize the disruption to the "user experience" that would result from Microsoft's purported click-to-activate workaround. For example, the presentation entitled "906BreezeLive_wa_part1" in the "presentations" directory on the ADBE018749 production DVD" indicates that they may use "JavaScript in an external JavaScript (.js) file to insert the <OBJECT> and <EMBED> tag combination into the HTML will ensure that sites with active content display properly in

the new Internet Explorer.” In other words, even after Microsoft’s introduction of its workaround, the group was taking steps to make sure that the user experience in playback and interaction with active content would not be adversely affected.

81. A summary of potential workarounds to Microsoft’s workaround which appear to have been discussed by the group appear in the “presentations” directory of the ADBE018749 production DVD (which I understand included information posted to web address www.macromedia.com/906). Specifically, a presentation entitled “906update_final_9_26” describes a potential “Manual fix” as the “external JavaScript fix that Microsoft will be recommending.” While the documentation is unclear on this point, and the code does not appear to be on the ADBE018749 production DVD, I understand that this “manual fix” is the same or similar to the one described on Adobe’s webpage using the name AC_FL_RunContent (<http://www.adobe.com/devnet-archive/activecontent/>) and described in response to Eolas’s Interrogatory No. 2 to be Answered by Defendant Adobe. Apple also described it on its webpages (<http://developer.apple.com/internet/ieembedprep.html> and <http://www.apple.com/quicktime/tutorials/embed.html>⁷) and in response to Eolas’s Interrogatory No. 4 to be Answered by Defendant Apple.

82. The so-called “manual fix” does not avoid infringement of Eolas’s patents. Specific examples of the “manual fix” being utilized to generate <object> and/or <embed> tags (and variations thereof) are discussed with respect to many of the defendant-specific infringement examples herein (including those on the Adobe and Apple web pages). In fact, what this “manual fix” does is workaround Microsoft’s click-to-activate workaround to avoid disrupting the user experience and make sure that the interactive content would work as it did before.

83. After describing the “Manual fix” to Microsoft’s purported workaround, the “906update_final_9_26” presentation discusses a “beta” that will be conducted shortly after Microsoft

⁷ This web page has since been removed, but a version from 2010 is available through <http://web.archive.org/web/20100524070411/http://www.apple.com/quicktime/tutorials/embed.html>.

announces its “fix.” The “beta” appears to have employed the “manual fix.” The following excerpts from emails from the ADBE018749 production DVD discuss the public’s negative reaction to Microsoft’s workaround and the need for users to implement the “manual fix” themselves:

- “Details: I am glad you are being proactive on this issue. But what I want to know is whether DW & Flash MX will have a patch sent that will generate these changes automatically, so embedding objects in a page, or just putting the whole movie in a [page], will be as easy as it has been until now. Many users are like me, and have neither the complete skills or desire to have to implement these ‘pain in the ass’ fixes. Please tell me that Macromedia recognizes this, and will be working to make using Flash objects as easy as it always has been - which is why so many of us love it so much!”
- “Thank you for posting this information. I have literally hundreds of pages of content spread out over tens of sites that have the embed or object tag in them. It's a very good thing that I can't get my hands on anyone at Microsoft in the IE development management. Please keep posting this type of information, although this is going to cause me hundreds of hours of work, I appreciate being told before the change happens.”

84. Additional discussion of Microsoft’s purported click-to-activate workaround appears in the next section.

85. The group also proposed the following to assist in working around Microsoft’s click-to-activate workaround:

- “Script/GUI fix” — described as “a standalone Perl script and related GUI that reports on uses of the object/embed/applet tags that will not run under the new version of IE.” “This solution works on the actual files on the web server, thus it will not catch dynamically-generated OBJECT tags (i.e. from CF, JSP, etc.) or password protected pages.” This describes a tool that can be used by a website provider to identify some of the pages that will be affected by the click-to-activate update to IE. As such, it is not a workaround to the ‘906 patent.
- “Server Side Fix”—described as being needed in “order to catch server-generated OBJECT tags, we are developing some web server plug-ins that report on invalid uses of object/embed/applet tags at the point when a page is delivered from the server.” This describes another tool that can be used by a website provider to identify some of the pages that will be affected by the click-to-activate update to IE. As such, it is not a workaround to the ‘906 patent.

86. An Apple engineer named Eric Carlson discussed these issues in his deposition. E. Carlson Depo. at 74:5-87:1. Adobe employees including Mike Sundermeyer provided similar testimony. M. Sundermeyer Depo. at 25:2-54:18.

87. In light of the foregoing, while each of Adobe, Apple and Oracle (the former Sun Microsystems) have been aware of Eolas's patents since at least 2003, and have discussed challenges to the validity of the '906 patent and potential workarounds to the '906 patent, I have seen no evidence of the proposal of any effective design change by any defendant in this case (or any other entity), let alone implementation of any such change, which would avoid infringement of Eolas's patents.

IV.G. Microsoft's "Click-to-activate" is Not an Acceptable Non-infringing Alternative to the Inventions Claimed in the Asserted Claims of the '906 and '985 Patents

88. Following Eolas's jury verdict against Microsoft, in April 2006, Microsoft introduced a purported workaround to Eolas's patented inventions called "click to activate." This is the Microsoft "fix" discussed in the "906update_final_9_26" presentation from the ADBE018749 production DVD described in the previous section.

89. Microsoft's click-to-activate workaround is discussed on Microsoft's website. *See, e.g.,* <http://msdn.microsoft.com/en-us/library/ms537508.aspx>, <http://support.microsoft.com/kb/945007>, <http://blogs.msdn.com/b/ie/archive/2007/11/08/ie-automatic-component-activation-changes-to-ie-activex-update.aspx> and <http://blogs.msdn.com/b/ie/archive/2008/04/08/ie-automatic-component-activation-now-available.aspx>. This purported workaround does not avoid infringement of Eolas's patents.

90. Microsoft's explanation of click-to-activate cited above indicates that the version of Internet Explorer using click-to-activate (the "modified IE") still automatically invoked the executable application to execute on the client workstation in order to display the object and enable an end-user to directly interact with it. Specifically, after the modified IE parsed an <object> embed text format, it automatically invoked the ActiveX control executable application for the purpose of displaying the data object and enabling an end-user to directly interact with it. Interactive ActiveX controls have this

purpose at their core — to display and enable interaction — and that is why the modified IE still invoked such ActiveX controls during the click-to-activate timeframe.

91. After the ActiveX control began executing, the modified IE called the EnableWindow API function on the associated object display area in order to disable the flow of mouse and keyboard input to the window. The documentation for EnableWindow at <http://msdn.microsoft.com/en-us/library/ms646291.aspx> indicates that this operation sends the window a WM_CANCELMODE message, which the ActiveX control can receive and act upon. Clicking or otherwise “activating” the window then sends another EnableWindow message to the window. Microsoft additionally describes click-to-active by stating that “When a control is inactive, it does not respond to user input; however, it does perform operations that do not involve interaction. If, for example, you open a web page that uses Microsoft Windows Media Player to play a music file, the music plays after the page loads. You cannot interact with Windows Media Player until the control's user interface is activated [...]” In other words, the modified IE effectively only added a requirement that the end-user interact with the object in an additional way. The ActiveX control is still invoked in order to display the object and to enable an end-user to interact with it.

92. Microsoft’s documentation states that even this EnableWindow procedure is not even performed if the ActiveX control is loaded “from external script files”. However, ‘906 claims 1 and 6 describe automatic invocation of executable applications due to parsing an embed text format in the first distributed hypermedia document. An external script file can be in a distributed hypermedia document in the same way that an external image file can be in a distributed hypermedia document; the fact that it is loaded from a different URL does not place it outside of the document.

93. Even if this purported workaround avoided infringement (which it does not), it was so negatively received that it was not acceptable then and would not be acceptable today. This is one of the reasons Microsoft rushed to remove this requirement after it settled its prior litigation with Eolas. Specific

examples of the negative reception of this workaround to the public are found in the comments section of the aforementioned Microsoft webpages (<http://blogs.msdn.com/b/ie/archive/2007/11/08/ie-automatic-component-activation-changes-to-ie-activex-update.aspx> and <http://blogs.msdn.com/b/ie/archive/2008/04/08/ie-automatic-component-activation-now-available.aspx>), in various pieces of unsolicited mail sent to Eolas by members of the general public after Microsoft introduced its workaround (*see, e.g.*, EOLASTX-E-0000225233; EOLASTX-E-0000606632; EOLASTX-E-0001653931; EOLASTX-E-0001657426) and also in various documents produced by the defendants in this case (*see, e.g.*, the documents and emails on the ADBE018749 production DVD). The unacceptability of this purported workaround is also shown by the great lengths—discussed in the prior sections—that Apple and Adobe went to in order to workaround Microsoft’s workaround to avoid an unacceptable “user experience.” As a further example, Adobe’s CTO Kevin Lynch described the requirement that “a user would have to actually click on it in order to make it work” as one “that changes the experience of the content and the user’s expectations and it’s a bad experience overall.” See April 26, 2011 deposition of Kevin Lynch at p. 94.

IV.H. Eolas’s Patents Are Essential to the Practice of the HTML Standard

94. The World Wide Web Consortium (W3C) is an international standards setting body for the World Wide Web. It describes itself as “an international community where Member organizations, a full-time staff, and the public work together to develop Web standards.” <http://www.w3.org/Consortium/>. The W3C was founded by and is now led by Tim Berners-Lee. <http://www.w3.org/Consortium/facts>. The W3C’s stated mission is “to lead the World Wide Web to its full potential by developing protocols and guidelines that ensure the long-term growth of the Web.” <http://www.w3.org/Consortium/mission>.

95. Today there are over 300 worldwide members of the W3C. <http://www.w3.org/Consortium/Member/List>. These members include technology vendors, content providers, corporate users, research laboratories, standards bodies, and governments.

<http://www.w3.org/Consortium/Member/stats.html>. Among the W3C's members are defendants Adobe, Apple, Google, Oracle, and Yahoo. <http://www.w3.org/Consortium/Member/List>.

96. Practicing certain portions of the HTML standard necessarily results in infringement of the asserted claims of Eolas's patents-in-suit—particularly the implementations of the HTML standard discussed in the defendant-specific infringement analysis provided herein. The HTML standard published by the W3C defines the use of various tags which can be utilized to embed interactive content in a webpage. As the W3C explains “HTML is the language for describing the structure of Web pages.” <http://www.w3.org/standards/webdesign/htmlcss>. It is used to “publish online documents” and “retrieve online information.” *Id.*

97. Section 4.8 of the current draft HTML standard is called “embedded content.” <http://www.w3.org/TR/html5/embedded-content-1.html#embedded-content-1>. Within this section, the HTML draft standard defines the following tags:

- <embed>—as the standard explains “the embed element represents an integration point for an external (typically non-HTML) application or interactive content.” <http://www.w3.org/TR/html5/the-iframe-element.html#the-embed-element>. It also includes the specification of the “src” (or source element) which specifies the external location of the content to be embedded and the “type” element which specifies the type of content to be embedded (and is the information used by the browser to identify and locate the executable application). *Id.* See also <http://www.w3.org/wiki/HTML/Elements/embed>.
- <object>—as the standard explains “the object element can represent an external resource, which, depending on the type of the resource, will either be treated as an image, as a nested browsing context, or as an external resource to be processed by a plugin.” <http://www.w3.org/TR/html5/the-iframe-element.html#the-object-element>. It further explains that “the following example shows how a plugin can be used in HTML (in this case the Flash plugin, to show a video file).” *Id.* Like the <embed> tag, it also includes the specification of the “src” (or source element) which specifies the external location of the content to be embedded and the “type” element which specifies the type of content to be embedded (and is the information used by the browser to identify and locate the executable application). *Id.* See also <http://www.w3.org/wiki/HTML/Elements/object>.
- <video>—as the standard explains “a video element is used for playing videos or movies” and “[video] content may be provided inside the video element.” <http://www.w3.org/TR/html5/video.html#video>. It further explains that there are “attributes common to all media elements” including the specification of the “src” (or source element)

which specifies the external location of the content to be embedded. *Id.* The standard also notes that the type of information identified by the video element “is a media element whose media data is ostensibly video data, possibly with associated audio data.” *Id.* See also <http://www.w3.org/wiki/HTML/Elements/video>. This data in turn is used by the browser to identify and locate the executable application.

- <audio>—as the standard explains “an audio element represents a sound or audio stream” and “[audio] content may be provided inside the video element.” <http://www.w3.org/TR/html5/video.html#audio>. It further explains that there are “attributes common to all media elements” including the specification of the “src” (or source element) which specifies the external location of the content to be embedded. *Id.* The standard also notes that the type of information identified by the audio element “is a media element whose media data is ostensibly audio data, possibly with associated audio data.” *Id.* See also <http://www.w3.org/wiki/HTML/Elements/audio>. This data in turn is used by the browser to identify and locate the executable application.

98. The standard further defines what it means to have “embedded” and “interactive content” on a webpage. Specifically, it teaches:

- “Embedded content is content that imports another resource into the document, or content from another vocabulary that is inserted into the document.” <http://www.w3.org/TR/html5/content-models.html#interactive-content>. The standard explains that certain tags including the aforementioned <embed>, <object>, <video> or <audio> tags may be used to embed content into a webpage. *Id.*
- “Interactive content is content that is specifically intended for user interaction.” <http://www.w3.org/TR/html5/content-models.html#interactive-content>. The standard explains that certain tags including the aforementioned <embed>, <object>, <video> or <audio> tags may be used to embed interactive content into a webpage. *Id.*

99. In my opinion, practicing the HTML standard in presently available web browsers via the use of the <embed>, <object>, <video> or <audio> tags to embed interactive content in a webpage delivered over the Internet—as all of the defendants in this case in fact do—leads to infringement of the asserted claims of Eolas’s patents. The specifics of this infringement are discussed in this report on a defendant-by-defendant and accused product-by-accused product basis.

IV.I. The W3C Standards-Setting Body Has Been Unable to Modify the HTML Standard to Remove Eolas’s Inventions

100. Following Eolas’s jury verdict against Microsoft, the W3C hosted a meeting at Macromedia (now part of Adobe) to discuss Eolas and its patents. On August 19, 2003 the W3C invited its members, as

well as “other key commercial and open source software interests” to attend an ad hoc meeting to discuss *Eolas vs. Microsoft* and the '906 patent. The meeting was hosted by Macromedia, in their San Francisco offices. The following W3C webpage details the impetus for the meeting:

<http://www.w3.org/2003/08/patent>, which was concern over the effect of the '906 patent on the industry. See MIT resp. to Eolas subp. 0189-0379. See also ADBE0193975 (email listing participants in the meeting from Apple, Adobe, Sun Microsystems).

101. Reports also suggest “[t]he objective of the meeting was to evaluate potential near-term changes that could be implemented in browsers, authoring tools and Web sites as a result of the court case” (http://news.cnet.com/Will-Microsoft-tweak-IE/2100-1012_3-5069943.html) and that the strategy session “described various methods [Microsoft] proposed for evading the particulars of the Eolas patent in launching applications like Macromedia Flash, Java applets and Adobe's Acrobat Reader.”

http://news.cnet.com/IE-patent-endgame-detailed/2100-1032_3-5074799.html. Approximately 50 people appeared in-person at the meeting (including representatives of Apple, Adobe and Oracle as discussed in their discovery responses). See Adobe's Responses to Eolas's Interrogatories Nos. 2-5 to be Answered By Defendant Adobe; Apple's Responses to Eolas's Interrogatory Nos. 3-4 to be Answered by Defendant Apple; Oracle's Responses to Eolas's Interrogatory Nos. 4-5 to be Answered by Defendant Oracle.

102. On August 23, 2003 the W3C formed the “HTML Patent Advisory Group” (“PAG”). Members of the PAG are also listed on the Group's homepage. Microsoft, Adobe, and Oracle (Sun Microsystems) were all represented in the Group. <http://www.w3.org/2003/09/pag>. As mentioned previously, while Apple indicates in its discovery responses that it did not believe it participated in the PAG, documents produced by the W3C indicate that Apple personnel were nominated by Apple to participate in the PAG. MIT resp. to EOLAS subp. 0324. The stated mission of the PAG was “to study issues for HTML-related Working Drafts and Recommendations raised by the court case of *Eolas v. Microsoft* and US Patent

5,838,906.” <http://www.w3.org/2003/09/pag>. The Patent Advisory Groups charter is publicly available: <http://www.w3.org/2003/09/w3c-html-pag-charter.html>. The Patent Advisory Group characterizes the '906 patent as having “specific patent claims likely to be essential to W3C work that are not available on royalty free terms.” <http://www.w3.org/2003/09/pag>. See also MIT resp. to Eolas subp. 0189-0379.

103. Like the common interest group discussed previously, the PAG—including Microsoft, Adobe, and Oracle (Sun Microsystems)—pursued two parallel courses of action. First, on October 28, 2003 the W3C sent a letter upon the endorsement of the Patent Advisory Group requesting reexamination of Eolas’s '906 Patent. This letter was signed by the Tim Berners-Lee, director of the W3C. MIT resp. to EOLAS subp. 0251-0273. As also mentioned previously, the Patent Office subsequently ordered the reexamination, which concluded by affirming the validity of the '906 patent.

104. Second, the PAG recognized the importance of Eolas’s patented technology to its HTML standards. Specifically, it noted that:

Under the Current Patent Practice, a PAG needs to be launched due to the discovery of specific patent claims likely to be essential [to a W3C standard] that are not available on royalty free terms. The mission of this Patent Advisory Group is to study issues for HTML-related Working Drafts and Recommendations raised by the court case of Eolas v. Microsoft and US Patent 5,838,906.

MIT resp. to EOLAS subp. 0274.

105. In a document entitled “FAQ on US Patent 5,838,906 and the W3C” the PAG made the following observations:

- “The outcome of the recent case of Eolas v. Microsoft in regards to US Patent 5,838,906, if upheld on appeal in its present form, may have implications for the World Wide Web. W3C believes that it is important that the Web community begin to consider the range of technical options available.”
- “On 23 September 2003, W3C launched a Patent Advisory Group (a mechanism for addressing patent infringement risks to the W3C Recommendations) to discuss issues arising from US Patent 5,838,906 in regards to HTML-related Working Drafts and Recommendations.”
- “Potential solutions include, but are not limited to, changes to HTML-related specifications to avoid US Patent 5,838,906 . . .”

- In discussing the '906 patent, the W3C noted that it “may affect all Web pages involving dynamically loaded browser extensions that use external data and which feature some kind of interactivity. Such browser extensions are widely used today e.g. for integrating audio, video, and interactive media applications into Web pages. This could therefore affect a large number of Web pages.”
- The W3C also noted that the potentially impacted standards “include HTML-related specifications.”

MIT resp. to EOLAS subp. 0281-0283.

106. In its discussions, the PAG—like the common interest group—indicated that “there was widespread agreement that a solution that minimizes the effect of changes to Web software, Web sites and the user experience was needed.” See ADBE0193975. Nonetheless, despite recognizing the importance of Eolas’s patented technology to the HTML standard, forming the Eolas-specific PAG and requesting reexamination of Eolas’s ‘906 patent, the W3C and its members—including various defendants in this case—did not modify the HTML standard to remove Eolas’s patented technology. In fact, the development of the standard from 2003 to today—including the most recent version of the HTML standard discussed previously—shows the continued use (and in fact expansion of prior use) of Eolas’s patented technology in the standard. A specific example of this expanded use is the inclusion of the new <video> and <audio> tags in the most recent version of the standard.

IV.J. The Level of Skill in the Art

107. The ‘906 and ‘985 patents describe distributed hypermedia systems and methods for automatically invoking executable applications providing interaction and display of embedded objects within a hypermedia document. In my opinion, these patents are directed to those with a level of skill corresponding to a bachelor’s degree in computer science or equivalent experience. In 1994 when the ‘906 patent was filed, I held a bachelor’s degree in computer science and had been working in the software field for 15 years. I installed, used, and demonstrated Mosaic in 1993.

IV.K. Construction of Claim Terms