

"The integration argument has not yet taken hold with Developers, as the majority holds the opinion that Internet Explorer is a separate product from the operating system", thus proving that the integration of the two products is the result of a strategy of Microsoft's to leverage the ubiquity of Windows." (emphasis added)²⁴²

(245) Last, also in 1996, suppliers of operating system products were not the same as the suppliers of web browsers. In the early 1990s, the main suppliers of web browsers were NCSA Mosaic, whose web browser was first designed for Unix²⁴³, and then ported to Macintosh and Windows, and Netscape which released its first web browser in 1994. Neither of them provided an operating system, but rather adapted their web browsers to the various operating systems present on the market at that time. Conversely, suppliers of operating systems did not develop web browsers. Microsoft released the first version of its web browser only in 1995, and the first release of Safari, Apple's web browser, was in 2003. As regards suppliers of Unix operating systems, none of the major ones has developed its own web browser.

4.3.1.1.2.4 Microsoft argues that bundling a web browser with the operating system has become normal commercial practice.

(246) Microsoft states that other software vendors integrate web browsing technologies in their client PC operating systems and that this is normal commercial practice because there would be no demand for a client PC operating system without a web browser.²⁴⁴

(247) If anything, the argument that other operating system vendors offer web browsers together with the operating system shows that customers predominantly want their client PCs to provide web browsing capabilities, but does not imply that there is one single product. For illustration, if Microsoft provided a third party's web browser with Windows, rather than its own – or OEMs provided such a bundle – consumers' demand for web browsing capabilities would be equally met. Second, other operating system vendors allow for the web browser to be uninstalled, whilst Internet Explorer cannot be uninstalled.

²⁴² Email of Thursday 12 March 1998, 4:35 pm, from Ann Redmond to Bob Herbold, subject "Developer Perspective" (MS-CC-Sun 000000654530), on page 2.

²⁴³ Mosaic was available for Unix in August 1994 at the latest. See <ftp://ftp.ncsa.uiuc.edu/Mosaic/Unix/> and <ftp://ftp.ncsa.uiuc.edu/Mosaic/Unix/README.Mosaic>, both printed on 23 October 2008.

²⁴⁴ See Microsoft's submission of 5 March 2008, page 30, reply to question 8: "The existence of other vendors' products would seem to indicate that there is some demand products specializing in a specific feature separate from demand for a client PC operating system. However, that does not necessarily imply that there is demand for PC operating systems without particular functionality."

(248) As the Court of First Instance pointed out in *Microsoft*, customers may wish to obtain the products together, but from different sources.²⁴⁵

4.3.1.1.2.5 Internet Explorer has not evolved into a component of the client PC operating system over time

(249) In *Microsoft*, the Court of First Instance observed that the:

*"[...] IT and communications industry is an industry in constant and rapid evolution, so that what initially appear to be separate products may subsequently be regarded as forming a single product, both from the technological aspect and from the aspect of the competition rules."*²⁴⁶

(250) Whilst the Commission fully shares this observation by the Court of First Instance, it considers that even today, web browsers and client PC operating systems cannot be regarded as forming a single product, either from a technical aspect or from the aspect of competition rules.

(251) A strong indication that there is no technical necessity to integrate the web browser with the client PC operating system is that Microsoft develops the client PC operating system and the web browser with different teams according to different schedules and ships updates and new versions of Internet Explorer independent of updates or new versions of its client PC operating system. Furthermore, as outlined above, other client PC operating system vendors such as Linux vendors rely on web browsers from third party sources and do not develop web browsers themselves, which is another indication that technically, web browsers are not a component of client PC operating systems.

(252) As regards the argument that since Microsoft has bundled its web browser with Windows from December 1995 onwards (when Internet Explorer was included in Windows 95 OEM Service Release 1), this conduct has become commercial usage, it first has to be recalled that "*[...] it is difficult to speak of commercial usage in an industry that is 95% controlled by Microsoft*".²⁴⁷

(253) Second, the practice of prior bundling cannot exculpate Microsoft's conduct. If it were otherwise, any dominant company could distort competition in adjacent markets simply by bundling products for long enough to establish a track record.

²⁴⁵ Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601, at paragraph 922.
²⁴⁶ Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601, at paragraph 913.
²⁴⁷ Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601, at paragraph 940.

4.3.1.1.2.6 Conclusion

(254) It follows from the foregoing that client PC operating systems and web browsers for client PC operating systems are distinct products for the purposes of Community competition law. As products distinct from client PC operating systems, web browsers for client PC operating systems are susceptible to be tied within the meaning of Article 82 EC.

(255) In any event, even if it were to be admitted that tied sales of client PC operating systems and web browsers for client PC operating systems are in accordance with commercial usage or there is a natural link between the two products in question, such sales may still constitute abuse within the meaning of Article 82 unless they are objectively justified.²⁴⁸

4.3.1.1.3 Microsoft does not give customers a choice to obtain Windows without Internet Explorer

4.3.1.1.3.1 Coercion applied to OEMs and users

(256) The third constituent element of illegal tying pursuant to Article 82 EC is that customers are not given the choice of acquiring the tying product without the tied product. The dominant undertaking renders the availability of the dominant (tying) product conditional on the customer's simultaneous acquisition of the tied product.

(257) In general, the OEMs that license Windows from Microsoft for pre-installation on their client PCs are the direct "addressees" of this coercion, passing it ultimately on to the users. By virtue of Microsoft's licensing model, OEMs must license Windows with Internet Explorer pre-installed.²⁴⁹ OEMs which choose to install an alternative web browser on Windows can only do so in addition to Internet Explorer. If a user buys Windows in a retail store, the same considerations apply.²⁵⁰

(258) There are no ready technical means to un-install Internet Explorer. OEMs confirmed they cannot remove Internet Explorer from Windows (see above at paragraph (123)).

²⁴⁸ See, to that effect, Case C-333/94 P *Tetra Pak International v Commission* [1996] ECR I-5951, at paragraph 37.

²⁴⁹ See paragraph (123).

²⁵⁰ Where Microsoft sells versions of Windows in retail shops, the coercion directly applies vis-à-vis consumers.

- (259) OEMs can, however, change the setting of the default web browser on a PC. In order to do so, they have to install a competing web browser on the PC, and to make it the default. This operation does not replace some of the various operations they have to do before shipping the PC, but is only added to them. They would also have to establish that the PC works properly with the new browser, which would require further testing. OEMs thus have very little incentive to install a second web browser.
- (260) IDC estimates that 92.0% of new PCs shipped in 2006 had Windows pre-installed.²⁵¹ According to a report provided by Opera "*none of the top U.S. OEMs bundle a third-party browser. In the E.U., Dell bundled Firefox on a very small portion of its product line sold in the U.K. as part of a trial that was not extended*".²⁵²
- (261) Users can also download free of charge a new web browser and then change the default settings of the web browser themselves. As outlined below at paragraphs (293) to (297), there is, however, a considerable number of users who only use the pre-installed software and do not wish to download other software (in view of the fact that no functionality is perceived to be "missing", this of course is not always the result of a conscious choice). Moreover, changing the default settings for web browsers requires technical steps that not every user is familiar with.
- (262) Furthermore, it is not sufficient to change the default settings of the web browser in order not to use Internet Explorer any more. In some situations Windows will automatically launch Internet Explorer to deliver the desired web page, even if Internet Explorer is not the default web browser. Moreover, applications could simply call upon Internet Explorer since its executable code is still present. This circumvention of default settings is sometimes described as a "zombie" effect, because the web browser springs back to life without the user's explicit instruction.²⁵³
- (263) Moreover, as the Court of First Instance pointed out in *Microsoft*, the fact that customers are not required to pay anything extra for Internet Explorer (Internet Explorer being distributed with Windows and downloadable free of charge from Microsoft's website) is immaterial for the assessment of coercion.²⁵⁴

²⁵¹ See paragraph (179).

²⁵² See Browser Market Shares and Measurement Methodologies by Ronald S. Alepin, submitted on behalf of Opera Software ASA, 11 September 2008, on page 28.

²⁵³ This technical effect is similar to the one described by the Court of First Instance with regard to Windows Media Player (See Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601, at paragraph 974), and has not been disputed by Microsoft with respect to Internet Explorer.

²⁵⁴ Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601, at paragraph 967.

- (264) Besides the observation that the applicable law is Article 82 EC in general, and Article 82 (d) in particular, it has to be noted that the wording of paragraph (d) of Article 82 EC does not include a reference to "paying" when introducing the element of a "supplemental obligations". Competitive harm can occur even if customers do not directly and separately have to spend money for the "tied" product.
- (265) Nor is there language in Article 82 EC which would suggest that, in order to show coercion, users need to be forced to use the tied product as confirmed by the Court of First Instance in *Microsoft* with respect to Windows Media Player.²⁵⁵ Already in *Hilti*²⁵⁶, for example, users were not forced to use the Hilti branded nails which they had to obtain with the Hilti branded nail gun.
- (266) The question whether there is foreclosure of competition because customers or suppliers of complementary software and content are *likely to use* the bundled product at the expense of competing non-bundled products is of course relevant. It will be shown in section 4.3.1.1.4.1 that the harmful effects on consumers from tying Internet Explorer (also) derive from undermining the structure of competition in the market for web browsers and appreciably altering the balance of competition in favour of Microsoft and to the detriment of the other operators, which ultimately has harmful consequences for consumers. This conduct in turn is liable to result in deterrence of innovation and eventual reduction in choice of competing web browsers.
- (267) In particular, it will be shown that inasmuch as tying risks foreclosing competitors, it is immaterial that consumers are not forced to "purchase" or "use" Internet Explorer. As long as consumers "automatically" obtain Internet Explorer - even if it is apparently free of charge²⁵⁷ - suppliers of competing web browsers are at a competitive disadvantage. First, because no other web browser could achieve the level of market penetration of Internet Explorer without having the advantage in terms of distribution that Internet Explorer enjoys as a result of Microsoft's bundling it to its Windows client PC operating system. Second,

²⁵⁵ Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601, at paragraphs 970-971.

²⁵⁶ Case T-30/89, *Hilti v Commission* [1991] ECR II-1439.

²⁵⁷ Internet Explorer is in fact not provided free of charge but its price is included in the price of Windows. See Microsoft's submission of 5 March 2008, page 35, reply to question 11: "None of the 18 features of Windows that are listed in the question carries a price of its own separate from the operating system. Each of them is included as part of the royalty paid for whichever versions of Windows in which they appear." In case Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601, at paragraph 968, the Court noted that "[...] while it is true that Microsoft does not charge a separate price for Windows Media Player, it cannot be inferred that the media player is provided free of charge. [...] the price of Windows Media Player is included in the total price of the Windows client PC operating system."

because no other web browser vendor can guarantee content providers and software developers a similarly ubiquitous platform.

4.3.1.1.3.2 The US Settlement/Judgments does not alter this assessment

(268) It is important to note that the US Judgments addressing monopoly maintenance do not alter this assessment. Removal of user access does not restore the choice of Microsoft's customers as to whether to acquire Windows without Internet Explorer (see paragraphs (270) and (271)).

(269) Section III.H of the modified final judgement in the case *United States of America, plaintiff, v. Microsoft Corporation, Defendant* (Civil Action N°98-1232), Filed September 7, 2006, states: "[...]Microsoft shall:

1. Allow end users [...] and OEMs [...] to enable or remove access to each Microsoft Middleware Product or Non-Microsoft Middleware Product by (a) displaying or removing icons, shortcuts, or menu entries [...]; and (b) enabling or disabling automatic invocations [...] that are used to launch Non-Microsoft Middleware Products or Microsoft Middleware Products. The mechanism shall offer end user a separate and unbiased choice with respect to enabling or removing access [...] and altering default invocations [...].

2. Allow end users [...], OEMs [...], and non-Microsoft Middleware Products [...] to designate a Non-Microsoft Middleware product to be invoked in place of that Microsoft Middleware Product (or vice versa) in any case where the Windows Operating System Product would otherwise launch the Microsoft Middleware Product."

Section VI.K states that "Microsoft Middleware Product" means

1. the functionality provided by Internet Explorer, [...]"

(270) As explained at paragraphs (14) and (15) above, the US Judgments do not purport to include a remedy for tying. In particular, the US Judgments do not provide for removal of Internet Explorer functionality from the client PC operating system. Under the US Judgments, Microsoft needs only to provide a means enabling OEMs and users to hide the icon and entries representing the Internet Explorer application on the computer screen. The Internet Explorer code is still present and active on top of each Windows operating system Microsoft ships.

(271) Hiding the files of Internet Explorer does not disable the functionality of Internet Explorer. Users can choose to unhide the hidden files by checking the right box. Regardless of whether the files are hidden or Internet Explorer's icon is removed, the executable code of Internet Explorer is still active in the computer. Internet

Explorer can thus be launched either directly by the user who can go to the program files folder, or indirectly due to the "zombie" effect (see paragraph (262)). Thus, the US Settlement does not require Microsoft to unbundle its web browser from its operating system product or to totally disable the related code (see paragraph (14)).

4.3.1.1.3.3 Conclusion

(272) It follows from the above considerations that Microsoft does not afford customers a choice as to whether to acquire the tying product without the tied product, which is the third constituent element of tying pursuant to Article 82 EC.

4.3.1.1.4 Microsoft's tying of Internet Explorer is liable to foreclose competition.

(273) In the present case, the Commission will also show that tying is liable to have a harmful effect on competition in the market for web browsers and to reinforce Microsoft's position in the market for client PC operating systems.

(274) Microsoft contends that there are circumstances (for example, other web browsers are given away free of charge, there are other ways to reach customers than through OEM pre-installation, tying has pro-competitive effects) attendant on the bundling of Internet Explorer with Windows which would mean that this practice has no negative effect on competition in the market for web browsers.²⁵⁸

(275) There are indeed circumstances relating to the tying of Internet Explorer which warrant a closer examination of the effects that tying has on competition in this case. In the case at issue, users can and do to a certain extent obtain third party web browsers through the internet, free of charge as regards web browsers for client PC operating systems. For this reason and in order to show that the case should be treated as an enforcement priority, the Commission will show that tying Internet Explorer to Windows constitutes conduct which is liable to foreclose competition.

(276) In the following sections, it will first be explained why tying Internet Explorer to Windows has the potential to foreclose competition in the market for web browsers so that the maintenance of an effective competitive structure of the relevant market is put at risk.

(277) In a nutshell, tying Internet Explorer with the dominant client PC operating system Windows allows Microsoft to obtain an unparalleled advantage with

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See Microsoft's submission of 5 March 2008, page 30, reply to question 8 "[...] that does not necessarily imply [...] that inclusion of a functionality in a PC operating system has any significant impact on demand for other vendors' product separate from the operating system".

respect to the distribution of its product and to ensure the ubiquity of Internet Explorer on client PCs throughout the world, thus providing a disincentive for users to make use of third-party web browsers and for OEMs to pre-install such web browsers on client PCs.²⁵⁹ Accordingly, Microsoft's conduct is liable to foreclose competition in the market for web browsers for client PC operating systems. This is outlined in section 4.3.1.1.4.1.1 below, and is sufficient to demonstrate foreclosure (see, in a similar case, paragraphs 1054 and 1058 of the judgment of the Court of First Instance in Case T-201/04 *Microsoft v Commission*).

(278) In order to demonstrate that the tying practice is liable to foreclose competition in the market for web browsers, in addition to the requirements of the case-law, the Commission will also examine: the market development and show that Microsoft's conduct has led to anticompetitive foreclosure (section 4.3.1.1.4.1.2); the effects that Microsoft's conduct has on content providers, software developers and users and the detrimental effects on competition (section 4.3.1.1.4.1.3).

(279) In section 4.3.1.1.4.2, the Commission will also show that due to network effects, Microsoft's tying of Internet Explorer to Windows is liable to reinforce Microsoft's position in the market for client PC operating systems. With the tying, Microsoft increases the content and applications barriers to entry, which protect Windows.²⁶⁰

4.3.1.1.4.1 Microsoft's tying of Internet Explorer is liable to foreclose competition in the market for web browsers for client PC operating systems.

4.3.1.1.4.1.1 Tying Internet Explorer affords Microsoft unmatched ubiquity on client PCs worldwide

(280) Microsoft estimates that in the financial year 2008, more than 267 million client PC operating systems were shipped worldwide (82 million in Europe), among which more than 192 million or 71.9% (almost 67 million or 81.2% in Europe) had Windows pre-installed. As regards the financial year 2007, those figures were respectively 238 million and 165 million worldwide, and 72 million and 56 million for Europe. IDC's estimates are even higher and indicate for 2006 a Microsoft market share of 92.0% of worldwide shipments of client PC operating systems.²⁶¹

²⁵⁹ See with regard to the tying of Windows Media Player Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601, at paragraph 1054.

²⁶⁰ Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601, at paragraph 1088.

²⁶¹ See Microsoft's submission of 5 March 2008, pages 3 and 4, reply to question 1. Source: IDC "Worldwide Client and Server Operating Environments 2007-2010 Forecast and Analysis: Don't Count Anybody Out Yet," February 2007, and Microsoft PCMIT team database.

- (281) Through tying Internet Explorer with Windows, Microsoft ensures that Internet Explorer is as ubiquitous on PCs worldwide as Windows. Microsoft controls this mode of distribution and does not afford competing web browser vendors access to it.
- (282) No other distribution mechanism or combination of distribution mechanisms is able to match Microsoft's distribution advantage. Users who find Internet Explorer pre-installed on their client PCs are indeed in general less likely to use alternative web browsers as they already have an application which delivers this functionality.²⁶² Moreover, it is highly probable that many users do not contemplate or see the point of downloading another web browser (perceived by many as a complicated operation) if the one already pre-installed on their PC provides them with the functionalities they wish to use.²⁶³ All web browsers available on the market provide users with the same basic functionalities. Varying features and performances are mostly relevant to and compared by advanced users, who are the most likely to download another web browser. Indeed, a Microsoft internal presentation classifies users in four categories according to their usage and choice of a web browser (the presentation only mentions Internet Explorer and Firefox). The "*Firefox Committed*" segment (15% of web browser users) is "[...] *the youngest segment within the taxonomy. They are heavy internet users and heavy internet searchers. The highest proportion of bloggers, social networkers and web developers are found amongst their rank*". The presentation mentions that "*100% use FF as primary browser*" and "*[o]nly 25% have IE7, low intention to upgrade*". At the opposite end of the spectrum, the "*IE [Internet Explorer] Passives*" represent 44% of web browser users and are "*indifferent*" regarding which web browser they use. They are "[...] *not likely to upgrade to IE7, much less to switch to Firefox without outside intervention*". The presentation specifies that these users very likely will use the web browser pre-installed on their computer. Half of them are at least 55 years old.²⁶⁴

²⁶² The possibility to download Netscape's Navigator from the internet could not halt the reversal of market shares as far as Microsoft's Internet Explorer and Netscape's Navigator are concerned. According to AdKnowledge, Netscape had 77% market share in January 1997, which decreased to 48% in August 1998. WebSideStory reportedly assessed Netscape's market share as around 26% in early 1999. See <http://www.usdoj.gov/atr/cases/exhibits/7.pdf>, printed on 18 November 2008 and http://www.pcworld.com/article/61024/internet_explorer_60_zooms_past_netscape.html, printed on 18 November 2008.

²⁶³ See Opera's submission of 18 August 2008, page 2, reply to question 4: "*a large number of users will not even contemplate changing the browser on their machine. Many users do not know what a browser is, or that it can be changed.*"

²⁶⁴ Presentation "IE 'Go Big' Strategy Discussion", attached to a preparatory email of Thursday 20 September 2007, 12:43 am, from Matthew Lapsen to Shanen Boettcher et al., subject "IE 'Go Big' Strategy Brainstorm" (MS01EU 000000007765); on slides 11 and 12.

(283) Due to the network effects described in section 4.3.1.1.4.1.3.1, content providers have strong incentives to design their websites to work primarily with Internet Explorer (see below at paragraphs (348) to (355)). As a result, users have very little incentive to download another web browser since the one they obtained when buying their PCs allows them to display almost all websites in a satisfactory manner.

4.3.1.1.4.1.1.1 *Installation agreements with OEMs are difficult to achieve for non-Microsoft web browser vendors and cannot offset Internet Explorer's ubiquity*

(284) None of the top ten OEMs in the U.S. and in Europe offer a non-Microsoft web browser pre-installed²⁶⁵. Since many users do not change the web browser pre-installed as default when they buy a PC, OEMs play a key role. This is acknowledged by Microsoft. A Microsoft internal presentation of September 2007 points out that the "[p]otential impact of OEM on Internet Explorer share [is] significant"²⁶⁶, especially in the consumer segment. The business plan of Internet Explorer for the financial years 2008-2010 also stresses that "*The market penetration of Internet Explorer is linked to Windows*"²⁶⁷. This statement in itself is a powerful demonstration of the effects of the tying in the market.

(285) In order to have their products pre-installed, some third-party suppliers of non-Microsoft web browsers have attempted to come to an agreement with OEMs. For example, Opera has been in contact with OEMs in order to have its web browser pre-installed by OEMs. However, Opera's attempts remained fruitless.²⁶⁸ The Mozilla Foundation has not entered into any arrangement with a large OEM either. Mozilla claims that "[t]o its knowledge, IE is the default browser on all Windows-based PCs".²⁶⁹ This reveals the difficulty for third-party suppliers of web browsers to come to agreements with OEMs.

(286) In any event, as long as Microsoft ships and licenses Windows only together with Internet Explorer and does not allow for uninstallation/code removal, OEMs face negative incentives to bundle an additional web browser. The pre-installed web browser uses up hard-drive capacity and offers essentially similar basic functionality. Further reasons for reticence to ship two web browsers include

²⁶⁵ See Browser Market Shares and Measurement Methodologies by Ronald S. Alepin, submitted on behalf of Opera's Software ASA, 11 September 2008, on page 28.

²⁶⁶ Presentation "IE 'Go Big' Strategy Discussion", attached to a preparatory email of Thursday 20 September 2007, 12:43 am, from Matthew Lapsen to Shanen Boettcher et al., subject "IE 'Go Big' Strategy Brainstorm" (MS01EU 00000007765); on slide 17.

²⁶⁷ Business Plan – FY08-FY10 – Windows Internet Explorer, 2 May 2008 (the date might be an automatic update) (MS01EU 000000095009); on page 5.

²⁶⁸ See Opera's submission of 18 August 2008, page 1, reply to question 1.

²⁶⁹ See Mozilla's submission of 18 December 2008 (Mozilla Response to Information Request No2), page 1, reply to question 1.

increased support and testing costs.²⁷⁰ For many OEMs, customer support is a major cost of business and the main type of incremental cost to consider when assessing the shipment of additional software.

(287) Moreover, even if third-party products' suppliers came to agreements with OEMs, they could not offset Internet Explorer's ubiquity. Indeed, another point to keep in mind is that OEM arrangements for pre-installation usually only cover PCs sold to home users. Microsoft states that "*OEM pre-installation of software is not a relevant form of distribution to reach the larger organizations that account for the preponderance of business users.*"²⁷¹ According to Gartner and IDC, the business segment represents about 60% of the PC installed base.²⁷²

(288) However, the tying applies in a similar way to the business segment. Business customers are unable to acquire Windows without Internet Explorer. Microsoft's web browser has been widely used in the business segment for years, and it would be difficult for enterprises to switch to another web browser, mostly because they are "locked-in" Microsoft's products (see below at paragraphs (345), (361) and (362)).

4.3.1.1.4.1.1.2 Downloading cannot offset Internet Explorer's ubiquity

(289) Alternative channels (to OEM pre-installation) for obtaining software such as web browsers are less effective. A distribution channel different from pre-installation is the internet, where suppliers can offer their web browsers for download. All main web browsers for client PC operating systems can be downloaded free of charge from the Internet. Except Microsoft and to a much lesser extent Apple, whose web browsers are already pre-installed on most of the shipped PCs in the world, all main suppliers of web browsers strongly promote their web browser on their web pages.²⁷³ This reveals the importance of the downloading distribution channel for suppliers of products competing with Internet Explorer given the difficulties they face in obtaining pre-installation with OEMs.

(290) There is no doubt that, among the alternative distribution channels to pre-installation of software, downloading is the most important. Due to the development of broadband access, it has become easier over the past years to

²⁷⁰ See Judgment of 28 June 2001, United States Court of Appeals for the District of Columbia Circuit, *United States v Microsoft*, No. 00-5212, at pp. 36-39.

²⁷¹ See 2004 Decision, at recital (850) and fn. 998.

²⁷² See Browser Market Shares and Measurement Methodologies, by Ronald S. Alepin, Submitted on behalf of Opera Software ASA, 11 September 2008, on page 43. Source: Gartner and IDC.

²⁷³ See for example <http://www.opera.com/>, printed on 18 November 2008, <http://www.apple.com/safari/>, printed on 27 November 2008, <http://www.mozilla.com/en-US/>, printed on 27 November 2008

download software products. For illustration, Opera is downloaded more than 100,000 times per day.²⁷⁴ Microsoft's competitors reach a significant number of users through offering their web browsers for download. Mozilla estimates that over 95% of its user base actively downloaded its web browser Firefox from the internet.²⁷⁵ However, downloading is not a channel which can be compared in effectiveness to (OEM) pre-installation.²⁷⁶

- (291) Microsoft and its competitors in the market for web browsers seek to have content providers and software developers target their content and applications to their web browser. The *guaranteed* distribution and installation of a given web browser on a user's PC assumes particular importance in a situation of limited resources and cost constraints. In other words, what is critical in a market characterised by network effects is not so much whether downloading allows for widespread distribution of competitors' web browsers, but whether downloading allows for distribution of the competing products to an extent that would match Internet Explorer's ubiquity on client PCs. Downloading does not achieve this.²⁷⁷
- (292) It must also be stressed that downloading an Internet Explorer upgrade in a situation where Microsoft recommends to do so via a recurring screen prompt is different from a situation where third party web browser vendors – whose web browsers are *not* automatically present on each newly bought Windows PC – have no possibility to prompt users to download their web browser onto the PC *for the first time*. Only once the initial obstacle of the first download has been overcome will they also be able to rely on mechanisms which allow them to use screen prompts to offer the user downloads of upgrades.
- (293) Another reason why downloading does not constitute an as efficient distribution channel as OEM pre-installation is that downloading is viewed as complicated by a not insignificant number of users, while using the pre-installed product is not.²⁷⁸ An internal 2007 Microsoft presentation states that 38% of US users are

²⁷⁴ See Opera's submission of 18 August 2008, page 2, reply to question 4.

²⁷⁵ See Mozilla's submission of 18 December 2008 (Mozilla Response to Information Request No 2), pages 1 and 2, reply to question 3.

²⁷⁶ See Opera's submission of 18 August 2008, page 2, reply to question 3: "[...] *Internet distribution of alternative browsers can only offset lack of pre-installation to a very limited extent*". See also Mozilla's submission of 16 December 2008, page 1, reply to question 3: "*In our experience, download of web browsers via the Internet does not offset the need for presence of client PCs as a pre-installed application nor the need to overcome default browser settings arrangements established by the OEM and OS provider*".

²⁷⁷ Even when they are aware of the existence of competing web browsers, a significant number of users will not download and install a different product. See below paragraph (293).

²⁷⁸ See for example Opera's submission of 18 August 2008, page 2, reply to question 4. See also Findings of Facts of 5 November 1999, United States District Court for the District of Columbia, *United States v Microsoft*, Civil Action No. 98-1232 and 1232 (TPJ), at paragraph 146.

"[...] concerned about installing software". Among the group of "Uninspired Basics" (which are said to account for 31% of the user population), the percentage is as high as 54%.²⁷⁹ It can be concluded that downloading a web browser is only performed by sophisticated users who are familiar with configuring their software.²⁸⁰ Indeed, a Microsoft internal e-mail shows that users of the Firefox web browser, who downloaded and installed the product, are more likely to be advanced users than Internet Explorer's users.²⁸¹ Opera also claims that "[...] only a fraction of the population is interested, willing and able to go through this process [...]" because they first have to hear about the competing web browser, then go to the website, download the software and finally install it.²⁸² According to Mozilla, the majority of web browser users accept the software they are provided with, or are not aware that they can download another web browser and/or do not know how to do it.²⁸³

- (294) From an economic point of view, users are prevented from switching from Internet Explorer to competing web browsers (even if these are offered free of charge (see paragraph (264)) due to the transaction costs associated with such a switch, such as searching, choosing and installing such a competing web browser, which can stem from a lack of technical skills (see paragraph (261), (281) and (293)), or be related to the user's "inertia" (see paragraph (172)). They will therefore use a competing web browser only if it fits their needs significantly better than the one they are provided.²⁸⁴

²⁷⁹ Presentation "Embracing the Best of Web Development" by Megan Sheehan/Presented by Bernardo Caldas (undated, but slide 12 makes reference to an article published in January 2007) (MS01EU 000000137851); on slide 23.

²⁸⁰ The existence of more sophisticated users also accounts for the number of consumers who obtain competing web browsers in the presence of Microsoft's bundling. A Microsoft internal email states that "[Microsoft is] getting more and more data backing up the theory that [it] really [has] a tech enthusiast problem in most markets" (Email of Wednesday 10 May 2006, 10:01 am, from Dean Hachamovitch to Gary Schare et al., subject "FYI...Yesterday's downloads" (MS01EU 000000010677); on page 1).

²⁸¹ Email of Thursday 3 November 2005, 7:39 pm, from Amar Gandhi to the "IE Core Team" mailing list, subject "Trip report from visit with Firefox, A9 and Dave Winer" (MS01EU 000000126175); on page 3.

²⁸² See Opera's submission of 18 August 2008, page 2, reply to question 3.

²⁸³ See Mozilla's submission of 18 December 2008 (Mozilla Response to Information Request No 2), page 2, reply to question 4. In a "chat" with the readers of the French online newspaper 20minutes.fr, Tristan Nitot, president of the Mozilla Europe association, specified that downloading cannot offset Internet Explorer's ubiquity because a certain part of the population does not know how to download a software, and that companies like Microsoft or Apple which provide users with a bundled browser thus have a genuine advantage. Chat of 27 June 2008 with Tristan Nitot, president of Mozilla Europe Association, on the French Online Newspaper 20minutes.fr *Vos questions sur Firefox 3*, See <http://www.20minutes.fr/article/239280/Chats-Vos-questions-sur-Firefox-3.php>, printed on 5 December 2008.

²⁸⁴ This is implicitly confirmed in Microsoft internal emails, where it is stated that it is sufficient that Internet Explorer is "Good enough for most users" See attachment to email of 22 April 2004, 3:34 pm, from Dean Hachamovitch to Tony Chor, subject "slides" (MS01EU 00000005431), on page 9.

- (295) Moreover, users may expect a web browser provided "out-of-the-box" together with the hardware to yield better results than a product they need to install themselves. Users know that the product has been tested and that they will get support if they have difficulties to make it work. An unsophisticated user may feel insecure, for instance for fear of viruses, about downloading a web browser, and even many more technically advanced users will not change the default settings of their computer.
- (296) It is also noteworthy that when installing new software on his Windows PC, the user is prompted with a screen asking him whether he is certain to be willing to execute the file, because of the risk of damages to his system. After being prompted by this screen, it is not unlikely that users may decide not to install the web browser they just downloaded.
- (297) Last but not least, it must be recalled that in many corporations, employees are prevented from downloading and installing software as downloads increase complexity for IT administrators who would need to manage disparate desktop environments. As pointed out above, the corporate market comprises about 60% of the client PC operating system market.
- (298) A supply-side aspect to consider is that, while downloading is in itself a technically inexpensive way of distributing web browsers, vendors must expend resources to overcome users' inertia and persuade them to ignore the pre-installed Internet Explorer. Unlike offers to download upgrades that pop up automatically, downloading a new web browser requires an active decision from the user who must be aware of the existence of the product. The targeted user must also be sufficiently familiar with the technology in order to be able to compare the product he intends to download with the product pre-installed on his computer.²⁸⁵ A Microsoft internal e-mail confirms that mainly more technically sophisticated users download competing browsers: "[...] *it's all about those tech enthusiasts who have switched and aren't looking back*".²⁸⁶
- (299) For the above reasons, downloading is not an adequate alternative to pre-installation, that is to say, it is not an alternative which would off-set the negative impact that the tying of Internet Explorer to Windows has on competition in the market for web browsers.

4.3.1.1.4.1.1.3 Other distribution channels are also less effective

²⁸⁵ See Opera's submission of 18 August 2008, page 2, reply to question 3: "[...] *only educated and determined users are likely to go through it*".

²⁸⁶ Email of Wednesday 10 May 2006, 9:30 am, from Gary Schare to Landis Stoltman et al., subject "FYI... Yesterday's downloads" (MS01EU 00000010677); on page 1.

- (300) Another way to distribute software is via the retail channel, where users are sold software on an external storage device. However, when independent vendors have to turn to retailers to distribute their software as separately packaged products, they incur higher costs compared to pre-installation on client PCs. At the consumer level, users who purchase software from retailers incur transaction costs that are absent when users find the same software pre-installed on their computer.²⁸⁷ In addition, retailers generally do not distribute products without charging a price for them.
- (301) Furthermore, almost all new PCs are shipped with a web browser providing the user with a means to access the web and the internet. Those users who want to change the web browser they use would in any event download it free of charge from the internet rather than obtain it from a retailer (free of charge or at cost). Therefore, this distribution channel of software has not gained importance with respect to web browsers on a stand alone basis.²⁸⁸
- (302) Web browsers can also be provided free of charge with computing magazines on an external storage device such as a CD-ROM. However, these kinds of magazines mainly target more sophisticated users, who are also more likely to hear about non-Microsoft web browsers and to be less reluctant to download and install those products, and thus only reach a minor part of the population. Consequently, distribution through this channel cannot lead to the same level of penetration as that enjoyed by Internet Explorer.
- (303) As outlined in the following section, market data confirm that none of the mentioned distribution alternatives is able to offset the distribution advantage that Internet Explorer has due to the tying with Windows.

4.3.1.1.4.1.1.4 Conclusion

- (304) It can therefore be concluded that through tying Internet Explorer Microsoft benefits from the ubiquity of the Windows client PC operating system, which cannot be counterbalanced by other methods of distribution. The tying allows Microsoft to obtain an unparalleled advantage with respect to the distribution of its web browser and to ensure the ubiquity of Internet Explorer on client PCs

²⁸⁷ See the District Court's findings in the US Microsoft case: "[...] The primary reason is that the other channels require users to expend effort before they can start browsing. The traditional retail channel, for example, requires the consumer to make contact with a retailer, and retailers generally do not distribute products without charging a price for them." Findings of Facts of 5 November 1999, United States District Court for the District of Columbia, *United States v Microsoft Corporation*, Civil Action No. 98-1232 and 1232 (TPJ), at paragraph 145.

²⁸⁸ Web browsers can of course be bought from retailers when bundled with an operating system or another software package.

throughout the world, thus providing a disincentive for users to make use of third-party web browsers and for OEMs to pre-install such products on client PCs.²⁸⁹ The tying has the consequence of "[...] appreciably altering the balance of competition in favour of Microsoft and to the detriment of the other operators".²⁹⁰ This assessment of likely effects is largely confirmed by actual data on the market development, as is outlined in section 4.3.1.1.4.1.2 below.

4.3.1.1.4.1.2 Market development

4.3.1.1.4.1.2.1 Installed base

(305) The number of downloads of third party web browsers may suggest (incorrectly) that the installed base of non-Microsoft web browsers is rather large. Opera claims that in 2008 its web browser was downloaded more than 100,000 times per day.²⁹¹ Firefox 3.0 was downloaded more than 8 million times within the 24 hours after its release.²⁹² However, it is impossible to derive the installed base of a given web browser from the number of times it has been downloaded. Indeed, the number of downloads includes not only first downloads but also new downloads after reformatting of the hard drive or buying a new PC, new releases or updates, which replace older versions of the same product but do not increase the installed base.

(306) On the other hand, it is not controversial that Microsoft has a default 100% installation rate on Windows PCs and around 90% installation rate on client PCs shipped worldwide.

4.3.1.1.4.1.2.2 Web Browser Usage

(307) In order to track browser usage and behaviour on the internet, internet measurement companies or major companies active on the internet have developed various methodologies.²⁹³

(308) Web browser usage can be tracked via software such as toolbars installed by the user in the web browser.²⁹⁴ This method can introduce a bias in the sample,

²⁸⁹ See, for a similar situation, Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601, at paragraph 1034.

²⁹⁰ Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601, at paragraph 1034.

²⁹¹ See Opera's submission of 18 August 2008, page 2, reply to question 4.

²⁹² See Mozilla's press release "*Mozilla Sets New Guinness World Record with Firefox 3 Downloads*", printed from <http://www.mozilla.com/en-US/press/mozilla-2008-07-02.html> on 12 November 2008.

²⁹³ See Browser Market Shares and Measurement Methodologies by Ronald S. Alepin, submitted on behalf of Opera Software ASA, 11 September 2008, on pages 14 to 22.

²⁹⁴ For example, Google and Yahoo provide such toolbars. See <http://toolbar.google.com/T5/intl/en/> and <http://toolbar.yahoo.com/>, both printed on 18 November 2008.

which might thus not be representative, as it only tracks users who voluntarily downloaded a toolbar.

- (309) Internet measurement companies can also determine which web browser people use when visiting one of the websites they monitor. Data can thus be biased by the selection of websites which are monitored by the internet measurement companies, and by people who installed and use several web browsers who will be counted several times as unique visitors. Moreover, those measurement companies usually do not track corporate usage of web browsers since companies often use a firewall that prevents the tracking of web browser usage. The available data related to web browsers' market share based on usage therefore need to be analysed with caution.
- (310) In its initial reply to Opera's complaint, Microsoft contends that it is possible for third-party web browsers to enter the market to a large extent. It points out that according to Xitimonitor, Firefox enjoys a market share in Europe that cannot be considered as corresponding to a niche. Indeed, Xitimonitor estimates that Firefox's market share was over 14.7% in every European country, and was up to 34.2% in Germany, 42.4% in Poland and even 45.4% in Finland at the end of 2007. Xitimonitor estimates Firefox's average market share in Europe was 28%.²⁹⁵
- (311) It is important to note that Xitimonitor is an internet measurement company whose data stem from users visiting its customers' websites. The data provided by Xitimonitor therefore widely depend on the actual selection of monitored websites.²⁹⁶ Moreover, Xitimonitor's data exclude the enterprise market in so far as they cannot measure the usage of web browsers on companies' intranets.
- (312) Moreover, Xitimonitor's data are at odds with Microsoft's own data. In a Microsoft internal presentation dated 30 January 2008, Microsoft states that:

"One-year post-IE7, IE usage share on Windows PCs remains robust: 83% (2Q-FY08)".²⁹⁷

Microsoft's market share on all PCs shipped worldwide is around 90% (see above at paragraph (179)). It can therefore be derived from the previous quotation that Internet Explorer's market share in January 2008 was around 75%.

²⁹⁵ See Microsoft's submission of 27 March 2008, page 4.

²⁹⁶ The list of these websites is not publicly disclosed.

²⁹⁷ Presentation of 30 January 2008, attached to an email of Monday 28 January 2008, 3:36 pm, from Matthew Lapsen to Bill Veghte et al., subject "IE7 Dell Slides" (MS01EU 00000096537); on slide 1.

- (313) This statement is consistent with Mozilla's assessment of Firefox's market share. Mozilla estimates Firefox's market share to be around 20% worldwide.²⁹⁸ Firefox is the most wide-spread web browser after Internet Explorer.
- (314) The Commission sent requests for information to fifteen major web portals²⁹⁹, eight of which sent a reply.³⁰⁰ The Commission asked these web portals³⁰¹ for their statistics during the last months in order to be able to estimate the different web browsers' market shares in terms of usage.
- (315) Even if some data collected by measurement companies indicate that Internet Explorer's market share is declining to the benefit of other web browsers³⁰², the result of the Commission's inquiry shows that as regards "non-specialised"³⁰³ web portals, Internet Explorer enjoys the largest market share by far. As an example, an analysis of data provided by Google shows that in March 2008, [65-70]% of the visitors of the portal (respectively [75-80]% of the visitors using Windows) used Internet Explorer, whereas [20-25]% (respectively [20-25]% of the Windows users) used Firefox, the second most used web browser on Google.³⁰⁴ An analysis of data provided by another major web portal, Yahoo, provides a similar picture with respect to Internet Explorer's market share. In February 2008, more than 60% of Yahoo's unique visitors used Internet Explorer.³⁰⁵

²⁹⁸ See Mozilla's submission of 18 December 2008 (Mozilla Response to Information Request No 1), page 2, reply to question 2.

²⁹⁹ Yahoo, Web.de, Voilà GIE Orange, Spiegel, MySpace, Microsoft, Libero Italia, Orupa Onet.pl, Facebook, eBay, BBC, Amazon.de, Mundinteractivos, Heise Zeitschriften. From their home page, web portals provide online access to a wide range of information, such as weather forecasts, news and stock prices, and applications, such as e-mail, photo sharing, search engine or instant messaging. International web portals enjoy a very large audience: Google's audience is about 500 million unique visitors per month with respect to search, and between 150 and 200 million unique visitors per month with respect to social networking (see Google's submission of 25 April 2008, page 2, reply to question 3). Yahoo's monthly audience between August 2007 and January 2008 was in the range of [28,500,000-33,000,000] unique visitors with respect to search and in the range of [317,000,000-368,000,000] unique visitors on Yahoo's properties (websites "belonging" to Yahoo) (see Yahoo's submission of 8 January 2009). Web portals which target a particular country, such as voila.fr, a French web portal, have a more limited audience. Voila.fr enjoys an audience of 7.6 million unique visitors each month (see France Télécom's submission of 18 April 2008, page 1, reply to question 3).

³⁰⁰ Amazon.de, Yahoo, Google, Heise Zeitschriften Verlag, Voilà GIE Orange, Libero Italia (Wind), Myspace (Fox Interactive Media), Microsoft.

³⁰¹ See fn. 299 for a description of web portals.

³⁰² See <http://marketshare.hitslink.com/report.aspx?qprid=1&qpd=1&qpc=4&qpcustom=Microsoft%20Internet%20Explorer&qptimeframe=M&qpsp=96&qnp=25>, printed on 12 January 2009.

³⁰³ A "non-specialised" web portal can be described as a web portal that provides information about a wide range of topics, such as finance, news, weather, as opposed to a "specialised" web portal that provides more focused data or services, such as IT news or e-commerce data.

³⁰⁴ See Google's submission of 25 April 2008, Annex, reply to question 4, as complemented by email of 16 December 2008.

³⁰⁵ See Yahoo's submission of 8 January 2009.

- (316) Here again, these data concern traffic on the internet and do generally not take into account intranet browsing in enterprises. Internet Explorer's market share is thus probably underestimated. However, the web portals mentioned above do have a very large audience. For example, Google provided data with respect to search, showing 516,225,000 unique visitors worldwide and 168,041,000 in Europe in December 2007, representing a large sample of users.³⁰⁶
- (317) With regard to all the other web portals which the Commission questioned,³⁰⁷ for all but one³⁰⁸, Internet Explorer's market share was consistently over 50%³⁰⁹, and up to 91.99% with respect to Pikeo.fr in March 2008. Firefox was the second most widely used web browser on these websites. 20% of the unique visitors of Fox Interactive Media's properties in March 2008 used Firefox. With respect to the other web portals which provided an answer, less than 20% of the total of unique visitors used Firefox³¹⁰.
- (318) Generally speaking, other web browsers apart from Internet Explorer and Firefox, including Safari, Opera and Chrome, are reported by internet measurement companies not to have reached market shares above 4 % worldwide.³¹¹ In this respect, it is noteworthy that the data available for Europe and worldwide do not deviate with respect to the wide gap in market share between Internet Explorer and competing web browsers.³¹²

³⁰⁶ See Google's submission of 25 April 2008, page 2, reply to question 3.

³⁰⁷ Namely Amazon.de, Orange (Orange – Voila), Heise Zeitschriften Verlag, Fox Interactive Media (myspace.com), Microsoft and Wind Telecomunicazioni (Libero.it).

³⁰⁸ The market shares of the web browsers on Heise Zeitschriften Verlag's websites are an exception. On these websites, Firefox was used by 52.4% of unique visitors in March 2008, whereas Internet Explorer was only used by 25.7% of unique visitors (see Heise's submission of 18 April 2008, Annex, reply to question 4). However, it must be mentioned that Heise's websites are more oriented toward technology than the other web portals that provided an answer, and that therefore its visitors are more likely to be "advanced users". As established at paragraph (298), by Microsoft's own account, those users are the most likely to change the web browser.

³⁰⁹ 80.95% on soundtribes.com (Orange group), 51.3% on orange.fr and voila.fr (see France Télécom's submission of 18 April 2008, pages 2-3, reply to question 4), 73% on Fox Interactive Media's properties (see Fox Interactive Media's submission of 12 December 2008, reply to question 4), around 85% on Microsoft's properties (it is however noteworthy that Microsoft's reply only concerns microsoft.com, and that Live Services are only accessible with Internet Explorer 6, see <http://get.live.com/wl/sysreq>, printed on 15 December 2008), and [80-90]% on libero.it (see Wind Telecomunicazioni's submission of 11 April 2008, page 2, reply to question 4 as complemented by email of 12 December 2008).

³¹⁰ In March 2008, 7.09% of unique visitors used Firefox on pikeo.fr (Orange group), 15.89% on soundtribes.com (Orange group), 11.2% on orange.fr and voila.fr (see France Télécom's submission of 18 April 2008, pages 2-3, reply to question 4), around 13% on Microsoft's properties, and [12-13]% on libero.it (see Wind Telecomunicazioni's submission of 11 April 2008, page 2, reply to question 4 as complemented by email of 12 December 2008).

³¹¹ See for example <http://www.onestat.com/html/press-release-google-chrome-global-usage-share.html>, printed on 12 January 2009.

³¹² See for example <http://www.onestat.com/html/press-release-google-chrome-global-usage-share.html>, printed on 12 January 2009.

- (319) Internet Explorer's market share remains thus very high by any measure and compared to the market share of its competitors as Microsoft's own data confirm (see paragraph (312) above).

4.3.1.1.4.1.2.3 Competition on the merits

- (320) Internet Explorer's large market share does not appear to have been driven by the features of the web browser, but rather to be a consequence of its being tied with Windows. As will be shown below, this strategy allowed Microsoft not only to win³¹³ what is frequently referred to as the "browser war" with Netscape, but also to maintain its current market share despite the fact that it did not improve Internet Explorer 6.0 for many years (whereas Internet Explorer 6.0 was released in 2001, Internet Explorer 7.0 was only released in 2006)³¹⁴ and that neither Internet Explorer 7 nor previous versions seem to be superior to its main competitors, in particular Firefox.

4.3.1.1.4.1.2.3.1 The "browser war" against Netscape

- (321) As regards Microsoft's strategy against Netscape, in the US proceedings the Court of Appeals concluded the following in its June 2001 ruling:

"By preventing the OEMs from [promoting multiple browsers], this type of license restriction, like the first two restrictions³¹⁵, is anticompetitive: Microsoft reduced rival browsers' usage share not by improving its own product but, rather, by preventing OEMs from taking actions that could increase rivals' share of usage."³¹⁶

"Microsoft had included IE in the Add/Remove Programs utility in Windows 95 [...], but when it modified Windows 95 to produce Windows 98, it took IE out of the Add/Remove Programs utility. This change reduces the usage share of rival browsers not by making Microsoft's own browser more attractive to consumers but, rather, by discouraging OEMs from distributing rival products. [...] Because Microsoft's conduct, through something other than competition on the merits, has the effect of significantly reducing usage of rivals' products

³¹³ The Netscape web browser, which was the most widely used web browser in the mid-1990s with reportedly 80% market share, is neither developed nor supported any more (see paragraph (97)).

³¹⁴ See paragraph (121).

³¹⁵ Namely preventing OEMs from removing visible means of user access to Internet Explorer and from modifying the initial boot sequence.

³¹⁶ Judgment of 28 June 2001, United States Court of Appeals for the District of Columbia Circuit, *United States v Microsoft Corporation*, No. 00-5212, at II.B.1.a. Under II.B.1.b., the Court of Appeals rejected Microsoft's justifications: "In sum, we hold that with the exception of the one restriction prohibiting automatically launched alternative interfaces, all the OEM license restrictions at issue represent uses of Microsoft's market power to protect its monopoly, unredeemed by any legitimate justification. The restrictions therefore violate s 2 of the Sherman Act."

and hence protecting its own operating system monopoly, it is anticompetitive".³¹⁷

"Accordingly, we reject Microsoft's argument that we should vacate [the District Court's] Finding of Fact 159 as it relates to the commingling of code³¹⁸], and we conclude that such commingling has an anticompetitive effect; as noted above, the commingling deters OEMs from pre-installing rival browsers, thereby reducing the rivals' usage share and, hence, developers' interest in rivals' APIs as an alternative to the API set exposed by Microsoft's operating system."³¹⁹

4.3.1.1.4.1.2.3.2 Internet Explorer in comparison to its competitors: pre Internet Explorer 7.0

(322) A Microsoft internal competitive analysis of Internet Explorer of December 2005 concludes:

"We are several years behind our competitors in providing a stable, predictable platform for standards-based web content, presences and applications. This is true of both scope of standards (and innovations) encompassed as well as quality/completeness of those implementations."³²⁰
"Our competitors are three+ years ahead"³²¹.

(323) In an internal Microsoft presentation, apparently of April 2004, on competing web browsers the following points are listed as "strengths" of "IE 5/6":

- "- MS owned and serviced
- Large installed base
- Good enough for most users

³¹⁷ Judgment of 28 June 2001, United States Court of Appeals for the District of Columbia Circuit, *United States v Microsoft Corporation*, No. 00-5212, at II.B.2.a. Under II.B.2.b., the Court of Appeals rejected Microsoft's justifications for excluding the option of removing Internet Explorer.

³¹⁸ I.e. placing code specific to web browsing in the same files as code that provided operating system functions. Microsoft confirmed that commingling is still taking place: "There are extensive dependencies taken by the remainder of the operating system on Internet Explorer functionality". See Microsoft's submission of 5 March 2008, page 31, reply to question 9.

³¹⁹ Judgment of 28 June 2001, United States Court of Appeals for the District of Columbia Circuit, *United States v Microsoft Corporation*, No. 00-5212, at II.B.2.a. Under II.B.2.b. the Court of Appeals rejects Microsoft's justifications for the commingling of code.

³²⁰ Attachment to email of 6 December 2005, 4:25 pm, from Chris Wilson to Tony Chor, subject "PLS REVIEW – deck for MWallent offsite tomorrow" (MS01EU 00000008509), on slide 4. The slide predicts that IE7 will put Microsoft ahead of the competition, an assessment no longer upheld in Microsoft's business plan for Internet Explorer of 2 May 2008 quoted below (cf. "Business plan FY08-FY10 Windows Internet Explorer" dated 2 May 2008 (the date might be an automatic update) (MS01EU 000000095009), on page 13).

³²¹ Attachment to email of 6 December 2005, 4:25 pm, from Chris Wilson to Tony Chor, subject "PLS REVIEW – deck for MWallent offsite tomorrow" (MS01EU 00000008509), on slide 8.

- Perceived [sic!] to be free"³²²

(324) The following properties are identified as strengths of "OSS browsers (primarily Mozilla and Firefox)":

"- Modern end user features (e.g. tabs, download manager, inline search)

- Better standards support

- Cross platform

- Fast

- Fewer perceived security issues

- Free / "OSS" [open source software] goodness".³²³

(325) It is noteworthy that while the listed strengths of these open source products result from what they offer users in terms of functionality (highly developed, interoperable), speed (high) and cost (none), the "strengths" of Internet Explorer 5/6 are not strengths from a user's perspective. This suggests that in Microsoft's own perception, Internet Explorer's market share was not due to its value for consumers, but to its distribution as part of Windows and that Microsoft was well aware of this.

(326) The comparative analysis by Microsoft of weaknesses interestingly identifies the following weaknesses of "IE 5/6": *"- Tied to existing implementation "quirks" - History of security and reliability issues"*. The most prominently named weakness of the open source web browsers is *"- [n]ot compatible with "IE std" sites"*.³²⁴ The main weakness of the open source web browsers is therefore caused by Microsoft – they cannot display sites optimized for Internet Explorer as well as Internet Explorer (cf. paragraphs (106) to (108) on compliance with web standards).

(327) A Microsoft internal exchange of emails of August 2005 contains several revealing statements on Internet Explorer before version 7, such as:

³²² Attachment to email of 22 April 2004, 3:34 pm, from Dean Hachamovitch to Tony Chor, subject "slides" (MS01EU 000000005431), on page 9.

³²³ Attachment to email of 22 April 2004, 3:34 pm, from Dean Hachamovitch to Tony Chor, subject "slides" (MS01EU 000000005431), on page 9.

³²⁴ Attachment to email of 22 April 2004, 3:34 pm, from Dean Hachamovitch to Tony Chor, subject "slides" (MS01EU 000000005431), on page 9. The further weakness of the open source browsers are identified as *"- unclear who supports old versions - No corp features (deployment, manageability) - [...]"*. "IE std" presumably refers to sites primarily designed for being accessed through Internet Explorer.