version of Internet Explorer was demonstrably inferior to Netscape's then-current browser product when the former was released in July 1995, Microsoft's investment eventually started to pay technological dividends. When Microsoft released Internet Explorer 3.0 in late 1996, reviewers praised its vastly improved quality, and some even rated it as favorably as they did Navigator. After the arrival of Internet Explorer 4.0 in late 1997, the number of reviewers who regarded it as the superior product was roughly equal to those who preferred Navigator.

E. Giving Internet Explorer Away and Rewarding Firms that Helped Build Its Usage Share

- 136. In addition to improving the quality of Internet Explorer, Microsoft sought to increase the product's share of browser usage by giving it away for free. In many cases, Microsoft also gave other firms things of value (at substantial cost to Microsoft) in exchange for their commitment to distribute and promote Internet Explorer, sometimes explicitly at Navigator's expense. While Microsoft might have bundled Internet Explorer with Windows at no additional charge even absent its determination to preserve the applications barrier to entry, that determination was the main force driving its decision to price the product at zero. Furthermore, Microsoft would not have given Internet Explorer away to IAPs, ISVs, and Apple, nor would it have taken on the high cost of enlisting firms in its campaign to maximize Internet Explorer's usage share and limit Navigator's, had it not been focused on protecting the applications barrier.
- 137. In early 1995, personnel developing Internet Explorer at Microsoft contemplated charging OEMs and others for the product when it was released. Internet Explorer would have been included in a bundle of software that would have been sold as an add-on, or "frosting," to Windows 95.

Indeed, Microsoft knew by the middle of 1995, if not earlier, that Netscape charged customers to license Navigator, and that Netscape derived a significant portion of its revenue from selling browser licenses. Despite the opportunity to make a substantial amount of revenue from the sale of Internet Explorer, and with the knowledge that the dominant browser product on the market, Navigator, was being licensed at a price, senior executives at Microsoft decided that Microsoft needed to give its browser away in furtherance of the larger strategic goal of accelerating Internet Explorer's acquisition of browser usage share. Consequently, Microsoft decided not to charge an increment in price when it included Internet Explorer in Windows for the first time, and it has continued this policy ever since. In addition, Microsoft has never charged for an Internet Explorer license when it is distributed separately from Windows.

138. Over the months and years that followed the release of Internet Explorer 1.0 in July 1995, senior executives at Microsoft remained engrossed with maximizing Internet Explorer's share of browser usage. Whenever competing priorities threatened to intervene, decision-makers at Microsoft reminded those reporting to them that browser usage share remained, as Microsoft senior vice president Paul Maritz put it, "job #1." For example, in the summer of 1997, some mid-level employees began to urge that Microsoft charge a price for at least some of the components of Internet Explorer 4.0. This would have shifted some anticipatory demand to Windows 98 (which was due to be released somewhat later than Internet Explorer 4.0), since Windows 98 would include all of the browser at no extra charge. Senior executives at Microsoft rejected the proposal, because while the move might have increased demand for Windows 98 and generated substantial revenue, it would have done so at the

unacceptable cost of retarding the dissemination of Internet Explorer 4.0. Maritz reminded those who had advocated the proposal that "getting browser share up to 50% (or more) is still the major goal."

The transcendent importance of browser usage share to Microsoft is evident in what the 139. firm expended, as well as in what it relinquished, in order to maximize usage share for Internet Explorer and to diminish it for Navigator. Not only was Microsoft willing to forego an opportunity to attract substantial revenue while enhancing (albeit temporarily) consumer demand for Windows 98, but the company also paid huge sums of money, and sacrificed many millions more in lost revenue every year, in order to induce firms to take actions that would help increase Internet Explorer's share of browser usage at Navigator's expense. First, even though Microsoft could have charged IAPs, ISVs, and Apple for licenses to distribute Internet Explorer separately from Windows, Microsoft priced those licenses, along with related technology and technical support, at zero in order to induce those companies to distribute and promote Internet Explorer over Navigator. Second, although Microsoft could have charged IAPs and ICPs substantial sums of money in exchange for promoting their services and content within Windows, Microsoft instead bartered Windows' valuable desktop "real estate" for a commitment from those firms to promote and distribute Internet Explorer, to inhibit promotion and distribution of Navigator, and to employ technologies that would inspire developers to write Web sites that relied on Microsoft's Internet technologies rather than those provided by Navigator. Microsoft was willing to offer such prominent placement even to AOL, which was the principal competitor to Microsoft's MSN service. If an IAP was already under contract to pay Netscape a certain amount for browser licenses, Microsoft offered to compensate the IAP the amount it owed Netscape. Third, Microsoft also reduced the referral fees that IAPs paid when users signed up for their services using the

Internet Referral Server in Windows in exchange for the IAPs' efforts to convert their installed bases of subscribers from Navigator to Internet Explorer. For example, Microsoft entered a contract with AOL whereby Microsoft actually paid AOL a bounty for every subscriber that it converted to access software that included Internet Explorer instead of Navigator. Finally, with respect to OEMs, Microsoft extended co-marketing funds and reductions in the Windows royalty price to those agreeing to promote Internet Explorer and, in some cases, to abstain from promoting Navigator.

- 140. Even absent the strategic imperative to maximize its browser usage share at Netscape's expense, Microsoft might still have set the price of an Internet Explorer consumer license at zero. It might also have spent something approaching the \$100 million it has devoted each year to developing Internet Explorer and some part of the \$30 million it has spent annually marketing it. After all, consumers in 1995 were already demanding software that enabled them to use the Web with ease, and IBM had announced in September 1994 its plan to include browsing capability in OS/2 Warp at no extra charge. Microsoft had reason to believe that other operating-system vendors would do the same.
- 141. Still, had Microsoft not viewed browser usage share as the key to preserving the applications barrier to entry, the company would not have taken its efforts beyond developing a competitive browser product, including it with Windows at no additional cost to consumers, and promoting it with advertising. Microsoft would not have absorbed the considerable additional costs associated with enlisting other firms in its campaign to increase Internet Explorer's usage share at Navigator's expense. This investment was only profitable to the extent that it protected the applications barrier to entry. Neither the desire to bolster demand for Windows, nor the prospect of ancillary revenues, explains the lengths to which Microsoft has gone. For one thing, loading Navigator makes

Windows just as Internet-ready as including Internet Explorer does. Therefore, Microsoft's costly efforts to limit the use of Navigator on Windows could not have stemmed from a desire to bolster consumer demand for Windows. Furthermore, there is no conceivable way that Microsoft's costly efforts to induce Apple to pre-install Internet Explorer on Apple's own PC systems could have increased consumer demand for Windows.

In pursuing its goal of maximizing Internet Explorer's usage share, Microsoft actually has limited rather severely the number of profit centers from which it could otherwise derive income via Internet Explorer. For example, Microsoft allows the developers of browser shells built on Internet Explorer to collect ancillary revenues such as advertising fees; for another, Microsoft permits its browser licensees to change the browser's start page, thus limiting the fees that advertisers are willing to pay for placement on that page by Microsoft. Even if Microsoft maximized its ancillary revenue, the amount of revenue realized would not come close to recouping the cost of its campaign to maximize Internet Explorer's usage share at Navigator's expense. The countless communications that Microsoft's executives dispatched to each other about the company's need to capture browser usage share indicate that the purpose of the effort had little to do with attracting ancillary revenues and everything to do with protecting the applications barrier from the threat posed by Netscape's Navigator and Sun's implementation of Java. For example, Microsoft vice president Brad Chase told the company's assembled sales and marketing executives in April 1996 that they should "worry about your browser share[] as much as BillG" even though Internet Explorer was "a no revenue product," because "we will lose [sic] the Internet platform battle if we do not have a significant user installed base." He

told them that "if you let your customers deploy Netscape Navigator, you will loose [sic] leadership on the desktop."

F. Excluding Navigator from Important Distribution Channels

143. Decision-makers at Microsoft worried that simply developing its own attractive browser product, pricing it at zero, and promoting it vigorously would not divert enough browser usage from Navigator to neutralize it as a platform. They believed that a comparable browser product offered at no charge would still not be compelling enough to consumers to detract substantially from Navigator's existing share of browser usage. This belief was due, at least in part, to the fact that Navigator already enjoyed a very large installed base and had become nearly synonymous with the Web in the public's consciousness. If Microsoft was going to raise Internet Explorer's share of browser usage and lower Navigator's share, executives at Microsoft believed they needed to constrict Netscape's access to the distribution channels that led most efficiently to browser usage.

1. The Importance of the OEM and IAP Channels

144. Very soon after it recognized the need to gain browser usage share at Navigator's expense, Microsoft identified pre-installation by OEMs and bundling with the proprietary client software of IAPs as the two distribution channels that lead most efficiently to browser usage. Two main reasons explain why these channels are so efficient. First, users must acquire a computer and connect to the Internet before they can browse the Web. Thus, the OEM and IAP channels lead directly to virtually every user of browsing software. Second, both OEMs and IAPs are able to place browsing software at the immediate disposal of a user without any effort on the part of the user. If an OEM pre-installs a browser onto its PCs and places an icon for that browser on the default screen, or