YESTERDAY MICROSOFT, TODAY GOOGLE: PRODUCT DESIGNS IN HIGH-TECH MARKETS AND CHALLENGES FOR COMPETITION LAW

DÜN MİCROSOFT, BUGÜN GOOGLE: YÜKSEK TEKNOLOJİ SEKTÖRLERİNDE ÜRÜN TASARIMLARI VE REKABET HUKUKU AÇISINDAN SORUNLAR

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Abstract

High-tech markets differ markedly from most of the industries in which modern competition law and policy emerged. In these markets, firms often operate globally and their products can virtually be found all over the world. Although the markets may be global and free from national borders, applicable competition laws are mostly national or regional, meaning that high-tech firms might be subject to different jurisdictions pursuing potentially different objectives. In contrast to the prohibition of cartels and merger control, where there is a growing global convergence, there is substantial divergence on the appropriate scope of control that should be placed upon unilateral conduct. Ironically, most competition cases or investigations in high-tech markets involving global high-tech giants, such as IBM, Microsoft, Google, Intel and Rambus, deal with unilateral conduct and allegations of abuse of market power. In the area of unilateral conduct, a more pressing concern arises when the conduct in question relates to how dominant high-tech firms design their products. Product designs appear to be the most controversial type of unilateral conduct to be challenged under competition law. Competition authorities and courts should not lose sight of the presence of actual consumer harm when ruling product designs as anti-competitive.

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Öz

Yüksek teknoloji sektörleri, modern rekabet hukuku ve politikasının doğduğu diğer endüstrilerden belirgin şekilde farklılıklar arz etmektedir. Söz konusu sektörlerde teşebbüsler genellikle dünya çapında faaliyet göstermekte olup, üretilen ürünler hemen hemen dünyanın her yerinde bulunabilmektedir. Her ne kadar pazarlar uluslararası ve ülke sınırlarından bağımsız olsa da, uygulanacak rekabet hukuku kuralları genellikle ulusal ya da bölgesel olmakta, bu nedenle de yüksek teknoloji ürünleri üreten teşebbüsler birbirinden farklı amaçlar izleyebilen farklı hukuk sistemlerine tabi olabilecektir. Artan bir uluslararası yakınsamanın görüldüğü kartellerle mücadelenin ve yoğunlaşmaların kontrolünün aksine, tek taraflı davranışların kontrolü noktasında dünya genelinde belirgin görüş ayrılıkları bulunmaktadır. İşin garip yanı ise yüksek teknoloji sektörlerinde IBM, Microsoft, Google, Intel ve Rambus gibi dünya devleri aleyhine açılan rekabet davaları veya soruşturmalarının büyük çoğunluğunun, tek taraflı davranış sonucu pazar gücünün kötüye kullanılmasına yönelik iddiaları konu edinmesidir. Tek taraflı davranışlar alanında çözüm bekleyen bir husus ise tek taraflı davranışın teşebbüslerin ürünlerini nasıl tasarladıklarına yönelik olması halinde ortaya çıkmaktadır. Ürün tasarımları rekabet hukuku altında ele alınabilecek en tartışmalı tek taraflı davranış olarak öne çıkmaktadır. Ürün tasarımlarını rekabete aykırı olarak değerlendirme hususunda rekabet otoriteleri veya mahkemeleri mevcut tüketici zararının varlığı hususunu gözden kaçırmamalıdırlar.

Anahtar Kelimeler: *Tek Taraflı Davranışlar, Hâkim Durumun Kötüye Kullanılması, Ürün Tasarımları, Yüksek Teknoloji Sektörleri, Yeni Ekonomi*

INTRODUCTION

Today we live in a world in which innovation and advances in technology are at the centre of economic activities. Economies of the world have increasingly become interrelated and the business context of our century has radically changed. New markets together with brand-new products have emerged. One of the most noted developments in the last decades is the rise of the "new economy" and high-tech markets. High-tech markets differ from traditional markets in terms of network effects, "winner-takes-all" market models, quick shifts of dominance,

dynamic competition, intellectual property rights, high rates of innovation, and so on.

The implementation of competition law is unlikely to remain intact vis-à-vis advances in technology and radical changes on the way firms do business. Indeed, new concepts, rules and reasonings have been injected into the theory and practice of competition law as a result of its interaction with the realm of technology. In contrast to traditional markets, which are more mature, stable and non-dynamic; the nature of competition in high-tech markets is relatively different and this suggests that the application of competition law rules might differ in these markets. This is aggravated by the global market phenomenon in high-tech markets as high-tech firms are often subject to different competition law systems, pursuing potentially different objectives.

In this changing competitive landscape, high-tech giants are being increasingly targeted by competition authorities and courts, not just in the European Union (EU) and the United States (US), but also in other jurisdictions such as Japan, South Korea, India and Brazil. The biggest ever fine of 1.06bn Euros was imposed on the high-tech giant Intel by the European Commission (Commission) in 2009 for Intel's exclusionary rebate scheme and other exclusionary practices. A then record fine of 497m Euros was levied against another high-tech giant and almost a worldwide monopolist Microsoft in 2004 by the Commission as a result of its product bundling, and this was followed by a further fine of 899m Euros for the company's lack of compliance with the remedies. Currently, the leading online search engine, Google, is subject to investigations in several jurisdictions.

Most competition law cases and investigations in high-tech markets involving global high-tech giants, such as IBM, Microsoft, Google, Intel, and Rambus, deal with unilateral conduct and allegations of abuse of market power. Ironically, there is substantial divergence among different competition law systems on the appropriate scope of control that should be placed upon unilateral conduct, in contrast to the prohibition of cartels and merger control where there is a growing global convergence. It becomes even more challenging when the unilateral conduct at hand relates to how dominant high-tech firms design their products, as products are essentially designed through innovative research and development. Product designs appear to be the most controversial type of unilateral conduct to be challenged under competition law.

It is against this background that the purpose of this article is to explore and

discuss the application of competition law rules on the prohibition of abusive unilateral conduct in the context of product designs in high-tech markets. This article is divided into four parts. Part 1 introduces high-tech markets and their unique features, discusses the role of competition law in high-tech markets and addresses the difficulties experienced in this respect. Part 2 deals with the Microsoft saga in the US and the EU, and analyses antitrust cases against Microsoft. This part asserts that despite being found anti-competitive in some cases, arguably the tying of media players and web browsers with operating systems can be regarded as innovative product designs for the benefit of consumers. Part 3 is concerned with the ongoing antitrust investigations in the EU and the US of Google and its allegedly anti-competitive conduct of designing its algorithms in a way that favours its own services over those of its competitors. In this part, it is stressed that Google's conduct can merely be a product design which seems prima facie anti-competitive, but may equally be pro-competitive as it enhances consumer welfare more than it generates anti-competitive effects. Finally, Part 4 outlines the authors' critical assessments of the cases examined in previous parts and draws conclusions.

1. COMPETITION LAW AND HIGH-TECH MARKETS

1.1. Introduction

Compared to the existence of competition law rules, the interaction of competition law with the realm of technology is relatively new, dating back to the 1970s, in which significant technological advances began to take place. The earliest case in which competition law rules faced the realm of technology is the US case against IBM in 1973 where IBM was accused of tying its central processing units (CPU) with main memory in its "System 370" mainframe computers, but the District Court held that the product was an integrated product and technologically superior to the non-integrated version.[1] In 1984, IBM was alleged to have tied its operating system, "MVS", to a software programme, "DFDSS", which was being supplied by one of its competitor; however, the District Court concluded that this was "a lawful package of technologically interrelated products."[2] This was the year in which IBM faced allegations of

[1] *Telex Corp. v IBM Corp.*, 367 F.Supp. 258 (N.D. Okla. 1973) reversed in part in *Telex Corp. v IBM Corp.*, 510 F.2d 894 (10th Cir. 1975).

[2] *Innovation Data Processing, Inc. v IBM,* 585 F.Supp. 1470 (D.N.J. 1984), para.1476. Several lawsuits were filed against IBM during the 1970s and 1980s on the ground of IBM's allegedly unlawful tying of certain features to its certain products. See *ILC Peripherals Leasing Corp. v IBM Corp.,* 448 F.Supp. 228 (N.D. Cal 1978); *California Computer Products Inc. v IBM Corp.,* 613 F.2d

unlawful tying also on the other side of the Atlantic and eventually came to a settlement with the Commission.[3]

The landmark case, however, is the US case against Microsoft, which is widely known as "a novel antitrust venture carrying the law deep into concerns about technology and innovation".[4] Filed in the late 1990s and ruled in the early 2000s; it was held, among other things, that Microsoft had illegally prevented computer manufacturers from uninstalling its web browser, "Internet Explorer" (IE), from its operating system, "Windows 95" and "Windows 98", and further removing it from the "Add/Remove Programs" utility of Windows.[5] On the other side of the Atlantic, the Commission decided, among other things, that Microsoft illegally tied its media player, "Windows Media Player" (WMP) to its operating system, "Windows XP", with a view to strengthening its dominance in the operating system market by foreclosing competition in the media player market.[6] In a similar case to that in the US, the Commission alleged that Microsoft tied its IE to its operating system, "Windows Vista", before it settled the case.[7]

As a result of all of these cases, the implementation of competition law experienced brand-new relevant product markets that are unique in its history. In addition to dealing with new products such as "mainframe computers", "operating systems", "web browsers", "media players" and "online search engines", it would appear that new concepts, rules and reasonings have been

727 (9th Cir. 1979); *Memorex Corp. v IBM Corp.*, 636 F.2d 1188 (9th Cir. 1980) and *Transamerica Computer Co. v IBM Corp.*, 698 F.2d 1377 (9th Cir. 1983). However, in none of these cases was there any ruling that IBM had engaged in unlawful tying.

3 Case IV/30.849 *IBM Personal Computers* [1984] OJ L 118/24. Similar to *Telex Corp. v IBM Corp.* in the US, IBM was alleged to have abused its dominant position by, among other things, not offering its CPUs in System 370 without a capacity of main memory included in the price and without the basic software included in the price. See EUROPEAN COMMISSION (1985), *14th Report on Competition Policy*, Brussels, p.78.

4 HOVENKAMP, H. (2008), *The Antitrust Enterprise: Principle and Execution*, Harvard University Press, USA, p.296.

5 *United States v Microsoft Corp.,* 87 F.Supp. 2d 30 (D.D.C. 2000), reversed in part in *United States v Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001) cert. denied, 534 U.S. 952 (2001) ("*Microsoft III*"). It should be noted that this case is actually the third case against Microsoft in the US, where the first case was settled with a consent decree and the second case, which was actually related to Microsoft's alleged infringement of that consent decree, was dismissed by the US Court of Appeals. See *infra* "2. The Microsoft Saga".

6 Case COMP/C-3/37.792 — *Microsoft* [2004] OJ L 32/23 upheld in Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601 ("*Microsoft WMP*").

7 Case COMP/39.530 — *Microsoft (Tying)* [2009] (unpublished) ("*Microsoft IE*").

injected into the theory and practice of competition law. To illustrate this, for decades, the practice of tying of certain products to other products was interpreted as a per se illegal restraint of trade (restriction of competition).[8] However, it has been interpreted under the rule of reason doctrine, since *Microsoft III* in which US Court of Appeals explicitly endorsed that "[t]here being *no close parallel in prior antitrust cases*, simplistic application of per se tying rules carries a serious risk of harm."[9] As rightly argued, the most important legacy of this case is likely to be, not its impact on Microsoft's monopoly, but rather its impact on antitrust enforcement.[10] Indeed, much of the attention paid to tying stems from the cases in high-tech markets against IBM in the 1970s and 1980s, and against Microsoft in the 1990s.[11]

Likewise, tying has become a broad category rather a single type of behaviour and begun to comprise "technological (or technical) tying" and "contractual (or classical) tying".[12] In *Microsoft WMP*, the Commission acknowledged that

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[8] In the mid-20th century, the US Supreme Court held that "[t]ying agreements serve hardly any purpose beyond the suppression of competition" and therefore regarded them as a per se restraint of trade. *Standard Oil Co v United States*, 337 U.S. 293 (1949), para.305. However, along with the interaction of technology with competition rules towards the end of 20th century, the reasoning behind some of the competition law rules had changed and those rules began to be implemented in a different way. In *United States v Microsoft Corp*., 253 F.3d 34 (D.C. Cir. 2001), the US Court of Appeals reversed the District Court's judgment and carved out what can be called as "technology exception" to the per se rule. JACOBSON, J. and QURESHI, A. (2001), "Did the Per Se Rule on Tying Survive 'Microsoft'?", http://www.ftc.gov/opp/intellect/020514jacobson2.pdf, Date Accessed: 20.12.2012, p.1. Here the Court made a distinction between "platform software products" and other products, and adopted a new legal standard by concluding that "platform software products" should be assessed under the rule of reason, whereas other products such as wheat, televisions and cigarette would still be subject to the per se rule. It should be noted that the US Supreme Court has not yet had its final say on this "exception" to the existing tying doctrine.

[9] *Microsoft III*, para.84 (emphasis added). Similarly it has been argued that prior to its Microsoft decision in 2004, the Commission's formal approach to tying and bundling could be characterised as "a modified *per se* illegality standard". O'DONOGHUE, R. and PADILLA, J. (2006), *The Law and Economics of Article 82 EC*, Hart Publishing, Great Britain, p.499.

[10] FOX, E. M. and CRANE, D. A. (2007), *Antitrust Stories*, Thomson West Foundation Press, USA, p.302. See also MANNE, G. A. and J. D. WRIGHT (2010), "Innovation and the Limits of Antitrust", *Journal of Competition Law and Economics*, No: 6(1), p.178 ("Few endeavors have had as large an impact on the history and future of antitrust as the case against Microsoft.").

[11] CARLTON, D. W. and M. WALDMAN (2002), "The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries", *The RAND Journal of Economics*, No: 33(2), p.197.

[12] Mostly after the cases in high-tech markets, a distinction has begun to be made between contractual tying and technological tying based on whether the tied products are tied together contractually or physically. As a general observation, a more lenient approach is adopted towards

Microsoft's practices could not be characterised as "classical tying" and that there were "*good reasons* not to assume without further analysis that tying WMP constitute[d] conduct which by its very nature [was] liable to foreclose competition."[13] The Commission takes this issue further in the Guidance Paper by removing the element of "coercion" from the constituent elements in the former tying and bundling cases when setting out its enforcement priorities in applying Article 102 of the Treaty on the Functioning of the European Union (TFEU). It is stated that:

> "The Commission will normally take action under Article [102] where an undertaking is dominant in the tying market and where, in addition, the following conditions are fulfilled: (i) the tying and tied products are distinct products, and (ii) the tying practice is likely to lead to anti-competitive foreclosure"[14]

From this expression, it can be seen that there has been a change in the Commission's practice after *Microsoft WMP* in 2004, since the earlier decisions on tying required the element of "coercion", where the consumers should be forced to buy the tied product together with the tying product.[15] Whereas in *Microsoft WMP*, the Commission decided that "inasmuch as tying risks foreclosing competitors, it is immaterial that consumers are not forced to "purchase" or "use" WMP".[16] It seems to have regarded "coercion" as "a lack of consumer choice" about whether or not to obtain WMP from Microsoft.[17] Some

technological tying which is thought to yield significant efficiency gains, whereas contractual tying arrangements tend to be subjected to a more restrictive treatment as they are traditionally regarded as tools to leverage the market power in the tying market to the tied market often to the detriment of competition and consumers. This distinction is now broadly accepted in formal and informal competition law related documents in both the EU and the US. See Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct [2009] OJ C 45/7, paras.47-59 (Guidance Paper) and US DOJ (2008), *Competition and Monopoly: Single-firm Conduct under Section 2 of the Sherman Act*, www.usdoj.gov/atr/public/reports/236681.htm, Date Accessed: 20.12.2012, p.77-90.

13 *Microsoft WMP*, para.989 (emphasis added).

14 Guidance Paper, para.50 (citations omitted).

15 Case IV/30.787 *Eurofix-Bauco v Hilti* [1988] OJ L 65/19 ("[The tying of the sale of Hilti-compatible nails to the sale of Hilti-compatible cartridge strips, together with other] policies leave the consumer with no choice over the supply of his nails and as such abusively exploit him.") upheld in Case T-30/89 *Hilti AG v Commission* [1990] ECR II-163 and a further appeal was dismissed in Case C-53/92P *Hilti AG v Commission* [1994] ECR I-666. See also Case IV/31.043 *Tetra Pak II* [1992] OJ L 72/1, upheld in Case T-83/91 *Tetra Pak II v Commission* [1994] ECR II-755 and Case C-333/94 P *Tetra Pak v Commission* [1996] ECR I-5951.

16 Case COMP/C-3/37.792 — *Microsoft* [2004] OJ L 32/23, para.833.

17 The General Court held that for this condition to be fulfilled, it was irrelevant whether consumers

commentators have reported other remarkable changes which have occurred in the reasoning of the Commission regarding "essential facilities" after it mandated Microsoft to disclose its interoperability information.[18] One could argue that *Microsoft WMP* and similar cases show that dealing with technology under competition law involves to a certain extent some difficulty. Challenges to competition law enforcement in high-tech markets must have been influential on the Commission to start seeking expert input to help support its antitrust, merger and state aid cases in telecom, media, information technologies, and consumer electronics markets, and in cases related to the use of internet.[19]

In the early years of the interaction of competition law with the realm of technology, particularly towards the end of 20th century, the role of competition law was initially questioned and there were doubts as to whether the traditional tools of competition law could be effectively used or easily adapted to analyse competition issues in the new economy. New economy markets, including high-tech markets, "differ markedly from most of the industries in which modern antitrust doctrine emerged".[20] The defining feature of new economy markets is a dynamic competitive process where firms compete *for the market* usually through research and development (R&D) to develop the "killer" product that will confer market leadership and thus diminish or eliminate rivalry.[21] By contrast, static price or output competition *in the market* is less important.[22] All those differences naturally raised doubts as to whether concepts and analytical paradigm of traditional competition law and policy could be used in high-tech markets. This

did not need to pay a price for the tied product or they were not coerced to use the tied product. *Microsoft WMP*, paras.967 and 970

[18] See *infra* "2.4. Microsoft WMP".

[19] CROFTS, L. (2011a), "EC Seeks IT, Media Experts for Competition Cases", MLex 24 January 2011, http://www.mlex.com/Content.aspx?ID=128531, Date Accessed: 20.12.2012.

[20] POSNER, R. (2000), "Antitrust in the New Economy", John M. Olin Law and Economics Working Paper No.106, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=249316, Date Accessed: 20.12.2012, p.2. For a good assessment of competition law and policy in the new economy and how new economy markets differ from traditional markets in terms of cost structures, profit levels, network effects, dynamic competition, intellectual property, dominance, market definition and so on, see AHLBORN, C., D. EVANS and J. PADILLA (2001), "Competition Policy in the New Economy: Is European Competition Law Up to the Challenge?", *European Competition Law Review*, No: 22(5), p.156-167.

[21] EVANS, D. and R. SCHMALENSEE (2002), "Some Economic Aspects of Antitrust Analysis in Dynamically Competitive Industries", *Innovation Policy and the Economy*, No: 2, p.1-2 (emphasis original).

[22] *ibid* (emphasis original).

made some authors to even regard competition law as "a 19th Century discipline [that] addresses 21st Century problems".[23]

The foremost criticism of the role of competition law in high-tech markets is that "these are fast-moving industries in which today's technology is quickly outmoded, opening the way for new competitors to overturn the dominance of incumbents."[24] Firms may be thought of as "fragile monopolists" since they can only retain their market position provided that they continue to innovate.[25] The traditional objections against market power as indicating an increase in price or a reduction in output are hardly relevant in these markets, where "standard anti-competitive behaviour turning into a chancy strategy if a new industry paradigm shift can completely annihilate established standards."[26] Therefore, not even a dominant firm can effectively prevent competition and there is always the possibility of potential competitors entering the market or brand-new products becoming a successor of former products.

There seems to be no objection to the prohibition of hard-core restrictions of competition and control of restrictive mergers among high-tech firms.[27] However, the same cannot be said in the area of abusive unilateral conduct. There is divergence on the implementation of competition law to challenge unilateral

[23] PITOFSKY, R. (1999), "Antitrust Analysis in High-Tech Industries: A 19th Century Discipline Addresses 21st Century Problems", Section of Antitrust Law's Antitrust Issues in High-Tech Industries Workshop, Arizona February 25-26, http://www.ftc.gov/speeches/pitofsky/hitch.shtm#N_2_, Date Accessed: 20.12.2012.

[24] BAER, W. J. and D. A. BALTO (1999), "Antitrust Enforcement and High-Technology Markets", *5 Michigan Telecommunications and Technology Law Review*, No:73, p.75.

[25] Ahlborn et al 2001, p.160. The authors further stress the Commission's understanding of dominance as the heavy reliance on market shares, and maintain that equating high market shares with dominance in the case of these "fragile monopolists" is potentially very damaging to innovation and competition and prevents firms with high market shares to compete vigorously on an equal footing with their competitors. *ibid* at p.162.

[26] CAMESASCA, P. D. (2000), "Mayday or Hayday? Dynamic Competition Meets Media Ownership Rules after Premiere", *European Competition Law Review*, No:21(2), p.82.

[27] ("Except for price fixing and other per se violations, competition law should leave such markets alone...") Baer and Balto 1999, p.75; ("We really don't know what the effect of applying antitrust principles to the new economy will be, except when they are applied just to stop horizontal price-fixing or mergers of major competitors in highly concentrated markets.") Posner 2000, p.11; ("There are many things, such as price-fixing, merger to monopoly, or foreclosure of distributional channels, that new-economy companies with substantial market power could in principle do to reduce competition. Such conduct is and should be illegal, as it is in traditional industries.") Evans and Schmalensee 2002, p.34.

conduct which fosters innovation and yields efficiency gains, but at the same time excludes competitors from the market. This poses problems in high-tech markets where most firms have considerable market power and operate throughout the world, meaning that they are subject to different jurisdictions pursuing potentially different objectives in the area of abusive unilateral conduct. Indeed, most competition law cases and investigations in high-tech markets deal with the allegations of abuse of market power and involve multinational high-tech firms such as IBM, Microsoft, Google, Intel and Rambus.

It is against this background that some commentators argue that competition law rules (on the prohibition of unlawful unilateral conduct) should not apply where innovation and dynamic competition are at stake due to potential chilling effects on innovators.[28] Any effort to create or exercise market power could quickly be corrected by market forces, and thus there is no need for the intervention of competition law.[29] By contrast, other commentators contend that competition law infringements are even more likely to stifle innovation and cause consumer harm in the new economy, and therefore enforcers should be "especially active" in high-tech markets.[30]

Former European Competition Commissioner Monti sums up well the role of competition law in high-tech markets as follows:

> "The general nature of the competition rules gives them an important advantage over most other legal rules, because they apply to the factual circumstances of a particular case, no matter how quickly industries develop or change. This allows to keep pace with technological developments. The rules stay the same, but the application of these rules is remarkably adaptable to changing circumstances… arguments against intervention include the difficulty of keeping up with market developments and the possibility that market failures in high technology sectors are far less likely to be enduring than market failures in other, more traditional, industries… keeping up with technical developments is certainly difficult. However,

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[28] SPULBER, D. F. (2008), "Unlocking Technology: Antitrust and Innovation", *Journal of Competition Law and Economics*, No:4(4), p.915-966 cited in Manne and Wright 2010, p.156. See also O'Donoghue and Padilla 2006, p.523 ("Due to huge benefits of innovation to the competitive structure of the markets, innovation should be praised by competition rules. It is probably the most valuable form of procompetitive activity and an enforcement policy that runs even a remote risk of stifling such activity can cause enormous harm to consumer welfare.").

[29] Baer and Balto 1999, p.75.

[30] SHAPIRO, C. (1999), "Exclusivity in Network Industries"*, 7 George Mason Law Review 673* cited in Manne and Wright 2010, p.156.

just because something is difficult cannot provide a basis for not intervening where necessary."[31]

The high-tech markets of today present legal and economic challenges that go far beyond the issues that were raised in the past.[32] There is now, however, broad consensus that neither the high rate of innovation in high-tech markets, nor other differentiating features make these markets immune from competition problems or constitute a valid ground for competition law to turn a blind eye to anti-competitive practices.[33] Special characteristics of high-tech markets should be taken into account just as the special characteristics of every industry, but none of those characteristics "justifies a complete or even substantial exemption."[34] Careful, mainstream and vigorous enforcement of competition law in high-tech markets is important so as to provide consumers with the benefits of innovation.[35] Most US courts now appear to have endorsed such conclusions.[36]

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[31] MONTI, M. (2000), "Competition and Information Technologies", Conference "Barriers in Cyberspace" Kangaroo Group, Brussels 18 September 2000, http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/00/315&format=HTML&aged=0&language=EN&guiLanguage=en, Date Accessed: 20.12.2012.

[32] GAL, M. S. and S. W. WALLER (2012), "Antitrust in High-Technology Industries: A Symposium Introduction", *Journal of Competition Law and Economics*, No:8(3), p.449.

[33] Ahlborn et al 2001; Evans and Schmalensee 2002; Posner 2000; Pitofsky 1999. The Antitrust Modernisation Commission (AMO), which is a body established by the US Congress in order to make recommendations for better antitrust law, also addressed the role of competition law in high-tech markets and came to the conclusion that there was "no need to revise the antitrust laws to apply different rules to industries in which innovation, intellectual property, and technological change are central features". AMO (2007), *Report and Recommendations*, http://govinfo.library.unt.edu/amc/report_recommendation/amc_final_report.pdf, Date Accessed: 20.12.2012, p.9.

[34] Pitofsky 1999, p.3. In a comprehensive report on the role of competition law and policy in new economy markets, The Office of Fair Trading (OFT) has come to the conclusion that "[t]here is a general consensus that competition policy and its active enforcement should be pursued in industries of the new economy but with some caution." OFT (2002a), *Innovation and Competition Policy: Part 1 – Conceptual Issues*, Report Prepared for the Office of Fair Trading, http://www.oft.gov.uk/shared_oft/reports/comp_policy/oft377part1.pdf, Date Accessed: 20.12.2012, p.15.

[35] Baer and Balto 1999, p.90.

[36] "This is a case dealing with technology, and the Court recognizes the need to promote pro-competitive conduct in the technology world. Indeed, technological innovation is an important defense in defending antitrust allegations… antitrust law has developed for good reason, and just as courts have the potential to stifle technological advancements by second guessing product design, so too can product innovation be stifled if companies are allowed to dampen competition by unlawfully tying products together and escape antitrust liability by simply claiming a 'plausible' technological advancement". *Caldera, Inc. v Microsoft Corp.*, 72 F.Supp. 2d 1295 (D.Utah 1999),

1.2. The Changing Nature of Cases

As the Greek philosopher Heraclitus once said well, "everything flows, nothing stands still" and "the only constant is change", this is certainly the case with the technology. It is self-evident that the most important characteristic of technology is that it is rapidly changing. If people were to say just one word about the concept of technology, it would probably be about its dizzyingly high pace. This is because of innovation as the driving source in high-tech markets where what matters for winning business is not the mere product itself, but the ability to further innovate, since an innovation at one point may be rendered obsolete by competitors' better innovations. To sell new products, a high-tech firm must bring new products to the market or else it may lose its customers to other suppliers who may be offering better products.[37]

Without saying more, the following statement of the former Assistant Attorney General for the Antitrust Division of the Department of Justice (DOJ) on the changing nature of the cases in high-tech markets is highly illuminating:

> "Microsoft is so last century. They are not the problem. I think we're going to continually see a problem potentially with Google, who I think so far has acquired a monopoly in internet, online advertising lawfully..."[38]

This statement verifies that, in accordance with the title of this study, yesterday the target was Microsoft, but now it is Google, which "has become the most discussed antitrust target."[39] In fact Microsoft, which faced significant allegations itself for decades on both sides of the Atlantic, is now an official complainant in the Commission's *Google* investigation.[40] Microsoft was long the

para.1323. However, the same cannot be said for the EU Courts as they seem to have been less concerned with the dynamic nature of markets and the need to protect innovation. This is evident from the General Court's *France Telecom* judgment where the Court held that "[t]he fact that there is a fast-growing market also cannot preclude application of the competition rules, in particular Article [102], especially where the undertaking in question has always held a market share much greater than that of its number one competitor, which is a valid indicium of a dominant position, and where it itself considers potential competition to be limited." Case T-340/03 *France Telecom SA v Commission* [2007] ECR II-207, para.6. Therefore, the US authorities and EU authorities do not show the same level of concern for the nature of competition in high-tech markets.

37 TEECE, D. J. and M. COLEMAN (1998), "The Meaning of Monopoly: Antitrust Analysis in High-Technology Industries", *43 Antitrust Bulletin 801*, p.830.

38 Manne and Wright 2010, p.154-155.

39 *ibid* at p.154.

40 For some of Microsoft's allegations against Google, see Microsoft's Vice President and Deputy General Counsel's statement at ——, "Company Statement: Microsoft - Competition Authorities and Search", MLex 1 March 2011, http://www.mlex.com/Content.aspx?ID=91044, Date Accessed: 20.12.2012.

"enfant terrible" of EU competition law, but now it complains that it is "obviously difficult for competing search engines to gain users when nearly every search box is powered by Google."[41] It must be ironic for Microsoft to lodge a complaint, as the company has often criticised the European authorities' handling of competition cases and most of the time blamed them for being considerably influenced by complaints from competitors.[42]

The pace of technology can be seen from some competition law cases involving *technological products*, *technological means* or even *the whole market dynamics*. The changing nature of the cases involving technological elements may make them look older than they really are. For example in the IBM case, the Commission dealt with the IBM's anticompetitive practices concerning its "System 370 mainframe computers". Today, this product may seem weird to the majority of people born in the aftermath of that decision dated 1984.[43] Although the case does not date back far from the present due to the relevant product market, it appears older than it really is.

On the contrary, although it dates back almost 10 years before the IBM case, in *United Brands* the European Court of Justice identified the relevant product market as "bananas" holding that:

> "[B]ananas are integral part of the fresh fruit market, because they are reasonably interchangeable by consumers with other kinds of fresh fruit such as apples, oranges,

[41] CROFTS, L. (2011b), "Microsoft Files Complaint against Google with EC", MLex 31 March 2011, http://www.mlex.com/EU//Content.aspx?ID=138469, Date Accessed: 20.12.2012. It is ironic that when Microsoft was dominating the market and Google did not have a high degree of market power in 2006 as it has today, it complained to both the US and the EU authorities that Microsoft would tie IE Version 7.0 with Windows Vista and set the MSN search engine as the default. The vice-president for search products at Google Mayer stated that "[t]he market favours open choice for search, and companies should compete for users based on the quality of their search services" and went on to state that "[w]e don't think it's right for Microsoft to just set the default to MSN. We believe users should choose." MARSON, I. (2006), "Google Claims IE 7 is Anti-competitive", ZDNET 3 May 2006, http://www.zdnet.com/google-claims-ie7-is-anti-competitive-3039266736/, Date Accessed: 20.12.2012. As an official complainant, Microsoft now seems to repeat what Google was complaining before.

[42] WATERS, R. and M. WATKINS (2011), "Microsoft Turns to Brussels in Google Complaint", Financial Times 31 March 2011, http://www.ft.com/cms/s/2/7dd1c7a4-5b61-11e0-b965-00144feab49a.html#axzz1ImHCovvS, Date Accessed: 20.12.2012.

[43] "Five years after the case, the alleged dominance of IBM sunk under a welter of new products, innovations, PCs, desktops, laptops, etc." VELJANOVSKI, C. (2001), "EC Antitrust in the New Economy: Is the EU Commission's View of Network Economy Right?", *European Competition Law Review*, No:22(4), p.117.

> grapes, peaches, and strawberries, etc... The banana has certain characteristics, appearance, taste, softness, seedlessness, easy handling, a constant level production which enable it to satisfy the constant needs of an important section of the population consisting of the very young, the old and the sick."[44]

Due to its unchanging nature, the relevant product market for banana is still the same, even almost half a century later. The banana of yesterday is no different to the banana of today; unless a ground-breaking achievement is occurred, such as its colour or size is altered by intervening with its genes. It should also be noted that in this situation, a genetically altered banana may be of less use and be completely replaced by another banana (as the case with technological products), which is far superior in terms of taste or portability. A new product may not be "just a vastly better version" leading to the demise of the old product; it may be "an entirely different product that eliminates the demand for the old product".[45] This hypothetical example illustrates that with the advance of technology, today's relevant product markets cases may not mean much to next generations.[46]

Over time the technological means, to which firms resort when restricting competition or abusing their market power, are unlikely to remain unaffected by the advance of technology and dynamic competition. To take but one example, as a widespread practice, mobile phone manufacturers equip their mobile phones with the technology of Subscriber Identity Module (SIM) locking as desired by the GSM operators. SIM locks in a mobile phone basically do not allow its possessor to use SIM cards of other GSM operators.[47] Constrained by the GSM

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[44] Case 27/76 *United Brands Co. v Commission* [1978] ECR 207, paras.12 and 31.

[45] Evans and Schmalensee 2002, p.17. The authors give the example of Microsoft Windows 95 which largely eliminated the demand for MS-DOS. Under the current state of technology, it is virtually impossible to effectively use Microsoft Windows 95.

[46] *United Brands* is still widely cited under the market definition section of most of the textbooks on EU competition law. See WHISH, R. and D. BAILEY (2012), *Competition Law*, Seventh Edition, Oxford University Press, Great Britain; JONES, A. and B. SUFRIN (2010), *EC Competition Law: Text, Cases and Materials*, Fourth Edition, Oxford University Press, Great Britain and KORAH, V. (2007), *An Introductory Guide to EC Competition Law and Practice*, Ninth Edition, Hart Publishing, Great Britain. One could argue that the case is likely to guide future market definition cases on other fruits, such as the ones explicitly mentioned in the case. However, the same is unlikely to happen with the future market definition of, say "cloud computing", whether that is in the same relevant product market with IBM's "System 370 mainframe computers".

[47] Mobile phone users can normally change GSM operators simply by changing the SIM card while retaining their phone. Some operators, however, appear to have blocked this by limiting the use of phone only with a single SIM card (usually issued by them). This practice is known as "SIM locking". This is done because the price of mobile phones is typically subsidised with revenues from subscriptions when customers obtain their mobile phones through contracts with GSM

operator's services, the possessor cannot use another SIM card of different GSM operators in that mobile phone, at least for a certain period of time. In this way, GSM operators are able to prevent substitutions to SIM cards of other GSM operators by the use of such technological mean.

In this respect, a possible future scenario would be that mobile phones might be designed in a way that the SIM card functionality of a mobile phone is integrated as a built-in function, meaning that consumers cannot use alternative SIM cards but only the services provided by the manufacturer of that mobile phone. This situation is likely to occur in the form of extending market power in one market into the other where a dominant firm does not have market power (leveraging), and in this respect a dominant mobile phone manufacturer might decide to enter the GSM operator market by technologically tying its mobile phones with the services of a GSM operator. This will certainly generate exclusionary effects on GSM operators, but it is not unequivocal whether such practice harms consumers.[48]

Apple, the manufacturer of *iPhone* which has been listed as one of the 1001 inventions that changed the world,[49] is claimed to have planned to produce its new generation mobile phone with a technology which, upon purchase, allows its users to sign up for a service on Apple's website and start using it immediately, without the need to subscribe to services of GSM operators.[50] It is reported that any decision by Apple to introduce a new version of *iPhone* with a SIM

operators, GSM operators simply try to avoid subsidising their competitors' mobiles. As a result of SIM locks, consumers are deprived of the choice to switch to different GSM operators, even if they offer better or cheaper products. In Australia, Canada, Europe and the United States, many GSM operators lock the mobile phones they sell. Source: http://unlockedcellphone.blogspot.com/2007/12/what-is-sim.html, Date Accessed 20.12.2012.

[48] "[W]here leveraging involves innovation… antitrust authorities are presented with the problem of deciding whether the benefits to consumers of the innovation itself outweigh the anti-competitive effects of leveraging." FISHER, M. F. (2001), "Innovation and Monopoly Leveraging", J. Ellig (ed.), in *Dynamic Competition and Public Policy: Technology, Innovation, and Antitrust Issues*, p.138.

[49] CHALLONER, J. (2009), *1001 Inventions: That Changed the World*, Cassell Illustrated, China, p.936.

[50] Obviously this would involve huge investment costs, such as building the infrastructure, base stations and satellites as well as advertisement costs to advertise the brand new product. Apple's strategy might be becoming a mobile virtual network operator (MVNO), since under this model, companies buy wholesale mobile telephony services from the existing GSM operators and subsequently resell under their own names. Therefore, it might be theoretically possible to leverage market power into another market with the use of a technological measure.

embedded would undermine the operators' relationship with their customers and such a move could prove to be the first step in a process in which the mobile operators cede customer control to mobile phone manufacturers like Apple, which is objected to by some of Europe's leading GSM operators.[51]

Even the whole market dynamics sometimes show a tendency to change and give way to a different market structure. This is especially the case with markets based on certain standards such as DVD, Blu-Ray, VHS, mp3, pdf and so on. Before a competition authority comes to a conclusion, a completely or partly new standard may come out and totally or partly replace the older standard. Whereas in other industries, which are not based on technological progress and dynamic competition, such as the sugar market, there are hardly any changes in terms of market structure, except some new entrants exerting competitive pressure on incumbents. Therefore, cases in high-tech markets may last for so long relative to the changing conditions of the industry and thus become irrelevant or ineffective at the end.[52] Even when a case is well handled, "the legal wheels turn far too slowly."[53]

In home entertainment markets, frequent and radical changes occur in the market dynamics. Having replaced the older Betamax standard, VHS standard lagged behind in the market and is eventually replaced by DVD standard, which is now on the verge of being replaced by Blu-Ray standard that won the "format war" with HD DVD couple of years ago. Even before a competition authority begins to investigate certain anti-competitive behaviour in this market such as the regional restrictions in DVDs due to a "region code" embedded in DVDs which does not allow the user to play DVDs if their DVD players are equipped with a different region code,[54] the whole market structure might lose its popularity in the eye of consumers.

Another example is the video games market. This market is characterised by significant "technology waves" in that in every three or four years, a new

[51] PARKER, A. (2010a), "Apple Warned over Built-in Sim Cards" Financial Times 18 November 2010, http://www.ft.com/cms/s/0/db917464-f344-11df-a4fa-00144feab49a.html#axzz1CjsbEeN8, Date Accessed: 20.12.2012; see also PARKER, A. (2010b), "In-built Sim for Apple's iPhone 5 Ruled out", Financial Times 22 November 2010, http://www.ft.com/cms/s/2/fb627cb8-f662-11df-846a-00144feab49a.html#axzz1CjsbEeN8, Date Accessed: 20.12.2012.

[52] Posner 2000, p.9.

[53] Hovenkamp 2008, p.299.

[54] For more information, see ÖZKAN, A. F. (2011), "AB Rekabet Kuralları Karşısında DVD Bölge Kodu Koruması: Teknik, Ekonomik ve Hukuki Bir İnceleme", *Rekabet Dergisi,* No:12(2), p.165-228.

technology platform is introduced to the market.[55] Video game consoles do not generally offer backward compatibility and often consumers, who are tired of old games, switch quickly and rapidly to newer and/or better games.[56] A new technology can completely "leap-frog" the market position of existing firms and then quickly attract customers.[57] In 1994, the UK Monopolies and Mergers Commission (now Competition Commission) conducted a market investigation into the UK video games market and found certain anti-competitive practices.[58] Some firms that are referred in this investigation exited the market notwithstanding their very high market shares and technological products that are defined in the relevant market are now superseded by the state-of-the-art ones.[59]

1.3. Public Awareness

Special attention is being paid to competition cases involving widely-used technological products and well-known high-tech multinational firms as the world's economies are becoming increasingly interrelated. A technology-related competition investigation into or a ruling against well-known multinational high-tech firms attracts the attention of not just competition economists or lawyers, but millions of consumers worldwide. Headlines highlighting news about the launch of such investigation into or findings against certain anti-competitive practices of such firms attract remarkable attention.

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55 OFT (2002b), *Innovation and Competition Policy: Part 2 – Case Studies*, Report Prepared for the Office of Fair Trading, http://www.oft.gov.uk/shared_oft/reports/comp_policy/oft377part2.pdf, Date Accessed: 20.12.2012, p.25.

56 *ibid*.

57 Pitofsky 1999, p.3. Sega's success with 16-bit video games, quickly surpassing Nintendo's 8-bit format, demonstrates this point. *ibid*.

58 By the time of the investigation, supply was dominated by two firms, namely Sega and Nintendo, both of which operated worldwide and supplied 99 percent of all consoles in the UK. They found to have established a discriminatory pricing scheme for game consoles and games which resulted in prices for games that were excessive compared to prices for consoles, controlled the supply of third party games through the conditions included in licence agreements, incorporated technical features in game consoles and games (similar to region codes in DVDs), some of which also introduced territorial segmentation and so on. OFT 2002b, p.20.

59 Although Sega was the leading supplier with 60 percent by value of total trade sales of game consoles, at present it does not produce game consoles but only engages in the market for video games themselves. Likewise, the most up to date game consoles at the time of the investigation were 16-bit consoles (fourth generation consoles), which were then quickly replaced by 32-bit and 64-bit ones. *ibid* at p.19. At the time of writing, the leading manufacturers of video consoles are Sony with *Playstation3*, Nintendo with *Nintendo Wii* and Microsoft with *Xbox 360* (the seventh generation of consoles).

It has been commented that there are not many competition cases that "receive global coverage and are known outside of the small world of competition economists and lawyers", and the Microsoft case is one of those, being perhaps one of the most interesting and controversial antitrust cases.[60] "By now, nearly every living person on earth has heard about" the US Microsoft decision.[61] Fox and Crane refer to this issue as follows:

> "There is no doubt that, from the public's perspective, U.S. v Microsoft was the antitrust case of the 1990s and perhaps for decades before that. The investigation, the trial, and its aftermath received wide press coverage throughout. A number of the major actors in the drama became household names, as much as a result of the public relations battle among the parties as of the litigation itself."[62]

One can argue that the reason for such attention is the global availability of the products in question. As will be explained below, the relevant geographic market for technological products is vastly international. Such products globally address a vast number of consumers and can virtually be found in the markets of all countries. This is absolutely natural as well, since around 90 percent of global consumers use Microsoft Windows as their client operating system,[63] and are most probably interested in what is happening to this company. Likewise, over 70

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[60] O'Donoghue and Padilla 2006, p.496.

[61] MORSE, H. (2001), "Antitrust Issues in High-Tech Industries: Recent Developments", The Antitrust Review of the Americas 2002, http://www.global-competition.com/spl_rpts/main_fs.htm, Date Accessed: 20.12.2012.

[62] Fox and Crane 2007, p.288. US Microsoft case is even regarded as "the case of the century". See PARDOLESI, R. and A. RENDA (2004), "The European Commission's Case Against Microsoft: Fool Monti Kills Bill?", LE Lab Working Paper AT-08-04, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=579814, Date Accessed: 20.12.2012, and RENDA, A. (2004), "Catch Me If You Can! The Microsoft Saga and the Sorrows of Old Antitrust", *Erasmus Law and Economics Review,* February-1, p.3.

[63] Once regarded as a "vast empire" in the eyes of the critics, Microsoft now faces fierce competition. Microsoft is losing market shares to Apple after this company's successful innovations regarding both its laptop computers and tablet computers that work with "*iOS*" as the operating system developed by Apple. It has been observed that Google is also developing its own operating system which will be quite different from Microsoft's Windows and Apple's "*iOS*". According to initial announcements by Google, this operating system is designed to be internet-based and is going to provide a cheaper alternative to today's computers: "[t]he Chrome OS laptop marks the culmination of Google's efforts to build a PC that draws entirely on the information and computing power on the web, rather than running "native" software made by Microsoft or other traditional software companies." WATERS, R. (2010), "Google Challenge to Microsoft Software Empire", Financial Times 8 December 2010, http://www.ft.com/cms/s/2/1b38a448-0263-11e0-ac33-00144feabdc0.html#axzz18BhQlCM4, Date Accessed: 20.12.2012.

percent of consumers use iPod as their portable music player[64] (or more than just a music player, when its new integrated features are taken into account), and are thus more or less familiar with its producer, Apple. Such high market shares coupled with global availability of technological products triggers a very high public awareness.[65]

However, for example, cases on other products, such as animal phosphates or oxygen peroxide, may not be that interesting to many people, including laymen and to a certain extent even scholars. The number of people that are familiar with operating systems, online search results or social network tweets far outweighs those that are into animal phosphates or oxygen peroxide. According to a study conducted by a business intelligence company, in every single minute of a day, Google receives over 2.000.000 search queries, Facebook users share 684.000 pieces of content, Twitter users send over 100.000 tweets and Apple's AppStore receives 47.000 application downloads.[66] Those statistics unequivocally point out to the vast use of technological products and services, and the level of familiarity with some high-tech and innovative firms.

Due to such a high level of public awareness, it appears that consumers appear to somehow take a stance in favour of or against the company in question, depending on the level of satisfaction or dissatisfaction they get from its products. For example, after the announcement of the Commission's investigation into Google,[67] numerous consumer comments have been made in favour of or against

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64 HAYS, T. (2006), "Apple's Massive Market Bite", *European Lawyer*, No:63, p.38.

65 Sometimes competitors also play an active role in creating a public awareness campaign against firms that have often outdone them in the market place with a view to winning business against those firms by attacking their popularity. For example, Microsoft has started a campaign to inform internet users that Google's privacy policies make them vulnerable to advertisers. It alleges that Google, which makes 96 percent of its revenues from advertising, collects users' information both from their search results and by reading through their personal Gmail accounts, and then sells it to advertisers for billions of US dollars. Consequently, those users unwittingly become specific targets for advertisers. Source: ——, "Microsoft warns people that Google is indeed spying on your every move", WorldPress Blog 1 February 2012, http://googleexposed.wordpress.com/ 2012/02/01/ microsoft-warns-people-that-google-is-indeed-spying-on-your-every-move/, Date Accessed: 20.12.2012. Microsoft with Internet Explorer and Google with Chrome compete in the market for web browsers. Microsoft's Bing, which entered the market in 2009, also competes with Google, which has been running its services since 1998, in the market for online search engines.

66 JOSH, J. (2012), "How Much Data Is Created Every Minute?", DOMO Blog 8 June 2012, http://www.domo.com/blog/2012/06/how-much-data-is-created-every-minute/, Date Accessed: 20.12.2012.

67 Press Release, "Antitrust: Commission probes allegations of antitrust violations by Google", IP/10/1624, 30 November 2010. See *infra* "3. The Google Dilemma".

this investigation. Majority of the consumers took a stance against the Commission and expressed their comments as follows: "*Google has built up its dominant share by providing an awe-inspiringly brilliant search service. The idea that Google is going to start sullying its reputation by fiddling the results of travel fare searches is simply not credible*", "*Google is one of the world's best search engines for a reason... government's intervention is frankly speaking really 'stupid' and against the fundamentals of capitalism*", "*Google is apparently good at what it does – brin*[g]*ing out sites relevant for us users*." and "*the EU is typically going after those high-profile multi-billion dollar foreign firms with no good reason at all other than to get some money*".

Some consumers even levelled harsh criticism against the Commission implying that it is acting "ignorantly": "*dear European Commission, did you know that you can just type "www.yahoo.com" in your browser at any time and you get a whole different search engine?*" and *"*[i]*f the EU must do something, if it thinks that it is imperative that they interfere in Google's (or anyone else's) web products, let it be in this form: a link somewhere such that when the user clicks, it is led to an EU web site that explains how the Internet works.*" Furthermore, one of the consumers accused the Commission of selecting the cases which it wants to be deal with and sarcastically meant that the Commission itself abuses its dominant position in investigating competition infringements: "*Seriously, does the EU ever go after high-profile European firms? ...they never went after Porsche/VW, never went after Tesco or Carrefour... I wonder if Google, MS, Intel, Oracle couldn't bring a case against the Commission in the ECJ for selective enforcement of anti-trust law*." Few consumers account for the Commission's investigation as follows: "[i]*t's a legitimate case. Most internet users use Google as their gateway to the digital world, so fair competition is key"* and "[e]*ven if no evil is being done, Google's dominant position demands a closer look."*[68]

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[68] All of those comments are taken from ——, "Engine Trouble for Google", The Economist 30 November 2010, http://www.economist.com/blogs/babbage/2010/11/google_and_european_commission?page=1, Date Accessed: 20.12.2012. It should be stressed that such consumer comments should not be taken seriously as these are not scholarly works and most of those consumers are probably laymen, and therefore not knowledgeable about what competition law is about. In this respect, one consumer expressed that "*if Google changes its search results to favor its own products, that's fair game, since it is their algorithm and they can tune it as they please (e.g., perhaps because they believe that their products are really superior)*", without being aware of the principle that dominant firms have a special responsibility not to impair undistorted competition as set out by the Court of Justice of the European Union in Michelin. Case 322/81 *NV Nederlandsche Banden Industrie Michelin v Commission* [1983] ECR 3461, para.57. For more information on this

On the enforcement side, public awareness might lead to increases in both public enforcement and private enforcement of cases involving ubiquitous technological products of transnational companies. The reason for an increase in public enforcement is due to the fact that a competition authority might not remain silent and thus feel the need to launch an investigation into a transnational company, when much is being said in the press or among consumers against that company. It can be argued that this fact may put pressure on competition authorities and courts and thus may give rise to "false positives" (or Type 1 errors) or "false negatives" (or Type 2 errors).[69] Faced with a high-tech company increasing its market shares rapidly, a competition authority might be willing to challenge its certain prima facie anti-competitive business strategy, although the same authority might not have done so in the absence of such a situation, which might lead to an unnecessary prohibition of an "innocent" behaviour and vice versa.[70]

Both types of errors seem to be costly: in the context of false positives, the costs are efficiencies that are foregone, and in the context of false negatives, the cost is consumer harm.[71] However, the probability of false positives and their

subject, see McMAHON, K. (2009), "A Reformed Approach to Article 82 and the Special Responsibility not to Distort Competition", in A. Ezrachi (ed.), *Article 82 EC: Reflections on its Recent Evolution,* Hart Publishing, Great Britain, p.121-145. On the other hand, such comments show customer feedback of Google's services and may be taken into account as a parameter when analysing the effects of the alleged anti-competitive practices of Google on consumers. For some consumer comments on the Commission's settlement with Microsoft regarding the unbundling of IE and Windows see KOMAN, R. (2009), "MSFT: EU Would Force Users to Pick Browser", ZDNet 28 January 2009, http://www.zdnet.com/blog/government/msft-eu-would-force-users-to-pick-browser/4306, Date Accessed: 20.12.2012.

[69] False positives mean the wrongful condemnation of conduct that benefits competition and consumers, whereas false negatives indicate the mistaken exoneration of conduct that harms competition and consumers. POPOFSKY, M. S. (2006), "Defining Exclusionary Conduct: Section 2, the Rule of Reason, and the Unifying Principle Underlying Antitrust Rules", *73 Antitrust Law Journal 435*, p.448.

[70] "[E]mpirical evaluation of business practices in high tech-markets is incredibly complex partly because these cases involve conduct that can theoretically prove either pro-competitive or anticompetitive, because regulators must act or forbear in light of the "false positives" which can chill innovation, and because distinguishing pro-competitive from anticompetitive conduct in a technologically advanced setting is particularly difficult." WRIGHT, J. D. (2011a), "Does Antitrust Enforcement in High Tech Markets Benefit Consumers? Stock Price Evidence from *FTC v. Intel*", George Mason University Law and Economics Research Paper Series No.11-02, http://ssrn.com/abstract_id=1739786, Date Accessed: 20.12.2012, p.27.

[71] AHLBORN, C., D. BAILEY and H. CROSSLEY (2005), "An Antitrust Analysis of Tying: Position Paper", D. Geradin (ed.), in *GCLC Research Papers on Article 82 EC*, p.200.

social costs are both higher as innovation would at stake.[72] The social costs of false positives are higher because, when competition law is applied in a situation involving innovation and technological advance, where it should not have been applied, this can stifle further innovation and disincentivise the innovator firm, which would obviously have undesirable social costs. Indeed, false positives are more costly than false negatives, because self-correction mechanisms mitigate false negatives but not false positives, and errors of both types are in fact inevitable.[73] While cases against high-tech giants grab headlines; pursuing them, however, may not always lead to "high-profile conclusions" for competition authorities and courts.[74]

As for the private enforcement, public awareness may also lead to an increase in the number of private actions. What is being continuously written in the press and spoken among consumers is likely to incentivise consumers to take an action against the high-tech firm in question and claim for the harm they suffered, if any. In addition, given the widespread use of the products of that company, this might even lead to a "snowball effect" in the number of private actions based on both "follow-on" claims and "stand-alone" claims. After knowing that the company is found to have violated competition rules in a country, a consumer in another country might want to file a stand-alone claim against the company in that

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72 Manne and Wright 2010, p.153; "[T]he risk of over-enforcement (Type I errors) should be preferable to under-enforcement (Type II errors), at least when discussing dynamic markets in general and in the absence of sector regulation." GALLOWAY, J. (2010), "Driving Innovation: A Case for Targeted Competition Policy in Dynamic Markets", http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1763676, Date Accessed: 20.12.2012, p.8 (citations omitted) (emphasis original).

73 EASTERBROOK, F. H. (1984), "The Limits of Antitrust", *63 Texas Law Review 1* quoted in Manne and Wright 2010, p.157. In light of this, there is almost always a room for self-correction mechanisms with the advances in technology. This might be in the form of product differentiation or a completely new product or, as this is mostly the case, the use counter-technological means. For instance, if the DVD content providers opt for the use of a region code in their DVDs, which basically limits the use of that DVD to a certain region, the playback of these DVDs are not allowed in the DVD players having a different region code. No matter how lawfully the consumers obtain these DVDs, they are still not allowed to play them if they have a DVD player whose region code does not match with their DVDs. Although this practice seems to harm consumer welfare, there may not be a need for the intervention of competition law, since the outcome can easily be mitigated by the use of "region killer software". These counter technological means allow consumer to play any DVD they have bought irrespective of its region code. See Özkan 2011, p.177-181.

74 CROFTS, L. and R. McLEOD (2010), "MLex Comment: Almunia Faces Tough Choices over Hi-tech Sector Abuse Complaints", MLex 23 March 2010, http://www.mlex.com/Content.aspx?ID=94079, Date Accessed: 20.12.2012.

country and make use of the findings of the court of the first country.[75] It was observed in the aftermath of US Microsoft case that the case spurred numerous private lawsuits that Microsoft settled at substantial costs, and the case encouraged government actions in the EU, Korea and elsewhere that have been, at the very least, burdensome and costly for Microsoft.[76]

1.4. Global Markets and Jurisdictional Problems

With domestic markets increasingly opening up to foreign trade, there have been tremendous increases in global trade thanks to industrialisation, globalisation, advanced transportation, multinational companies, as well as international bilateral or multilateral agreements between various states. As national borders disappear and the world increasingly transforms into a global market place, companies are seeking out several ways to sell their products in different markets, and thereby addressing vast amounts of consumers. As globalisation has brought competition to the international arena,[77] firms have to vigorously compete not only with their competitors in national markets, but also with other firms in foreign markets to win business.[78]

Compared to most goods, technological products are globally available and can virtually be found in the market place of all countries. The same smart phones, software, DVDs, portable music players, USB-powered webcams and so on can all be found across the US, Europe, Australia, Japan and many other markets, sometimes only with some minor product differentiations.[79] In

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[75] It has been observed that sometimes even competition authorities or courts and the undertaking(s) in question tend to make cross-references to the findings, arguments or defences in decisions or judgments from other jurisdictions. See both the Commission's and Microsoft's references to the previous US cases and settlements on Microsoft in *Microsoft WMP*, paras.51-58, 201, 663, 672-673, 687, 703, 947, 959, 973-974, and 1011 (especially paras.893, 902, 972, 1022 and 1363).

[76] Fox and Crane 2007, p.301.

[77] Economically speaking, globalisation is the world's becoming a single market with the gradual removal of trade barriers among countries.

[78] "In the old economy, fixed assets, financing, and labor were principal sources of competitive advantage for firms. But now, as markets fragment, technology accelerates, and competition comes from unexpected places, learning, creativity, and adaptation are becoming the principal sources of competitive advantage in many industries." ATKINSON, R. D. and R. H. COURT (1998), "The New Economy Index: Understanding America's Economic Transformation", Progressive Policy Institute, Technology Innovation and New Economy Project, http://www.dlc.org/documents/ACFACVCViGNa.pdf, Date Accessed: 20.12.2012, p.6.

[79] Sometimes national laws and regulations bound companies to comply with them in producing their goods for use in that country. These can be in the form of safety standards, health regulations

Microsoft WMP,[80] the Commission noted that a worldwide market existed for client PC operating systems, work group server operating systems and streaming media players, and found that multinational computer manufacturers enter into worldwide licence agreements and sell computers globally.

Not only have new products emerged,[81] but also the way how business is made has also changed. With its increasing use and thus growing role in international trade, internet has enabled the sale of products to longer distances easily and quickly without the presence of seller and buyer at the time of transaction. Within this context, internet enables some technological products to be bought and used instantly even without the need of actual delivery. Consumers have the option to buy software, download copyrighted music and film instantly, without waiting for these items to be delivered to their doors. Therefore, those kinds of technological products have become only "one click" away from consumers which leads them to be more and more globalised.[82] Indeed, the internet has changed the basic economics of many sectors of the economy.

Although the markets may be global and free from national borders, competition laws are mostly national or regional as the case with EU. When the same kinds of products are available in different markets but produced and exported by the same companies (either parent or subsidiary), jurisdictional problems are likely to arise. These can be in the form of *extra-territoriality* or *achieving different outcomes in different jurisdictions* leading to inconsistent decisions or rulings. After all, the belief that anti-competitive behaviour is also

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or other requirements. The use of three-pin adapter as the power source in the UK is a typical example for safety standards leading to product differentations. Besides, national classification (rating) criteria and age restrictions for films in DVD format have to be complied with, if DVDs are to be commercially sold in the UK market. Within this respect, in every DVD cover the logo of "British Board of Film Classification" has to be shown together with a number or a letter (such as U, PG, 12, 18) specifying the age groups for which the content of that DVD is suitable and to which persons it can be sold.

[80] *Microsoft WMP*, paras.23-29.

[81] "[Today] what we produce is increasingly a line of computer code or a gene sequence rather than an ingot of iron or a barrel of oil or a bushel of wheat." Morse 2001.

[82] The development of e-commerce poses important questions in the context of competition law, especially with regard to permissible distribution systems. There has been an interest in regulating the internet sales within exclusive and selective distribution systems in the EU with the adoption of the Guidelines on Vertical Restraints [2010] OJ C 130/1 (see paras.51-54). On the role of internet in EU competition law see GAHNSTROM, A. and C. VAJDA (2000), "EC Competition Law and the Internet", *European Competition Law Review,* No:21(2), p.94-106.

contrary to the public good depends on the acceptance of a certain set of economic and political beliefs.[83]

As an example of a dispute over extra-territoriality, in the context of DVD region codes, the world has been divided into six different regions by Hollywood based film studios and DVD player manufacturers, and each region has been given a specific region code, which should be matched with the player's embedded region code. Examining this practice, the Australian Competition and Consumer Commission's (ACCC) head stated that if the companies agreed on those restrictions, this would look like an "off-shore" anti-competitive agreement breaching not only Australian law but the laws in other countries and in practice and it may or may not be easy to enforce the law against overseas countries.[84] He further concluded that there were jurisdictional issues and ACCC would make recommendations to the Parliament in a few months, which include forcing the DVD industry to change its ways by international co-operation or legislation to declare Australia a market that would only sell multi-region DVD players.[85]

When companies, resident within a country, export their products and sell them in different countries, extra-territoriality issue gains importance. This is often the case with high-tech companies since they tend to sell their products across different parts of the world, and thus are subject to different competition law regimes. Indeed technological product giants like Microsoft, Google, Apple, IBM and many others usually have a large global portfolio of customers. "Enforcers came to realise that the transnational character of the competition cases of today clashes with the traditionally territorial scope of domestic antitrust rules."[86] To overcome disputes over jurisdiction, more and more countries are

[83] Jones and Sufrin 2010, p.1227.

[84] FITZSIMMONS, C. (2001), "Restricting DVD's illegal: ACCC", The Australian 27 March 2001, http://www.consensus.com.au/ITWritersAwards/ITWarchive/ITWentries02/C1CaitlinFitzsimmons.htm, Date Accessed: 20.12.2012.

[85] *ibid*. In a press statement ACCC "*advised* consumers to exercise caution when purchasing a DVD video player because of the restrictions that limit their ability to play imported DVDs." ACCC (2000), "Consumers in Dark about DVD Imports", http://www.accc.gov.au/content/index.phtml/itemId/87605, Date Accessed: 20.12.2012 (emphasis added). It would appear that both the recommendations that were to be made to the Parliament and the wordings in the press release point out to jurisdictional problems as a result of which the case was closed and consumers were only left with an "advice".

[86] MONTI, M. (2001), "Competition in the New Economy", 10th International Conference on Competition, Bundeskartellamt, Berlin 21 May 2001, http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/01/232&format=HTML&aged=0&language=EN&guiLanguage=en, Date Accessed: 20.12.2012.

now increasingly making use of international co-operation agreements.[87] Within this context, an international harmonisation movement has been led by the EU and the US.[88] As the former Assistant Attorney General for the Antitrust Division of the DOJ stated, cooperation is particularly important given the global nature of many markets, including in the high technology sector."[89]

Another issue in jurisdictional problems is that competition authorities and courts might achieve different outcomes in different jurisdictions which in return lead to inconsistent rulings, when the effects of the alleged anti-competitive behaviour are the same or similar. This situation is very likely given the global availability of technological products in different jurisdictions and the divergence in the applicable laws of the countries where such products are being sold. In fact, this is one of the most highlighted concerns when referring to different handling of anti-competitive behaviour, in particular unilateral conduct,[90] and different outcomes between the US and EU authorities. This transatlantic divide is caused by different views on how antitrust should protect the market.[91]

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87 For a good list of bilateral competition-specific agreements between different countries, see DABBAH, M. M. (2010), *International and Comparative Competition Law*, Cambridge University Press, Great Britain, p.532-540.

88 See Agreement between the Government of the United States of America and the Commission of the European Communities regarding the application of their competition laws [1995] OJ L 95/47, and Agreement between the European Communities and the Government of the United States of America on the application of positive comity principles in the enforcement of their competition laws [1998] OJ L 173/28.

89 Source: http://www.justice.gov/atr/public/press_releases/2007/226070.pdf, Date Accessed: 20.12.2012.

90 In contrast to the prohibiton of cartels and merger control, where there is a growing global convergence, there is substantial divergence both within the EU and worldwide as to the appropriate scope of control that should be placed upon unilateral conduct of firms with market power. Article 101 TFEU in the EU and Section 1 of the Sherman Act 1890 in the US appear to be quite similar to each other, compared to Article 102 TFEU and Section 2 of the Sherman Act 1890. Article 102 TFEU forbids the "abuse of a dominant position" by one or more undertakings, whereas Section 2 of the Sherman Act prohibits "monopolization", "attempted monopolization" and "conspiracy to monopolize". In addition to the differences in their wording, it seems that the real difference centres on the application of those corresponding provisions which has become highly visible after the cases against high-tech firms based on similar facts in both sides of the Atlantic. Cf. Case COMP/38.636 — *Rambus* [2010] OJ C 30/17 and *Rambus Inc. v FTC,* 522 F.3d 456 (D.C.Cir 2008).

91 MARSDEN, P. (2010), "Some Outstanding Issues from the European Commission's Guidance on Article 102 TFEU: Not-so-faint Echoes of Ordoliberalism", F. Etro and I. Kokkoris (eds.), in *Competition Law and the Enforcement of Article 102*, p.54.

US officials have begun to raise growing concerns on the way the Commission handles competition cases against US-based high-tech companies. Herb Kohl, a US Senator, lucidly expressed that "[c]omplying with the antitrust laws of different countries, which often have differing substantive and procedural rules, is increasingly becoming a burden on US businesses" and further stressed that "[o]ver the past several years, foreign and in particular European regulators have been aggressive in their review of American companies' business practices."[92] Likewise, Philipp Verveer, an executive officer at the US State Department, stated that "in Europe there has been a significant antitrust and competition regime that has had significant effects on the way US companies operate."[93] Similar statements can also be found in the press and some blogs.[94]

An obvious example is Microsoft's tying of WMP to Windows, which was held as an abuse of dominance in EU, but nothing has yet been ruled against Microsoft in US with regard to media players, although Windows is the same in both jurisdictions. The Commission ordered Microsoft to offer Windows without a WMP tied thereon (more technically, to eliminate Windows' code-commingling with WMP), but Microsoft retained the right to continue selling Windows with WMP. That remedy not only caused Microsoft to incur additional costs for unbundling WMP from the Windows, but also forced Microsoft to redesign specific operating systems for the EU Internal Market based on the meticulous dictations of the Commission.[95] Although this product was globally

[92] CROFTS, L. (2011c), "US Senate Panel to Look into EU Antitrust Treatment of American Multinationals", MLex 11 March 2011, http://www.mlex.com/EU//Content.aspx?ID=135140, Date Accessed: 20.12.2012.

[93] FRANKLIN, M. (2011), "US Official Cautions against Antitrust Intervention in 'Dynamic Markets'", MLex 9 February 2011, http://www.mlex.com/EU/Content.aspx?ID=130295, Date Accessed: 20.12.2012.

[94] See ——, "Is Microsoft Ruling an Example of EU Protectionism?", European Voice Blog 29 January 2009, http://www.europeanvoice.com/article/imported/is-microsoft-ruling-an-example-of-european-protectionism-/63776.aspx, Date Accessed: 20.12.2012. The differences in the way competition rules are being implemented is also emphasised in this source. This is evident from the question as to whether "things really look so different in the EU from the way they look to the rest of the world."

[95] The response of Microsoft to the Commission is worth mentioning in this respect: According to Microsoft's General Counsel, "the code-removal approach that the [C]ommission pursued today is an approach that in our view will help a small number of competitors ... it's worth noting that the same competitors that have sought this outcome in Europe also sought it in the United States ... [but] the District Court ... rejected the precise code-removal remedy that the Commission has endorsed." Pardolesi and Renda 2004, p.13. Likewise, IBM had also undertaken to offer its mainframe computers in a way that was tailored to the EU Internal Market (either without memory devices or with the minimum capacity required for testing) as a result of the settlement with the Commission.

available in its original form which included the WMP, it had to be redesigned in order to be sold in the EU Internal Market.[96] It would be controversial to have two different outcomes on the same product in different jurisdictions, although the rules are similar in certain, but not all, respects. The relationships between the American and European competition laws are becoming increasingly matters of concern to governments and to business communities throughout the world.[97]

A problem is that jurisdictional rules developed in the 19th century may not be particularly well suited to the business context or the information technology of the 21st century.[98] The scope for conflicts could increase as more states adopt their own codes of competition law and business becomes increasingly international.[99] Competition laws are now a global phenomenon; however, ideas for international competition regimes are unrealistic and overambitious compared to bilateral agreements and co-operative relations between authorities, which seem a better way ahead.[100] As emphasised by enforcers, the inherently global nature of many of the cases involving technology requires effective international co-operation amongst antitrust authorities.[101]

2. THE MICROSOFT SAGA

Part 2 deals with the Microsoft saga and analyses the cases against Microsoft on both sides of the Atlantic during the last two decades. Emphasis is on the product designs of Microsoft and their implications for the implementation of competition law rules on the prohibition of unlawful exclusionary conduct. This part asserts that despite being found anti-competitive in some cases, arguably the tying of media players and web browsers with operating systems can be regarded as innovative product designs for the benefit of consumers.

2.1. Microsoft I

Microsoft's market power has led to a series of antitrust challenges on both sides of the Atlantic, and in some Far East countries such as Korea, Japan and

96 The Commission's remedy was limited to the EU; however, its substantive findings were based on a relevant market for streaming media players that was worldwide in scope. O'Donoghue and Padilla 2006, p.731-732.

97 GIFFORD, D. J. and R. T. KUDRLE (2003), "European Union Competition Law and Policy: How Much Latitude for Convergence with the United States?", *48 Antitrust Bulletin 727*, p.731.

98 Whish and Bailey 2012, p.490.

99 *ibid*.

100 Jones and Sufrin 2010, p.1264.

101 Monti 2001.

Taiwan.[102] The Microsoft saga began with *Microsoft I*.[103] In the early 1990s, the DOJ began investigating Microsoft's acquisition and maintenance of monopoly power in the market for operating systems contrary to the Section 2 of the Sherman Act 1890. In 1994, it filed a complaint against Microsoft concerning the company's anti-competitive practices with original equipment manufacturers (OEM). According to the DOJ, the following practices of Microsoft were exclusionary:[104]

i. Using contract terms requiring OEMs to make "per processor" payments for each computer they sell regardless of the installation of Windows,

ii. Executing long-term contracts that exacerbated the anti-competitive effects of the "per processor" payment requirements,

iii. Imposing overly restrictive non-disclosure requirements that precluded certain independent application developers (software vendors) from working with competitors.

The major anti-competitive practice of Microsoft was the use of contract terms which required OEMs to make "per processor" payments. OEMs manufacture computers by assembling components some of which are purchased from other sellers, install an operating system and subsequently retail those computers under their brand. Though every computer needs an operating system, that operating system does not have to be Microsoft's Windows. In practice, OEMs also use other operating systems.

However, Microsoft imposed contract terms on OEMs which required them to pay Microsoft a licence fee (royalty) for each and every computer they sell

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[102] In February 2006, the Korean Fair Trade Commission denied Microsoft's arguments on efficiency gains in distribution and decided that Microsoft abused its "significant market dominant position" by tying Windows Media Server, Windows Media Player and Messenger with its client operating system, thereby excluding competitors and also harming consumers. CHOI, Y. S. (2010), "Analysis of the Microsoft, Intel and Qualcomm Decisions in Korea", *European Competition Law Review*, No:31(11), p.471. Microsoft was mandated to distribute a new version of Windows Server 2003 without such tie-ins, which provides download links to rivals' products through "Media Center" and "Messenger Center" to original equipment manufacturers and system builders in 2006. *ibid* at p.472. Likewise in Japan, the Japanese Fair Trade Commission found Microsoft's tying of Microsoft Word, Excel and Outlook to Windows unlawful and ordered Microsoft to stop engaging in the anti-competitive practice. CHO, J. W. (2007), *Innovation and Competition in the Digital Network Economy*: *A Legal and Economic Assessment on Multi-tying Practice and Network Effects,* Kluwer Law International, The Netherlands, p.33.

[103] *United States v Microsoft Corp*., 56 F.3d 1448 (D.C. Cir. 1995) ("*Microsoft I*") (all references are made to the judgment of the US Court of Appeals).

[104] *Microsoft I*, paras. 6-7.

regardless of whether Microsoft's operating system is included in that computer.[105] This licensing practice had the effect of increasing the costs of rival operating systems, since any other operating system would be an additional cost for OEMs and thus be a disadvantage. Consequently, OEMs were incentivised to install Windows because they have already paid a "per processor" licence fee, rather than a "per Windows" licence fee.

In order to reinforce "per processor" payments, Microsoft engaged in executing long-term contracts with major OEMs that exacerbated their anti-competitive effects. Under those contracts, Microsoft opted for minimum commitment requirements and credited unused balances to future contracts, and thus practically created a room for longer contracts. Those practices hindered innovation by suppressing the opportunities of smaller rivals who were placed at a competitive disadvantage to have their own operating systems installed on new computers.[106] As for the abovementioned third practice, the DOJ did not contend that it was of crucial significance to the case.[107]

The DOJ and Microsoft settled the case by entering into a consent decree which was refused by the District Court but approved by the US Court of Appeals. The consent decree prohibited Microsoft from requiring OEMs to make "per processor" payments and other related arrangements such as minimum requirements and lump-sum payments, executing contracts that exceed one year unless the customer renews the contract for another year, and imposing unduly restrictive non-disclosure requirements on application developers. It has been observed that despite the consent decree, by that time "the damage was already done"; IBM's alternative operating system, OS/2, was "virtually dead and never recovered".[108]

The consent decree was mainly concerned with the anti-competitive way how Microsoft commercialised its operating system; however, for the purposes of our study, it has one important aspect related to the use of technology in designing products in a way that breaches competition law rules on the prohibition of unlawful exclusionary conduct: that is, the anti-bundling provision. Pursuant to § IV (E) of the consent decree:

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[105] "As a result, if the computer was to have a different operating system than Windows, the license fee for that system would have to be paid on top of the Windows fee, thus making any computer with a non-Windows operating system more costly than a Windows-based system." Hovenkamp 2008, p.266.

[106] *ibid* at p.267.

[107] *Microsoft I*, para.8.

[108] Hovenkamp 2008, p.299.

> "Microsoft shall not enter into any License Agreement in which the terms of that agreement are expressly or impliedly conditioned upon: (i) the licensing of any other Covered Product, Operating System Software product or other product (provided, however, that this provision in and of itself shall not be construed to prohibit Microsoft from developing integrated products); (ii) or the OEM not licensing, purchasing, using or distributing any non-Microsoft product."[109]

This provision prohibited Microsoft from bundling other software with its operating system under its contracts with OEMs.[110] However, Microsoft was allowed to develop new functions for its operating systems and integrate them with its current and future operating systems. Put differently, the sale of products on condition to the sale of other products (contractual tying) was prohibited, but the design of integrated products in a way that customers only obtain one product together with another (technological tying) was allowed.[111] "It seems to be in retrospect clear that the integrated product caveat would eventually lead to conflict, given the inherent difficulties of determining whether a bundle is one integrated product or two bundled items."[112] This paved the way for *Microsoft II* as discussed immediately below.

2.2. Microsoft II

Microsoft II judgment[113] examines Microsoft's alleged violation of the 1995 consent decree as the DOJ claimed that Microsoft unlawfully bundled its web

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[109] Final Judgment, Civil Action No. 94-1564.

[110] The consent decree also prohibited Microsoft from discriminating among OEMs by using price or other terms to retaliate against OEMs who decide to install non-Microsoft products. See *ibid* at § IV(G)(iii).

[111] "Microsoft has expanded over the years before and after the 1995 consent decree the functionality included in Windows, leading to the elimination of some stand-alone add-ons markets. For example, Microsoft included a disk defragmenter in Windows 1995 and the market for defragmenters promptly died. Similarly, when hard disk compression was included in Windows 1995, the market for disk compression software died". ECONOMIDES, N. (2001), "United States v. Microsoft: A Failure of Antitrust in the New Economy", Stern School of Business, New York University, http://www.stern.nyu.edu/networks/UWLA.pdf, Date Accessed: 20.12.2012, p.6. In accordance with this observation, the Commission observes in the Guidance Paper that "[t]he risk of anti-competitive foreclosure is expected to be greater where the dominant undertaking makes its tying or bundling strategy a lasting one, for example through technical tying which is costly to reverse." Guidance Paper, para.53.

[112] LANGER, J. (2007), *Tying and Bundling As a Leveraging Concern under EC Competition Law*, Kluwer Law International, The Netherlands, p.77.

[113] *United States v Microsoft Corp*., 980 F. Supp. 537 (D.D.C. 1997) reversed in *United States v Microsoft Corp*., 147 F.3d 935 (D.C. Cir 1998) ("*Microsoft II*") (all references are made to the judgment of the US Court of Appeals).

browser, IE Version 4.0, with its operating system, Windows 95. Microsoft released the first three versions of IE on the same disc with Windows 95, but Version 4.0 was initially distributed on a separate disc and sold to the users of other operating systems as well. Microsoft's Windows 95 licence agreements required OEMs to install IE and prohibited them from removing any features. The DOJ became concerned that this practice violated § IV(E)(i) by effectively conditioning the licence for Windows 95 on the licence for IE 4.0, creating in its view what antitrust law terms a "tie-in" between the operating system and the browser.[114]

On appeal to the Court of Appeals, Microsoft stressed the "integrated product" exemption in § IV(E)(i) defending that adding any feature to an operating system, as by simply putting the disc containing a compatible application in the same box with the operating system and requiring OEMs to install both, creates an integrated product unless Microsoft also licenses the feature on a stand-alone basis to OEMs.[115] It defined an "integrated product" as a product that "combines" or "unites" functions that although capable of functioning independently, undoubtedly complement one another and insisted that Windows with IE constituted such a product. In short, Microsoft argued that it had simply integrated the products as allowed by the consent decree by pre-installing IE on Windows.

It is evident from the judgment that the US Court of Appeals had to deal with the meaning of "integration" and when a product is "integrated". This is because the 1995 consent decree contained "a critical ambiguity in that it could not be construed to prohibit Microsoft from developing integrated products."[116] Interpreting the decree, the court held the view that an integrated product "combines functionalities (which may also be marketed separately and operated together) in a way that offers advantages unavailable if the functionalities are bought separately and combined by the purchaser."[117] It concluded that the

[114] *Microsoft II*, para.12.

[115] *Microsoft II*, para.18.

[116] ROWLES, D. (2001), "Is It a Tie-in or an Integration? U.S. v. Microsoft Weighs In", Boston University School of Law, http://www.bu.edu/law/central/jd/organizations/journals/scitech/volume6/rowles.pdf, Date Accessed: 20.12.2012, p.4.

[117] *Microsoft II*, para.56 (emphasis original). Based on its definition, the Court laid down the two limbs of the test by requiring the integrated product to be "different from what the purchaser could create from the separate products on his own" and "better in some respect." *ibid* at para.59. This case illustrates that the cases where integration of products offers some non-trivial gain to consumers above what they could achieve on their own by combining the different products were

Windows 95 and IE package was a "genuine integration" and § IV(E)(i) of the consent decree did not bar Microsoft from offering it as one product.[118] In doing so, the Court of Appeals rightly focused on the technological aspect of the case, from which the case actually sprang, rather than dealing with Microsoft's contractual arrangements with OEMs regarding their purchase of IE Version 4.0 as a condition of licensing Windows 95. Consequently, the case was remanded to the District Court. This was, according to some authors, a major victory for Microsoft.[119]

2.3. Microsoft III

Compared to the aforementioned earlier cases, *Microsoft III* judgment was the most important challenge against Microsoft's abusive practices in the US.[120] In 1998, the DOJ and the Attorneys General of twenty states brought antitrust lawsuits against Microsoft. The DOJ asserted that Microsoft violated Section 1 and Section 2 of the Sherman Act 1890: by tying IE to Windows and other exclusionary practices, Microsoft monopolized the operating system market to maintain its market power (unlawful maintenance of monopoly power) and it attempted to monopolize the web browser market (attempted monopolization).[121] The case was settled in 2002.[122]

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then exempt from the tying prohibition. HYLTON, K. N. and SALINGER, M. (2001), "Tying Law and Policy: A Decision-Theoretic Approach", *69 Antitrust Law Journal 469*, p.484.

[118] *Microsoft II*, para.68. The Court's reasoning was not shared by some commentators. Stating that the combination of Windows and IE did not confer advantages unobtainable by their combination by buyers because Microsoft actually had its buyers combine the separate disks, Elhauge argues that Windows and IE should not have been deemed a single integrated product. ELHAUGE, E. (1998), "The Court Failed My Test", The Washington Times 10 July 1998, http://www.law.harvard.edu/faculty/elhauge/pdf/court_failed_test.pdf, Date Accessed: 20.12.2012.

[119] Langer 2007, p.78.

[120] *United States v Microsoft Corp.,* 87 F.Supp. 2d 30 (D.D.C. 2000) affirmed in part, reversed in part in *United States v Microsoft Corp.,* 253 F.3d 34 (D.C. Cir. 2001) cert. denied, 534 U.S. 952 (2001) ("*Microsoft III*") (all references are made to the judgment of the US Court of Appeals).

[121] Section 2 of the Sherman Act 1890 establishes three offences, namely "monopolization,", "attempted monopolization" and "conspiracy to monopolize". Monopolization occurs when the firm in question possesses monopoly power and has willfully acquired or maintained that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident. Whereas, elements of attempted monopolization comprise predatory or anti-competitive conduct, a specific intent to monopolize and a dangerous probability of achieving monopoly power. The mere possession or exercise of monopoly power is not an offence; the law addresses only the anti-competitive acquisition or maintenance of such power and certain related attempts. For more information, see US DOJ 2008.

[122] Final Judgment, Civil Action No. 98-1232 and 98-1233.

As discussed above, in *Microsoft II*, the Court of Appeals held that the bundle of IE with Windows was an integrated product and thus legal under the 1995 consent decree. To overcome this interpretation of the law, the DOJ argued that Microsoft's bundling of IE with Windows and its attempt to eliminate one of its major competitors in the browser market, Netscape, went beyond simply adding functionality to Windows and resulted in a series of add-on software manufacturers being driven out of the market.[123] According to the DOJ, Netscape had become a significant threat to Microsoft's operating system by developing a web browser, Navigator. Netscape would pose a threat to Microsoft if it allowed application programmes to run on all the operating systems that work with Netscape because that would erode the advantage that Windows had of having more application programmes than other operating systems.[124]

Understanding of the capabilities of Navigator is crucial in understanding the background of the DOJ's case against Microsoft. As a browser, Navigator was naturally designed to allow users to visit web sites. However, the bottom line is that it offered more than mere web browsing. As Hovenkamp expresses, Netscape offered "a kind of software-generated "shadow" operating system sitting on top of the computer's existing operating system."[125] Microsoft feared that Netscape's new technology would tilt the operating system market by lessening dependence to Windows and sooner or later pose a great threat to its quasi-monopoly position. At first, Microsoft tried to convince Netscape not to release a version of its browser that would act as an applications platform.[126] Upon the refusal of Netscape, Microsoft decided to stifle this technology by adopting an exclusionary strategy involving a wide range of practices.

In its defence, Microsoft first pointed out to the ruling of the Court of Appeals in *Microsoft I* and argued that the bundle of IE and Windows was legal under the 1995 consent decree with a view to refuting the anti-competitive tying allegation. Second, it challenged its alleged monopoly power in the market for operating systems. Third, it argued that consumers have benefited from its free IE and affordable Windows, and its innovations were thus welfare-enhancing. Lastly, it contended that it was competing vigorously against Netscape in a way that was legal under the Sherman Act.[127]

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123 Economides 2001, p.7.

124 CARLTON, D. W. and J. M. PERLOFF (2005), *Modern Industrial Organization*, Pearson Addison Wesley Press, Fourth Edition, USA, p.374.

125 Hovenkamp 2008, p.294-295.

126 Langer 2007, p.79.

127 *Microsoft III*, paras. 51, 58, 61, 67 and 98.

The District Court first found that Microsoft enjoyed a large and stable market share of more than 95 percent in the market for operating systems for Intel-compatible computers which showed "application barriers to entry" due to the abundance of applications running on Windows.[128] Such a vast array of applications for Windows made it appealing for users to choose Windows and a greater number of users choosing Windows eventually spurred developers to write programmes for that operating system.[129] Netscape attempted to lower those application barriers to entry and Microsoft engaged in a series of conduct.

Starting with the allegation of unlawful monopolization, the District Court condemned a number of provisions in Microsoft's licence agreements with OEMs as Microsoft's imposition of those provisions served to reduce the usage share of Navigator and thus to protect its monopoly in the operating systems market. In particular, it condemned the provisions prohibiting OEMs from:

i. Removing IE's desktop icons, folders, or "Start" menu entries,

ii. Modifying the initial boot sequence,

iii. Otherwise altering the appearance of the Windows desktop.[130]

The District Court observed that Microsoft believed those contractual restrictions on OEMs were not sufficient; therefore, it set out to bind IE more tightly to Windows as a technical matter. It centred upon three specific practices in this respect:

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[128] *Microsoft III*, paras.54-56. The application barriers to entry to the market for operating systems created by the vast number of applications running on Windows appear to have played an important role in this case. During *Microsoft II*, an expert opined that "[b]ecause of the nature of the barriers to entry created by network effects, the most likely long-term threat to Microsoft's monopoly power does not come directly from other operating systems, but rather from the spread of cross-platform technologies, that can serve (like Microsoft's operating system) as a platform to which application developers write… [A]lthough browsers may never develop into full-fledged operating systems, browsers can serve as a platform to which application developers write." In a clear and consistent manner, he explained that "[s]hould application vendors use a browser platform other than the Windows platform, the applications barrier to entry that protects Microsoft's monopoly could be diminished, and competition in the PC operating system market created." SIDAK, G. J. (2001), "An Antitrust Rule for Software Integration", *18 Yale Journal on Regulation 1*, p.13-14 (emphasis original). His testament clearly explains the whole story behind *Microsoft III*.

[129] PAGE, W. H. and S. J. CHILDERS (2012), "Antitrust, Innovation and Product Design in Platform Markets: Microsoft and Intel", *78 Antitrust Law Journal 363*, p.369.

[130] *Microsoft III*, para.60. The Court of Appeals upheld those contractual restrictions as unlawful maintenance of monopoly power with just one exception concerning the restriction prohibiting automatically launched alternative interfaces. *ibid* at para.64.

i. Excluding IE from the "Add/Remove Programs" utility in Windows 98 with a view to discouraging the use of competing browsers,

ii. Designing of Windows in a way that in some circumstances overrides the user's choice of a default browser other than IE,

iii. Commingling browser and operating system codes so that any attempt to delete the files containing IE would concurrently deteriorate the operating system.[131]

Microsoft's agreements and dealings with internet service providers (ISP) with regard to the distribution of IE were also condemned by the District Court. Microsoft monopolized the operating system by:

i. Offering IE free of charge to ISPs,

ii. Offering ISPs a bounty for each customer the ISP signs up for service using the IE browser,

iii. Developing the IE Access Kit and offering it free of charge to ISPs,

vi. Providing easy access to ISPs' services from the Windows desktop in return for their agreement to promote IE exclusively and to keep shipments of internet access software using Navigator under a specific percentage.[132]

The District Court further condemned Microsoft for its agreements with independent software vendors (ISV) and Apple. According to the court, by granting ISVs free licences to bundle IE with their offerings, and by exchanging other valuable inducements for their agreement to distribute, promote and rely on IE rather than Navigator, Microsoft directly induced developers to focus on IE rather than Navigator so that web-based applications would rely on the

[131] *Microsoft III*, para.65. The Court of Appeals upheld two of those three actions as unlawful maintenance of monopoly power with the exception of Microsoft designing of Windows in a way that overrides the user's choice of a browser other than IE as the default browser. *ibid* at paras.66-67.

[132] *Microsoft III*, para.68. The District Court did not, however, assign liability for offering IE free of charge (predatory pricing). The Court of Appeals held that neither Microsoft's predatory pricing, nor development of products was unlawful, but affirmed the district court's judgment holding that Microsoft's exclusive contracts with ISPs violated Section 2. The Court of Appeals agreed with the reasoning of the district court that Microsoft did not completely excluded Netscape, but it substantially excluded Netscape from the most efficient distribution channels, namely the pre-installation by OEMs and promotion by ISPs. By doing so, Microsoft relegated Netscape to more costly and less effective methods such as mass mail ing its browser on a disk or offering it for download over the internet. *ibid* at para.70.

technology of Windows.[133] Microsoft also pressured Apple by threatening to withdraw support for Mac Office, a programme which was vital for Apple to stay in the market amid the then steep decline of its business. Microsoft and Apple consequently reached an agreement under which Microsoft would continue to release up-to-date versions of "Mac Office" and in return Apple would bundle IE with Apple's operating system, "Mac OS", and make IE the default browser.[134]

One of the key points of the judgment centres on the manipulation of a particular technology, Java. Java was itself "middleware"[135] and included a programming language, but the bottom line was that it allowed cross-platform uses between different operating systems meaning that users would be less dependent to Windows as their operating system since Java compatible applications could run directly on a browser installed in any supported operating system. This technology was developed by Sun Microsystems Inc. (Sun) and Netscape agreed to distribute a copy of Java with Navigator. Microsoft also agreed to promote Java technologies, but at the same time it developed its own Java Virtual Machine (JVM) which was incompatible with the one Sun had already developed for Windows. The District Court found that Microsoft took the following four steps to prevent Java from being developed as a viable cross-platform:

i. Designing a JVM which run faster but was incompatible with the one developed by Sun,
ii. Entering into contracts with major ISVs inducing them to promote Microsoft's JVM exclusively,
iii. Deceiving Java developers about the Windows-specific nature of the tools it distributed to them by causing them to produce Windows-dependent Java applications that they believed would be cross-platform,

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[133] *Microsoft III*, para.72. By way of illustration, a 2002 Evans Data Corporation report covering both client PCs and servers found that 75 percent of ISVs wrote applications for the Windows platform, the next popular operating system being Linux and Solaris with 6.7 percent and 5.2 percent respectively. KORAH, V. (2006), *Cases and Materials on EC Competition Law*, 3rd Edition, Hart Publishing, Great Britain, p.158.

[134] *Microsoft III*, para.73. The Court of Appeals upheld those findings of the District Court.

[135] Middleware is a term used for programmes which have their own operating system capabilities and therefore offer their users more than a mere application programme. "If the same middleware applications are provided on different operating systems, then applications that interact with that middleware can also run those different operating systems. If middleware, and programs that run on it, become widespread that makes it easier for users to move to competing operating systems." COATES, K. (2011), *Competition Law and Regulation of Technology Markets*, Oxford University Press, Great Britain, p.248.

vi. Coercing Intel to stop aiding Sun in improving the Java technologies.[136]

In addition to condemning Microsoft for unlawful maintenance of monopoly power in the market for operating systems for the abovementioned practices, the District Court also held that Microsoft attempted to monopolize the browser market. The Court of Appeals reversed this part of the judgment on the grounds that the plaintiffs simply relied upon Microsoft's liability for monopolization of the market for operating systems as a presumptive indicator of attempted monopolization of an entirely different market.[137] Likewise, some commentators have been sceptical about the DOJ's theory of harm with regard to the attempted monopolization in the browser market.[138]

As for the tying allegation,[139] the District Court held that Microsoft's contractual and technological tying of Windows 95 and Windows 98 with IE was per se unlawful.[140] The Court of Appeals, however, stressed that the rule of reason, rather than per se analysis, should govern the legality of tying arrangements involving "platform software products". Therefore, it overturned the District Court's finding and remanded the case for an evaluation under the rule of reason.[141] As discussed in Part I, the Court came to the conclusion that "[t]here being no close parallel in prior antitrust cases, simplistic application of per se tying rules carries a serious risk of harm."[142]

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136 *Microsoft III*, para.74. The Court of Appeals reversed the imposition of liability for Microsoft's development and promotion of its JVM, but upheld Microsoft's exclusive dealings with ISVs, deception of Java developers and threat to Intel as unlawful exclusionary practices.

137 *Microsoft III*, paras.80-81.

138 "The Antitrust Division effectively made a prediction in the Microsoft suit: if Microsoft is allowed to bundle Internet Explorer and undermine Netscape, it will obtain a monopoly and be able to raise prices in the future. That prediction has been falsified... despite Microsoft's continued zero pricing of IE, other browsers have been able to enter and achieve substantial usage shares… Websites have not become locked in to any proprietary aspects of Microsoft's browser standards." PAGE, W. H. (2010), "Microsoft and the Limits of Antitrust", *Journal of Competition Law and Economics*, No:6(1), p.48.

139 For a good critical analysis of the tying allegation in this case, see CHIN, A. (2005), "Decoding Microsoft: A First Principles Approach", *Wake Forest Law Review*, No:40(1), p.1-157.

140 The facts underlying the tying allegation under Section 1 of the Sherman Act substantially overlapped with those discussed above in the context of Microsoft's exclusive dealings with OEMs as the basis for unlawful maintenance of monopoly power under Section 2 of the Sherman Act.

141 On the meaning of and difference between per se and rule of reason rules, see BLACK, O. (1997), "Per Se Rules and Rules of Reason: What Are They?", *European Competition Law Review*, No:18(3), p.145-161.

142 *Microsoft III*, para.84.

Microsoft disputed and the court doubted whether the "separate product" element in (contractual) tying test[143] was properly applicable to technological tying cases, when two products are technologically integrated, but also available separately. The court took the view that that the facts of the case poorly fit with the separate product element[144] and eventually opposed to the test being per se applied as it may not give newly integrated products a fair shake.[145] The court came to the conclusion that "wooden application of per se rules in this litigation may cast a cloud over platform innovation in the market for PCs, network computers and information appliances."[146] The DOJ dropped the tying claim and since the case was settled, this issue was not thoroughly discussed.

The last issue in *Microsoft III* was the remedy that the District Court adopted: among other things, Microsoft shall be divested into two companies, with one continuing Microsoft's operating system business and the other undertaking application and software operations. During the trial, Microsoft's CEO emphasised that Microsoft was not the result of mergers or acquisitions and thus always had been a unified company without free-standing business unit. The Court of Appeals remanded the case to the District Court for the determination of the specific remedy for the limited ground of liability which it upheld.[147] When the case was settled, Microsoft undertook to provide OEMs and consumers the choice of using rival middleware in addition to or instead of its own products.

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143 The constituent elements of the modified tying test were laid down by the US Supreme Court as (1) the tying and tied goods are two separate products; (2) the defendant has market power in the tying product market; (3) the defendant affords consumers no choice but to purchase the tied product from it; and (4) the tying arrangement forecloses a substantial volume of commerce. *Jefferson Parish Hospital Distict No 2 v Hyde*, 466 U.S. 2 (1984). See also *Eastman Kodak Co. v Image Technical Servs., Inc.,* 504 U.S. 451 (1992). For a detailed analysis of the development of tying and tying cases in US and EU law, see AHLBORN, C., D. EVANS and J. PADILLA (2004), "The Antitrust Economics of Tying: A Farewell to Per Se Illegality", *49 Antitrust Bulletin 287*, and EKDİ, B. (2011), "Ürün Bağlama ve Paket Satışlar Yoluyla Hakim Durumun Kötüye Kullanılması", K.C. Sanlı (ed.), in *Hakim Durumun Kötüye Kullanılması: Sorunlar ve Çözüm Önerileri Sempozyumu*, p.460-480.

144 ?…the separate-products test is a poor proxy for net efficiency from newly integrated products." *Microsoft III*, para.92.

145 "…judicial "experience" provides little basis for believing that, "because of their pernicious effect on competition and lack of any redeeming virtue," a software firm's decisions to sell multiple functionalities as a package should be "conclusively presumed to be unreasonable and therefore illegal without elaborate inquiry as to the precise harm they have caused or the business excuse for their use." *Microsoft III*, paras.90-91 (citations omitted).

146 *Microsoft III*, para.95.

147 *Microsoft III*, para.107.

2.4. Microsoft WMP

The case against on the other side of the Atlantic began in 1998 when Sun filed a complaint with the Commission claiming that Microsoft had refused to licence information that Sun deemed necessary for its server software to work with Microsoft's client PC operating system in order to compete in the work group server operating system market. The complaint was based on Microsoft's refusal of interoperability information, but the Commission later extended the scope of its investigation on its own initiative to the integrated media functionality of Windows. This time Microsoft was accused of unlawful tying of WMP to Windows, quite similar to the tying of IE with Windows in the US.[148] The decision was adopted in 2004 after 6 years and largely upheld by the General Court in 2007.[149] A fine of 497 million Euros was imposed on Microsoft.[150]

The Commission found that Microsoft's market share in the market for client PC operating systems was over 90 percent and it enjoyed stable and continuous market power in the relevant market.[151] The market share of Microsoft in the market for work group server operating systems was at least 60 percent and Microsoft competed against three competing products, namely Novell, Linux and UNIX. Close commercial and technological associative links between those two markets were found.

The first abusive conduct in which Microsoft is found to have engaged was the refusal to supply interoperability information[152] (communication protocols)

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148 On the similarities and differences between *Microsoft III* and *Microsoft WMP*, see APON, J. (2007), "Cases against Microsoft: Similar Cases, Different Remedies", *European Competition Law Review*, No:28(6), p.327-336.

149 Case COMP/C-3/37.792 — *Microsoft* [2004] OJ L 32/23, upheld in Case T-201/04 *Microsoft v Commission* [2007] ECR II-3601 ("*Microsoft WMP*") (all references are made to the judgment of the General Court). See also Press Release, "Commission Concludes on Microsoft Investigation, Imposes Conduct Remedies and a Fine", IP/04/382, 24 March 2004.

150 This was a huge sum in absolute terms, but actually it roughly equaled to only two weeks of Microsoft's profits by then. Coates 2011, p.219. In the aftermath of the Commission's decision, there have been several disagreements between Microsoft and the Commission in relation to the accuracy of the interoperability information and its pricing, which in 2008 led to a further fine of 899 million Euros imposed on Microsoft for the period between 21 June 2006 and 21 October 2007.

151 *Microsoft WMP*, para.31.

152 "Interoperability generally arises in high-tech markets where software producers may be dependent on interface information concerning the operation of other software (such as platform operating systems) in order to produce products (such as applications) which are compatible". HOWARTH, D. and K. MCMAHON (2008), ""Windows has performed an illegal operation": the Court of First Instance's Judgment in Microsoft v Commission", *European Competition Law Review*, No:29(2), p.117 (emphasis original).

to its competitors in the work group server operating systems market. Microsoft defended that the interoperability information, which it was required to disclose to its competitors, was protected by intellectual property rights (IPR). A requirement that it disclose such information would interfere with the free exercise of its IPRs and with its incentive to innovate.[153] Furthermore, it argued the relevant criteria established in the case law which determine when a dominant firm could be required to grant a licence to a third party were not satisfied in this case.[154]

According to the Commission, by refusing to disclose interoperability information, Microsoft aimed to leverage its quasi-monopoly position from the client PC operating system market to the adjacent work group server operating system market. The Commission contended, among other things, that it was essential that Microsoft's competitors have access to indispensable information relating to interoperability with the Windows domain architecture in order for them to be able to remain viably on the market and to develop work group server operating systems capable of achieving a required degree of interoperability when the servers on which they are installed are added to a Windows work group server.[155] If Microsoft's competitors had access to the interoperability information that Microsoft refuses to supply, they could use the disclosures to make the advanced features of their own products available for consumers.[156]

The Commission went on to state that even though the interoperability information was not "indispensable", Microsoft retained a "significant competitive importance" in terms of interoperability by its refusal which discouraged its competitors from developing and marketing work group server operating systems with innovative features, to the prejudice of consumers.[157] As the Commission argued, Microsoft's refusal created a risk of stifling competition on the work group server operating system market and led to restriction of consumer choice. Although the refusal did not prevent the appearance of a "new product", it did hamper innovation and for this reason, an increasing number of consumers were locked into Windows at the level of work group server operating

153 This plea was overturned by the Commission through an incentive balance test: "[A] detailed examination of the scope of the disclosure at stake leads to the conclusion that, on balance, the possible negative impact of an order to supply on Microsoft's incentives to innovate is outweighed by its positive impact on the level of innovation of the whole industry (including Microsoft)". *Microsoft WMP*, para.706 (emphasis original).

154 *Microsoft WMP*, paras.108-112 and 312.

155 *Microsoft WMP*, para.106.

156 *Microsoft WMP*, para.654.

157 *Microsoft WMP*, paras.381 and 653.

systems.[158] UNIX, for example, offered more functions such as reliability, availability and security, compared to Microsoft's server operating system. The Commission's decision has been widely debated.[159]

The second abusive conduct, which is more relevant for the purposes of our study, was Microsoft's tying its WMP to Windows. The Commission decided that Microsoft's conduct in making the availability of Windows conditional on the simultaneous acquisition of WMP constituted an abusive tied sale.[160] The Commission considered that Microsoft's conduct satisfied the conditions for a finding of an unlawful tying for the purposes of Article 102 TFEU:[161] (1)

[158] *Microsoft WMP*, para.650. Geradin insists that the Commission seemed to have overlooked or at least insufficiently examined the issue of emergence of a new product for which there is an unsatisfied consumer demand (*Magill*), but also adds that the new product element is itself "absurd" and leads to "undesirable consequences". GERADIN, D. (2005), "Limiting the Scope of Article 82 of the Treaty: What Can EU Learn from the US Supreme Court's Judgment in Trinko in the Wake of Microsoft, IMS and Deutsche Telekom?", *Common Market Law Review,* No:41, p.1537. Pardolesi and Renda argue that contrary to other EU cases on refusal to license intellectual property rights, Microsoft's refusal to supply interoperability operation did not prevent the emergence of a new product, or a new market for which there was sufficient consumer demand. Consequently, Microsoft's competitors enjoyed costless and perfect interoperability. Pardolesi and Renda 2004, p.50. Analysing the case law, Komninos and Czapracka observe that although the ECJ had confirmed in *IMS Health* the principles in its earlier judgments, including *Magill* and *Bronner*, in *Microsoft* the General Court significantly relaxed the *IMS Health* test and lowered the threshold for antitrust intervention. KOMNINOS, A. P. and K. A. CZAPRACKA (2010), "IP Rights in the EU Microsoft Saga", F. Etro and I. Kokkoris (eds.), in *Competition Law and the Enforcement of Article 102*, p.92.

[159] Czapracka notes that the Commission imposed a duty to disclose interoperability information which was more than access to an essential facility, since it required disclosing as to create "full interoperability", a level playing field between the dominant firm and its competitors. CZAPRACKA, K. A. (2008), "Antitrust and Trade Secrets: The U.S. and the EU Approach", *24 Santa Clara Computer & High Tech. Law Journal 207*, p.269. Andreangelli claims that the General Court showed a 'benevolent' attitude in favour of Microsoft's competitors. ANDREANGELLI, A. (2009), "Interoperability as an "Essential Facility" in the Microsoft Case: Encouraging Competition or Stifling Innovation?", *European Law Review*, No:34(4), p.597. Larouche suggests that the European authorities simply assumed that "competition on the market" was preferable to "competition for the market" and breakthrough innovation. LAROUCHE, P. (2008), "The European Microsoft Case at the Crossroads of Competition Policy and Innovation", *75 Antitrust Law Journal 601*, p.610.

[160] *Microsoft WMP*, para.814. Unlike the web browsers in *Microsoft III*, media players were not regarded as cross-platform applications posing a threat to Microsoft's dominance in operating systems market in *Microsoft WMP*.

[161] The constituent elements of the tying analysis were listed by the Commission as (1) the tying and tied goods are two separate products; (2) the undertaking concerned is dominant in the market for the tying product; (3) the undertaking concerned does not give customers a choice to obtain the

Microsoft had a dominant position on the client PC operating systems market; (2) media players and client PC operating systems were two separate products; (3) Microsoft did not give consumers the choice of obtaining Windows without WMP; and (4) the tying foreclosed competition in the market for media players. The Commission added that Microsoft failed to demonstrate that its conduct was objectively justified.[162] The General Court held that the Commission's analysis of the constituent elements of tying abuse was correct and consistent both with Article 102 TFEU and with the case law.

Most of the analysis of the Commission was devoted to the second and fourth elements. The first condition, the finding of dominance, was quite easily satisfied and was not very much disputed by Microsoft. On the second condition, the separate products issue, the Commission observed that there were independent manufacturers of media players and thus there was a distinct market for the tied product.[163] Second, a significant number of users chose to obtain media players separately from operating systems. Third, by contrast, some users did not need or want a media player meaning that there was material demand for operating systems without media players. Lastly, Microsoft itself developed and distributed versions of WMP for other operating systems, and engaged in promotions of WMP independent of Windows.[164] According to Microsoft, the Commission

tying product without the tied product; and (4) the tying in question forecloses competition. *Microsoft WMP*, para.842. These elements are almost a carbon copy of the four conditions of the modified per se tying test in *Jefferson Parish Hospital*, which was not found applicable to "platform software products" in *Microsoft III*.

[162] *Microsoft WMP*, paras.853-858.

[163] Albeit controversial in the context of high-tech markets, in *Microsoft WMP* the Commission seems to have remained faithful to its earlier assessment of tying in the Guidelines on Vertical Restraints [2000] OJ C 291/1, which was then in force. According to para.216 of that Guidelines, "[t]wo products are distinct if, in the absence of tying from the buyers' perspective, the products are purchased by them on two different markets." As an example, the Commission states that "the sale of shoes with laces is not a tying practice' since *customers want to* buy shoes with laces, *it has become commercial usage* for shoe manufacturers to supply shoes with laces" (emphasis added). This analysis, together with the example, has been carried through into the new Guidelines on Vertical Restraints [2010] OJ C 130/1 as well (para.215). In our view, there is no reason that prevents the very same analysis to apply to WMP and Windows; it has become commercial usage for operating system manufacturers to supply operating systems with media players as this is the case with Apple, Linux and IBM, and consumers want to buy Windows with WMP. There is no meaningful demand on the part of consumers for an operating system without a media player even if there is a separate and additional demand for different media players. Therefore, the Commission's analysis of separate products in *Microsoft WMP* seems to be flawed and in particular, does not fit to the nature of competition in high-tech markets.

[164] *Microsoft WMP*, paras.873-882. The General Court found that (1) the operating system and

tended to punish dominant firms which improve their products by integrating new features in them, when it required that such features be made removable whenever a firm markets a standalone product that provides the same or similar functionalities.[165]

With regard to the third condition, the coercion of users, Microsoft contended that the fact that it integrated WMP in Windows did not entail any coercion or supplementary obligation on users and emphasised they paid nothing extra for the media functionality of Windows.[166] Users were neither obliged to use that functionality, nor prevented from installing and using other media players. In fact, users had strong incentives to use more than a single media player: as more formats were flourishing each day, this would necessitate users to install other media players at some point in the future. The Commission found that the coercion was applied primarily to OEMs as it was impossible for OEMs to obtain a licence on Windows without WMP, and it then passed on to consumers. Uninstalling WMP was not found technically possible either. The Court endorsed that OEMs were deterred from pre-installing a second media player and consumers had an incentive to use WMP at the expense of competing media players.[167]

As for the fourth condition, foreclosure of competition, the Commission observed that Windows was pre-installed on more than 90 percent of client PCs shipped worldwide, so that, by bundling WMP with Windows, Microsoft ensured that its media player was as ubiquitous as Windows on client PCs. Neither the Internet, nor other distribution channels could thus offset the ubiquity of WMP. Such a ubiquity in turn incentivised the vast majority of software developers and content providers to choose the WMP format, and this gave Microsoft a competitive advantage unrelated to the intrinsic qualities or merits of its product.[168] Implying its speculative nature, Microsoft responded that the Commission's theory was based on a presumption that competition might be

media player clearly differed in terms of functionalities; (2) there were other manufacturers who supply media players independently of operating systems; (3) Microsoft itself developed and marketed versions of WMP for other operating systems; (4) WMP was downloadable over the Internet independently of Windows; and (5) a significant number of users were acquiring media players from Microsoft's competitors. *Microsoft WMP*, paras.926-932.

165 *Microsoft WMP*, para.888.

166 *Microsoft WMP*, para.960.

167 *Microsoft WMP*, para.971.

168 *Microsoft WMP*, paras.980-988.

foreclosed at some unidentified point in the future as a result of the future conduct of third parties over which Microsoft had no control.[169]

The General Court noted that OEMs who pre-install WMP were a key distribution channel, as the great majority of sales of Windows client PC operating systems (approximately 75 percent) are made through OEMs.[170] For this reason, no other media player could achieve such a level of market penetration without having the advantage in terms of distribution that WMP enjoyed.[171] According to the Court, OEMs were reluctant to pre-install another media player(s) as this would occupy additional hard-disk capacity, create a risk of confusion on the part of users and increase their customer support and testing costs of each additional player, since they generally operated on thin profit margins.[172] Therefore, the option of entering into agreements with OEMs was a less efficient and a less effective way for other media player manufacturers to obtain media player distribution in the face of Microsoft's tying.

As the Commission identified, there were various channels through which media players may be distributed to users. First of all, media players may be pre-installed on computers by OEMs under agreements between OEMs and software developers. Second, users may download them to their computers over the Internet. Third, they may be sold in retail outlets or distributed with other software products. However, the tying of WMP to Windows allowed Microsoft to obtain an unparalleled advantage with respect to the distribution of WMP, ensured the ubiquity of WMP on client PCs throughout the world, and thus provided a disincentive for users to make use of other media players and for OEMs to pre-install such players on client PCs.[173] The widespread distribution of WMP was also found liable to compel content providers to encode their content in WMP format, which would have the effect of excluding competing media players from the market and would then indirectly compel consumers to use only WMP.[174]

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[169] *Microsoft WMP*, para.1022. However, the Commission furthered submitted that the industry data which it used invariably revealed a tendency for the market to tip in favour of the use of WMP and WMP formats to the detriment of the main competing media players, namely RealNetworks and Apple.

[170] *Microsoft WMP*, para.1038.

[171] *Microsoft WMP*, para.1039.

[172] *Microsoft WMP*, paras.1044-1045.

[173] *Microsoft WMP*, para.1054.

[174] *Microsoft WMP,* paras.1067-1069.

As for the most controversial part of the case, the appropriate remedy,[175] the Commission decided that the best remedy would be technological unbundling.[176] Despite Microsoft's argument that the removal of media functionality from Windows would harm the integrity of other functionalities and result in degrading Windows, the Commission required Microsoft to redesign its Windows by removing the code-commingling of WMP from Windows, and offer an unbundled version which ought to be well-functioning and of quality.[177] However, Microsoft retained the right to continue offering a version of Windows bundled with WMP. The remedy applied to Windows licensed directly to end users (home users via retail and corporate customers) and licensed to OEMs for sale in the European Economic Area (EEA).

2.5. Microsoft IE

Following the complaint by Opera, the Norwegian Internet browser maker, in December 2007, the Commission initiated investigations and sent a Statement of Objection to Microsoft in January 2009, for an alleged violation of Article 102 TFEU by unlawfully bundling its web browser IE to its dominant client PC operating system Windows.[178] Not even a decade later *Microsoft WMP*, the Commission again alleged that Microsoft's conduct harmed competition between web browsers, undermined product innovation and eventually reduced consumer choice.[179]

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175 For a critique of the remedy in this case, see *infra* "4. Comments and Conclusion".

176 During the discussions between the Commission and Microsoft with regard to the remedy, Microsoft first offered "mandatory versioning" as an alternative to bundling in that it would include rival media players in a CD to be supplied when buying a new PC. This remedy was overturned by the Commission on the grounds that less-informed users would simply ignore such CDs and even knowledgeable ones might not want to spend time on installation. Later, Microsoft and the Commission discussed the option of pre-installing rival players in addition to WMP, but this remedy suffered some disadvantages too (such as taking too much hard drive size). It would not also solve the underlying problem that WMP was to be distributed with Windows. Finally, Microsoft and the Commission agreed on the removal of software codes for the media playback functionality. Langer 2007, p.167-168.

177 *Microsoft WMP,* para.1137. Microsoft maintained that the remedy was internally inconsistent and impossible for it to comply with, because it was required to remove important functionality from Windows and at the same time ensure that the degraded version of Windows was not less performing than the version with WMP. There was also no discussion on the cost to Microsoft of developing the unbundled version.

178 Press Release, "Antitrust: Commission confirms sending a Statement of Objections to Microsoft on the tying of Internet Explorer to Windows", MEMO/09/15, 17 January 2009.

179 Press Release, "Antitrust: Commission statement on Microsoft Internet Explorer announcement", MEMO/09/272, 12 June 2009.

Citing *Microsoft WMP*, the Commission took the preliminary view that the criteria for illegal tying were fulfilled: (i) Microsoft did not contest that it holds a dominant position on the client PC operating system market with its Windows operating system; (ii) IE and Windows were provisionally considered as separate products; (iii) before Windows 7 was released, computer manufacturers and end users could not technically and legally obtain Windows without IE. Neither for OEMs, nor for end users was it technically possible to remove IE from Windows, and licensing agreements prevented OEMs from selling Windows without IE; and (iv) the tying was provisionally found as liable to foreclose competition on the merits between web browsers.[180]

Quite similar to WMP in *Windows WMP*, IE was provisionally found to have enjoyed "an artificial distribution advantage" that other web browsers were unable to match and downloading web browsers from the Internet did not "offset the artificial distribution advantage" of IE resulting from the alleged tying.[181] The Commission also preliminarily considered that, in addition to reinforcing Microsoft's position on the market for client PC operating systems, the tying of IE to Windows created "artificial incentives" for web developers and software designers to optimise their products primarily for IE.[182] This is because in practice, many content providers, as well as software developers write first and foremost for the web browser which has the highest usage share with the hoping of obtaining the most cost-effective exposure of their products.[183]

The case does not provide a detailed analysis of whether Microsoft's tying of IE to Windows could be objectively justified by distribution or technical efficiencies. However, Microsoft argued at the time of *Microsoft WMP* that it should be allowed to pre-install separate software products with Windows because the operating system and its applications constituted a uniform platform, an argument that was subsequently rejected by the General Court.[184] The Commission only preliminarily concluded that as a result of the tying, IE's market share remained much higher than that of competing browsers, "although

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[180] Case COMP/39.530 — *Microsoft (Tying)* [2009] (unpublished) ("*Microsoft IE*"), para.36.

[181] *Microsoft IE*, paras.39 and 45.

[182] *Microsoft IE*, para.37.

[183] DOLMANS, M., T. GRAF and D. R. LITTLE (2010), "Microsoft's Browser Choice Commitments and Public Interoperability Undertaking", *European Competition Law Review*, No:31(7), p.270.

[184] *ibid* at p.271.

it could not be considered as a superior product compared to its main competitors."[185]

Microsoft undertook not to bundle IE with Windows 7 (code removal) in the system to be sold in Europe. However, this proposal was not seen sufficient by the Commission. As a remedy, Microsoft proposed a ballot screen (browser choice screen)[186] to provide users in the EEA with links to download rival web browsers. In addition, OEMs would be free to pre-install any web browser(s) of their choice on computers they ship and set it as default web browser and Microsoft would not circumvent the commitments by any means and shall not retaliate against OEMs for installing competing web browsers.[187]

The case was settled in December 2009, roughly within a year after Microsoft first received the Commission's Statement of Objections, in accordance with Article 9 of the Regulation 1/2003.[188] Microsoft's proposal was approved by the Commission, which concluded that there were no grounds for further action, but required legally binding commitments by Microsoft to report at six-month intervals in its conformity with the commitments.[189] The implementation of the ballot screen started in March 2010[190] and the ballot screen will be available in the EEA for five years.[191] It should be noted that the Commission recently announced that Microsoft has acted contrary to Microsoft IE and failed to comply with its commitments to offer users the browser choice screen.[192]

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185 *Microsoft IE*, para.54.

186 The full text of the commitments offered by Microsoft including the ballot screen proposal is available at www.microsoft.com/presspass/presskits/eu-msft/docs/07-24-09Commitment.doc, Date Accessed: 20.12.2012.

187 *Microsoft IE*, para.60.

188 Council Regulation (EC) No 1/2003 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty OJ L 1/1.

189 *Microsoft IE*, para.111. See also Press Release, "Antitrust: Commission welcomes Microsoft's roll-out of web browser choice", IP/10/216, 2 March 2010.

190 According to this proposal, within the EEA users who receive automatic updates for Windows and have Microsoft's browser set as default are being invited to choose from several rival web browsers, namely *Apple Safari, Google Chrome, Mozilla Firefox* and *Opera* which will be prominently displayed alongside with IE; *Avant Browser, Flock, Green Browser, K-Meleon, Maxthon, Sleipnir* and *Slim Browser* will be displayed if the user scrolls sideways.

191 *Microsoft IE*, para.112.

192 The Commission took the preliminary view that Microsoft has failed to roll out the browser choice screen with its Windows 7 Service Pack 1, which was released in February 2011. According to the Commission, from February 2011 until July 2012, millions of Windows users in the EU may not have seen the choice screen. See Press Release, "Antitrust: Commission sends Statement of

2.6. Summary

As a result of the aforementioned Microsoft cases on both sides of the Atlantic, competition law interacted with the realm of technology, and the way Microsoft designed and commercialised its products was subject to antitrust scrutiny. The analysis of product designs under the light of competition law was far from being straightforward and the courts showed obvious hesitation as to whether the product designs in question amounted to anti-competitive tying, whether they could or should be handled differently from contractual tying arrangements, which had been known as the only form of tying arrangements for more than half a century, and lastly whether they were ties at all if they in fact constituted integrated products.

The Microsoft Saga began with *Microsoft I* which, though not directly, dealt with Microsoft's design of its web browser and operating system as "integrated products". The case was settled with a consent decree in 1995, pursuant to which Microsoft's sale of products on condition to the sale of its other products was prohibited, but the design of integrated products in a way that consumers only obtain one product together with another was left outside of the scope of the consent decree. Design of products as "integrated products", albeit not specially defined and elaborated, was held legal under the 1995 consent decree, as it was not explicitly prohibited in contrast to the situation where Microsoft designs and ties two different and separate products contractually. It can be argued that an integrated product was then thought to be better than the sum of the previously separated products.

The "integrated product" exemption of the 1995 consent decree was analysed in more detail few years later in *Microsoft II*. For the first time, the Court of Appeals set out a definition of "integrated products"[193] and came to the conclusion that Microsoft's product design was in line with the consent decree. The Court appeared to have favoured a permissive approach into technological tying, but it left open the question whether its interpretation was the appropriate test in general. Some authors have argued that the Court even created a rule of per se legality for products characterised as an "integrated product",[194] after it held

Objections to Microsoft on non-compliance with browser choice commitments", IP/12/1149, 24 October 2012. See also Press Release, "Antitrust: Commission opens proceedings against Microsoft to investigate possible non-compliance with browser choice commitments", IP/12/800, 17 July 2012.

[193] See *Microsoft II*, para.56.

[194] Rowles 2001, p.5. The Court referred to the views of some commentators against the intervention of competition law to technologically integrated products and product designs by

that courts were "ill equipped to evaluate the benefits of high-tech product design".[195] The Court in fact refrained from the dangerous task of judging the justifiability of technological integration. The Court's permissive approach did not, however, last for long and in the same year (in fact one month before *Microsoft II*), *Microsoft III* was filed by the DOJ.

Up until *Microsoft III*, the courts had not gotten too much embroiled in analysing technological tying practices, but with *Microsoft III* those practices somehow lost their "antitrust immunity".[196] *Microsoft III* judgment was the most important challenge against Microsoft's abusive practices in the US. Among other things, the Court of Appeals examined the design of Microsoft's product, and held that excluding IE from the "Add/Remove Programs" utility in Windows with a view to discouraging the use of competing browsers and commingling the browser code with the operating system code so that any attempt to delete the files containing IE would eventually deteriorate Windows were anti-competitive, while the design of Windows in a way that in some circumstances overrides the user's choice of a default browser other than IE was not.[197] On the prohibition of technological tying, it held the view that the separate products test was a poor proxy for integrated products[198] and remanded the case to the District Court for an evaluation under the rule of reason.

In fact, *Microsoft III* is not all about the product design of Microsoft. It illustrates that Microsoft almost undertook an anti-competitive campaign with a view to protecting its quasi-monopoly position in the operating system market against the threat posed by Netscape. Technological tying was like "the tip of the iceberg" compared to Microsoft's other exclusionary tactics; Microsoft entered into a variety of exclusive dealing agreements, pressurised OEMs, forced Intel, threatened Apple and finally suppressed a computer language with a view to protecting its quasi-monopoly in the operating system market. Had the only practice been technological tying, the outcome might have been different. Lacking any redeeming virtue and pro-competitive justification, majority of those

stressing that "scholars have long recognized the undesirability of having courts oversee product design, and any dampening of technological innovation would be at cross-purposes with antitrust law". *Microsoft II*, para.55.

195 *Microsoft II*, para.70.

196 Ekdi 2011, p.465-468. See also Hylton and Salinger 2001, p.473 ("The splintering of legal rules created by the *Microsoft III* decision casts a cloud of uncertainty over technological integration.").

197 *Microsoft III*, paras.66-67.

198 *Microsoft III*, para.92.

practices led to the condemnation of Microsoft without elaborate discussions on technological tying. After all, many efficiency claims could have been put forward for technological tying, but obviously not for threat or economic force.[199] Those practices reinforced the suppression of Netscape which was no longer an alternative to IE when the case was settled.[200]

On the other side of the Atlantic, the Commission issued one infringement decision (*Microsoft WMP*) and settled one case (*Microsoft IE*), both of which dealt with, inter alia, how Microsoft designed its products. Even though *Microsoft WMP* was the first decision on technological tying in the EU considering the fact that 1984 IBM case was a settlement, it actually failed to provide satisfactory guidance as to the features of anti-competitive technological tying. It has been argued that the General Court's reluctance to offer guidance on weighing up the benefits of technical integration against its exclusionary effects is highly unsatisfactory and all the more disappointing given the dearth of precedent on technical integration as an abuse of dominance.[201] The lack of consumer harm, protection of competitors and the ineffective remedy were the highlights of this case. The case should have been *a fortiori* dismissed, considering the fact that there was no threat of middleware in the context of media players unlike browsers in *Microsoft III* and Microsoft did not resort to any other exclusionary practices (Microsoft's refusal to supply interoperability information was not related to the tying claim) unlike the ones in *Microsoft III*. It should be borne in mind that the US Court of Appeals did not directly regard technological tying as unlawful notwithstanding those two findings.

The last action taken against Microsoft to date ended with a settlement in *Microsoft IE*. The issue was similar to that in *Microsoft III*: the tying of IE to Windows. It was not a prohibition decision; however, the preliminary findings of the Commission, and especially how the Commission assessed them, indicated a

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199 See *infra* "Figure 1 – The Spectrum of Different Types of Anti-Competitive Unilateral Conduct".

200 Statics show a sharp decline in the user demand for Netscape. The usage share of Netscape was at around 80 percent in 1996. It dropped down to around 60 percent when the lawsuit was filed in 1998 and was less than 5 percent when the case was settled in 2002. Netscape subsequently exited the market in 2004. See DUNHAM, W. R. (2006), "The Determination of Antitrust Liability in United States v. Microsoft: The Empirical Evidence the Department of Justice Used to Prove Its Case", *Journal of Competition Law and Economics*, No:2(4), p.549-671.

201 BATCHELOR, B. (2008), "The Fallout from Microsoft: the Court of First Instance Leaves Critical IT Industry Issues Unanswered", *Computer and Telecommunications Law Review*, No:14(1), p.21.

likely prohibition decision had the case was not settled. The Commission followed a similar line of analysis that it employed in *Microsoft WMP*, and came to the preliminary conclusion that the design of IE in a way that is technologically tied to IE generated anti-competitive effects. The decision was not much of a surprise after the Commission's restrictive approach to the technological tying of WMP to Windows in *Microsoft WMP* and in *Microsoft IE,* IE simply replaced WMP. In contrast to the *Microsoft IE* settlement (which is approximately 40 pages long), the *Microsoft WMP* judgment (which is approximately 160 pages long) seems to offer more analysis and findings for the existing case law on technological tying, as well as more predictability for other stakeholders in the long run. However, Microsoft's browser choice screen commitment in *Microsoft IE* was much more effective and consumer-friendly compared to the unbundling remedy in *Microsoft WMP*.

3. THE GOOGLE DILEMMA

Search engines are crucial for locating and accessing the vast amount of digital content and they have been subject to close scrutiny by the media, governments and scholars.[202] As the leading search engine provider, Google has recently been at the centre of a great deal of controversy particularly in the field of the trademark, privacy and competition law. Part 3 addresses the competition law aspects of the issue. It explores whether Google has market power in online search or online advertising, and examines the ongoing antitrust investigations in both the EU and the US by focusing on the allegations against Google. The main argument of this part is that Google's alleged anti-competitive practices in fact serve consumer welfare in the long run notwithstanding the harm to competitors.

3.1. Is Google a Dominant Player in Online Search?

While no definitive findings have been made as to the relevant product market in relation to the market that Google operates in, there are strong indications in the

[202] A fast growing number of scholars have written and are writing about the regulation of search engines and other legal issues in relation to search engines. See VAN EJIK, N. (2009), "Search Engines, the New Bottleneck for Content Access", B. Preissl, J. Haucap and P. Curwen (eds.), in *Telecommunication Markets: Drivers and Impediments*, Springer, p.141-156; GRIMMELMAN, J. (2007), "The Structure of Search Engine Law", New York Law School Legal Studies Research Paper No.06/07-23, http://ssrn.com/abstract=979568, Date Accessed: 20.12.2012; PASQUALE, F. A. and O. BRACHA (2008), "Federal Search Commission? Access, Fairness and Accountability in the Law of Search", *93 Cornell Law Review 1149*, and GASSER, U. (2006), "Regulating Search Engines: Taking Stock and Looking Ahead", *9 Yale Journal of Law & Technology 124*.

Commission's Microsoft/Yahoo Search Business concentration[203] which suggest that Google can be perceived as a dominant company on several product markets including online search and search advertising.[204] Furthermore, as pointed out by Cave and Williams, decision in relation to the relevant product market in the case of Google seems to be moving in the direction of a market for online search advertising.[205]

In its investigation in relation to the Microsoft/Yahoo Search Business concentration, the Commission cited data showing that Google has more than 90 percent market share in online search in Europe.[206] According to a February 2011 study by comScore,[207] nine out of ten Europeans use Google for online search, making it an undisputed dominant player in online search in Europe.[208] In the past, the Commission and the European courts have relied on market shares as a good indication of market power and based on its market shares, Google can be perceived as a dominant player in the market for online search. However, relying solely on market share as a proxy for market power may not be an appropriate way of dealing with online search as the main product in online search is information. Furthermore, in information markets, rivals may be able to respond quickly and easily, and dominant positions may be highly transitory as evidenced in the case of Yahoo losing its dominant position to Google in online search.

Prior to investigating whether Google has abused alleged its dominance one should assess whether Google has market power. In other words, in the context of online search advertising, can Google act independently of its customers,

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[203] Case COMP/M.5727 — *Microsoft/Yahoo! Search Business* [2010] OJ C 20/32.

[204] WOOD, D. (2011), "EU Competition Law and the Internet: Present and Past Cases", *Competition Law International,* No:7(1), p 44.

[205] CAVE, M. and H. WILLIAMS (2011), "The Perils of Dominance: Exploring the Economics of Search in the Information Society", Initiative for a Competitive Online Marketplace, http://www.i-comp.org/en_us/resources/resources/download/1043, Date Accessed: 20.12.2012, p.15.

[206] Case COMP/M.5727 — *Microsoft/Yahoo! Search Business* [2010] OJ C 20/32. According to this decision, the probability that users run a search on a search engine within a month in the EU is 90-100 percent for Google, 20-30 percent for Microsoft's Bing and 10-20 percent for Yahoo.

[207] comScore is an independent digital marketing service. With approximately 2 million worldwide consumers under continuous measurement, the comScore panel is designed to accurately measure people and their behaviour in the digital environment. Source: http://www.comscore.com/About_comScore, Date Accessed: 20.12.2012.

[208] comScore Report: Europe Digital Year in Review 2010, February 2011, available upon registration at http://www.comscore.com/layout/set/popup/Request/Presentations/2011/2010_European_Digital_Year_in_Review_PDF_Request, Date Accessed: 20.12.2012.

competitors and ultimately of consumers? Hence to determine whether Google has market power in online advertising and online search markets, it is suggested that competitive restraints exerted on Google and switching costs at both sides of the platform ought to be considered. As noted by Van Loon, Google is under constant threat of other general search engines that are trying to catch up with Google as recently evidenced in the Microsoft/Yahoo Search Business concentration, as well as of other companies, such as Apple, that operate in different but related markets.[209] Therefore, it might be argued that Google is subject to competitive restraints and under the threat of potential new entry.

Concerning switching costs, as often argued by Google, competition from other search providers is only one click away.[210] However, as noted by Patterson,[211] the ease of clicking another online search provider does not necessarily demonstrate that Google has no market power. Considering the fact that Google is a two-sided platform, one should examine both sides of the platform, namely the internet users and the advertisers. In order to switch to another search provider, internet users must be convinced that the other search engine in question offers the same quality as Google. Furthermore, in order to switch from one provider to another, consumers must also be well informed and know what to expect from their search query. Even if they run the search on a different search engine provider, such as Bing or Yandex, and obtain very different results, they may not be able to assess the quality of the search.

As an example, if a consumer runs a straightforward search for "Oxford University", he/she knows more or less what to expect from the search result. But if the search is conducted on an academic subject such as "essential facilities

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209 VAN LOON, S. (2012), "The Power of Google: First Mover Advantage or Abuse of a Dominant Position", A. Lopez-Tarruella (ed.), in *Google and the Law: Empirical Approaches to Legal Aspects of Knowledge-Economy Business Models*, p.2-27.

210 See Testimony of Eric Schmidt, Executive Chairman, Google Inc., Hearing on "The Power of Google: Serving Consumers or Threatening Competition?" Subcommittee on Antitrust, Competition Policy and Consumer Rights, Committee on the Judiciary, U.S. Senate, September 21, 2011, http://searchengineland.com/figz/wp-content/seloads/2011/09/Eric-Schmidt-Testimony.pdf, Date Accessed: 20/12/2012, p.7. ("[I]f consumers don't like what one website is providing them, they can switch to another website with just one click. Using Google is a choice (and a free one), and there are no barriers to consumers navigating to www.kayak.com, www.nextag.com, www.bing.com, www.yelp.com, www.expedia.com, or any other website.") (emphasis original).

211 PATTERSON, M. (2012), "Google and Search Engine Market Power", Fordham Law Legal Studies Research Paper No. 2047047, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2047047, Date Accessed: 20.12.2012, p.2.

doctrine" and if the user has no background information on the subject matter, he/she may not be able to determine the quality of results in different search engine providers. Arguably, with regard to advertisers, switching costs are remarkably higher as a result of the network effects. Advertisers need to attract as many Internet users as possible and given the prominent market share of Google in Europe and elsewhere, it seems to be the best online platform to target online users. The more online users use Google's online search engine, the more crucial it becomes for advertisers.

To sum up, in our view, although market shares in themselves are not enough to infer that a company holds a dominant position in a relevant market; market shares coupled with high switching costs particularly on the advertisement side of the platform suggest that Google has market power and thus can be perceived as a dominant player in several online markets including online search and online advertising.

3.2. The European Investigation into Google[212]

On November 30, 2010, the Commission launched a formal antitrust investigation into Google based on the allegations that Google has abused a dominant position in online search in violation of Article 102 TFEU.[213] The investigation itself does not necessarily mean that Google has abused its alleged dominance in online search and online advertising markets, but it certainly exhibits an image change that Google has undergone.[214] Rather than being regarded as an innovative new start-up company, Google is currently being perceived as "a new Microsoft" with the potential to abuse its dominance in online search and online advertising markets.

As pointed out by the European Competition Commissioner Almunia, "understanding the dynamics of web based services is a complex task due to innovative business models that change persistently"[215] and Google sets a good

[212] This part borrows extensively from the following article that one of the authors published elsewhere: DİKER VANBERG, A. (2012), "From Archie to Google-Search Engine Providers and Emergent Challenges in Relation to EU Competition Law", *European Journal for Law and Technology*, No:3(1), p.1-18.

[213] Press Release, "Antitrust: Commission probes allegations of antitrust violations by Google", IP/10/1624, 30 November 2010.

[214] Van Loon 2012, p.9.

[215] ALMUNIA, J. (2010), "Competition in Digital Media and the Internet", UCL Jevons Lecture, London 7 July 2010, http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/10/365, Date Accessed: 20.12.2012.

example as it shows that "timely intervention is crucial in fast-moving high-tech markets, which often feature network and lock-in effects."[216]

3.3. The Highlights of the European Investigation

In February 2010, *Foundem* (a UK price comparison website), *Ciao* (a German shopping site owned by Microsoft) and *ejustice.fr* (a French legal search engine) filed a complaint before the Commission. These three complaints focused on abuse of dominance: that Google used its dominant search engine and its "Universal Search Service"[217] to promote its own services, whilst discriminating as well as demoting the search rankings of competing websites and other specialised (vertical) search engines[218] among its unpaid and paid search results.[219]

In addition to the first complaint in relation to the manipulation of search rankings, in the scope of its investigation the Commission is also investigating;[220]

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216 ALMUNIA, J. (2011), "New Challenges in Mergers and Antitrust", IBA Annual Competition Conference, Florence 16 September 2011, http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/11/581&format=HTML&aged=0&language=EN&guiLanguage=en, Date Accessed: 20.12.2012.

217 Universal Search Service was introduced by Google in 2007. When one uses Google, Universal Search returns more than just the traditional text results. As an example, when one searches for Micheal Jackson, it not only brings information about Micheal Jackson, but also brings images, news, local listings, shopping, video, blog posts and so on. Google calls this service as blending, whilst others call it bundling as Universal Search places Google's own services such as YouTube results and Google News at prominent positions in search results. See Google's own blog on Universal Search http://googleblog.blogspot.co.uk/2007/05/universal-search-best-answer-is-still.html, Date Accessed: 20.12.2012.

218 According to PC Magazine Encylopedia, specialised search engines, also known as vertical search engines, are web-based search engines that classify content specialised by location (local venues and activities), by subject, typically for consumers, or by industry. Instead of returning thousands of links from a query, as is common on a general purpose search engine such as Google and Bing, vertical search engines deliver more relevant and specific search results to the user. A typical example of a specialised search engine is *Expedia* that only returns results on travel deals such as flights, hotels and holidays. Source: http://www.pcmag.com/encyclopedia/, Date Accessed: 20.12.2012.

219 Google's search engine provides two types of results; the first one is "unpaid" search results which are sometimes also referred to as "natural", "organic" or "algorithmic" search results, and the second one is "paid third party advertisements" shown at the top and/or at the right hand side of Google's search results page often referred to as "paid" search results or "sponsored links".

220 Press Release, "Antitrust: Commission probes allegations of antitrust violations by Google", IP/10/1624, 30 November 2010.

i. Whether Google has imposed exclusivity obligations on advertising partners, hindering them from placing certain types of competing adverts on their web sites, as well as on computer and software vendors with the aim of foreclosing competition for competing search tools,

ii. Whether Google has restricted the portability of online advertising data to competing online advertising platforms, and

iii. Whether Google uses third party content, mainly competing websites content on its offerings, whilst reducing competitors' incentives to invest in creating original content to the detriment of consumers.

The investigation was broadened in December 2010, when complaints by three additional companies were added to the file as the *Bundeskartellamt*, the German Competition Authority, transferred to the Commission a part of its investigation that overlapped with that of the Commission. The complaints to the *Bundeskartellamt* were made by *BDVZ* and *VDZ*, two newspaper and magazine publisher associations, and the online mapping company *Euro-cities*. Among other things, these complaints were mainly centred on the preferential treatment of Google's own services.[221]

On March 30, 2011, Microsoft issued a formal complaint with the Commission.[222] In its complaint, Microsoft alleged that:

i. Google uses technical measures to stop Microsoft's search engine from indexing content on YouTube, which is owned by Google,

ii. Google blocks Microsoft smart phones from operating with YouTube,

iii. Through Google Books, Google controls access to online copies of out of copyright books,

iv. Google limits the ability of advertisers to move their own advertising data to competing advertising platforms, and

v. Google contractually hinders leading websites in Europe from distributing competing search boxes.

In April 2012, online travel sites *Expedia* and *TripAdvisor* joined the

[221] ——, "Verleger schalten Kartellamt gegen Google ein", Spiegel Online 16 January 2010, http://www.spiegel.de/netzwelt/netzpolitik/0,1518,672343,00.html, Date Accessed: 20.12.2012.

[222] Microsoft's allegations in relation to Commission's investigation can be found at: http://blogs.technet.com/b/microsoft_on_the_issues/archive/2011/03/30/adding-our-voice-to-concerns-about-search-in-europe.aspx, Date Accessed: 20.12.2012.

bandwagon of complainants claiming that Google's preferential treatment of its own services places rival competing travel websites at a competitive disadvantage and forecloses competition in the online travel market.[223]

On May 21, 2012, the European Competition Commissioner Almunia stated that the Commission has reached preliminary conclusions in its Google investigation and identified four main areas of concern in relation to the alleged anti-competitive practices:[224]

i. The first concern of the Commission is unsurprisingly in relation to manipulation of search results and whether Google favours its own vertical services differently than it does for its rivals' links,

ii. The second concern is in relation to Google copying content from third party websites, mainly competing vertical services, using this content in its own offerings. The Commission is of the view that by copying material from the rivals' websites, Google undermines the benefits of its competitors, and thus reduces their incentives to invest in creating original content to the detriment of consumers,

iii. The third concern is in relation to the exclusivity deals between Google and partners, on the websites of which Google delivers search advertisements. Those exclusivity deals contain provisions that force Google's partners to obtain all or most of their advertisement from Google, thereby foreclosing competing providers of search advertising intermediation services, and

iv. The fourth concern is in relation to data portability and the restrictions that Google placed in relation to the advertising campaigns from its platform *AdWords*.[225]

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223 WHITE, A. (2012), "TripAdvisor Files Antitrust Complaint against Google with EU", Bloomberg 3 April 2012, http://www.bloomberg.com/news/2012-04-03/tripadvisor-files-antitrust-complaint-against-google-with-eu.html, Date Accessed: 20.12.2012.

224 ALMUNIA, J. (2012), "Statement of VP Almunia on the Google Antitrust Investigation", Brussels 21 May 2012, http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/12/372, Date Accessed: 20.12.2012.

225 AdWords is Google's keyword advertising platform, in which an advertiser bids for several keywords related to their business and chooses a short line text ad which is shown on Google's search results when the keywords match up with the search enquiry of the internet user. It should be noted that with AdWords advertisers undertake to pay only if someone clicks on their ad and lands on their website, not when their ad is displayed. For more information, see Google's website http://adwords.google.com, Date Accessed: 20.12.2012. See also RATLIFF, J. D. and D. L. RUBINFELD (2010), "Online Advertising: Defining Relevant Markets", *Journal of Competition Law and Economics*, No:6(3), p.658-659.

3.3.1. Harming Downstream Rivals by Manipulating Search and by Giving Preferential Treatment to its Own Services

This is the most commonly heard and arguably the most intricate complaint brought against Google. A group of complainants, including specialised search engines such as *Foundem*, claim that Google downgrades them both on its organic and paid results as it gives preferential treatment to its own products and services.[226] Put in a different way, they claim that due to Google's downgrading of their companies and products, some online markets are foreclosed to rivals and new entrants, as consumers hardly look beyond the first few pages of search results, and this ultimately leads to less choice for consumers in other online markets.

Foundem gave concrete examples from two different markets where it was allegedly adversely affected by Google's preferential treatment to its own services. The first market is the online map market: within two years after the Google's introduction of Universal Search, *Map Quest*, a leading US based online mapping service provider, lost its leading position in this market as the traffic to its website significantly diminished, whilst the traffic to Google Maps increased significantly.[227] The second market is the product comparison market: again after the introduction of Universal Search, Google's market comparison product, which had been largely unsuccessful up to that time, started to grow rapidly.[228] At the same time, visitors to UK's leading product comparison websites decreased dramatically as well.[229] *Foundem* submits that Google's conduct in relation to those markets is anti-competitive as it has a foreclosure effect on rivals, and reduces consumer choice and welfare.

In relation to the above complaint, there are two central issues that have to be discussed. The first issue is whether Google's practices can be perceived as anti-competitive tying. The second issue is whether appearing in Google's first result page is crucial for a website. It can be argued that as Microsoft bundled WMP

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[226] SWENEY, M. (2010), "EU to Launch Google Search Investigation", The Guardian 30 November 2010, http://www.guardian.co.uk/technology/2010/nov/30/google-search-eu-investigation, Date Accessed: 20.12.2012.

[227] See comments of Foundem before the Federal Communications Commission, which outlines the adverse of effects of Google's preferential treatment to its own services, http://regmedia.co.uk/2010/02/24/universal_search_submission_to_fcc.pdf, Date Accessed: 20.12.2012, p. 5-9.

[228] *ibid*

[229] *ibid*

with and tied IE to its dominant Windows operating system to monopolize other related markets, Google is also tying its own products and services to its dominant search engine to extend its existing dominance to other online markets.[230] As stated by Adam Raff from *Foundem*, Google can leverage its "search engine monopoly" into virtually any market of its choosing, such as mapping, video, price comparison, travel search, financial search, property search, music downloads, and books.[231]

Some prominent examples of potentially anti-competitive tying in the context of online search are;

i. *Google Maps*. If a user searches for an address in Google, the result will be shown in Google Maps which seems to have been set as default.

ii. *Google Chrome*. The search feature "Instant Pages" is tied directly to the Google's own web browser, Google Chrome.[232]

iii. *Google+*. Google's "Search Plus Your World" blends information such as photos, comments and news posted on Google's own social network, *Google+*, into users' search results.[233]

According to the Guidance Paper, the Commission will consider tying as an enforcement priority, if the following three conditions are present:[234]

i. The undertaking should hold a dominant position in the market for the tying product,

ii. The tying and the tied products should be two distinct products,

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[230] METZ, C. (2010a), "We Probe the Google Anti-trust Probe: Vigorously Schmidt's Mighty Tool Can Penetrate Any Market He Likes", The Register 1 December 2010, http://www.theregister.co.uk/2010/12/01/google_eu_investigation_comment/, Date Accessed: 20.12.2012.

[231] Source: http://regmedia.co.uk/2010/02/24/universal_search_submission_to_fcc.pdf, Date Accessed: 20.12.2012, p.3.

[232] See WILCOX, J. (2011), "Google's Antitrust Defense Sounds like Microsoft's", Betanews (date not specified), http://betanews.com/2011/06/25/google-s-antitrust-defense-sounds-like-microsoft-s/, Date Accessed: 20.12.2012. In his blog, Wilcox argues that this could be seen as a product improvement but might as well be perceived as attempt to leverage monopoly from one market into another.

[233] GUYNN, J. (2012), "Google Likely to Face FTC Complaint over Search Plus Your World", Los Angeles Times 11 January 2012, http://latimesblogs.latimes.com/technology/2012/01/google-likely-to-face-ftc-complaint-over-search-plus-your-world.html, Date Accessed: 20.12.2012. According to this article; Rotenberg, a Google critic, stated that "Google is an entrenched player trying to fight off its challenger Facebook by using its market dominance in a separate sector." *ibid*.

[234] Guidance Paper, para.50.

iii. The tying practice is likely to lead to anti-competitive foreclosure.

Within this context, the abovementioned three conditions could be deemed to be satisfied in the case of Google;

i. As Google is dominant in online search market (the tying product market),
ii. As online search and Google's other products such as *Goople Maps*, Goog*le Chrome* and *Google+* can be regarded as distinct products, and
iii. As argued by Google's competitors, Google's practice can lead to anti-competitive foreclosure in other online markets.

However, as noted earlier, the General Court confirmed in *Microsoft WMP* that the additional criterion to be satisfied for anti-competitive tying is whether the dominant undertaking gives consumers the choice to obtain the tying product without the tied product (coercion).[235] Arguably, this does not seem to be the case with Google, since Google's main product is its online search engine and the usage of this engine has not been made conditional on using Google's other online products or services, and vice versa.

Search engines claim that they strive to provide the most relevant search results without any bias or manipulation. They often maintain that there is no human intervention to their algorithms as they have an automated algorithm. However, it is well established that search results can be manipulated by search engines themselves as well as by information providers.[236] In the context of search results, one must bear in mind that even the most automated search engine is a result of human work and beyond every algorithm, there is a programmer giving specific instructions to the computer.[237]

It seems straightforward to establish whether a search engine favours its own services. For example, if Google shows only the results from YouTube, which is owned by Google, when a user types a search term such as "video", he/she may conclude that Google is favouring its own (its affiliates') results. However, given the secrecy surrounding algorithms, it may be difficult to establish whether such ranking is unfairly favouring a search engine's own websites or is entirely fair -

[235] *Microsoft WMP*, paras.864 and 962.

[236] INTRONA, L. D. and H. NISSENBAUM (2000), "Shaping the Web: Why the Politics of Search Engines Matters", *The Information Society*, 16(3), p.141. See generally GOLDMAN, E. (2006), "Search Engine Bias and the Demise of Search Engine Utopianism", *8 Yale Journal of Law & Technology 188*, p.188-200.

[237] GRIMMELMANN, J. (2009), "The Google Dilemma", *53 New York Law School Law Review 939*, p. 944.

one website could simply be of a higher quality or better promoted. Some scholars suggest that just like retailers that allocate their shelves to their own-brand products, search engines should be able to favour their own products and services, as this is a part of the normal competitive process until proven otherwise.[238] Furthermore, as recently argued by Bork and Sidak, appearing in the top results of a search engine is not an "essential facility", as there are several ways for websites to obtain traffic, through other general search engines, vertical search engines, consumers and even through offline advertising.[239] However, as Marsden points out, this is a problem if such preferential treatment (favouritism) is not done transparently.[240] If search results are based on anything but quality, then this should be clearly communicated to the user, as it is with paid search results and own-brand products of retailers in the real world.[241]

Arguably, there are two significant complexities in relation to the manipulation of search results in the antitrust context. First, given the secrecy around algorithms, it seems very difficult to establish with clarity whether such manipulation has taken place with the aim of discriminating rivals. Secondly, even if the existence of such bias could be proven, finding an adequate remedy that does not affect the competitive structure of the industry seems challenging. A commitment by search engines to provide more objective results will maintain the *status quo*, whilst more interventionist measures such as regulating and monitoring search results with a view to ensuring objectivity may well reduce their quality. Furthermore, even if it is decided that regulating and monitoring search results is a viable option, the scope and objectives of such regulation and monitoring, as well as the determination of the authority that will be in charge of this job, seem to be highly contestable.

3.3.2. Harming Other Search Engines by Denying Access to Content and Data

Other allegations against Google focus on denying or limiting rivals access to its own content, thereby adversely affecting rival search engines' ability to provide

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238 See WRIGHT, J. D. (2011b), "From: Truth on the Market, Antitrust Remedies", http://journaloflaw.us/5%20The%20Post/1-1/JoL1-2,%20TP1-1,%20Wright.pdf, Date Accessed: 20.12.2012, p.432.

239 See BORK, R. H. and G. J. SIDAK (2012), "What Does the Chicago School Teach About Internet Search and the Antitrust Treatment of Google?", *Journal of Competition Law and Economics*, 8(4), p.679-682.

240 MARSDEN, P. (2011), "Online Search: "Antitrust"", *Competition Law Insight*, July, p.18.

241 *ibid*.

the quality of results that Google can provide. Unlike its early days, today Google is not only a search engine provider; it owns a considerable amount of content as diverse as online books, video, music, travel and social media. It can be problematic, if other search engines cannot access or receive limited access to this content. In this respect, Microsoft's general counsel Brad Smith alleges that Google is restricting competitors from accessing search inputs, in particular video content in YouTube and scanned books in Google Books,[242] and goes on to claim that this is "preventing competing search engines from returning relevant results", as well as "raising [their] costs and hampering their ability to offer competitive services."[243]

The following analogy can be drawn between *Microsoft WMP* and the Google investigation: Microsoft's refusal to provide communication protocols that would have enabled rival server operating systems to interoperate with Windows client and server operating systems was found as an abuse of dominance.[244] In the same vein, despite not being dominant in the online content market, it can be argued that the walling of access to content and data by Google can be perceived as an abuse of dominance, if such conduct is likely to hinder Google's rivals from providing quality search results, and consequently from competing with Google on an equal footing. However, in our view, such argument is a bit far-fetched as it is not sufficiently clear how critical Google's content is for rival search engines to compete with Google and ultimately it must be noted that competition law is not concerned with the protection of rivals.

If Google is to be found to abuse its dominance in the content market, a key challenge again will then be the finding of the appropriate remedy. If it is established that Google's denial to grant access to its own content has a substantial effect on rivals' offerings, thereby eliminating consumer choice, the Commission may decide to intervene and mandate access in favour of rivals, as evidenced in its past decisions in a number of industries such as telecommunications, transport and financial services.[245] However, if such a

[242] Source: http://blogs.technet.com/b/microsoft_on_the_issues/archive/2011/03/30/adding-our-voice-to-concerns-about-search-in-europe.aspx, Date Accessed: 20.12.2012. Brad Smith also alleges that Google has "put in place a growing number of technical measures to restrict competing search engines from properly accessing [YouTube] for their search results". *ibid*.

[243] *ibid*.

[244] See *supra* "2.4. Microsoft WMP".

[245] For a discussion of cases in transport and financial services sector which may provide some guidance in relation to Google investigation, see Wood 2011, p.44-49.

remedy is foreseen by the Commission, the viability and scope of such mandatory access will be highly disputed, since such access to Google's content and platform might give its rivals access to strategic assets (such as social network member data), insights in relation to its inner workings and even to its protected algorithms. After all, if a dominant firm has engaged in high risk investment and come up with product(s) as a result of its success, superior skill and entrepreneurship, mandatory access claims should be treated with caution.[246]

3.3.3. Harming Competition through Exclusivity Deals

One of the allegations against Google is the fact that it has imposed exclusivity agreements on its contracting partners in the online advertising market which restrict them from placing their advertisements to different providers at the same time.[247] By entering into such exclusivity contracts, Google is alleged to have denied its competitors the scale which is necessary for them to compete with Google on an equal footing.[248] As demonstrated by the established case law in the EU, exclusivity contracts that ties customers – even if they do so at their request – to obtain only the dominant company's products, as well as loyalty contracts (rebates) requiring customers to buy its all or most of supply exclusively from the dominant undertaking are generally ruled as an abuse of dominance.[249] To this end, hindering its partners from advertising with other companies that also provide online advertising services can be deemed as abusive, if Google is to be perceived as an unavoidable trading partner in the relevant market.[250]

In this regard, it seems straightforward to establish whether Google places exclusivity obligations on its partners. However, it must be noted that exclusivity in itself may not necessarily generate anti-competitive effects. Exclusivity agreements can be tolerated as long as they enhance efficiency and their exclusionary effects do not deny rivals market access for too long.[251] Hence in

[246] OFT 2002a, p.98.

[247] Press Release, "Antitrust: Commission probes allegations of antitrust violations by Google", IP/10/1624, 30 November 2010.

[248] Scale enables a search engine to deliver the most relevant results to a user query; the more users use a search engine in relation to a search query, the better results that search engine provides.

[249] See in particular Case 85/76 *Hoffmann-La Roche & Co. AG v Commission* [1979] ECR 461, Case C-497/99 *Irish Sugar plc v Commission* [2001] ECR I-5333, Case T-203/01 *Manufacture française des pneumatiques Michelin v Commission* [2003] ECR II-4071 and Case T-65/98 *Van den Bergh Foods Ltd v Commission* [2003] ECR II-4653.

[250] Van Loon 2012, p.32.

[251] Marsden 2011, p.18. For a good assessment of exclusive dealing agreements under competition law, see MELAMED, D. (2006), "Exclusive Dealing Agreements and Other Exclusionary Conduct: Are There Unifying Principles?", *73 Antitrust Law Journal 375*, p.375-412.

this context, critical questions that need to be addressed are whether such exclusivity deals have a substantial effect on competition and consumer welfare, and whether there are efficiencies brought about by such exclusivity agreements which could outweigh their potential foreclosure effects. The Commission's approach towards efficiencies, its definition of what constitutes foreclosure in online advertisement market, and its determination as to the length of tolerating such foreclosure will obviously determine the answers to these questions. In this respect, without assessing the term and conditions and effects of the alleged exclusivity contracts on consumer welfare, it is hard to predict the outcome of the Commission's assessment.

3.3.4. Harming Competitors by Copying Third Party Content for Free

The complaint made by the German publisher associations relates to the use of third party content by Google in order to generate advertising revenue, without paying any remuneration to third parties. According to several media reports, this relates to Google's display of "snippets"[252] third party content in Google News.[253] Google News shows hyperlinks to news messages from third parties websites, along with the first two or three lines of the messages concerned. The content publishers are concerned that by copying their content for free, Google earns money from their offerings without offering them any share of the remedy.

Arguably this complaint is more related to infringement of IPRs than possible abuse of dominance. If Google has the right to show the third party content under the relevant intellectual property laws, the lack of payment to the publishers should not be perceived as an abuse of dominance.[254] As pointed out by several scholars if the content is in the public domain, every user can view it for free, hence it is not sufficiently clear why Google, can be obliged to share its advertising revenue with the third parties for using it for free.[255]

3.4. The Developments in Relation to the EU Investigation

In the preliminary decision, in May 2012, the Commission gave a strict deadline

[252] A snippet means a small piece of something. In the context of search results, Google provides a few short "snippets" of the texts of articles and copyrighted books in a way that responds the searched keyword(s).

[253] PFANNER, E. (2010), "An Antitrust Complaint for Google in Germany", The New York Times 18 January 2010, http://www.nytimes.com/2010/01/19/technology/19antitrust.html?adxnnl=1&adxnnlx=1347963350-qBl/rnbjsB/WqXBDAj0uAA, Date Accessed: 20.12.2012.

[254] Van Loon 2012, p.34.

[255] See eg *ibid*.

to Google to propose remedies addressing the concerns in a short time frame.[256] In July 2012, Google proposed remedies to address the abovementioned four areas of concern.[257] Terms and conditions of Google's proposals have not been made public, but commentators suggest that if a settlement is to be reached between Google and the Commission, Google's search results and its ranking decisions would be subject to important changes globally which would affect both desktop computers as well as the fast growing mobile platforms.[258]

According to Nicolas Petit, an EU competition law professor at the University of Liege in Belgium, the willingness of the Commission to settle the case without sending the formal statement of objections demonstrates that the Commission did not have a strong case against Google in the first place,[259] whilst other commentators suggest that Google's willingness to settle the case as quickly as possible can also be seen as an admission of quilt.[260] Arguably, the willingness of Google to settle the case should not be seen as admission of any wrongdoing. As a technology company Google has surely learned lessons from the Microsoft saga and will probably do everything to avoid the cost of a long battle which might cost it up to 10 percent of its worldwide total turnover, if the case was to be resolved in its disadvantage. Furthermore, such a negative decision is very likely to have an adverse affect in other jurisdictions where Google is operating and facing antitrust complaints.[261]

At the time of writing no settlement has been reached between Google and the Commission, but the increasing reliance of the Commission on settlement procedures and several news reports[262] stating that Google and the Commission

256 ALMUNIA, J. (2012), "Statement of VP Almunia on the Google Antitrust Investigation", Brussels 21 May 2012, http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/12/372, Date Accessed: 20.12.2012.

257 ARTHUR, C. (2012), "Google Offers to Settle EU Antitrust Case", The Guardian 2 July 2012, http://www.guardian.co.uk/technology/2012/jul/02/google-eu-antitrust-case, Date Accessed: 20.12.2012. See also KANTER, J. (2012), "Google Moves to Head off E.U. Antitrust Charges", International Herald Tribune 3 July 2012, p.17.

258 Arthur (2012).

259 PUZZANGHERA, J. (2012), "Europe's Antitrust Chief Urges Google to Settle Allegations", Los Angeles Times 22 May 2012, http://articles.latimes.com/2012/may/22/business/la-fi-google-europe-20120522, Date Accessed: 20.12.2012.

260 Arthur 2012.

261 See *supra* "1.3. Public Awarenesss".

262 See GEITNER, P. (2012), "Google Moves toward Settlement of European Antitrust Investigation", New York Times 24 July 2012, http://www.nytimes.com/2012/07/25/technology/eu-nears-settlement-of-google-antitrust-investigation.html, Date Accessed: 20.12.2012.

has reached a level of understanding in relation to the four areas of concern mentioned above, suggest that the European investigation in relation to Google's alleged anti-competitive practices will most probably not proceed to an infringement decision.

The European probe in relation to Google's anti-competitive practices is not the only one. It has been reported that South Korean, Argentinean,[263] Indian[264] and Brazilian competition authorities,[265] as well as the US Federal Trade Commission (FTC), have also started investigations in relation to the alleged anti-competitive practices of Google. The investigations in the US will be discussed briefly below.

3.5. The Investigation in the United States

In June 2011, the FTC launched an investigation in relation to Google.[266] Similar to the EU investigation, the FTC's investigation mainly focuses on whether Google unfairly ranks search results to favour its own services and increases advertising rates for competitors to place them at a competitive disadvantage.[267] The FTC is also examining whether Google is using its control of the Android mobile operating system to discourage smart phone makers from using rivals'

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[263] FOSSUM, M. (2012), "South Korean, Argentinian Google Antitrust Probes Nothing New", *WebProNews* 1 May 2012, http://www.webpronews.com/south-korean-argentinian-google-antitrust-probes-nothing-new-2012-05, Date Accessed: 20.12.2012.

[264] LARDINOIS, F. (2012), "India Launches Antitrust Investigation Against Google", *TechCrunch* 13 August 2012, http://techcrunch.com/2012/08/13/google-antitrust-india/, Date Accessed: 20.12.2012.

[265] A case (Case No 583.00.2012.131958-7) was brought against Google by the parent of the Brazilian shopping comparison site Buscapé. The case was very similar to the cases and claims against Google around the world and centred on the argument that Google favours it own services at the expense of its rivals. The 18th Civil Court of the State of Sao Paulo decided in favour of Google. The Court first declared that Google is not a monopoly as there were several search engine providers at the disposal of websites and advertisers. Secondly, the Court decided that Google is allowed present search results in whatever order or manner it deems appropriate. An English version of the decision on the merits is available at:
http://www.scribd.com/doc/105502055/BUSCAPE%CC%81-vs-Google-Summary-Judgment-ruling, Date Accessed: 20.12.2012.

[266] See Google's public policy blog confirming the FTC's investigation, available at: http://googleblog.blogspot.co.uk/2011/06/supporting-choice-ensuring-economic.html, Date Accessed: 20.12.2012.

[267] GARSIDE, J. (2011), "Google confirms FTC's antitrust probe", The Guardian 24 June 2011, http://www.guardian.co.uk/technology/2011/jun/24/google-confirms-ftc-antitrust-probe, Date Accessed: 20.12.2012.

applications, such as Windows operating systems by foreclosing competition in the mobile market.[268] This has not been a central discussion in the EU, however in our opinion it is likely to be addressed in the potential settlement between the EU and Google.

According to various sources, the FTC also expanded its antitrust probe to deal with competition issues raised by *Google+*.[269] In December 2011, Google announced a new search feature entitled "Search Plus Your World" which allows Google to pull data from users' connections in *Google+*. Accordingly, for *Google+* users, search results will now be customised to their particular interests and will include photos and comments from their *Google+* connections. Google markets its new search feature as an improved search method that will provide tailored results for each individual.

In January 2012, the Electronic Privacy Information Center (EPIC) issued a letter of complaint with the FTC raising concerns about privacy and adverse effects of the new features on rival web services.[270] In addition to EPIC, social media websites including Twitter voiced their concerns regarding Google's practice stating that as a result of Google's changes finding information on the web would be harder which will have an adverse affect on people, publishers, news organisations and Twitter users.[271] However, Google responded to these claims stating that there are technical limitations that hinder it from including competitors' content in "Search Plus Your World".[272] Google in the past had an alliance with Twitter that allowed it to feature tweets in its search results which

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[268] FORDEN, S. (2012), "FTC Said Poised to Finish Google Antitrust Probe in Weeks", Bloomberg 30 August 2012, http://www.bloomberg.com/news/2012-08-30/ftc-said-poised-to-finish-google-antitrust-probe-in-weeks.html, Date Accessed: 20.12.2012.

[269] FORDEN, S. and B. WOMACK (2012), "FTC Said to Expand Antitrust Probe of Google to Social Networking Service", Bloomberg 13 January 2012, http://www.bloomberg.com/news/2012-01-13/google-s-social-networking-service-said-to-be-added-to-ftc-antitrust-probe.html, Date Accessed: 20.12.2012.

[270] The letter of EPIC can be found at: https://epic.org/privacy/EPIC-FTC-Google-Search-letter.pdf, Date Accessed: 20.12.2012.

[271] MCGEE, M. (2012), "Twitter: Google+ Integration In Google Search Is "Bad" For Everyone", MarketingLand 10 January 2012, http://marketingland.com/twitter-google-integration-in-google-search-is-bad-for-everyone-3091, Date Accessed: 20.12.2012.

[272] Google's response to Twitter's claims is available at Google+'s own blog: https://plus.google.com/+google/posts/24uqWqvALud#+google/posts/24uqWqvALud, Date Accessed: 20.12.2012.

ended in July 2012[273] and for this reason it cannot crawl the said specific content from Twitter.

In September 2011, Google's Executive Chairman, Eric Schmidt, was invited to testify before the US Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights, in relation to the potential anti-competitive conduct claims.[274] In his testimony, he mainly focused on the innovative and extremely competitive nature of online search and asserted that consumers have a variety of options to access information. He maintained that if Google fails to deliver the best results, they can readily switch to other search providers while dismissing the fact that Google favours its own services at the expense of its rivals.[275]

On Dec 19, 2011, the bipartisan leadership of the US Senate Antitrust Committee Chairman Herb Kohl and Ranking Member Mike Lee wrote a letter expressing support for the FTC's ongoing investigation into Google's business practices.[276] They argued that in order to preserve the openness, competitiveness and innovative nature of the Internet, it is crucial for the FTC to determine whether Google's actions violate antitrust law or substantially harm consumers and competition in the online environment.

It has been reported by several commentators that the FTC has recently hired an experienced outside prosecutor to potentially bring a solid antitrust case against Google.[277] In addition to the concerns raised by the Commission, the US investigation also deals with Google's potential to lock down its search and other

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273 FIVEASH, K. (2011), "Google shutters Realtime Search after Twitter deal expires Tweet firehose still spraying into Bing, Yahoo", The Register 5 July 2011, http://www.theregister.co.uk/2011/07/05/google_realtime_search_twitter/, accessed 20/12/2012.

274 Source: http://searchengineland.com/figz/wp-content/seloads/2011/09/Eric-Schmidt-Testimony.pdf, Date Accessed: 20.12.2012.

275 *Ibid*.

276 The letter addressed to the US Senate Comittee on the Judiary written by Herb Kohl and Mike Lee can be found at http://www.fairsearch.org/wp-content/uploads/2011/12/Google-FTC-Letter-12-19-11.pdf, Date Accessed: 20.12.2012.

277 STREITFELD, D. and E. WYATT (2012), "U.S. Escalates Google Case by Hiring Noted outside Lawyer", New York Times 26 April 2012, http://www.nytimes.com/2012/04/27/technology/google-antitrust-inquiry-advances.html?_r=4, Date Accessed: 20.12.2012. See also STERLING, G. (2012), "US FTC Hires Formidable Outside Litigator For Possible Antitrust Case Against Google", Marketing Land 27 April 2012, http://marketingland.com/us-ftc-hires-formidable-outside-litigator-for-possible-antitrust-case-against-google-10860, Date Accessed: 20.12.2012.

applications on smart phones that run its operating system, Android.[278] At the federal level, several states also started full scale investigations in relation to Google's alleged anti-competitive practices. Texas was the first state in this respect. The investigation started in 2010 is still ongoing at the time of writing.[279] Subsequently, the Attorneys General in New York, California, Ohio, Mississippi and Oklahoma also initiated investigations. The antitrust investigation against Google in Ohio was dismissed in September 2011 as the District Court stated that the complainant had only proved harm to itself and failed to show harm to competition.[280]

At the time of writing, the FTC and the remaining federal states have not reached any conclusion in relation to the alleged anti-competitive practices of Google. Due to the similarities between the EU and the US investigations, it is expected that there will be some parallels in relation to the outcome of the investigations. Despite the divergent approaches in the area of unilateral conduct in the EU and US,[281] it is likely that the FTC investigation will also result in a settlement, requiring Google to address competition concerns particularly in relation to its search algorithms which allegedly favour its own services at the expense of its rivals.

3.6. Summary

Irrespective of the outcome, the Google investigation highlights the tension between high-tech firms and competition authorities and courts, as well as the rapidly changing nature of the competition landscape in relation to high-tech markets. The case shows that innovative and successful companies are more likely to be subject to antitrust intervention. The lengthy and controversial nature of the Microsoft cases and the ongoing Google cases clearly demonstrate the need

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278 KANG, C. (2012), "Pity Google? Patent Case Loss to Apple Could Spell Relief in Antitrust Probe, Analyst Says", The Washington Post 28 August 2012, http://www.washingtonpost.com/blogs/post-tech/post/pity-google-patent-case-loss-to-apple-could-spell-relief-in-antitrust-probe-analyst-says/2012/08/28/c608f58e-f0fb-11e1-adc6-87dfa8eff430_blog.html, Date Accessed: 20.12.2012.

279 METZ, C. (2010b), "Google Faces Antitrust Investigation in Texas: EU Complaint Echoed in US", *The Register* 3 September 2010, http://www.theregister.co.uk/2010/09/03/google_antitrust_investigation_in_texas/, Date Accessed: 20.12.2012.

280 The claimant *MyTriggers.com*, an Ohio-based shopping comparison search website, accused Google of giving preferential treatment in its search results to Google's own service and thereby placing its competitors at a competitive disadvantage.

281 See *supra* "1.4. Global Markets and Jurisdictional Problems".

for antitrust policies adequately to address challenges in such dynamic industries, particularly in the area of unilateral conduct. In this respect, particular attention should be given to product design which also includes tying, as the potential benefits of such conduct may outweigh its potential anti-competitive effects and the condemnation of such conduct might result in aiding less efficient rival firms rather than enhancing consumer welfare.

In our view allegations in relation to Google involving exclusivity agreements and copying third party content are less controversial in nature and not to the same degree unique to high tech markets. However, for the purposes of this article, Google's alleged tying practice or product design choices are very relevant. The approach of antitrust agencies and courts will be the ultimate test for them in assessing product designs with a particular focus on consumer welfare in high tech industries. The outcome of the cases on both sides of the Atlantic will be highly dependent on whether they regard Google's vertically integrated services as a major innovation and as such beneficial for consumers or whether they perceive such product as another abusive conduct that limits consumer choice. As noted by Edelman and Wright, "Google is not merely a URL finder. Consumers demand more than that and competition forces search engines to deliver."[282] So at the end of the day, the question remains what serves consumers welfare in the long run? If consumers demand more vertically integrated products such as Google's online search engine, such conduct should not be condemned as anti-competitive merely for causing harm to some competitors.

4. COMMENTS AND CONCLUSION

Today we live in a world in which innovation and advances in technology are at the centre of economic activities. Compared to traditional markets at the implementation of competition law, high-tech markets show some unique characteristics. Technological products are mostly available all over the world and their producer high-tech firms are most of the time dominant, if not monopolist, in the relevant market. Firms operating in traditional markets, such as a cheese producer, operate either locally or even if they operate globally, they hardly hold a dominant position in the relevant market. Because of this global market phenomenon, high-tech firms are often subject to different competition law systems, whose economic development may be very different from one another. Inevitably, a competition law system, which is more concerned with the

[282] EDELMAN, B. G. and J. D. WRIGHT (2012), "Debate on Antitrust Scrutiny of Google", http://journaloflaw.us/5%20The%20Post/2-1/JoL2-2,%20TP2-1,%20Edelman%20and%20Wright.pdf, Date Accessed: 20.12.2012, p.459.

protection of competitors, especially small- or middle-sized local firms, is inclined to intervene in the market rather than to leave the alleged anti-competitive conduct to be corrected by market dynamics. After all, in a competitive environment where competition is primarily innovation driven, it is not surprising that most of the allegations about anti-competitive conduct relate to practices that threaten to tilt the playing field in favour of the dominant firm.[283] Active competition in high-tech markets may look like anti-competitive conduct in other markets; a dominant software or hardware platform owner's efforts to enhance its platform by design choices, such as integration of new functionalities, may harm firms producing complementary products for that platform by reducing the price of those functionalities or by partially excluding their products from the platform.[284]

There appears to be hardly any problem in high-tech markets with prohibiting hard-core violations, such as a high-tech firm forming a cartel with its competitors to fix prices or share markets, or restrictive mergers such as a merger to monopoly between the only two high-tech firms in the relevant market. However, the same cannot be said in the area of unilateral conduct where there seems to be some degree of divergence between different competition law regimes pursuing different objectives. Even among the types of anti-competitive unilateral conduct, some potentially anti-competitive practices raise no or little controversy, such as predatory pricing, exclusive dealing and conditional rebates. When Intel, inter alia, granted rebates to OEMs on the condition that they buy all or virtually all of their CPUs from Intel but not from Advanced Micro Devices (AMD), this was found anti-competitive by the Commission.[285] The outcome would have still been the same if a dominant tyre manufacturer had engaged in the same anti-competitive conduct vis-à-vis automobile manufacturers, except perhaps with less discussion on cost structure in high-tech markets which tend to have high initial investment costs and low marginal production costs in contrast to most traditional markets.

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[283] OFT 2002a, p.42. See also Ahlborn et al., p.167 ("In new economy industries, where corporate success often means failure for rivals, innovators who succeed in the marketplace will often face all sorts of complaints for anti-competitive behaviour. Hopefully, the competition authorities will analyse these complaints keeping in mind that competition policy is about protecting competition and not competitors.") On this point, it can be argued that competition authorities and courts should be more concerned with false positives. The bulk of cases and allegations against high-tech firms are brought and made by their competitors who seemed to have (ab)used competition law rules to provide a shelter to them against aggressive competition on the part of the dominant firm.

[284] Page and Childers 2012, p.376.

[285] Case COMP/C-3 /37.990 — *Intel* [2009] OJ C 227/13.

In the area of unilateral conduct, a more pressing concern arises when the conduct in question relates to how dominant high-tech firms design their products, and especially when some anti-competitive effects are generated as a result of their product designs.[286] Product designs often manifest themselves in the form of tying; however, an equally ubiquitous example of a potentially anti-competitive product design can be the introduction of brand-new or improved products to the market. One of the key issues the IBM and Microsoft cases on both sides of the Atlantic was their allegedly anti-competitive product designs. Currently Google is being accused of, among other things, designing its search algorithms in a way that manipulates search results and favours its own vertical services at the expense of those of its rivals. At some point in the future, Apple may be accused of designing the way how *iTunes* works with its own *iPods* and portable music players of other companies, as a result of which Apple might leverage its significant market position in the portable music player market into the market for the sale of digital music.[287]

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[286] Even though this article limits itself to product design in the context of unilateral conduct of firms with market power, competitive concerns with regard to how firms design their products may also arise in the context of merger control. One good and recent example of this is the acquisition of McAfee by Intel. Although it can be prima facie preceived as a conglomerate merger as the CPU producer Intel proposed to acquire the antivirus software developer McAfee, theories of harm with regard to Intel's post-merger product designs were not speculative. There were concerns as to whether Intel could develop algorithms for its CPUs that optimise the use of McAfee and hold this critical information back from rivals, or only share it selectively with some of them. NELSON, D. (2010), "EC's Intel, McAfee Probe Finely Balanced as Complex Third-party Concerns Emerge", MLex 17 December 2010, http://www.mlex.com/Content.aspx?ID=124195, Date Accessed: 20.12.2012.Furthermore, another concern was that Intel could differentiate its CPUs by designing chips that speed up the security scans typically performed by McAfee or creating technology that makes gadgets less vulnerable to attacks by hackers. FINKLE, J. and FELIX, B. (2011), "Intel Offers Concessions to EU on McAfee", Reuters 6 January 2011, http://www.reuters.com/article/idUSTRE7053DD20110106, Date Accessed: 20.12.2012. Alternatively, it was believed that Intel could use its CPUs to launch advertisement, pop-ups or even discounts promoting the use of McAfee; however, this was not likely to result in consumer harm. Notwithstanding those concerns, the Commission cleared the operation after Intel offered several commitments to alleviate the concerns on potentially anti-competitive product design (Case COMP/M.5984 — *Intel/McAfee* [2011] OJ C 98/1). See Press Release, "Mergers: Commission clears Intel's proposed acquisition of McAfee subject to conditions", IP/11/70, 26 January 2011. This case shows that concerns over product designs come to the fore even in the context of conglomerate mergers, which do not normally lead to any competition concerns at all in the majority of circumstances.

[287] Apple's commercial strategy was the creation of a virtual tie-in which required the users of iPods to purchase digital music from Apple's online digital music store, iTunes. Although users had the option of using and uploading to their iPods unprotected music, usually in MP3 format; if they wanted to download digital songs form iTunes, those were used to be DRM-protected (digital rights

Figure 1 – The Spectrum of Different Types of Anti-Competitive Unilateral Conduct

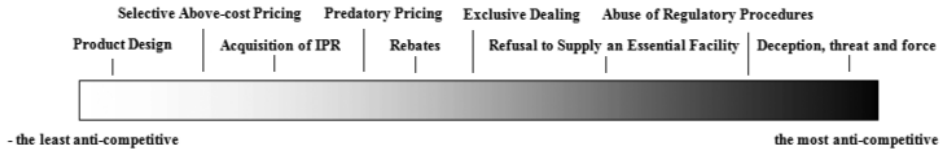

Figure 1 shows the spectrum of different types of anti-competitive unilateral (exclusionary) conduct ranging from the least to the most anti-competitive according to which product design is the closest to a genuine pro-competitive practice; whereas deception, threat and force are nakedly anti-competitive and have no redeeming features or efficiency gains.[288] Different standards apply to

management), usually in AAC format, and thus not playable on other portable music players apart from iPods. There was no requirement on the part of users to purchase any digital music at all, but the only digital music had to come from only iTunes. LIEBOWITZ, S. F. and S. E. MARGOLIS (2008), "Bundles of Joy: The Ubiquity and Efficiency of Bundles in New Technology Markets", *Journal of Competition Law and Economics*, No:5(1), p.30. Considering the fact that Apple had 83 percent market share in the market for the sale of digital music (see Hays 2006, p.39), it could be thought that the company might have been the next target of competition authorities or courts, in particular in the EU, as the competing digital music retailers, such as Amazon.com, eMusic and Rhapsody, would be practically placed at a competitive disadvantage. In this case, iTunes seems to be integrated into iPods by way of software and it can be only used by the users of iPods. Such a product design initially attracted attention and in March 2006, the French Senate passed a law requiring Apple to disclose its DRM-protection method in an attempt to liberalise the online digital music retail market. KIRK, E. (2006), "Apple's iTunes Digital Rights Management: "Fairplay" under the Essential Facilities Doctrine", *Communications Law*, No:11(5), p.161. However, since January 2009, Apple has stopped selling tightly DRM-protected digital music, which means that users now have the option of playing the DRM-free digital music they have bought from iTunes on other portable music players as well. Source: http://www.apple.com/pr/library/2009/01/06Changes-Coming-to-the-iTunes-Store.html, Date Accessed: 20.12.2012. Nevertheless, as DRM-free availability does not apply to video clips and films available on iTunes, it remains to be seen whether a competition investigation will still be launched into the company on the basis a lack of interoperability as abuse of market power.

[288] It has been contended that if conduct harms the competitive opportunities of rivals, has no cognisable efficiencies, is reasonably capable of harming competition and implemented with the sole or overwhelmingly predominant intent of causing competitive harm, then "no more should be required to establish a prima facie abuse". NAZZINI, R. (2011), *The Foundations of European Union Competition Law: The Objective and Principles of Article 102*, Oxford University Press, Great Britain, p.60. The author gives the example of a dominant firm obtaining a patent by perpetrating fraud on the relevant patent office or inducing the government to erect or maintain barriers to entry by bribery or deception. Similarly, Melamed states that some practices can be "unambiguously anticompetitive" and gives the example of a dominant firm destroying its rival's factory or paying its suppliers of inputs not to do business with its rivals who also need the same

each category of practice depending on the risks false positives and over-deterrence. Generally speaking, the standards become more lenient towards the left end of the spectrum and more restrictive towards the right end.[289] Even though the order at the middle of the spectrum can be disputed and there may be divergence on both sides of the Atlantic in this respect, the opposite ends of the spectrum remain largely free from controversy and tend to exhibit profound differences. In our view, product design (which also includes technological tying) denotes the least anti-competitive (but not per se lawful) unilateral conduct among a spectrum of different types of conduct in the enforcement of the prohibition of unlawful unilateral conduct. Product design represents the most controversial type of unilateral conduct to be challenged under competition law and to attach competition law liability to dominant high-tech firms.[290]

Some commentators have argued in favour of a per se legality for product designs in the form of introduction of brand-new products. Manne and Wright propose "a rule of per se legality for new product introductions". The authors insist that even the rule of reason analysis does not survive a cost-benefit analysis that incorporates the potential for error costs of wrongful condemnation.[291] In our view, a rule of per se legality may arguably be appropriate for competition law systems that do not employ sound economic analysis in distinguishing between

input. Melamed 2006, p.377. The author actually implies that such conduct is rare and not worth commenting on in detail, since according to the author "most conduct that excludes rivals, however, provides some efficiency benefits that must be taken into account to determine whether the conduct, on balance, is anticompetitive." *ibid*.

289 "As the risks and costs of false convictions and over-deterrence increase, the [standard] becomes more lenient for the dominant undertaking and a competition authority or claimant is required to meet a higher threshold to make out a prima facie case." Nazzini 2011, p.164.

290 "Certainly, it is not always the case that an exclusionary innovation is necessarily anticompetitive and even an innovation that might be anticompetitive *sometimes* will be unlikely to be anticompetitive *all the time*. Thus, a key critique of the modern industrial organization literature and its possibility theorems involving anticompetitive behavior has been that it fails to consistently produce testable implications." Manne and Wright 2010, p.172 (emphasis original).

291 Manne and Wright 2010, p.196. Similarly, Temple Lang contends that "[w]holly new products are procompetitive", and therefore dominant firms "should not be discouraged from introducing them". Also product innovations or improvements by dominant firms in markets where there is no significant effect on complementary products "should be legal". However, he goes on to state that the situation where the conduct has effects on complementary products (this should also include related markets) is "more complicated". TEMPLE LANG, J. (2008), "The Requirements for a Commission Notice on the Concept of Abuse under Article 82 EC", Centre for European Policy Studies Special Report, http://www.ceps.eu/ceps/dld/1588/pdf, Date Accessed: 20.12.2012, p.33 (emphasis added).

legitimate competitive conduct and unlawful exclusionary conduct. The analysis could be flawed in such a system, due to a possible lack of a clear, consistent, sound and administrable rule. Nevertheless accepting such a rule, and thus an absolute antitrust immunity, in other jurisdictions which are instead grounded on sound economic analysis may raise concerns about under-inclusiveness and false negatives. As the US Court of Appeals pointed out in *Microsoft III* that as a general rule, courts should be sceptical about claims that competition has been harmed by a dominant firm's product designs; however, judicial deference to product innovation does not mean that a dominant firm's product design decisions are per se lawful.[292]

In high-tech markets, the rules on the prohibition of unlawful exclusionary conduct, especially with regard to product designs, should be implemented in a way that is unlikely to "punish" high-tech firms that often work so hard to innovate.[293] In other words, competition authorities and courts should if/when possible refrain from discouraging future incentives to innovate. In our view, competition authorities and courts should not lose sight of the presence of actual (not likely) consumer harm when deciding whether the product design in question is anti-competitive; the focus should remain upon consumers and thus consumer harm should not be assumed from harm to the structure of the market or to competitors. Much has been written emphasising the analysis of consumer harm and even the titles of some articles or books themselves explicitly ask whether there was consumer harm in the relevant case.[294] Strict and formalistic implementation of competition law rules on the prohibition of genuinely competitive product design raises concerns as to the objective of competition law and may lead to confusion about what it aims to protect in general: competition or competitors. *Microsoft WMP* was criticised on the fact that the Commission had focused on preserving rivalry rather than on efficiency and wanted to keep competitors in the game, even if it made Windows a less reliable and versatile

[292] *Microsoft III,* para.65.

[293] "Antitrust law enforcement would have undesired consequences if major actors were penalized merely for successful innovation and superior efficiency. For legal instruments to benefit consumers in the long run, they must get the balance right…" GLADER, M. (2006), *Innovation Markets and Competition Analysis: EU Competition Law and US Antitrust Law*, Edward Elgar Publishing, USA, p.170.

[294] See EVANS, D., A.L. NICHOLS and R. SCHMALENSEE (2005), "United States v. Microsoft: Did Consumers Win?", *Journal of Competition Law and Economics*, No:1(3), p.497–539, and EVANS, D., F. M. FISHER, D. L RUBINFIELD and R. SCHMALENSEE (2000), *Did Microsoft Harm Consumers? Two Opposing Views,* Aei Press, USA.

platform.[295] On the very same day that the General Court issued *Microsoft WMP*, the former Assistant Attorney General for the Antitrust Division of the DOJ, Barnett, stated in a press release that "[i]n the United States, the antitrust laws are enforced to protect consumers by protecting competition, not competitors."[296] His message could hardly be clearer.

On the other hand, if one is to understand how markets work in the real world, one must look at all aspects. Such a thorough analysis can provide insights for the determination of consumer harm. In some cases, the relevant market may show the characteristics of two- or multi-sided markets, which will then have a bearing on the competitive assessment. The Commission considered the effect of Microsoft's tying WMP to Windows not only in the market for media players, but also in adjacent markets.[297] It has been argued that since understanding the pro- and anti-competitive effects of any conduct requires an assessment of effects on multiple markets and an observation of long term impact of those effects, static analysis of individual markets will eventually generate misleading results.[298] Within this context, by giving away WMP, Microsoft sought to generate new

[295] Apon 2007, p.8. See also ART, J. Y. and G. S. McCURDY (2004), "The European Commission's Media Player Remedy in Its Microsoft Decision: Compulsory Code Removal Despite the Absence of Tying or Foreclosure", *European Competition Law Review*, No:25(11), p.707 ("Unfortunately, the Commission has lost sight of its mission to protect consumers and competition and instead has focused on how to improve the already significant the distribution channels of particular competitors by attempting to reengineer complex technical products and determine particular market outcomes."); McMahon 2009, p.137 ("[The General Court in *Microsoft WMP*] too readily found a breach of Article [102] by conduct which distorted structure, rather than undertaking a more focused examination of the effect on [competion] and consumer welfare... [The Court] seemed to equate consumer detriment with disadvantage to competitors.") and ETRO, F. and I. KOKKORIS (2010), "Toward an Economic Approach to Article 102 TFEU", F. Etro and I. Kokkoris (eds.), in *Competition Law and the Enforcement of Article 102*, p.32 ("[T]here seemed to be no actual consumer harm or predatory purpose from bundling from bundling the Media Player with Windows."). Cf. KELLEZI, P. (2009), "Rhetoric or Reform: Does the Law of Tying and Bundling Reflect the Economic Theory?", A. Ezrachi (ed.), in *Article 82 EC: Reflections on Its Recent Evolution,* p.161 ("[*Microsoft WMP* is] a very welcome development in EC competition law and suggests that not only is the Commission fully committed to the move to a more economic approach, but also that it has begun to develop the tools to implement it.").

[296] Press Release, "Assistant Attorney General for Antitrust, Thomas O. Barnett, Issues Statement on European Microsoft Decision", 07-725, Washington 17 September 2007.

[297] The Commission found that Microsoft enjoyed ubiquity by virtue of the bundle of WMP and Windows, which had effects on adjacent markets, such as media players on wireless information devices, set-top boxes, DRM solutions and on-line music delivery. *Microsoft WMP*, para.1076. Accordingly, WMP was a gateway to a range of those adjacent markets.

[298] Coates 2011, p.247.

revenue streams from web content providers who wished to provide streaming audio and video services, and therefore deliberately altered their commerical choice by installing WMP in every copy of Windows and thereby making it an ubiquitious programme requiring no additional downloads on the part of users.[299]

Indeed, the market for media players, like the market for online search, is a two-sided market benefiting from "network effects"[300] in that as more users begin to use a certain media player, more benefits are provided to content providers who develop their content compatible with the format of that media player, and as more content providers begin to develop contents for a certain media player, more benefits are provided to users in return. This ultimately tips the market in favour of that media player. Therefore, when analysing Microsoft's product design and giving away of WMP in the light of the theory of two-sided markets, a mere lack of consumer harm no longer appears to be the only decisive factor. However, this raises a very significant question as to whether the market tips in favour of WMP because of Microsoft's business acumen, foresight and efficiency, or because of Microsoft's tying of WMP with Windows. It depends on how one interprets the concept of network effects; the Commission and the General Court affirming on appeal[301] appear to have regarded it as a barrier to entry rather than the reward of Microsoft's efficiency and successful business acumen.[302] Even if the perception of a risk of tipping were supported by the facts, this does not necessarily mean that a beneficiary of tipping should be penalised

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[299] *ibid* at p.249.

[300] Network effects are a demand side phenomenon associated with the value to the customer in that customer's valuation of particular product is enhanced when it is employed in a system: the more users on a system, the valuable it is. Teece and Coleman 1998, p.814. It has been argued that an overall assessment of the effects of high tech product integration is not complete without a careful examination of the role of network effects. GRIMES, W. S. (2002), "The Antitrust Tying Law Schism: A Critique of Microsoft III and A Response to Hylton and Salinger", *70 Antitrust Law Journal 199*, p.224.

[301] According to the reasoning of the Commission, Windows provided Microsoft with a more efficient distribution system for WMP than was available to its rivals. Such an advantage led content providers and software designers to adopt the WMP format. Due to strong network effects, this ultimately led the market to tip towards WMP and eliminate competing media players. *Microsoft WMP*, paras.1049-1090. Grimes argues that on the relation of network effects with efficiency, the US Court in *Microsoft III* cited disagreements in the literature, but drew no definitive conclusions. Grimes 2002, 224.

[302] This, however, has led to a significant number of views expressed in favour of Microsoft in the literature: ("[T]he European Commission saw the existence of network effects as signs of a malfunctioning market.") GIFFORD, D. J. and R. T.KUDRLE (2011), "Antitrust Approaches to Dynamically Competitive Industries in the United States and the European Union", *Journal of Competition Law and Economics*, No:7(3), p.719; ("[T]he Commission… appeared to consider

under competition law.[303] It is true that competitors need to offer a number of applications upon entry to match the high quality of the Windows package and create their own network effects, but the cost of offering these applications is unlikely to be prohibitive compared to the global size of this market.[304]

In the assessment of consumer harm, there is one concept that has to be taken into account before coming to a conclusion: that is, the right remedy. Designing an appropriate remedy for an innovative market is like "trying to shoe a galloping horse".[305] If an allegedly anti-competitive practice generates long-term detrimental effects, but benefits consumer in the short term, then there is a risk that the remedy may preclude short term consumer benefits for the sake of future benefits, the occurrence of which may not be certain.[306] Despite the WMP and Windows bundle, competitors may still enter the market with superior technology and replace WMP. Trying not to make the same mistake twice, the Commission is now, in a way, asking Google about what could be the best remedy to address the allegations made against the company. In *Microsoft WMP*, the Commission's remedy was the unbundling of the media streaming function of Windows and Microsoft was therefore ordered to release a version of Windows without WMP, in addition to the version with WMP. However, the version of Windows without WMP (also known as "Windows XP-N", where "N" is the abbreviation for "naked")[307] sold virtually no copies.[308] Demand for this product has been

network effects mainly as a barrier to entry, thus failing to recognise that they constitute a major source of consumer value.") Ahlborn et al 2001, 166; ("[T]he Commission's decision misinterprets the role of the network effects.") O'Donoghue and Padilla 2006, p.498; ("If the Commission seriously believes that network effects are pervasive and pernicious, it confronts the paradox that monopoly is achieved by increasing consumer welfare – better products at lower prices.") Veljanovski 2001, p.117 and ("The decline in market shares of competitors... could be attributed to a number of other sources... including the superior efficiency of Microsoft products...") McMahon 2009, p.137.

303 Art and McCurdy 2004, p.699-700.

304 ETRO, F. (2007), *Competition, Innovation and Antitrust: A Theory of Market Leaders and Its Policy Implications*, Springer, Germany, p.224.

305 *New York v Microsoft Corp*., 224 F.Supp. 2d 76, (D.D.C. 2002).

306 Cf. EKLÖF, D. (2009), "The Microsoft Case – at the Heart of the IP/Antitrust Intersection", A. Ezrachi (ed.), in *Article 82 EC: Reflections on Its Recent Evolution,* p.105 ("The crucial welfare issue is not short-term product involvement, but rather what preserved rivalry or credible threat of entry means for the medium- and long-term rate of innovation in a sector.")

307 There was even a dispute over the name of this version between Microsoft and the Commission: Microsoft wanted to name it "Windows XP Reduced Media Edition", but the Commission objected to this as such a title would discourage sales and mislead users. Langer 2007, p.168.

308 Retailers bought 1,787 copies which amounted to less than 0.005 percent of the copies of all

virtually zero in the EU, a likely sign that Microsoft's bundling strategy was at least not hurting consumers.[309] The product was doomed right from the start: it was placed on the market alongside with the bundled version and sold at the same price.[310] The remedy was in reality "a failure".[311]

In fact, bundling WMP with Windows arguably did not foreclose the market to competing media player manufacturers or drive them out of the market. Even if WMP was there on the Windows desktop, nothing forced consumers to use it. In other words, there was no physical or even technical coercion. Without prejudice to WMP, they still had the option of installing other available media players, some of which were free of charge as well. Even though the Commission and the General Court did not share this view,[312] but there was no evidence that integrated software packages in any way prevented access to other, free standing applications available for purchase or for free over the Internet.[313] In today's world, almost every software is available online and just one click away from users with a broadband connection. For instance, Microsoft does not produce separate CDs for its Windows service packs or updates; Windows notifies them to users so that they can download directly and install immediately. Unlike the years in which the Commission's investigation took place, broadband connection

sales of Windows XP sold at retail level in Europe. AHLBORN, C. and D. EVANS (2009), "The Microsoft Judgment and Its Implications for Competition Policy towards Dominant Firms in Europe", *75 Antitrust Law Journal 887*, p.922. Consumers do not seem to be pleased with the version without WMP and in this respect one consumer expressed his/her dissatisfaction as follows: "they forced Microsoft to release a version of Windows without a media player and guess what, Europeans didn't WANT IT! They bought the full-blown version of Windows instead!" Koman 2009.

309 Etro 2007, p.235.

310 Larouche 2008, p.625.

311 Coates 2011, p.273. See also Etro and Kokkoris 2010, p.33 ("...Microsoft was forced to commercialize a new operating system without its WMP, which, by the way, no one purchased.")

312 The Commission dismissed the argument other distribution methods, especially the internet, was as efficient as pre-installing WMP on Windows: "First, while it is true that downloading via the Internet enables suppliers to reach a large number of users, it is less effective than pre-installation by OEMs… Second, downloading, unlike using a pre-installed product, is seen as complicated by a significant number of users. Third… a significant number of download attempts… are not successfully concluded… Fourth, users will probably tend to consider that a media player integrated in the client PC which they have bought will work better than a product which they install themselves... Fifth and last, in most undertakings employees cannot download software from the Internet as that complicates the work of the network administrators…" *Microsoft WMP*, para.1050.

313 EVANS, D., J. PADILLA and M. POLO (2002), "Tying in Platform Software: Reasons for a *Rule-of-Reason* Standard in European Competition Law", *World Competition*, No:25(4), p.514.

is widely available today. It used to take more than an hour to download WMP through a dial-up connection before, but now the same only lasts for a couple of minutes with a broadband connection. This is a clear sign of the would-be correction of allegedly anti-competitive conduct by the market dynamics.[314] It is doubtful whether the mandatory release of Windows without WMP was worth the prohibition decision and the imposition of the then record fine of 497 million Euros.

Furthermore, the Commission's vision of consumers was equally unconvincing. The Commission treated consumers as if they were keen on using or even addicted to WMP and Microsoft exploited this by bundling it with Windows. It is worth noting that consumers might find WMP unsatisfactory or even "good-for-nothing". One of the authors has observed elsewhere that a user attempting to watch a DVD film on a DVD-ROM by using WMP is affected by the region code restrictions, in that if the region code of that DVD does not match with the region code of that DVD-ROM, the user encounters with an error message and consequently cannot play that DVD in that DVD-ROM, even if he/she bought it completely legally. Whereas if the same user attempts to watch the same DVD on the same DVD-ROM by using "*VLC Media Player*", he/she remains totally unaffected by the region code restrictions and can therefore play any DVDs regardless of whether their region codes match with the region code of his/her DVD-ROM.[315] Being aware of this crucial difference and attaching importance thereto, that user is thus highly likely to use the "*VLC Media Player*" irrespective of whether WMP comes pre-installed with Windows. This then refutes the General Court's cursory observation that consumers had an incentive to use WMP at the expense of competing media players even if they were of

[314] This view was again not shared by the Commission in *Microsoft IE*. Even if it was issued 5 years after *Microsoft WMP*, the Commission appears to have relied on and in a way "recycled" the same findings of *Microsoft WMP* regardless of advances in the use of Internet and growing availability of broadband connection. For instance, only one in six households in Europe with Internet access had broadband connection in 2002. *Microsoft WMP*, para.1050. Now this rate is almost 100 percent. However, according to the Commission: "[d]ue to the development of broadband access, it has become easier over recent years to download software products, including web browsers. However, *for various reasons*, the Commission reached the preliminary conclusion that the downloading of web browsers from the internet does not provide a sufficiently effective distribution alternative." *Microsoft IE*, para.46 (emphasis added). Some commentators disagree with the Commission that IE could have been substituted with another browser in a few seconds and freely even before the introduction of the choice screen with *Microsoft IE*. Etro and Kokkoris 2010, p.34.

[315] Özkan 2011, p.181-182, fn.19.

better quality.[316] Indeed, studies show that consumers frequently install and use multiple media players due to the diversity of features they offer and formats they support.[317]

The same can be said for IE as well; IE may not be superior in the eyes of consumers. Other web browsers may offer new add-ons, a higher compatibility with web pages, berrer security or faster downloads. To illustrate this, in 2011 Microsoft issued a critical security alert which could affect about 900 million users of Windows operating system. Although the problem was with the operating system, it affected the way IE handles some web pages in that users could be fooled into downloading malicious scripts which might collect user information.[318] Other web browsers such as *Firefox*, *Chrome* and *Safari* remained unaffected by this threat, since they did not support "MHTML" files.[319] Consumers whose first expectation is enhanced security may thus opt for other web browsers as they may be safer compared to IE. Within this respect, Google's *Chrome* has a unique feature called "sandboxing" which is said to isolate web browser commands from the operating system, and other applications and data; therefore, this makes it harder for hackers to infect users with suggested malware and spyware.[320] These two examples thus show that neither in *Microsoft WMP*, nor in *Microsoft IE* was there a coherent theory on consumer harm. The fact that the most efficient distribution channel was foreclosed cannot be necessarily equated with consumer harm as long as all distributions channels are not foreclosed.

The Commission's analysis is also flawed from a different point of view. A Windows with WMP was found to have amounted to a technological tie. The same should then be true for a Windows with IE. Despite the same type of "infringement", the Commission's remedies in *Microsoft WMP* and *Microsoft IE* were quite different. In the former, the Commission ordered Microsoft to

316 *Microsoft WMP*, para.971.

317 Art and McCurdy 2004, p.699.

318 FOSTER, A. (2011), "Security Flaw Opens Windows to Data Thieves", London Evening Standard 1 February 2011, p.13.

319 *ibid*. From a different perspective, the appearance of Firefox, Chrome and Safari shows that even though the Windows and IE bundle (this is also true for Windows and WMP) reduced the average prices of browsers and media players, this did not lead to any entry deterrence. Etro 2007, p.232.

320 PERT, J. (2010), "Internet Explorer vs Google Chrome: 3 Reasons to Choose Chrome", Product Reviews 5 May 2010, http://www.product-reviews.net/2010/05/05/internet-explorer-vs-google-chrome-3-reasons-to-choose-chrome/, Date Accessed: 20.12.2012.

unbundle WMP from Windows and release an unbundled version of Windows. Whereas, in the latter Microsoft agreed to include a browser select screen, under which users could download the browser they want to use. The same remedy could have been imposed in *Microsoft III*, but the unbundling of IE from Windows was not a viable option in *Microsoft IE*; users could not download a different browser without using IE first. WMP and IE were both functionalities of Windows, but because of the nature of the market their unbundling brought about different outcomes. The unbundling of these functionalities severely interfered with the design of Windows and provided hardly any consumer benefit.[321] When a few US states which objected to the settlement in the aftermath *Microsoft III* applied for a stricter remedy of code removal of IE from Windows, the District Court rightly found that "the forced removal of software code from the Windows operating system will disrupt the industry, harming both ISVs and consumers."[322] The Commission's unbundling remedy can thus be regarded as "mistakenly wielding the antitrust hammer"[323] against an innovative firm; it fails to appreciate the benefits of bundling in high-tech markets.[324]

The tying of IE to Windows was not, however, found unlawful in itself in the US; the Court of Appeals remanded that claim to the District Court for reconsideration. Microsoft was mainly condemned for carrying out a systematic anti-competitive campaign, under which the tying of IE to Windows had only a small part. As Hovenkamp summarises well, the history of *Microsoft III* shows far more; including efforts to pressure OEMs to deny access to alternative operating systems, to force Intel not to develop chips that would process Java multiplatform language effectively, to quash Internet access technology that

321 "Adding new functions to existing products will inevitably lead to exclusion of vendors of products providing only the standalone function. But generally such additional functions are pro-competitive innovations that benefit consumers, notwithstanding short-term harm to standalone vendors." Batchelor 2008, p.21.

322 *New York v Microsoft Corp*., 224 F.Supp. 2d 76 (D.D.C. 2002), para.184 (V\B).

323 Manne and Wright 2010, p.155.

324 "Consider Nokia's integration of music players, games, and most recently cameras into their handsets… Consider IBM's integration of storage memory into its mainframe computers. Consider Intel's progressive integration of the functionality of previously stand alone products like math coprocessors and multimedia chips into its core CPU chips for PCs. Consider PC OEMs integration of modems, CD and DVD burners, graphics accelerators, and similar components into the off-the-shelf PC. Should they be regarded as tying simply because such functionality can also be supplied by stand-alone products? Clearly not… It is both in the nature and the commercial usage of these products to be integrated to the great benefit of providing consumers increasingly useful and innovative products." Art and McCurdy 2004, p.698 and 706.

would have served to link multiple operating systems together, and to suppress a computer language that would have permitted developers to write software that would run on multiple operating systems.[325] Had the only practice been the tying of IE to Windows, the outcome might have been different.[326] Whereas Microsoft also resorted to deceptions and threats, which constitute the most anti-competitive practices as shown in Figure 1 above. The Court seems to have revealed its reluctance to condemn the technological tying of IE to Windows when it held that "not all ties are bad".[327] It is worth reminding at this stage that in none of the lawsuits filed against IBM during the 1970s and 1980s in the United States on the ground of IBM's allegedly unlawful tying of certain features to its certain products was there any ruling that IBM had engaged in unlawful tying.[328]

If the attitude of competition authorities or courts towards product designs remains the same regardless of any of these criticisms, more cases will highly likely be brought against high-tech firms. It should be noted that applications running on Windows do not confine to IE and WMP. There are actual and potential competitors in the markets for many other applications that come up with Windows such as Messenger, Photo Viewer, Fax and Scan, Notepad, Paint and Calculator. Microsoft risks facing potential worldwide tying allegations concerning those products, if it continues to offer those products pre-installed on Windows.[329] It has been observed that because of competition law concerns, Microsoft's latest operating system, Windows 7, does not include a number of applications that consumers have come to expect from a full-featured operating system: "out of fear of antitrust headaches, Microsoft has stripped Windows 7 of

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325 Hovenkamp 2008, p.296.

326 It has been suggested that the various activities challenged in *Microsoft III* might appear legal under a clear rule, but that when all of the multiple exclusionary practices are put together, it can be seen why the conduct (tying of IE to Windows) was really problematic. ADKINSON, W. F., K. L. GRIMM and C. N. BRYAN (2008), "Enforcement of Section 2 of the Sherman Act: Theory and Practice", Staff Working Papers on Section 2, US Federal Trade Commission, http://www.ftc.gov/os/sectiontwohearings/docs/section2overview.pdf, Date Accessed: 20.12.2012, p.30, fn.166.

327 *Microsoft III,* para.87.

328 "Courts refused to apply the tying prohibition, generally on the ground that innovation is too important to the competitive process to subject to judicial second-guessing." Hylton and Salinger 2001, p.480.

329 As discussed above, the Korean Fair Trading Commission decided that Microsoft abused its "significant market dominant position" by tying, among other things, Windows Messenger with its client operating system, thereby excluding competitors and also harming consumers. See *supra* fn.102. Those two products have not been addressed by the Commission in the EU so far.

some important accessory programs. Believe it or not, software for managing photos, editing videos, reading PDF documents, maintaining a calendar, managing addresses, chatting online or writing e-mail doesn't come with Windows 7."[330] This massively important observation suggests that in a way, consumers might be using an inferior operating system because of historical competition law action. But is it what consumers could want? Google's search algorithms are now at stake; up to now Google "has zealously guarded those formulas in much the same manner as Coca-Cola Co. protects the recipe for its signature drink or KFC guards the ingredient mix for its chicken."[331] Interference with its product design in a way that may adversely increase the ranking of websites which are low-value add for users or have no original content would unlikely to offer benefits to consumers.[332] Therefore, efforts to base competition law liability on product design involve a high risk of interfering with ordinary, and often efficiency-enhancing, practices of high-tech firms.

All in all, competition law rules condemning product designs and technological ties present a particularly serious threat of chilling innovation and, moreover, raise severe remedial difficulties.[333] Remedying anti-competitive product designs and technological ties appropriately can often be difficult, requiring courts to make judgments about unusually complicated, forward-looking business issues and thereby heightening the risk that a remedy will hurt, rather than help, consumers.[334] Competition authorities and courts are likely to

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330 POGUE, D. (2009), "State of the Art - Windows 7 Keeps the Good, Tries to Fix Flaws", The New York Times 21 October 2009, http://www.nytimes.com/2009/10/22/technology/personaltech/22pogue.html?_r=5&, Date Accessed: 20.12.2012. See also Adkinson et al 2008, p.26, fn.147 ("...concerns about potential liability under section 2 have led Microsoft not to include new product features and to raise prices.")

331 Source: ——, "EU probe delves into heart of Google's business", Associated Press 30 November 2010, http://www.cleveland.com/business/index.ssf/2010/11/eu_probe_delves_into_heart_of.html, Date Accessed: 20.12.2012.

332 Under pressure to improve the quality of its search results from smaller rivals, Google has changed its formula to penalise "low-quality" content. The company announced without giving details that it was trying to reduce the rankings in websites which are low-value add for users, copy content from other websites or websites that are just not very useful. MENN, J. (2011), "Google Changes its Search Formula", Financial Times 26 February 2011, http://www.ft.com/cms/s/2/69bb5514-413a-11e0-bf62-00144feabdc0.html#axzz1GXf8Uew6, Date Accessed: 20.12.2012.

333 US DOJ 2008, p.87.

334 *ibid* at p.88. The Commission, however, did not seem to share this when it stated in a press release that as a result of the unbundling remedy in *Microsoft WMP*, the configuration of a bundle of an operating system and a media player by OEMs would "reflect what consumers want, and not

make serious errors if they endeavour to second-guess design decisions of innovators in regimes of rapid technological change and/or product redefinition.[335] Compared to traditional markets, the nature of competition in high-tech is different, particularly when it is related to product designs. It should be borne in mind that dynamic innovative markets often compete by adding desirable functions into new versions of existing products[336] and the margin of innovation in many high-tech products is the addition of new functionalities.[337] For this reason; economists, lawyers, competition authorities and courts must approach product designs in high-tech markets with caution, and reassess their methods and tests in determining both market power and abuse of market power.

what Microsoft imposes." Press Release, "Commission Concludes on Microsoft Investigation, Imposes Conduct Remedies and a Fine", IP/04/382, 24 March 2004. It appears that the Commission itself imposed Microsoft the requirement to offer an unbundled version for which there has been no apparent consumer demand.

335 Teece and Coleman 1998, p.842. The authors rightly observe that "[d]etermining the right answer likely requires significant technological detail, and understanding of consumer preferences are inherently uncertain. Enforcement agency personnel are not likely to be capable of making the technical distinctions and would have to rely on industry personnel who may have divergent views and special agendas. This indicates the need for extreme caution." ibid at p.845-846. See also Etro 2007, p.235 ("…attempts of antitrust authorities to stop or delay the evolution of OS through additional features, as browsers and media players, appear quite dangerous: while it is difficult to verify in which moment it would be optimal to bundle secondary products in an evolving primary product, it is not clear why antitrust authorities should have a better guess than market driven firms.")

336 Batchelor 2008, p.19.

337 Liebowitz and Margolis 2008, p.22. See also Etro 2007, p.234 ("If supply of media player functionalities was inefficient through bundling a few years ago, and it was mostly left to specific add-ons; improvements in hardware processing power, in the cost of hard disk storage and random access memory, and in the streaming technology made it simple and efficient to bundle media player functionality within current OSs… while a few years ago an OS and a media player could be regarded as separate goods whose union could be associated with a bundling strategy, nowadays an OS must incorporate media player functionalities (as it must incorporate a browser) so that we cannot even talk of a traditional form of bundling.") (emphasis original).

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