Microsoft on Trial

Legal and Economic Analysis of a Transatlantic Antitrust Case

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13. The quest for appropriate remedies in the EC Microsoft cases: a comparative appraisal

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1. INTRODUCTION

The Microsoft cases in the United States and in Europe have been influential in determining the contours of the substantive liability standards for dominant firms in US antitrust law and in EC competition law. The competition law remedies that were adopted, following the finding of liability, seem, however, to constitute the main measure for the 'success' of the case(s). An important disagreement exists between those arguing that the remedies put in place failed to address the roots of the competition law violation identified in the liability decision and others who advance the view that the remedies were far-reaching and that their alleged failure demonstrates the weakness of the liability claim. This study evaluates these claims by examining the variety of remedies that were finally imposed in the EC Microsoft cases, from a comparative perspective. The study begins with a discussion of the roots of the Microsoft issues in Europe and the consequent choice of a remedial approach by the European Commission and the European Court of First Instance (CFI). It then explores the effectiveness of the remedies in achieving the aims that were set. The non-consideration of the structural remedy in the European case and the pros and cons of developing such a remedy in the future are briefly discussed before more emphasis is put on alternative remedies (competition and non-competition law ones) that have been suggested in the literature. The study concludes by discussing the fit between the remedy and the theory of consumer harm that led to the finding of liability and questions a total dissociation between the two. We believe that it is important to think seriously about potential remedies before litigation begins. However, we do not require an *ex ante* identification of an appropriate remedy by the plaintiffs, since this could lead to underenforcement or overenforcement.

In 2004, the European Commission adopted a Decision declaring that

Microsoft had violated Article 82 EC[1] by committing two abuses of its dominant position on the market for PC operating systems (the first EC Microsoft case).[2] Microsoft was held to have abused its dominant position by refusing to supply competitors with certain interoperability information and to allow them to use it for the purpose of developing and distributing competing products on the market for work group server operating systems. It also found that Microsoft had infringed Article 82 EC by making supply of its client PC operating system Windows conditional on the simultaneous acquisition of its Windows Media Player (WMP). The CFI affirmed the Decision of the Commission in 2007.[3]

Following complaints by Opera, the Norwegian web-browser developer, in December 2007 the Commission initiated investigations and sent a Statement of Objection (SO) in January 2009[4] alleging a violation by Microsoft of Article 82 EC for tying its web-browser Internet Explorer to its dominant client PC operating system Windows. On 16 December 2009 the Commission gave its approval to the choice screen proposal suggested by Microsoft and adopted an Article 9 of Reg. 1/2003 commitment decision[5]

This study will focus on the remedies that were adopted by the Commission and confirmed by the CFI in the first EC Microsoft case, as well as those accepted by the Commission in the second EC Microsoft case, and will *not* examine the liability issue or the specific substantive standards for the finding of an abuse of dominant position in EC competition law.[6] Although there will be some references to the remedial

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[1] Article 82 of the EC Treaty prohibits the abuse of a dominant position that one or more undertakings have in a relevant market when there is an affect on trade between Member States.

[2] Commission Decision 2007/53/EC of 24 March 2004 [2007] OJ L32/23 ('the Decision').

[3] Case T-201/04 *Microsoft Corp.* v *Commission* [2007] ECR II-3601 ('CFI judgment').

[4] European Commission, MEMO 09/15, 17 January 2009, available at Europa Press Release.

[5] See European Commission at http://europa.edu/rapid/pressReleases-Action.do?reference=IP/091941 and http://ec.europa.eu/competition/antitrust/cases/decisions/39530/final_decision_en.pdf (full version). In the final settlement, Microsoft made additional commitments on interoperability between rivals' software and its own, including Windows, Windows server, Office, Exchange and SharePoint.

[6] On the tying part of the case, see Nicholas Economides and Ioannis Lianos, 'The Elusive Antitrust Standard on Bundling in Europe and in the United States in the Aftermath of the Microsoft Cases' (2009) 76(2) *Antitrust Law Journal* 483 available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1078932.

strategy adopted in the United States for practices that were closely related to those condemned in the EC Microsoft case, this study will also not systematically compare the US remedy with the EC remedy, for the simple reason that each remedy addressed a different competition law problem, and therefore required the adoption of different measures to address that problem.

Competition law remedies are adopted with the aim to restore competition in the market: this includes the 'micro' goal of putting the infringement to an end, compensating the victims,[7] and curing the particular problem to competition, but also the 'macro' goal of putting incentives in place 'so as to minimize the recurrence of just such anti-competitive conduct'.[8] This study embraces a broader view of the concept of remedies than Council Regulation 1/2003 on the implementation of the rules on competition laid down in Articles 81 and 82 of the EC Treaty.[9] Competition law remedies seek generally to restore 'the plaintiff's rightful

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[7] Taking illegal gains away from the law violators and 'restoring the monies to the victims' constitutes a principal goal of competition law remedies: see Robert Pitofsky, 'Antitrust at the Turn of the Twenty-First Century: The Matter of Remedies' (2002) 91 *Georgia Law Journal* 169, 170.

[8] Eleanor Fox, 'Remedies and the Courage of Convictions in a Globalized World: How Globalization Corrupts Relief' (2005) 80 *Tulane Law Review* 571, 573.

[9] Council Regulation 1/2003 [2003] OJ L1/1. According to Article 7 of Regulation 1/2003, the aim of competition law remedies is 'to bring the infringement effectively to an end'. Remedies should therefore be distinguished from sanctions against undertakings, as the latter have the aim to punish the infringer and to provide compensation to victims or society in general. See also, on the distinction between remedies and sanctions, OECD, *Remedies and Sanctions in Abuse of Dominance Cases*, DAF/COMP(2006) (May 2007), p. 18, available at www.oecd.org/dataoecd/20/17/38623413.pdf: '(t)ypically, remedies aim to stop a violator's unlawful conduct, its anticompetitive effects, and their recurrence, as well as to restore competition. Sanctions are usually meant to deter unlawful conduct in the future, to compensate victims, and to force violators to disgorge their illegal gains'. This distinction does not adequately take into account that sanctions and damages often affect the incentives of the wrongdoers in their future behaviour on the market. This study adopts a broader view of remedies, which includes different aims, allegedly also those performed by sanctions, such as stopping the illegal conduct and preventing its recurrence, restoring competition, deterrence, just compensation, disgorgement of illicit profits. This overall approach may provide a more useful analytical framework for analysing the effect of competition law on the specific market. Furthermore, the restrictive position adopted by Regulation 1/2003 concerns public enforcement and does not take into account the emerging role of private enforcement in EC competition law, following the publication of the White Paper on Damages Actions for Breach of the EC Antitrust rules, COM(2008)165.

position, that is, to the position that the plaintiff would have occupied if defendant had never violated the law' or 'to restore the defendant to the defendant's rightful position, that is, the position that the defendant would have occupied absent the violation'.[10] In other words, remedies are a cure to a 'wrong' the defendant committed, 'in contravention of some legally-recognised right of the plaintiff's'[11] or of the category of right-recipients that the legislator aimed to protect. The wrong of the defendant gives rise to the enforceable right of the plaintiff (or the protected category) to impose on the defendant a correlative duty of stopping the illegal behaviour, paying damages, making restitution, or adopting a specific behaviour. An important aspect in the definition of remedies is therefore to determine who would be the beneficiary of this right, in other words the protected category that retains the right to impose a correlative duty to the defendant. We will assume that the protected category is the consumers of the relevant market harmed by the 'wrong' committed by the defendant.[12] A wider perspective would be to consider that the protected category consists of the 'broader public' who derive benefits from the principle of competition, allegedly jeopardized by the practices of the dominant firm.[13]

Whichever perspective is chosen, 'restoring competition' should not be interpreted as reaching perfect competition (or free competition if one takes a deontological perspective), which is practically unattainable, and in some cases normatively an undesirable objective from a public policy perspective.[14] The remedy aims to restore the market that would

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[10] Douglas Laycock, *Modern American Remedies: Cases and Materials* (Little, Brown, 1994), p. 2.

[11] Michael Tilbury, Michael Noone and Bruce Kercher, *Remedies: Commentary and Materials* (3rd edn, LBC Information Services, 2000), p. 1.

[12] In this case, consumer welfare or consumer sovereignty will be proxies of consumer harm.

[13] See the Opinion of Advocate General Kokott in Case C-8/08 *T-Mobile Netherlands BV and others*,[19 February 2009, paras 58 and 71, defending the view that the objective of EC competition law is to 'protect competition as such' because this is of benefit, not only for consumers but for 'the public at large'. In Case C-8/08 *T-Mobile Netherlands BV and others*, 4 June 2009, para. 38, the European Court of Justice accepted that 'Article 81 EC, like the other competition rules of the Treaty, is designed to protect not only the immediate interests of individual competitors or consumers but also to protect the structure of the market and thus competition as such' but did not adopt the position of Advocate General Kokott with regard to the ultimate beneficiaries of the principle of competition, thus suggesting that a possible interpretation of the aims of EC competition law is the avoidance of a long-term consumer harm.

[14] In industries with significant network effects, even in the absence of anti-competitive actions, the natural equilibrium is neither perfect competition nor an egalitarian market structure. Markets with strong network effects, such as the

have existed in the absence of the conduct found illegal, that is, what is commonly called the 'but for' market conditions.

Competition law remedies list also a prophylactic objective: 'ensure that there remain no practices likely to result in monopolization in the future'.[15] This is certainly a difficult enterprise that requires from the courts a guessing exercise linked to a counterfactual analysis of the situation in the market with and without the specific competition law violations. This is particularly true in complex and dynamically evolving markets, where static models cannot easily predict the situation that would have existed absent the restraint. It also requires a difficult decision on the appropriate remedy enforcement mechanism, as the judge should decide on the degree of her involvement (as opposed to market forces or regulatory institutions) in the operation. One could indeed perceive the operation of designing appropriate remedies as being, first of all, a decision over the need for regulatory interference in order to bring the self-correcting forces of the market back to their usual operation, as the default mechanism that would adjust the incentives of market actors and therefore the interaction between supply and demand in the specific sector of the economy. Thus, remedies could be (i) setting up conditions for the market to work, or (ii) directly influencing or guiding the market.

There are, of course, different choices that can be made and combined in order to affect the incentives of market actors and restore 'competition', defined as the best possible outcome for the consumers of the specific relevant market in terms of price, quality, variety, innovation etc., if one assumes (as does this study) a consumer-driven competition law and policy. First, it is possible to contract out the remedy to other affected market participants by enabling them to sue for the recuperation of the

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market for operating systems of PCs, are 'winner takes most' markets with significant market share and profits inequality as well as high concentration. Thus, the 'but for' world that would have existed in the absence of anti-competitive actions is one of very significant inequality. Attempting to impose the perfectly competitive egalitarian environment of a non-network industry can lead to lower social benefits. *See* Nicholas Economides, 'The Economics of Networks' (1996) 14 *International Journal of Industrial Organization* 675, available at www.stern.nyu.edu/networks/Economides_Economics_of_Networks.pdf; Nicholas Economides and Fredrick Flyer, *Compatibility and Market Structure for Network Goods*, Discussion Paper EC-98-02 (Stern School of Business, New York University), available at www.stern.nyu.edu/networks/98-02.pdf; and Nicholas Economides, 'Competition Policy in Network Industries: An Introduction' in Dennis Jansen (ed.), *The New Economy and Beyond: Past, Present and Future* (Cheltenham: Edward Elgar, 2006), available at www.stern.nyu.edu/networks/Economides_Competition_Policy.pdf.

15 See *United States* v *Microsoft Corp.*, 253 F.3d 34, 103 (D.C. Cir. 2001).

damages suffered because of the conduct found illegal or for more than the damages incurred in order to deter market participants from adopting a similar anti-competitive conduct in the future. Secondly, it is possible to develop remedies that would affect the discretion of market participants to run their business, in other words affect their autonomy as market participants and consequently their incentives. The latter could be conceived as a continuum ranging from preserving some degree of discretion for market participants (in the case of contractual remedies, such as commitments) to purely non-voluntary schemes, unilaterally imposed by the public authorities. One could also distinguish remedies that relate to the conduct of the market participants and attempt to affect their incentives to adopt a specific form of conduct (by creating disincentives such as fines, or, more brutally, by imposing injunctions, interdictions, conduct remedies) from more intrusive remedies that affect the infringing company's or management's status (criminal sanctions, structural remedies).

The next section will briefly discuss the roots of the Microsoft issues in Europe and the consequent choice of a remedial approach by the Commission and the CFI. The third section will critically assess the effectiveness of these remedies. Time has been relatively short since these remedies were adopted to be able to proffer a well-substantiated judgement on the success of the remedial strategy adopted in Europe. Two sources of wisdom will, however, be employed in order to make a relatively informed assessment of the remedial part of the EC Microsoft case so far. First, we will refer to the example of the US Microsoft cases and the effectiveness of the remedial strategy employed, not only in order to add a comparative law perspective to this study but because the EC remedial strategy has been influenced by the US remedial experience in the US Microsoft case. Secondly, we will incorporate in our analysis the recent business history of this specific sector and the emergence of new market characteristics, new products and competitors, as is usually the case in the rapidly evolving high-tech markets. The fourth section will discuss the non-consideration of the structural remedy in the EC case and will reflect on the prospects of developing such a remedy in the future. The fourth part will conclude by discussing alternative remedies (competition and non-competition law ones) that have been suggested in the literature and that could provide the adequate incentives to market participants. The final section will conclude.[16]

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[16] The important issue of the proportionality of the remedies imposed to Microsoft will be the object of another study: Nicholas Economides and Ioannis Lianos, 'A Critical Appraisal of Remedies in the EU Microsoft Cases', forthcoming (2010) 2 *Columbia Business Law Review*.

2. DESIGNING OPTIMAL REMEDIES AND THE ROOTS OF THE MICROSOFT PROBLEM IN EUROPE

The design of optimal remedies requires a clear identification of the competition law problem that the antitrust remedy is attempting to address. It may be that competition authorities and courts develop different remedial strategies for precisely similar or analogous fact patterns, because the competition law problems that were identified as the source of consumer harm in the liability phase of the decision are different. This study builds on the assumption that consumers should be at the centre of the attention of competition law enforcers, not only at the liability phase of the decision, but also at the remedy phase.

In the background of the finding of a competition law violation there is always a consumer harm story, in other words a narrative of consumer harm that is built on specific inferences from the facts of the case and that is established by different types of evidence: circumstantial, empirical or theoretical, quantitative or qualitative. In order to understand and assess the remedies adopted in the Microsoft case, we need to briefly unravel the dominant narrative of consumer harm that led to the adoption of these specific remedies. Additionally, often actions can be identified as anti-competitive and their likely effect can be determined, but the quantification of their effect is much more difficult. Thus, a full restoration of the market to the 'but for' world may be unfeasible. Often all that can be done is to eliminate the impediments to competition that resulted from anti-competitive actions.

In Europe, the dominant narratives of consumer harm in the first Microsoft EC case were two: first, an issue of lack of interoperability and compatibility that allegedly harmed consumers; secondly, a story of leveraging. Both stories are different from the dominant narrative of the US Microsoft case, although they also relate to the business strategy of Microsoft to integrate different applications in its Windows platform, the source of Microsoft troubles in the United States. However, there are different views on the anti-competitive effects of this strategy of integration. While in the United States, the main story of anti-competitive harm was that Microsoft was essentially attempting to preserve the dominance of the Windows' platform,[17] in Europe the Commission and the CFI perceived

[17] The leveraging attempted monopolization part of the browser market claim was not successful. See *United States* v *Microsoft Corp.*, 253 F.3d at 80–1, although an undertone of leveraging theory existed in some other claims. See e.g. the integration of Internet Explorer and Windows (253 F.3d at 65–6).

Microsoft's strategy as essentially being focused on the applications part of the business, where it attempted to extend its dominant position through the network effects of its platform.[18] The different narratives of consumer harm justified the choice of a different remedial strategy.

Institutional differences with the United States, such as the unavailability of civil remedies (fines) for infringements of sections 1 and 2 of the Sherman Act, while fines are frequently imposed in Europe, may also explain the different remedy mixture in each jurisdiction. Private enforcement and damages actions are also less frequent in Europe than in the United States. Frederic Jenny rightly observes the close relation between civil sanctions and damages, from a deterrence perspective, even if the beneficiaries of the compensation are different in each case:

> (i)t makes no difference whether payments are made to the state budget or to consumers. Thus the current discussion in the EU on private enforcement should take into account the fact that even if the purpose of private enforcement is to compensate victims rather than to punish violators, the possibility of adding compensatory damages to administrative (or criminal) sanctions increases the overall cost of being caught for violators and therefore increases the deterrent effect of the enforcement system. This means that when considering whether an enforcement system is over deterrent or under deterrent (and when considering whether more or less resources should be devoted to public enforcement), one should take into account the effect of the interaction between public and private enforcement. For example in jurisdictions (such as the US) where it is relatively easy for victims to bring civil suits against antitrust violators that have inflicted harm on them, there is, *ceteris paribus*, less need for public enforcement than in countries where it is more difficult to bring such actions (such as in the EC Member States). Cross-Atlantic comparisons of fining policies between the US Department of Justice and the EC Commission sometimes seem to suggest antitrust enforcement is as vigorous in the EC as in the US because the level of sanctions meted out by the Commission tends to be nearly as high (or sometimes higher) as penalties obtained by the US Department of Justice. But if such comparisons do not take into account civil enforcement as well as public enforcement, they can be highly misleading.[19]

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[18] The Commission also argued that Microsoft had a maintenance of monopoly/defensive leveraging objective for the interoperability part of the Decision: Decision, paras 768–70, but the extension of monopoly power was the primary concern in both the interoperability and the tying parts of the case. See also, CFI judgment, paras 1288, 1327, 1344 ('it must be borne in mind at the outset that the two abuses at issue form part of a leveraging infringement, consisting in Microsoft's use of its dominant position on the client PC operating systems market to extend that dominant position to two adjacent markets, namely the market for work group server operating systems and the market for streaming media players').

[19] Frederic Jenny, 'Optimal Antitrust Enforcement: From Theory to Policy

The alleged consumer harm narrative is intrinsically related to the imposition of a specific duty on the defendant to cure the wrong committed. It therefore affects the mixture of the different types of remedies adopted. In some cases, that will require the adoption of a specific duty to act (conduct remedies). In other cases, it will entail a substitutionary (pecuniary) remedy, often when it is difficult or impossible to cure all the negative effects of the practice on the protected category with conduct remedies. It is therefore important to understand the mixture of all types of remedies, specific and substitutionary, adopted by different jurisdictions in order to form an idea on their comparative effectiveness. We will first discuss the conduct remedies imposed on Microsoft in Europe before examining the substitutionary remedies (fines, damages).

Specific (Conduct) Remedies

The Commission adopted conduct remedies for both anti-competitive practices of Microsoft. These remedies should respect the usual requirements of proportionality[20] and the existence of a relation between the remedy and the infringement that has been established.[21] The first remedy addressed the interoperability/compatibility issue, the second the tying/leveraging issue.

Interoperability/compatibility

The Commission found that Microsoft had refused to provide Sun with information enabling it to design work group server operating systems which could seamlessly integrate in the 'Active Directory' domain architecture, a web of interrelated client PC-to-server and server-to-server protocols that organize Windows work group networks. Microsoft's refusal to provide interoperability to Sun was found to be part of a broader pattern of conduct of refusing the relevant information to any vendor of work group server operating systems. Microsoft developed this strategy after it had, for a certain period of time, provided analogous information for previous versions of Microsoft's products to Sun and to the industry at large. The Commission found that this disruption of previous

Options' in I. Lianos and I. Kokkoris, *The Reform of European Competition Law: New Challenges* (The Hague: Kluwer, 2009).

[20] Case 15/83 *Denkavit* [1984] ECR 2171, para. 25 and Case C-354/95 *R* v *Minister for Agriculture, Fisheries and Food, ex parte National Farmers' Union and others* [1997] ECR I-4559, paras 49 and 50.

[21] Joined Cases 6/73 and 7/73 *Commercial Solvents and others* v *Commission* [1974] ECR 223, para. 45

levels of supply eliminated competition in the relevant market for work group server operating systems, as this information was indispensable for competitors operating in that market.[22]

The objective pursued by Microsoft was to leverage the quasi-monopoly power it had in the operating systems market to the work group server systems market. Due to network effects, Windows is an indispensable platform for most applications. In reaching this conclusion, the Commission relied on evidence that there was a link between the enhanced interoperability from which Microsoft's work group server operating systems benefited, in comparison to competing work group server operating systems, and the rapid rise to dominance of Microsoft's applications in the work group server operating systems market. The Commission proceeded even further and attempted to show consumer harm, as in the absence of Microsoft's refusal to provide interoperability, the competitors would have been able to provide new and enhanced products to consumers. The Decision of the Commission did not include any evidence of the existence of projects for new products or investments that were not carried on because of Microsoft's conduct. Rather, it emphasized the indirect nature of consumer harm provoked by Microsoft, which put interoperability at the centre stage of the competitive struggle. Consumers seemed, however, to attach greater importance to other product characteristics, such as reliability and security. The Commission rejected the objective justifications advanced by Microsoft. The Commission did not make a full market inquiry on whether the free provision of software and the expansion of functionality of Windows create benefits to consumers. Such potential benefits should have been balanced with the losses to consumers from the alleged anti-competitive actions.

The European Court of Justice's case law recognizes that in exceptional circumstances a refusal to license may constitute an abuse under Article 82 EC.[23] This was found to be the case, after the Commission proceeded to a

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[22] The exact market definition for interoperable systems was contested between Microsoft and the Commission. Here we take the liability verdict as given.

[23] For an analysis, see Ioannis Lianos, 'Competition Law and Intellectual Property Rights: Is the Property Rights' Approach Right?' in John Bell and Claire Kilpatrick (eds), *Cambridge Yearbook of European Legal Studies* (Oxford: Hart Publishing, 2006), pp. 153–86. The CFI gave a broad interpretation of the 'new product rule' in comparison to the previous case law: '(t)he circumstance relating to the appearance of a new product as envisaged in *Magill* and *IMS Health* . . . cannot be the only parameter which determines whether a refusal to license an intellectual property right is capable of causing prejudice to consumers within the meaning of Article 82(b). As the provision states, such prejudice may arise where

qualitative balancing of the incentives of Microsoft and its competitors to innovate in the marketplace. Imposing a duty to provide interoperability would not reduce Microsoft's incentives to innovate, because, from the Commission's point of view, this is the way competition takes place in this industry. It will also preserve the incentives to innovate of Microsoft's competitors. This finding was based on three implicit assumptions: first, competition constitutes the most adequate market structure to promote innovation in the software market;[24] secondly, Microsoft's competitors would have the incentive to provide new products and functionalities to consumers in order to be able to compete and would not clone Microsoft's products; and thirdly, that the Commission-imposed disclosures on interoperability among Microsoft servers would not diminish Microsoft's incentives to innovate in systems of servers. Further direct evidence of exclusionary intent, such as company internal documents, carried the conviction of the Commission that Microsoft's objective was to restrict competition in the work group server operating systems market.

In adopting the conclusion on Microsoft's liability, the Commission was indirectly influenced by the existence of a previous remedial strategy addressing problems of interoperability in the software sector.[25] In fact, although the decision of the Commission targeted the refusal of interoperability by Microsoft to Sun, it is clear from the general description of the competition law problem with which the Commission was confronted in this case that it envisioned the issue of interoperability more broadly and therefore not strictly confined to the facts of the specific case. For example, the Commission referred to the strong network effects that existed in this market, thus reducing considerably the contestability of Microsoft's

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there is a limitation not only of production or markets, but also of technical development': CFI judgment, para. 647. The focus on the limitation of technical development to the detriment of consumers widens the scope of application of Article 82 EC in comparison to the position of the European Court of Justice in Joined Case C-241 and 242/91 P, *RTE and ITP* v *Commission* [1995] ECR I-743, para. 50 ('*Magill*') and Case C-418/01 *IMS Health* v *NDC Health* [2004] ECR I-5039, paras 34–5, which found that except in exceptional circumstances, a refusal to license intellectual property rights cannot by itself constitute an abuse of a dominant position. Such cumulative exceptional circumstances exist when the refusal to license is unjustified, prevents the emergence of a new product for which there is a potential consumer demand and excludes 'any' or 'all' competition on a secondary market.

24 In reaching this conclusion, the Commission did not fully consider innovation by new companies that might be bought by the dominant company or with whom it might create strategic alliances, and then their products would be sold or marketed by the dominant company.

25 Commission Decision IV/29.479, *IBM*.

dominance in the platform and applications parts of its business. The Commission also emphasized, when it examined the issue of Microsoft's dominant position, the 'strong commercial and technical associative links' between the PC operating systems market and the work group server operating systems market, with the result that 'Microsoft's dominance over the PC operating systems market has a significant impact on the adjacent market for operating systems for work group servers'.[26] This observation communicates the idea that the competition law problem with which the Commission was confronted was of a structural nature (relating to the nature of the market and not necessarily linked to the specific characteristics of the excluded rivals) and therefore required the development of a set of remedies that would address the problem of interoperability at its core.

The Commission referred to previous industry practice, in particular the licence agreement with AT&T relating to the disclosure of portions of the Windows source code,[27] to previous decisional practice, such as the *IBM* precedent, and to the existing regulatory framework, in order to emphasize the need to establish interoperability in the software market. Furthermore, the EC Software Directive adopted in 1991[28] restricted the exercise of copyright over software (including exercise by non-dominant undertakings) for interoperability reasons and explicitly provided that its provisions were without prejudice to the application of Article 82 EC, in particular if a dominant undertaking refused to make available information which is necessary for interoperability.[29]

The main objective of the remedy was thus to restore interoperability, at least to the same degree that existed on the market before the alleged disruption by Microsoft of the previous supply of information. This raised two difficulties.

First, the Commission had to define the requisite degree of interoperability. This is an issue linked to both the liability and the remedy parts of the decision. Microsoft argued that it already provided some form of interoperability, which was allegedly found insufficient by the Commission, as this degree of interoperability was still providing an advantage to Microsoft's work group server operating systems. The issue could be framed as a platform neutrality problem: where a platform owner also provides complementary goods or services (applications), which rely on the platform and which compete with other applications. Had Microsoft

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[26] Decision, para. 526.
[27] Decision, para. 212.
[28] Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs [1991] OJ L122/42 ('Software Directive').
[29] Decision, para. 763.

not provided full (or native) interoperability to its own work group server operating systems, after providing the same degree of interoperability in the past with competing applications, most likely the Commission would not have found a violation of Article 82 EC. In other words, the Commission understood interoperability in relative (not absolute) terms, requiring in systems composed of components of different companies the same level of interoperability achieved between the dominant platform's components. This created a paradox as the Active Directory did not exist in the past (before Windows 2000) and Microsoft had not provided interoperability information in the past. Rather, what Microsoft provided was a licence to the source code of Windows itself, for others (mainly AT&T) to use to build bridges between UNIX and Windows. But providing Windows source code was not what the Commission wanted Microsoft to do. Secondly, the Commission had to decide the institutional arrangement that would have achieved most effectively the required degree of interoperability. This issue relates to the implementation mechanism for the remedy, which raised important difficulties.

Defining the Requisite Degree of Interoperability

One could attempt a comparison between the EC interoperability remedy and the interoperability remedy imposed in the US Microsoft case: contrary to the EC case, interoperability was a minor point of the liability claims of the US Department of Justice and the 19 states against Microsoft. Of course, incompatibility between different operating systems (OS) created a inequality in market shares, with Microsoft ending with a lion's share of the OS market for PCs.[30] Thus, it could be argued that the lack of technical compatibility in operating systems (the fact that Windows applications do not run on Linux or Apple in native mode and vice versa) resulted in dominance by Microsoft in the market for OS for PCs, and in turn this was the foundation of Microsoft's distributional advantage for any type of application or middleware that could be added to the Windows platform.

[30] In industries with strong network effects, lack of compatibility leads to a natural equilibrium of severe market share and profit inequality even in the absence of anti-competitive acts. See, Nicholas Economides, 'Public Policy in Network Industries' in Paolo Buccirossi (ed.), *Handbook of Antitrust Economics* (Cambridge: MIT Press, 2008), available at www.stern.nyu.edu/networks/Economides_Public_Policy_In_Network_Industries.pdf. When anti-competitive acts are proven, the appropriate remedy should not be to restore perfect competition with egalitarian market shares and profits but rather the natural oligopoly equilibrium that has severe market share and profits inequality.

The US case The issues in the US case were mainly the contractual and technological integration of Internet Explorer and Windows, along with a number of measures adopted with relation to Internet Explorer (IE), and a number of acts adopted with the aim to undermine Sun's cross-platform Java. In order to build a stronger integration between IE and Windows, Microsoft had adopted a number of practices, such as (i) imposing licence restrictions barring original equipment manufacturers (OEMs) from a number of activities, such as removing IE icons, causing a new interface to load in place of Windows, altering the appearance of the Windows desktop; (ii) designing Windows to exclude IE from the Add/Remove Programs utility or to commingle IE only and shell code in the same files and otherwise technologically tying IE with Windows; (iii) entering agreements with Internet access and content providers to promote and favour IE and IE technologies; (iv) contractually tying IE with Windows.

The theory behind the case, accepted by Judge Thomas Penfield Jackson of the District Court in his liability decision,[31] was mainly that Microsoft's aim was to protect its monopoly in the operating systems market (platform) from the threat of middleware such as Sun's Java technologies and Netscape, which could have evolved into a rival platform for applications. Microsoft engaged in a strategy of annihilation of that threat,[32] through a series of measures, such as withholding technical information, contractual and design measures, etc. The District of Columbia Circuit unanimously affirmed some of Judge Jackson's liability findings with regard to IE, including most notably monopolization of the OS market for PCs.[33] Judge Jackson also found liability of tying IE with Windows as a per se tying claim, but this was reversed by the District of Columbia Circuit on appeal. The US Department of Justice declined to pursue the tying claim under the rule of reason approach suggested by the District of Columbia Circuit.

Crucially, however, the District of Columbia Circuit did not address the claim that Microsoft withheld valuable technical information from Netscape in the liability part of the decision. William Page and Seldon Childers note that 'nothing in the opinion supports the propositions that a monopolist has a general obligation to make its products compatible with those of its rivals or to help its rivals develop products that can inter-

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31 *United States* v *Microsoft Corp.*, 87 F.Supp.2d 30 (D.D.C. 2000).

32 87 F.Supp.2d at 46. The District of Columbia Circuit found that the plaintiffs did not establish a high probability of success of the attempted monopolization claim, in particular, but demonstrated that substantial barriers to entry protected that market: *United States* v *Microsoft Corp.,* 253 F.3d 34, 81 (D.C. Cir. 2001).

33 253 F.3d 34.

operate with its own'.[34] Interoperability became, however, an important concern in the remedial part of the US Microsoft case. Judge Jackson's 2000 remedial order called for a variety of conduct orders, in addition to the structural vertical separation of Microsoft, including a requirement that Microsoft disclose applications programming interfaces (APIs), communications interfaces and technical information necessary for developers to ensure that their software was compatible with Windows and therefore to 'interoperate effectively with Microsoft platform software'.[35]

The District of Columbia Circuit vacated the remedial order for a number of reasons, including the fact that Judge Jackson failed to offer an explanation of how the remedy would restore competitive conditions and that, following the reversal of most of the liability holdings, it was necessary to remand the case to the trial court in order to establish appropriate remedies. Interestingly, the District of Columbia Circuit linked the design of an appropriate remedy with the issue of causation, by mentioning that the courts must base their remedies on 'some clear indication of a significant causal connection between the conduct enjoined or mandated and the violation found directed toward the remedial goal intended'.[36] The remedy should also be carefully 'tailored to fit the wrong creating the occasion for the remedy'.[37] It is interesting to note that on remand, after a further trial, the district court rejected the divestiture remedy for IE and Microsoft Office, suggested by the plaintiffs, because '(n)either the evidentiary record from the liability phase, nor the record in this portion of the proceeding, establishes that the present success of IE is attributable entirely, or even in predominant part, to Microsoft's illegal conduct'.[38] Following the referral to the district court, the United States and nine states (the New York group) entered a settlement with Microsoft and agreed to a proposed final

[34] William H. Page and Seldon J. Childers, 'Software Development as an Antitrust Remedy: Lessons from the Enforcement of the Microsoft Communications Protocol Licensing Requirement' (2007) 14 *Michigan Telecommunications and Technology Law Review* 77, 86 available at www.mttlr.org/volfourteen/page&childers.pdf.

[35] *United States* v *Microsoft Corp.*, 97 F.Supp.2d 59, 67 (D.D.C. 2000).

[36] 97 F.Supp.2d at 105. The court also indicated when remanding the case to the district court that '(i)n devising an appropriate remedy, the District Court also should consider whether plaintiffs have established a sufficient causal connection between Microsoft's anticompetitive conduct and its dominant position in the OS market', the court noting that 'we have found a causal connection between Microsoft's exclusionary conduct and its continuing position in the operating systems market only through inference'.

[37] 97 F.Supp.2d at 107.

[38] *New York* v *Microsoft Corp.*, 224 F.Supp.2d 76, 185 n. 81 (D.D.C. 2002).

judgment. Judge Kollar-Kotelly reviewed the settlement under the Tunney Act in order to determine if it was in the public interest[39] and confirmed the consent decree with only minor modifications.[40] A group of states (the California group) pursued a more extensive relief[41] but they were finally granted a similar relief to the New York group.[42] The District of Columbia Court of Appeals affirmed both final judgments.[43] Judge Kollar-Kotelly, the district court judge, supervised the enforcement of the remedy.

The District of Columbia District Court's decision included some 'forward-looking' remedies that attempted to guarantee a degree of interoperability between Microsoft's operating system and middleware applications, as well as between Microsoft's PC operating system products and third party server operating systems. It was thought that such interoperation 'will play an integral role in the successful emergence of new software products and platforms and that fostering such interoperation is an appropriate remedial objective in this case'.[44] This remedy was allegedly demanded by the states and included in the consent decree without any particular thought as to the extent of the obligation imposed on Microsoft and the difficulties of its enforcement.[45] Middleware was defined more broadly than the browser and the Java applications that were the main subjects of the decision, and also included WMP, Windows Messenger, Outlook Express 'and their successors in a Windows Operating System Product',[46] although it was contended that these 'forward looking provisions' aimed to 'foster competition in the monopolized market in a manner

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[39] *United States* v *Microsoft Corp*., 215 F.Supp.2d 1 (D.D.C. 2002).

[40] *U.S.* v *Microsoft*, 231 F. Supp 2d. 144 (D.D.C. 2002)

[41] *New York* v *Microsoft Corp*., 209 F.Supp.2d 132 (D.D.C. 2002).

[42] *New York.* v *Microsoft Corp.*, 224 F.Supp.2d 76 (D.D.C. 2002), final judgment.

[43] *Massachusetts* v *Microsoft Corp*., 373 F.3d 1199 (D.C. Cir. 2004).

[44] *New York* v *Microsoft Corp*., 224 F.Supp.2d at 171.

[45] As is explained by Page and Childers, n. 34, above, at 97,, the idea of requiring Microsoft to disclose protocols for interoperation of server-based applications and Windows had arisen during the settlement negotiations mediated by Judge Posner and were not mentioned in the liability phase of the decision. The negotiations did not focus on the web-browser as it had become clear by that time that Microsoft had won the 'browser war'. The US Department of Justice and the states were instead worried that Microsoft could leverage its monopoly power onto the server operating systems market and thus 'maintain its dominance by retarding the ability of non-Microsoft servers—servers being the vital, digitized, data-filled libraries that served corporate networks and the Internet—to hook onto PCs powered by Windows'.

[46] *New York* v *Microsoft Corp*., 224 F.Supp.2d at 275.

consistent with the theory of liability in this case'.[47] The consent decree required Microsoft to disclose not only APIs that were used by Microsoft middleware to interoperate with a Windows operating system product in order to place rival middleware suppliers on an equal footing with Microsoft in developing applications for Windows, but also 'any communications protocol', which is 'implemented in a Windows Operating System Product installed on a client computer' that is 'used to interoperate, or communicate natively (i.e., without the addition of software code to the client operating system product) with a Microsoft server operating system product'.[48]

Communication protocols constitute the rules for the transmission of information between servers and clients or between servers and other servers. Communication protocols may 'perform a function akin to that performed by traditional middleware because they provide a platform for applications running "for" use on a PC', thus enhancing the ability of these non-Microsoft server operating systems to provide a platform which competes with Windows itself.[49] The district court limited its disclosure requirement for protocols that had a sufficient nexus to the theory of the liability of the case, maintenance of monopoly: only communication protocols implemented in a Windows operating system product installed on a client (PC) computer used to interoperate or communicate natively with the Microsoft server operating system product were covered.[50] This followed the rejection, by the district court, of the attempt of the plaintiffs to link interoperability as a general concept to the findings of liability and, consequently, the 'overbroad' disclosures that these were requesting. Such overbroad disclosure would have led to the cloning of Windows without violating Microsoft's intellectual property rights (IPRs). The court defined cloning as 'the creation of a piece of software which replicates the functions of another piece of software, even if the replication is accomplished by some means (e.g. reverse-engineering) other than the literal repetition of the same source code'.[51]

The district court rejected the states' definition of interoperable, as it equated this concept to interchangeable.[52] That would have denied Microsoft returns from its investment in innovation and divested Microsoft's IPRs of their value, as well as decreasing the incentives of

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[47] 224 F.Supp.2d at 193.
[48] 224 F.Supp.2d, final judgment, part III.E.
[49] 224 F.Supp.2d at 172–3.
[50] 224 F.Supp.2d at 173.
[51] 224 F.Supp.2d at 176.
[52] 224 F.Supp.2d at 227.

software developers to innovate since they would have created clones of Microsoft's product.[53] The district court assumed that a greater degree of interoperability would have increased the risk of cloning and therefore led to greater homogeneity in the market. Additional difficulties for an extensive disclosure related to the need for Microsoft to maintain product flexibility, but again the indirect connection of the interoperability remedy with the liability findings in this case limited the court's activism. The district court also rejected the plaintiff's demand to require Microsoft to provide this information without being permitted to charge a reasonable royalty in exchange for the licence of its intellectual property.

The State of Massachusetts challenged the remedy decision of the district court to the Court of Appeal arguing, among other claims, that the district court had imposed a restrictive disclosure obligation on Microsoft. With regard to communication protocols, it was argued that native interoperability was only one out of five possible approaches to achieving interoperability between Windows client (PC) operating systems and non-Microsoft server operating systems. The Court of Appeal found that complete interoperability would have been imprudent and that the objective of the court should be to 'advance the ability of non-Microsoft server operating systems to serve as platforms for applications', in conformity with the liability theory of the case.[54] The court ruled that 'full' or 'seamless' interoperability was not appropriate in this case. Pursuant to section III.E of the remedies judgment, Microsoft put in place a protocol licensing programme in September 2002.[55]

The EC case The broader scope of the consumer harm theory followed in the EC Microsoft case had an impact on the degree of interoperability required. Contrary to the US Microsoft case, the leveraging of Microsoft's quasi-monopoly power in the Windows operating system (platform) to the applications was the principal theory of harm in the EC Microsoft case. The two forms of conduct sanctioned by the European Commission, refusal to interoperate and tying, were intrinsically linked to this specific theory of consumer harm. Certainly, defensive leveraging was mentioned as an additional concern but the core of the case was leveraging.[56] It was thus possible for the Commission to impose stricter and more extensive

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53 224 F.Supp.2d.

54 *Massachusetts* v *Microsoft Corp*, 373 F.3d at 1224.

55 For additional information on the monitoring process of the protocol licensing programme, see the Joint Status Reports on Microsoft's Compliance with the Final Judgment, available at www.usdoj.gov/atr/cases/ms_index.htm.

56 See our analysis, n. 17 above.

requirements on Microsoft. Furthermore, contrary to the US case, the existence of consumer harm was not inferred by the possibility of middleware to operate as a competing platform to Windows in the future. There was some evidence in the Decision that supported the contention that consumers were harmed by the exclusion of competing work group servers, as it was 'diminishing consumers' choices by locking them into a homogenous Microsoft solution'.[57] This causal link between the theory of harm and the anti-competitive practice can be explained by the emphasis put in EC competition law on the special responsibility of dominant firms to preserve competition[58] and the importance the Commission gave to network effects as significant barriers to entry reducing the contestability of the operating systems and the work group server markets.[59]

Sun was therefore able to extend the interoperability requirement to server-to-server communication protocols that were non-native. According to the Commission, this was linked to the perception that compatibility should extend beyond the Windows domain architecture or computer system as, in order to benefit from the upgrade from Windows to Windows 2000 and profit from the advanced features of the Windows 2000 domain, the work group servers should be Windows 2000-compatible.[60] This was possible partly because Microsoft had integrated Active Directory support directly into the Windows server which guaranteed interoperability 'within a computer *system* encompassing several Windows client PCs and several Windows work group servers linked together in a network', therefore implying 'both client-to-server and server to-server interoperability' in a seamless way.[61] As the Commission noted in the Decision:

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[57] Decision, para. 782.

[58] Case C-322/81 *NV Nederlandsche Banden Industrie Michelin* v *Commission* [1983] ECR 3461 ('*Michelin I*'), para. 57; CFI judgment, para. 775; Case T-203/01 *Michelin* v *Commission* [2003] ECR II-4071 (*Michelin II*), para. 97. See also, Opinion of Advocate General Kokott in Case C-95/04 P *British Airways plc* v *Commission* [2007] ECR I-2331, para. 23: '(w)ithin the scope of the application of Article 82 EC, a dominant undertaking is subject to certain limitations that do not apply to other undertakings in the same form. Because of the presence of the dominant undertaking, competition on the market in question is weakened. Therefore – whatever the causes of its dominant position – that undertaking has a particular responsibility to ensure that its conduct does not undermine effective and undistorted competition in the common market. A practice which would be unobjectionable under normal circumstances can be an abuse if applied by an undertaking in a dominant position'.

[59] Decision, para. 448.

[60] Decision, para. 169.

[61] Decision, para.178.

> The common ability to be part of that architecture is *an element of compatibility* between Windows client PCs and Windows work group servers. This compatibility can be described in terms of interoperability with the Windows domain architecture.[62]

The Commission found that the degree of interoperability of a non-Microsoft work group server affects the 'efficiency with which that work group server delivers its services to the users of the network', as 'other work group server operating system vendors that want to compete for customers having an existing investment in Windows need access to information relating to interoperability with the Windows domain architecture'.[63] Sun was indeed requesting Microsoft to provide full (native) interoperability information for its server Solaris, including server-to-server native interoperability, the type and degree of interoperability that was explicitly rejected by Judge Kollar-Kottely in the US Microsoft case. Sun requested specifications that would enable the company to implement in its products this ability for native interoperability. In comparison, the fact that this information was proprietary was mentioned in the US case as a factor limiting disclosure.

The scope of the interoperability requirement was also broader than in the US case. The US Microsoft Communications Protocols Licensing programme was limited to client-server communication[64] but did not extend to the interoperability between server-to-server protocols that are functionally related to the client PC, as was requested in the Commission's Decision.[65] Other interoperability solutions were not considered to be equivalent. The interoperability requirement imposed by the Commission was not open-ended, however, but concerned precisely the core work group server tasks of file, print and group and user administration, which were essential for rivals to compete in the work group server operating systems market.[66] The refusal that was at stake in the Decision was that to provide a full specification of the protocols underlying the Windows domain architecture, which organizes the way in which Windows work group servers deliver work group server services to Windows client PCs.[67] The Commission insisted that while Sun's requests involved both client-

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62 Decision, para. 182.
63 Decision, paras 183–4.
64 Microsoft's Communications Protocol License Agreements, section 2.2.(e) License Scope,
Reservation of Rights. Available at www.microsoft.com/protocols/mcpp.mspx.
65 Decision, paras 287, 289, 688–91.
66 Decision, para. 566.
67 Decision, para. 567.

to-server and server-to-server interoperability, the latter interconnections and interactions were functionally related to the client PC, noting that 'the link back to the client PC operating system market implies that the competitive value of the information refused derives from Microsoft's market strength in the client PC operating system market', thus building the necessary causal link between the dominant position and the abuse.[68]

The Commission found that Microsoft's refusal to supply full specification of the protocols used by Windows work group servers to deliver work group server services to Windows group networks aimed to allow the use of that specification to build interoperable products and distinguished that from the implementation of these specifications, which were not to be disclosed.[69] The Commission noted that it was common industry practice to provide interface specifications without giving access to all implementation details (e.g. standard–setting organizations on best practices in software specification).[70]

Microsoft's work group server operating system products had also enjoyed a rapid rise to dominance in the market.[71] The Commission linked Microsoft's growth to the launch of Microsoft's Windows 2000 generation of products, for which Microsoft had disclosed less interoperability information than for previous generations.[72] Microsoft's competitors have been unsuccessful in challenging Microsoft's position: Novell's market shares decreased considerably and Linux and UNIX products had only a marginal presence in the market[73] and did not represent a significant threat to Microsoft. The lack of interoperability locked-in customers in a 'homogeneous Windows solution for work group networks'.[74] According to the Commission, which based its findings on consumer surveys, interoperability was 'the key factor driving the uptake of Microsoft's work group server operating systems'.[75] The Commission

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68 Decision, para. 567.

69 Decision, para. 570. 'The specification is descriptive in nature and describes what an implementation must achieve, not how it achieves it. The implementation is, on the contrary, algorithmic as it has to provide a process or set of rules to be followed in calculations or problem-solving operations that will run on a computer': Decision, para. 65. In other words, contrary to implementations, specifications do not have to be executable (run on a computer).

70 Decision, para. 571.

71 Decision, para. 590.

72 Decision, para. 592.

73 Decision, para. 597.

74 Decision, para 613.

75 Decision, paras 637, 665. It is not entirely clear, however, if the specific consumer surveys were as conclusive as the Commission concludes in the Decision.

emphasized server to server interoperability as it viewed client-to-server and server-to-server interoperability as 'tightly linked to one another',[76] a consequence of the new integrated architecture of Windows to function as a system.[77] As long as server-to-server communication was necessary in order to perform a server-to-client communication, Microsoft had to provide specifications for these communication protocols in order to enable Novell's products to compete.

The linkage with the quasi-monopolistic position of Microsoft on the client PC operating systems market is more indirect and in essence weaker than in the case of server-to-client communications. The Commission found nevertheless that server-to-server interoperability was an 'indispensable input' for Microsoft's competitors to be able to compete and did not distinguish between the different degrees of indispensability of a server-to-client or server-to-server interoperability and the various degrees of interoperability that could have influenced the remedy imposed. Additionally, the Commission did not clearly show that the high degree of interoperability among servers that it demanded was sufficiently influenced by Microsoft's dominant position as regards Windows clients.

Microsoft's conduct was found to produce consumer harm: first, consumer harm came in the form of reduced consumer choice as non-disclosure would have eliminated or marginalized products that could provide interoperability in 'heterogeneous computing environments';[78] secondly, Microsoft has been able to impair 'the effective competitive structure in the market' by gaining a dominant position in the market for work group server operating systems.[79] The Commission did not believe that enhanced interoperability would lead to cloning.[80] The definition of cloning by the Commission was not, however, similar to the definition of cloning in

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Footnote 75 (*cont.*)
The surveys did not fully assess the value that consumers would place on interoperability compared to other features of Microsoft and non-Microsoft servers. Additionally, it is unclear whether the surveys were filled only by server buyers in the relevant antitrust market as defined by the Commission.

[76] Decision, para. 689.

[77] The Commission noted that 'the proper functioning of a Windows work group network relies on an architecture of client-to-server and server-to-server interconnections and interactions, which ensures a transparent access to the core work group server services', known as 'Active Directory domain architecture'.

[78] Decision, para. 703. Locking-in consumers into a homogenous Microsoft solution and therefore diminishing consumer choice indicated, according to the Commission, the existence of important consumer harm. Decision, para. 782.

[79] Decision, para. 704.

[80] Decision, paras 713–29.

the US case given by Judge Kollar-Kotelly, for whom cloning was precisely what the European Commission called functional equivalence.[81] The Commission rejected the definition of cloning as functional equivalence and implied that cloning would exist only if Sun was authorized to copy Microsoft's source code.[82] The existence of functional equivalence would not lead to a similar product, as the Commission assumed that 'Microsoft's competitors will have to provide additional value to the customer, beyond mere interoperability of their products with the Windows domain architecture, if such products are to be commercially viable'.[83] The Commission found that there was no qualitative difference, from the point of view of innovation, between the protocols on client-to-server communication that it had agreed to provide under the US consent decree with the Communications Protocols Licensing programme, and the protocols required for server-to-server interoperability, as these 'involve the same type of protocols—sometimes the very same protocols' and that therefore any disclosure would not affect Microsoft's incentives to innovate.[84]

Microsoft was ordered 'to disclose complete and accurate specifications for the protocols used by Windows work group servers in order to provide file, print and group and user administration services to Windows work group networks'[85] as well as to authorize the implementation of these specifications in work group server operating system products.[86] As it was previously noted, this disclosure covered 'both direct interconnection and interaction between a Windows work group server and a Windows client PC, as well as interconnection and interaction between a Windows work group server and a Windows client PC that is indirect and passes through another Windows work group server'.[87] It also applied prospectively

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81 *New York* v *Microsoft Corp*., 224 F.Supp.2d at 175–6, cited by William H. Page, *Mandatory Contracting Remedies in the American and European Microsoft Cases*, University of Florida Levin College of Law Research Paper No. 2009-22 (5 May 2009), pp. 29–30, available at SSRN at http://ssrn.com/abstract=1073103. According to Judge Kollar-Kotelly, 'the clone emerges from a process of reverse engineering, which consists of the study of functionality in the original product and the attempt to produce a product which accomplishes the same end. The process of cloning the functionality of a competitor's product is usually an expensive and time-consuming undertaking which, if successful, will enable the cloned product to function as a replacement for the original product'.

82 Decision, paras 718–19.

83 Decision, para. 722.

84 Decision, para. 728.

85 Decision, para. 999.

86 Decision, para. 1003.

87 Decision, para. 1003.

to future generations of Microsoft's products, implying that Microsoft should update the disclosed information, each time it brought to market new versions of its products.[88] The aim set for the remedy was 'to ensure that Microsoft's competitors can develop products that interoperate with the Windows domain architecture *natively supported* in the dominant Windows client PC operating system and hence viably compete with Microsoft's work group server operating system'.[89] The disclosure did not cover the source code but the Commission also added that 'to the extent that this Decision might require Microsoft to refrain from fully enforcing any of its intellectual property rights, this would be justified by the need to put an end to the abuse'.[90]

Article 5 of the Decision required that any disclosure should be made on 'reasonable and non discriminatory terms'. This implied: first, that 'the disclosures should be made to *any* undertaking having an interest in offering work group server operating system products' and in a timely manner;[91] secondly, that any remuneration that Microsoft might charge for supply should not reflect the strategic value stemming from Microsoft's market power in the client PC operating system market or in the work group server operating system market, allowing its recipients to 'viably compete with Microsoft's work group server operating system';[92] and thirdly, that the terms 'under which they can make use of the disclosed specifications will remain reasonably stable'.[93] We will examine in a subsequent section how these conditions, in particular the second one, led to substantive litigation. However, it was the design of an implementation mechanism for the remedies that raised the most important difficulties.

Difficulties of the Implementation Mechanism

The period after the European Commission's decision: slow progress Article 7 of the Commission's liability Decision required from Microsoft to submit a proposal to the Commission 'for the establishment of a suitable mechanism assisting the Commission in monitoring Microsoft Corporation's compliance'. The Commission retained the right to impose such a mechanism by Decision, if Microsoft's proposal was not found 'suitable'. The Commission followed the example of the US Microsoft

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88 Decision, para. 1002.
89 Decision, para. 1003.
90 Decision, para. 1004.
91 Decision, para. 1006.
92 Decision, para. 1008(ii).
93 Decision, para. 1008(iv).

antitrust case, where a technical committee was appointed with the aim to ensure compliance, thus rejecting the option of a simple reporting mechanism. The complexity of the Decision, and in particular the need to constantly verify the accuracy and completeness of the information provided by Microsoft, as well as the need to provide adequate information on specifications, would have indeed required, in some circumstances, the inspection of Microsoft's source code in order to resolve any issue of accuracy and completeness of the specifications disclosed, thus requiring a more institutionalized structure, such as a Monitoring Trustee. The Monitoring Trustee was urged to adopt a proactive, rather than reactive, role in enforcing the interoperability, as well as the tying, part of the Decision.

Microsoft was required to propose a mandate for the Monitoring Trustee. This mandate was subject to a number of principles, among others, the designation of the Monitoring Trustee by the Commission, the independence of the Trustee from Microsoft, the guarantee that 'the Monitoring Trustee would have access to Microsoft's assistance, information, documents, premises and employees to the extent that he may reasonably require such access in carrying out his mandate' and 'full access to the source code of the relevant Microsoft products'.[94] The Monitoring Trustee had the possibility to hire experts to carry out certain precisely defined tasks on his behalf and it was specified that all costs of establishment of the Monitoring Trustee, including a fair remuneration, should be borne by Microsoft.[95]

Microsoft submitted the first proposal for the establishment of a monitoring mechanism in April 2004 and followed up with the submission of two draft agreements that it intended to offer as part of a Work Group Server Protocol programme (the 2004 WSPP agreement).[96] The experience of the US Communications Protocol programme (MCPP)[97] and

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94 Decision, para. 1048.

95 Decision, para. 1048(v).

96 These included the licence agreement that Microsoft 'planned to use in order to make available the intellectual property in its protocols' ('the 2004 WSPP Development and Distribution Agreement'), and 'a draft form of evaluation agreement that Microsoft planned to use in order to enable prospective licensees to evaluate the protocols we would be making available before entering into a license for such protocols' ('the 2004 WSPP Evaluation Agreement'). For a corporate description of Microsoft's Intellectual Property Licensing programme, see Eve Psalti and Keith Hageman, 'Microsoft's Intellectual Property Licensing Program Boosts Customer Choice', available at http://download.microsoft.com/download/3/a/6/3a601f1b-ab32-486b-83de-dff660162125/MPP_IP_White_Paper.pdf.

97 See www.microsoft.com/protocols/mcpp.mspx.

the monitoring of the remedy by the US Technical Committee were, in a way, instructive of the difficulties the implementation of the Commission Decision would also face.[98]

Most difficulties related, as in the US case, to the scope and the quality of the documentation provided by Microsoft in order to fully comply with the Decision. William Page and Seldon Childers detail the compliance efforts undertaken by Microsoft and the Technical Committee in the US Microsoft case as an ongoing project readjusted according to the market results it was achieving: these were not those anticipated, as after the first year of the programme and the initial release of the documentation, only four companies had agreed to a MCPP licence.[99] Under the instigation of the monitoring Judge Kollar-Kotelly, Microsoft was required to make significant changes to the MCPP licences, to reduce the royalties required and to perform a number of promotional activities in order to attract new licensees.[100] The Technical Committee had also extended the degree of disclosure of the protocols by requiring Microsoft to show licensees how to use the protocols and created 'an ancillary software development that would field test the protocols in order to check if the information provided by Microsoft would enable the Technical Committee's engineers to write implementations; this amounted to test Microsoft's compliance by using the information provided'.[101] Microsoft went as far as to create an 'interoperability lab', in order to test MCPP protocol implementations for MCPP licensees and to offer 'direct access to Microsoft product development teams and in-person support from experienced engineering staff during testing'.[102] As it is reported by Page and Childers, 'these efforts led to substantial increases in staffing for both Microsoft and the Technical Committee', as more than 210 Microsoft employees and 40 Committee staff were involved in the operation.[103]

The 'one at a time' method of fixing problems in the communication of the protocols was replaced in 2006 by a more comprehensive approach and a 'new overarching specification' for the technical documentation, put under the supervision of Robert Muglia, an experienced Microsoft executive. This new programme was based on 'the specification agreed

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[98] For an excellent account, see William H. Page and Seldon J. Childers, n 34 above, 108.

[99] Page and Childers, n. 34 above, 114. To date, only SAMBA has worked in any significant way with the information provided through the MCPP licence.

[100] Page and Childers, n. 34 above.

[101] Page and Childers, n. 34 above, 117.

[102] See www.microsoft.com/protocols/mcpp.mspx.

[103] Page and Childers, n. 34 above, 120.

upon between Microsoft and the European Monitoring Trustee'.[104] According to Page and Childers, this new specification was the result of a formal collaboration between the Technical Committee and the European Commission's Monitoring Trustee and involved the rewriting of the technical documentation, 'eventually replacing the bulk of the work performed to date, while incorporating everything Microsoft has learned while trying to meet the prior standards, as well as complementary requirements from the EU documentation standards'.[105] The importance of this project required the extension of the programme until November 2009, with a further possibility of extension until November 2012.[106]

The European Commission's Decision had the advantage of intervening at a later stage when the US experience could have been very instructive for the design of the interoperability remedy. It also requested, however, disclosure of information that was never before the subject of a disclosure programme. The result of the Commission's Decision was therefore not only to oblige Microsoft to adopt the Work Group Server Protocol programme, but also to extend the scope of the US MCPP to the extent that this would have made possible compliance with both US and EC requirements. It is clear that in a global market where products are marketed at the global level, it is very difficult and costly to maintain two different compliance or communications protocols programmes: the programme that imposes the strictest disclosure obligations ends up setting the standard of disclosure.

Microsoft lodged an application for suspension of the Decision with the CFI[107] and also applied for an annulment of the Commission's Decision.[108] However, it decided on its own initiative not to enforce articles 5(a), 5(b), 5(c), 5(e), 6(a) and 6(b) of the Decision, pending the outcome of the interim measures proceedings before the CFI. The President of the CFI rejected

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[104] Joint Status Report on Microsoft's Compliance with the Final Judgments, United States v. Microsoft Corp., No. 98-1232 (CKK) (D.D.C. 30 August 2006) (hereinafter 'JSR August 2006'), at 3, available at www.usdoj.gov/atr/cases/f218000/218096.pdf.

[105] Page and Childers, n. 34 above, 122.

[106] Joint Status Report on Microsoft's Compliance with the Final Judgments US v. Microsoft, 22 April 2009, available at www.usdoj.gov/atr/cases/f244900/244920.htm.

[107] Application for Suspension of the Commission Decision of 24 March 2004 (COMP/C-3/37.792 Microsoft), Case T-201/04 R *Microsoft* v *Commission* [2004] ECR II-4463.

[108] See CFI judgment.

Microsoft's application for a suspension order in December 2004.[109] Following an exchange of views between Microsoft and the European Commission on different draft decisions, the Commission adopted a Decision in July 2005, setting a detailed framework for the Monitoring Trustee's functions, determining the procedure of appointment of the trustee and describing the rights and obligations of each party.[110] The Commission appointed as Monitoring Trustee, Professor Neil Barrett, a computer scientist, from a shortlist of four experts submitted by Microsoft in October 2005.[111] In the meantime, the European Commission had received from Microsoft a proposal on the technical documentation to be disclosed, as well as suggestions as to the non-discriminatory and reasonable conditions under which the information would be disclosed.[112]

The compliance process for the interoperability part of the Decision faced two difficulties that led to a number of exchanges between the Commission and Microsoft and eventually a number of penalty decisions under Article 24 of Regulation 1/2003.[113] The first series of difficulties concerned the extent to which Microsoft provided the European Commission with complete and accurate technical documentation. There is an inherent ambiguity in this kind of exercise. Since the subject matter was intensely technical, it was hard for the lawyers on each side to communicate effectively with one another and to find a consensus on which aspects of Windows the Commission wanted Microsoft to document and share with competitors. The second series of difficulties related to the imposition of reasonable and non-discriminatory terms, and in particular the establishment of royalties for the WSPP licences.

OTR, the external technical experts of the Commission prior to the appointment of the Monitoring Trustee, found the proposals sent by Microsoft to be insufficiently complete, in particular as there was missing information and a lack of introductory and explanatory materials, making the technical information virtually unusable for developers without prior knowledge of the Microsoft environment. The Commission found that the WSPP remuneration scheme also presented several problems as it did not

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109 Case T-201/04R *Microsoft* v *Commission*.

110 See Decision.

111 IP/05/1215.

112 IP/05/673.

113 Article 24 of Regulation 1/2003 entitles the Commission to impose such penalty payments not exceeding 5 per cent of average daily turnover in the preceding business year per calendar day to compel companies to put an end to infringements of EC Treaty antitrust rules, where an infringement has been established by a previous Commission antitrust Decision.

comply with the three conditions for the remuneration to be declared reasonable and non-discriminatory: i.e. that the protocols were Microsoft's own creation, the protocols were innovative, and the remuneration should be in line with a market valuation for technologies deemed comparable to any innovations identified by Microsoft.

Microsoft was indeed offering two separate licensing agreements to companies: a 'No-Patent Agreement', which allowed licensees to use the protocols without taking a licence for some disputed (by third parties) patents that Microsoft considered as being necessary, and an 'All IP Agreement' which included a patent licence for these disputed patents. For both licensees, Microsoft divided the protocols into Gold, Silver, Bronze price categories, from the most to the least innovative information or not necessarily innovative category, for which Microsoft imposed no royalty. The Commission found that the WSPP agreements offered by Microsoft were lacking in all three conditions.[114]

In light of these failings, the Commission issued a Decision in November 2005 pursuant to Article 24(1) of Regulation 1/2003 which warned Microsoft that if it did not comply with its obligations to supply complete and accurate information and to make the information available on reasonable terms, it would face a daily fine of up to €2,000,000.[115]

Following this Article 24(1) Decision, Microsoft provided, some days after the expiry of the deadline, a new version of technical documents and announced in January 2005 that it was offering a source code licence to all potential licensees. The Commission found that this documentation was not 'substantially different' from the earlier documentation and did not seem impressed by the source code announcements as this did not necessarily respond to the need to provide some active support to third party developers if these were to understand the specifications described by Microsoft

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[114] In particular, the Commission noted that Microsoft's maximum royalty pricing levels would place the potential recipient of the interoperability information at a significant competitive disadvantage vis-á-vis Microsoft 'if the royalty that it has to pay is the same as the stand-alone price of Microsoft's work group server operating system product' (Decision, para. 118) and that even the minimum pricing levels would create 'a significant constraint on the ability of the work group server operating system vendor to compete if the cost of interoperating (which is necessary to be able to viably compete) is one fifth of the value of the dominant vendor's entire work group server operating system product' (Decision, para. 120). This issue is reminiscent of a margin squeeze claim.

[115] Commission Decision imposing a periodic penalty payment pursuant to Article 24(1), available at http://ec.europa.eu/competition/antitrust/cases/decisions/37792/art24_1_decision.pdf.

in the technical documentation provided.[116] Following consultation with the Advisory Committee of Member State Competition Authorities,[117] and supporting reports from the Monitoring Trustee and other external consultants, the Commission sent a new Statement of Objection for non-compliance with the obligation to provide complete and accurate technical documentation (the first step in an Article 24(1) Decision),[118] and later issued a decision for non-compliance pursuant to Article 24(2) of Regulation 1/2003 imposing on Microsoft a further €2.8 billion for continued non-compliance with the March 2004 Decision and (this time acting on the basis of Article 24(1)) raised the periodic penalties to €3,000,000 for non-compliance.[119] Microsoft introduced an action for annulment of this decision at the CFI in October 2006, requesting the annulment or reduction of the amount of the periodic penalty imposed.[120]

But this was not the end of Microsoft's troubles. The Commission had raised in the first Article 24(2) Decision the possibility of also fixing periodic penalty payments for non-compliance with the second aspect of the Decision: charging reasonable remuneration for access to or use of the interoperability information. Both the Monitoring Trustee and the Commission's external advisor submitted reports which concluded that the remuneration levels proposed by Microsoft as a starting point for negotiation with licensees were not reasonable.[121] Following this consultation, the Commission sent Microsoft a Statement of Objection on 1 March 2007 indicating that there was no significant innovation in the interoperability information and concluded that the prices suggested by Microsoft were unreasonable.[122] In response, Microsoft submitted revised

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[116] MEMO/06/76.

[117] 2008/C 138/04 [2008] OJ C138/3.

[118] IP/06/298.

[119] Commission Decision fixing the definitive amount of the periodic penalty payment of 12 July 2006, available at http://ec.europa.eu/competition/antitrust/cases/decisions/37792/art24_2_decision.pdf; Summary of Commission Decision, 12 July 2006, Case COMP/C-3/37.792 *Microsoft* [2008] OJ C138/1. According to Article 24(2) of Regulation 1/2003, '(w)here the undertakings or associations of undertakings have satisfied the obligation which the periodic penalty payment was intended to enforce, the Commission may fix the definitive amount of the periodic penalty payment at a figure lower than that which would arise under the original decision'.

[120] Case T-271/06 *Microsoft* v *Commission*, later removed from the register of the Court as Microsoft decided to discontinue the proceedings.

[121] For a more detailed description, see Final Report of the Hearing Officer in Case COMP/C-3/37.792 *Microsoft*, available at http://ec.europa.eu/competition/antitrust/cases/decisions/37792/ho_report_2008.pdf.

[122] IP/07/269. The Commission found that, regarding the 'No-Patents Agreement', there was no innovation in any protocol in the Gold and Silver

WSPP agreements that included a revised royalty table providing for a new remuneration scheme, to be assessed by the Commission.

The period after the CFI's judgment: acceleration At this stage of the proceedings, the CFI rendered its judgment, which annulled Article 7 of the Decision in so far as it ordered Microsoft to submit a proposal for the establishment of a mechanism involving a Monitoring Trustee independent from the Commission.[123] The Commission asked Microsoft to provide all documents and information Microsoft had provided to the Trustee or his team to the Commission from the date of the appointment of the Trustee.[124] The judgment of the Court on the liability issue strengthened the Commission's position in the negotiation process and finished by convincing Microsoft to agree to alter a certain number of the conditions in the WSPP licence regarding the provision of interoperability information ('the Neelie Kroes-Steve Ballmer agreement').[125] These included the alteration of the terms of the licence in order to render it compatible with the open source software model, the reduction of the royalty to a flat fee of €10,000 and the reduction of royalties for a worldwide licence including patents from 5.95 per cent to 0.4 per cent. The initial royalty claimed by Microsoft was of the range of 7 per cent. In comparison, the royalty rates of the standard MCPP agreement between Microsoft and the US government were 4 per cent of the net revenue of the licensee.[126] This figure was modified as a consequence of the European Decision and it is now 0.4 per cent.[127]

More concretely, Microsoft will now offer two agreements: a 'No-Patent Agreement' which would allow access to the interoperability information,

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categories and that only four minor Bronze protocols represented a limited degree of innovation. As regards the 'All IP Agreement' category, the Commission also found that these were unreasonable, but this time not because of the absence of innovation, as the Commission indicated that the existence of patents indicates the existence of innovation, although it is possible to challenge the patents or to implement software which, in their view, does not infringe the patented technology.

[123] See our analysis below.

[124] Final Report of the Hearing Officer, at 5, available at http://ec.europa.eu/competition/antitrust/cases/decisions/37792/ho_report_2008.pdf.

[125] William H. Page and Seldon J. Childers, 'Bargaining in the Shadow of the European Microsoft Decision: The Microsoft-SAMBA Protocol License' (2008) 102 *Northwestern University Law Review* 332.

[126] See Commission Decision C(2008)764 final fixing the definitive amount of the periodic penalty payment imposed on Microsoft, para. 246, available at http://ec.europa.eu/competition/antitrust/cases/decisions/37792/decision2008.pdf.

[127] See www.microsoft.com/interop/FAQ.aspx.

but without taking a licence for patents which Microsoft claims necessary, with the flat royalty fee, and a 'Patent Agreement' for patents which Microsoft considers relevant, where the royalty fee would be limited to 0.4 per cent of licensees' product revenues.[128] In addition to these two licences, Microsoft took an 'irrevocable pledge not to sue open source developers (whether they are individuals, nonprofit organizations or commercial entities, such as companies and their employees, working in an open source development project) for development and noncommercial distribution of implementations of these Open Protocols'.[129]

The Neelie Kroes-Steve Ballmer agreement was not greeted overwhelmingly by the members of the open source software community,[130] essentially for two reasons: first, 'the terms were still incompatible with the GPLv3 (General Public License),[131] the standard open source license employed by open source software',[132] and secondly, the €10,000 flat royalty fee could 'discourage use by small free and open source development teams, which typically have no operating budget'.[133]

It had nevertheless a direct impact on the marketplace, as the Commission supported in December 2007 the conclusion of a licensing agreement between Microsoft and Samba ('the PFIF agreement')[134] for the covered protocols. Samba is an open source/free software package that gives administrators flexibility and freedom in terms of set-up, configuration and choice of systems and equipment for work group servers and which provides interoperability to a number of platforms, such as UNIX, Linux, IBM System 390, Open VMS and other operating systems. The involvement of Samba in the EC Microsoft litigation has been well explained elsewhere,[135] but it is interesting here to note the following points: Samba decided to intervene in 2003, when its existence was portrayed by Microsoft as a proof that there was no need to provide interoperability information to competitors and that reverse-engineering techniques were already in

128 IP/07/1567.

129 Page and Childers, n. 125 above, 343.

130 See www.samba.org/samba/PFIF/PFIF_history.html at 6.

131 See www.gnu.org/copyleft/gpl.html.

132 An important characteristic of Samba is that it is free and that it offers, according to GPL, permissive licensing terms, the possibility to change Samba software, which is available to download for free from the Samba website, and a copyright licence that requires derived works to be available under the same copyright.

133 Page and Childers, n. 125 above, 344.

134 The Protocol Freedom Information Foundation Agreement. PFIF was a non-profit corporation created by the Software Freedom Law Center (SFLC) in order to license the documentation to free or open source developers.

135 See www.samba.org/samba/PFIF/PFIF_history.html.

use and sufficient.[136] Samba's role became more prominent when the companies that initiated the complaint, in particular Sun and Novell, settled the case with Microsoft. This prevented these companies from playing an active part at the appeal stage and therefore sharing their important technical experience with the Commission and the Monitoring Trustee. The SFLC (representing SAMBA) had stepped into the procedure as an intervener in order to provide the Commission with technical support if needed in the appeal, and a SFLC representative participated to the CFI's hearings. Samba's role in the litigation became particularly prominent as it is now 'the most important non-Microsoft technology in the server market . . . which emulates the behavior of Windows server products, but runs on Linux' and 'the de facto standard for most non-Microsoft network enabled products' used by work group server companies such as IBM, Apple, Sun and Novell for their engines.[137]

The licence agreement between Samba and Microsoft was made possible with the mediation of the European Monitoring Trustee, who was still in place at the time, as the Commission had not formally repealed article 7 of the 2004 Commission Decision.[138] The Monitoring Trustee put Samba's and Microsoft's engineers directly in contact to try and fix the most problematic parts of the agreement. In particular, Microsoft was willing to provide, as an annex to the agreement, an indication of all the patents it claimed in its licensed information and agreed not to sue Samba for infringement of an unlisted patent.[139] These 'patent maps', which have also become a prominent feature of Microsoft's interoperability policy,[140] provide developers with an opportunity to attempt to successfully design around Windows, without risk of patent infringement. Microsoft has only included patents on the patent map that it believes are necessarily infringed by any implementation of the protocol. The Samba licence constitutes by far the most important development of the EC Microsoft Decision's remedial phase.

In February 2008, the Commission adopted a second Article 24(2) Decision which imposed an additional €899,000,000 penalty for charging unreasonable prices for access to interface documentation for work group servers.[141] The Decision made clear that in order to be reasonable

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[136] Decision, paras 293–7. The Commission rejected this argument as Samba could not function as an Active Directory primary domain controller.

[137] Page and Childers, n. 125 above, 335, 336.

[138] See www.samba.org/samba/PFIF/PFIF_history.html, at 6.

[139] Page and Childers, n. 125 above, 347.

[140] See www.microsoft.com/protocols/default.mspx#patent%20maps.

[141] Decision C(2008)764, n. 126 above.

the remuneration charged by Microsoft should exclude the strategic value stemming from Microsoft's market power in the client PC and work group server operating systems markets.[142] The Commission decided that the WSPP pricing principles to which Microsoft had agreed could serve as a point of reference for the assessment of the reasonableness of the prices. In particular, the Commission assessed the innovative character of the interoperability information provided by Microsoft, which forms the second WSPP pricing principles criterion, by examining the prior art for each claimed specification, and arrived at the conclusion that a very large part of the unpatented information (merely trade secrets) lacked innovation.[143] The Commission referred to the usual criteria of patentability (novelty, non-obviousness) in order to define the innovative nature of the information as 'an operational proxy', mainly for the reason that these are 'settled concepts' in the area of intellectual property.[144]

An action for annulment against this Decision was brought at the CFI, arguing, among other pleas, that the Commission committed a manifest error of assessment 'by requiring Microsoft to establish that trade secrets were innovative under a heightened patentability test in order to justify the imposition of royalties for a license to such trade secrets'.[145] The Commission then examined the third condition for the remuneration to be declared reasonable and non-discriminatory. It noted that Microsoft had provided similar technical documentation of protocols royalty-free in the past, a conduct that it discontinued when it acquired a dominant position in the work group server operating systems market; that the royalties charged in the MCPP licence agreements should not be considered as concrete evidence of market valuation, in particular as they did not bring the requisite results; and finally that remuneration charged in the context of standard setting organizations (SSOs) should be considered as comparable, thus indicating that Microsoft charged unreasonable prices. The Commission noted that 'Article 5 of the Decision does not prevent Microsoft from submitting its WSPP protocols to an SSO, thereby possibly reaping alleged 'non-royalty benefits' in the form of cross licenses or services provided by the SSOs'.[146] This aspect will be examined in the last section of this chapter.

In a recent press release, the Commission reaffirmed Microsoft's 'ongoing

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142 Decision C(2008)764, para. 107.

143 Decision C(2008)764, paras 130–8. See also, http://ec.europa.eu/competition/antitrust/cases/decisions/37792/decision2008_annex.pdf.

144 Decision C(2008)764, para. 138.

145 Action brought on 13 May 2008, [2008] OJ C171/42.

146 Decision C(2008)764, n. 126 above, para. 271.

obligation to supply complete and accurate interoperability information' but took notice of the Court's judgment on article 7 of the 2004 Decision, removed the Trustee provision from the 2004 Decision and repealed the 2005 Trustee Decision, which provided for the modalities of the monitoring mechanism and the appointment of a Monitoring Trustee.[147] According to the Commission, the changes in Microsoft's behaviour, the possibility for third parties to exercise their rights directly before national courts, with the operation of private enforcement provisions in Microsoft's licence agreements, as well as the experience gained since the process of compliance started in 2004, convinced the Commission that the need for technical assistance should now be of an ad hoc character.

Tying

In comparison to the complex and long-running compliance procedures with the interoperability part of the Decision, the conduct remedy imposed with regard to the tying of Windows Media Player to Windows was relatively straightforward. The 2004 Commission Decision took the view that Microsoft had violated Article 82 EC, in particular because of the possible leveraging of its quasi-monopolistic position in the PC operating systems market to the media-player market. As it is explained in the Commission's Decision, the US judgments did not solve that particular anti-competitive problem. First, the US proceedings focused only on the maintenance of monopoly argument and the leveraging argument was abandoned at the appeal level. The plaintiffs abandoned the tying claim after the Court of Appeal ruled that technological tying should be examined under a rule of reason. Secondly, as a consequence of the narrow focus of the US liability decision, there was no specific remedy included for tying:[148] the US judgment did not provide means enabling OEMs and end-users to remove WMP code from the PC operating system (as it was technically unfeasible to remove the WMP code without running the risk that other parts of the operating system and third party products relying on WMP would not function properly),[149] but only requested Microsoft to provide OEMs and end-users the means to remove access (including icons) to the WMP application or to disable automatic launches.[150]

The effectiveness of this remedy was limited, as only few OEMs

[147] IP/09/349.
[148] However, bundling also formed part of the maintenance of monopoly claim: *United States* v *Microsoft Corp*., 253 F.3d at 65.
[149] Decision, para. 829.
[150] *New York* v *Microsoft Corp.*, 224 F.Supp.2d at 153–5.

took advantage of this possibility.[151] The alleged lack of success of the remedy[152] could be explained by the fact that the final remedial order did not require Microsoft to charge a lower licence fee to OEMs that deleted access to Microsoft middleware, although this eventuality was included in Judge Jackson's remedial order.[153] In addition, the Commission may have found this remedy inadequate 'because it reinforced the applications barrier to entry from which Microsoft benefited by encouraging content providers to encode their products in Microsoft's standards'.[154]

The importance of the leveraging argument and network effects in the EC case and the insistence of the Commission on the need to restore the freedom of choice of the consumers that were coerced by Microsoft's conduct to use WMP as a default media-player led to a more intrusive remedy than in the US Microsoft case. The fact that WMP was offered for free, that there were other ways to reach consumers for competing products, and that the consumers were not forced but simply likely to use WMP, did not influence the conclusion of the Commission that there was coercion. The extent of the competition problem was of a structural nature: the ubiquity of Windows undermined because of the network effects competition in media-players.[155] This was thought to deter innovation and reduce consumer choice as competing media-players that consumers preferred were excluded from the market.[156]

The extent of the competition problem identified, Microsoft's distributional advantage, led to a more intrusive competition law remedy than in the US case, affecting Microsoft's freedom to design its products. Article 6 of the Decision requested Microsoft to offer a version of Windows for

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151 William H. Page and John E. Lopatka, *The Microsoft Case* (Chicago: University of Chicago Press, 2007), p. 215.

152 One could, however, also argue that taking into account the liability claim, which was that OEMs were forced to carry Internet Explorer because they could not exclusively promote other browsers, the remedy was fully 'successful' in providing them with that option. The fact that they may or may not choose to take advantage of that right may not necessarily mean the remedy was unsuccessful, unless a 'successful' remedy is defined as a socially desirable market outcome, which could blur the distinction between competition law intervention and regulatory alternatives.

153 Page and Lopatka, n. 151 above, 216.

154 Page and Lopatka, n. 151 above, 218.

155 Decision, para. 979. As the Commission put it, 'through tying with Windows, Microsoft uses Windows as a distribution channel to anti-competitively ensure for itself a significant competition advantage in the media player market. Competitors, due to Microsoft's tying, are *a priori* at a disadvantage irrespective of whether their products are potentially more attractive on the merits'.

156 Decision, paras 978–84.

client PCs which does not include WMP media files,[157] the new version being equally performing. The remedy applied to licences for both end-users and OEMs. Microsoft was also asked to refrain from using 'any technological, commercial, contractual or any other means which would have the equivalent effect of tying WMP to Windows', for example by selling the new version at a higher price than the Windows with WMP version.[158] This did not include directly an obligation for Microsoft to offer the Windows without WMP version for a lower price than for the Windows with WMP version, since most competing media-players were offered for free. In addition, the Decision included an indication of activities having an effect equivalent to tying to which Microsoft should not resort, such as privileged interoperability between WMP and Windows or any other favourable treatment for Windows, conditional discounts, punishing or threatening OEMs who obtained Windows without WMP, tying WMP to other products that 'would exhibit a similar ubiquity as Windows', such as Microsoft Office.[159] The Commission rejected Microsoft's arguments that removing the WMP would undermine the integrity of the operating system, as for the Commission any interdependencies between the two products were the result of 'deliberate choice by Microsoft' and the integration of WMP was not a precondition for the multimedia capabilities of Windows.[160] In other words, the remedy imposed attempted to unravel the various links that tied WMP and Windows. Microsoft was given 90 days to implement the remedy. The Commission rejected Microsoft's proposal to include other media-players in Windows (the must carry remedy). This aspect will be examined more extensively below.

As was the case for the interoperability remedy, Microsoft invoked its right to seek a suspension of the Decision, which was refused by order of the President of the CFI. The CFI upheld the liability and the remedial part of the decision. The Monitoring Trustee supervised Microsoft's compliance with the remedy. Microsoft launched Windows XP N (for 'not with media functionality') to European Union countries in mid-June 2005.

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[157] According to the Commission, 'these files contain the technologies which have been identified as bringing about the foreclosure effect by virtue of WMP being tied to Windows, namely the files that support the proprietary Microsoft codecs, file formats and DRM formats and the WMP user interface': Decision, para. 1019.

[158] Decision, para. 1012.

[159] Decision, para. 1013(v).

[160] Decision, paras 1027, 1031. The Commission distinguished between two sorts of dependencies: 'technical' which would by definition lead to the non-functioning of the operating system, and functional dependencies which can be dealt with 'gracefully': Decision, para. 1033.

Almost 200 ancillary or support files were removed from XP Home and Professional Editions. According to a Microsoft's press release in April 2006, there has been virtually no demand from PC manufacturers, retailers and consumers for Windows XP N, and only 1,787 copies of Windows XP N have been sold to retailers and distributors in Europe; more importantly, no OEM was interested in installing and selling computers with a less than fully functional version of Windows XP.[161]

Measured in terms of the number of sales for the Windows XP N edition, the effectiveness of the remedy can certainly be questioned.[162] The Commission's hope of widespread adoption of Windows XP N and the emergence of new powerful competitors did not materialize.[163] One could compare the situation of the media-player market with that of web-browser market, which was the subject of the US Microsoft case. As was previously explained, after the Court of Appeal's judgment, the tying case was dropped. By the time of the Court of Appeal's decision, Microsoft commanded an impressive share of the web-browser market (almost 90 per cent). It is only recently that Mozilla Firefox, a competing web-browser developed by Netscape in the form of open source software in 2004, after Netscape's defeat in the 'first browser war',[164] has been able to challenge Internet Explorer's dominant position, with Internet Explorer's usage share reducing to 66.1 per cent in the second quarter of 2009.[165] The situation is somewhat different in the media-player market, where a number of competing programs developed during the same period. One could suggest that one of the reasons for the faster development of competing products in the media-player market than in the web-browser market was the relatively important constraint and distraction that litigation in Europe

161 See www.microsoft.com/presspass/legal/european/04-24-06windowsxpn salesfs.mspx.

162 The alleged ineffectiveness of the remedies may raise questions as to the validity of the liability theory of harm in the first place. One could claim that Microsoft was essentially found liable for failing to produce a product – Windows without media functionality – that no one wanted.

163 There is no doubt that powerful competition existed in media-players before the introduction of Windows XP N, as evidenced by the huge successes of the iPod and the associated media format, as well as the Adobe Flash Player.

164 See http://en.wikipedia.org/wiki/Browser_wars.

165 See http://en.wikipedia.org/wiki/Usage_share_of_web_browsers. Mozilla Firefox had 22.47 per cent of usage share. According to other reports, the Internet Explorer versions had a total of 54.4 per cent market share in July 2009, a significant decline from 65.8 per cent in March 2009. See www.techcrunch.com/2009/07/05/since-march-internet-explorer-lost-114-percent-share-to-firefox-safari-and-chrome/?awesm=tcrn.ch.Furthermore, Apple Safari 4 and Google Chrome have done well since their releases, too.

caused to Microsoft's management, and the effect the Decision had on Microsoft's aggressive competitive ethos.[166]

Substitutionary Remedies

Substitutionary remedies may take different forms, e.g. fines, damages, disgorgement of illegally acquired gains. As is the case for remedies in kind, the objective of substitutionary remedies is to place the plaintiff or the protected category of rightholders in the situation that would have existed absent the infringement. This could be achieved through compensation of the rightholders and/or by restoring competition. For example, the objective of fines is to raise the costs of the violation of competition law and therefore affect the incentive for undertakings to adopt a similar conduct in the future. In that sense, pecuniary sanctions such as fines aim to restore competition. This deterrence effect will also affect the incentives for all other undertakings likely to adopt similar conduct in the future. This assumes, as Frederic Jenny observes, 'that persons engaging in illegal practices are rational individuals who (implicitly) consider the expected cost and the expected benefit to them of violating a law and will engage in such a violation only if it pays (that is, if the expected benefit outweighs the expected cost to them) when they are risk neutral or if the expected net gain is sufficiently large, if they are risk averse'.[167] It follows that '(i)n order to achieve . . . optimality, the basic framework on penalties should be a quantitative one, rather than qualitative. In other words, the quantity of the penalty has to be linked to the measure of the effect that the infringement provoked, rather than on the quality of the action undertaken'.[168] The monetary transfers involved may have different addresses. Indeed, substitutionary remedies may consist in fines, which is a monetary transfer to the tax-payer, or damages, which is a monetary transfer to the 'victims' of the anti-competitive practice. The choice of one over the other, or of a

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[166] Gary L. Reback, *Free the Market!* (New York: Portfolio, 2009). See also the remarks of William E. Kovacic, 'Designing Antitrust Remedies for Dominant Firm Misconduct' (1999) 31 *Connecticut Law Review* 1285, 1288–92, arguing that the existence of an antitrust lawsuit may inhibit aggressive commercial behaviour by the defendant as well as distract the defendant's employees from more productive functions, thus imposing formidable costs on the company. One could, however, remark that Microsoft continued to introduce new products in the market, such as Zune (media-player hardware) and Silverlight (for Internet media playback, like Adobe Flash Player).

[167] Jenny, n. 19 above.

[168] Enrico Leonardo Camilli, 'Optimal Fines in Cartel Cases and the Actual EU Policy' (2006) 29(4) *World Competition* 575.

combination of both, depends on the emphasis given by each legal system to deterrence or compensation. For example, fines serve merely a deterrence aim, although it is possible that they could also be conceptualized as a compensation mechanism, if one adopts the position that the restoring competition will benefit the 'public at large'. In any case, setting an optimal level for civil sanctions and damages should take into account the interaction of these two forms of substitutionary remedies.

Fines

Article 3 of the Commission's Decision imposed on Microsoft what appeared at the time as a record fine in an abuse of dominance case.[169] The Commission calculated the amount of the fines according to the method set in the Guidelines on Setting Fines of 1998, revised in 2006.[170] This includes two steps: first, determine the basic amount of the fine, and secondly examine the existence of aggravating or attenuating circumstances. The Commission took into consideration in order to set the basic amount of the fine the gravity of Microsoft's infringement, a leveraging strategy which comprised two separate abuses: a refusal to supply and a tying abuse. The Commission found that Microsoft had engaged in a 'general pattern of conduct', which could produce 'significant effects on the competition landscape', in particular as it would have given Microsoft the ability to erect further barriers to entry in the client PC operating systems market and thus 'to limit the risk of a change of paradigm that could strip Microsoft's overwhelming dominance on the client PC operating system market of its competitive importance'.[171] Microsoft would thus be able to extend its quasi-monopolistic position into the server industry or the market for the delivery of content over the Internet and on multimedia software. The fact that Microsoft had already achieved a dominant or leading position in these industries was found a sufficient indication of the gravity of the infringement.

The initial amount for gravity was set at €162,732,101, without distinguishing which amount represented the fine for the refusal to supply interoperability infringement and which the one for the tying infringement. This starting amount was doubled in order to ensure 'a sufficient deterrent effect on Microsoft', in light of the undertaking's significant economic capacity.[172] The duration of the infringement was also particularly long: the refusal to supply abuse lasted six years and it was still ongoing at the time of

[169] The latest record is held by the fine imposed on Intel. See IP/09/745.
[170] Guidelines on the Method of Setting Fines [1998] OJ C9/3; Guidelines on the Method of Setting Fines [2006] OJ C210/2.
[171] Decision, paras 1061–8.
[172] Decision, para. 1076.

the decision; the tying abuse lasted more than five years. The Commission set the overall duration of the infringement at five years and five months, thus increasing the basic amount of the fine by 50 per cent to €497,196,204, taking into account an increase of 10 per cent for each year of participation in the infringement. The fine represented 7.5 per cent of Microsoft's turnover on the market for client PC and work group server operating systems in Europe,[173] thus below the threshold of 10 per cent set by the Guidelines. No aggravating or attenuating circumstances were found.

The CFI affirmed the fine imposed by the Commission and rejected Microsoft's arguments that no fine should be imposed, as the infringements resulted from 'novel theories of law' or that Microsoft had already taken measures, following the US settlement, to provide the necessary degree of interoperability.[174] The Court also acknowledged that 'the obligation to state reasons does not require the Commission to indicate in its decision the figures relating to the method of calculating the fines'.[175] Finally, the CFI found that the doubling of the basic amount of the fine by the Commission was justified for deterrence reasons: in a prescient (given recent developments) paragraph, the Court noted that 'since Microsoft is very likely to maintain its dominant position on the client PC operating systems market, at least over the coming years, it cannot be precluded that it will have other opportunities to use leveraging vis-á-vis other adjacent markets'.[176]

Although the fine imposed on Microsoft seems particularly important, its deterrent effect may be questioned. In the high technology sector, where network effects may tip the market for some time towards a particular technological standard, incurring the costs of civil penalties may still be a profitable strategy for monopolists. The effectiveness of this part of the EC remedy should be examined in comparison with the pecuniary sanctions imposed in the US Microsoft case. There is no provision for civil penalties, such as fines, under the Sherman Act and their adoption may not be possible, at least in the near future.[177] In US antitrust law, pecuniary

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[173] CFI judgment, para. 1319.
[174] CFI judgment, para. 1324.
[175] CFI judgment, para. 1361.
[176] CFI judgment, para. 1363.
[177] The proposal to make the necessary amendments to permit the imposition of civil fines has been rejected by the recent Antitrust Modernization Commission, *Report and Recommendations* (April 2007), pp. 285–91. For a critical analysis, see Stephen Calkins, 'Civil Monetary Remedies Available to Antitrust Enforcers' (2006) 40 *University of San Francisco Law Review* 567; Harry First, 'The Case for Antitrust Civil Penalties' *Antitrust Law Journal* (forthcoming); New York Law and Economics Research Paper No. 08-38, available at SSRN at http://ssrn.com/abstract=1162353.

sanctions take the form of wealth transfers to the victims of the exclusionary practice, which may engage a private action to collect damages. Most often, this leads to settlements entered between the monopolist and the claimants. The next section will discuss the availability of damages and settlements as an effective ‘pecuniary’ remedy. These remedies, to which one could add restitution/disgorgement, rarely ordered in the United States and unavailable in Europe, provide compensation/restitution to the victims of the competition law infringement, as well as deter the monopolist or dominant firm from adopting similar practices in the future by acting indirectly on their incentives.

Damages

In comparison to the amount of the fines imposed by the European Commission, the monetary transfers to consumers and competitors affected by Microsoft’s antitrust law infringement in the US case seem particularly important. According to Harry First, more than 220 private cases have been filed against Microsoft, from consumers and rivals.[178] Consumer class actions represent the largest group of claims (more than 80 per cent), with individuals having filed 30 cases and state Attorneys General having filed two cases on behalf of their non-business citizens.[179] This category of private plaintiffs had an important hurdle to overcome, as they had to prove that they were overcharged, following Microsoft’s maintenance of monopoly in the operating systems market. As indirect purchasers, they were barred from bringing a federal antitrust private damages claim,[180] with the exception of some states that provide the possibility for state antitrust actions filed in state courts. All class actions had also to pass the procedure of class certification, which was in this case overly complicated by the fact that it was not clear how much of the alleged overcharge the direct purchasers had passed on to indirect purchasers. This required individualized determinations which made class certification particularly difficult.[181]

Important difficulties also arose with regard to the existence of an overcharge for Windows, as Microsoft was allegedly able to maintain its monopoly power by excluding potential competing platforms in the

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[178] Harry First, *Netscape is Dead: Remedy Lessons from the Microsoft Litigation*, NYU Law and Economics Research Paper No. 08-49 (29 August 2008), available at SSRN at http://ssrn.com/abstract=1260803.

[179] First, n. 178 above, 6.

[180] *Illinois Brick Co.* v *Illinois*, 431 U.S. 720 (1977).

[181] The majority of the courts adopted, however, a liberal standard for class certification. See Page and Lopatka, n. 151 above, 235.

operating systems market.[182] The issue revolved on the question of what would have been the price of Windows, had Netscape and Java been able to challenge Microsoft's dominant position and develop a competing platform. Judge Jackson's judgment contained some indications that Microsoft was able to charge higher prices for Windows 98 upgrades, while lower prices would have also been profitable. However, Judge Jackson also recognized that it might be in Microsoft's interest to 'keep the price of Windows low today' in order to support the growth of the operating systems market.[183] These elements offered the possibility to OEMs, such as IBM and Gateway, which did not accept Microsoft's offer to distribute and promote Internet Explorer and therefore did not receive any compensation in the form of rebates, to enter significant settlements with Microsoft.

Additional private damages suits in the US Microsoft case included the two competitors that brought the case against Microsoft in the European Union, Netscape/AOL and Sun. Netscape settled in 2003, while Sun settled a few days after the publication of the Decision of the European Commission in 2004 and consequently retreated as a third party intervener in the EC litigation. This had the effect of pushing SAMBA and the open source community to step in as the main opponent of Microsoft in the post-decision 2004 period, until they settled in the aftermath of the CFI's judgment. As for Microsoft's other opponents in the EC antitrust case, both RealNetworks and Novell settled, with the exception of Novell's pending lawsuit against Microsoft relating to the damage suffered by WordPerfect (for lack of interoperability information), which because of its cross-platform capacity posed a potential threat to Microsoft's

[182] Whether Netscape together with Java could have been a real threat to Windows was not clear and definitely not proved. Netscape's CEO Jim Barksdale completely dismissed that likelihood at trial, stating that Netscape never planned such entry into operating systems. However, Microsoft had taken this potential threat, expounded by Netscape's CTO Mark Andreesen, very seriously as internal Microsoft emails presented at trial revealed. But if Netscape's success was very unlikely in the absence of anti-competitive actions, the remedy should be limited to erasing the anti-competitive hurdle and should not involve a restructuring of the market.

[183] *United States* v *Microsoft*, 84 F.Supp.2d 9, 27 (D.D.C. 1999), Finding of Fact, para. 66). However, this argument is not credible given that Microsoft already had over 90 per cent market share in the OS market. In fact, it is likely that potential competition in the OS market drove Microsoft to charge a significantly lower price than the unconstrained monopoly price. For a detailed analysis of pricing of Windows, see Nicholas Economides, 'The Microsoft Antitrust Case' (2001) 1 *Journal of Industry, Competition and Trade: From Theory to Policy* 7, 16–19, available at www.stern.nyu.edu/networks/Microsoft_Antitrust.final.pdf.

monopoly in the operating systems market.[184] In total, the settlements in the United States appear to have exceeded US$3.5 billion.[185]

In comparison, the fine imposed by the European Commission, which represents only a fraction of the total amount of settlements, seems to lead to underdeterrence, absent private enforcement. This conclusion is reinforced by the absence of any private action brought against Microsoft for damages in the European Union. There are two cumulative explanations for this: first, private enforcement of EC competition law is only nascent and does not include a system of treble damages or other incentives for private actions.[186] Secondly, the heart of the EC case was not maintenance of monopoly, and therefore a possible overcharge for Windows, but the extension of the monopoly power of Microsoft to the work group server and media-player markets. Concerning the work group server market, it is not clear if consumer harm took a different form than just a slower pace of innovation because of the exclusion of competitors, or whether it led also to an increase in the prices charged by Microsoft. In the media-player market, the product was given away for free, so the harm to consumers was not relating to higher prices but to possibly lower quality, as allegedly better quality media-players were excluded from the market. It would, however, be extremely difficult and costly to quantify this reduction in quality.[187] Because of the limited access of European consumers to damages and the difficulties in obtaining damages in the United States as a result of comity concerns, in particular after *Empagran*,[188] European consumers will remain without compensation and, consequently, there will be less deterrence. The weakness of private enforcement of competition law in Europe indicates that fines should be set at a higher level in order to ensure more effective deterrence.[189]

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[184] First, n. 178 above, 9.

[185] First, n. 178 above, 27.

[186] See the recent discussion of possible options in European Commission, White Paper on Damages Actions for Breach of the EC Antitrust Rules, COM (2008)165.

[187] However, during the infringement period there was significant innovation and entry of new products, such as the iPod and the Adobe Flash Player.

[188] *F. Hoffmann-La Roche Lt.* v *Empagran SA*, 542 U.S. 155 (2004).

[189] This supposes, however, a clarification of the liability standard under Article 82 EC. The European Commission has recently adopted guidance on Article 82 EC: DG Competition, Communication from the Commission, Guidance on the Commission's Enforcement Priorities in Applying Article 82 EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings, 864(2009)final. Note the guidance on enforcement priorities is a softer law instrument than guidelines: it

3. CRITICAL ASSESSMENT OF THE REMEDIES

The success of the interoperability remedy required a sustained and continuing effort of setting and monitoring compliance standards, which was particularly difficult in the absence of a regulatory authority that could supervise its enforcement. The European Commission initiated the mechanism of the Monitoring Trustee, which proved particularly useful in the promotion of the SAMBA-Microsoft settlement, the only positive outcome so far of the Commission's Decision. However, the CFI annulled this part of the Decision. The crafting of remedies involves the consideration of an adequate institutional mechanism for their enforcement. The design of the remedy for the tying part of the Decision was also particularly problematic, as the Commission took a quasi-regulatory role by imposing on Microsoft a particular product design which, however, produced very poor results in the marketplace.

Enforcement Difficulties of the Interoperability Remedy: Institutional Aspects

The appointment of a Monitoring Trustee was the primary mechanism of enforcement of the remedy imposed by the Commission for both the interoperability and tying parts. The Monitoring Trustee was required to assess whether the information made available by Microsoft was complete and accurate, and to ensure that Windows XP N was of no less performance than any bundled version of Windows which Microsoft would continue to provide on the market. The Monitoring Trustee was independent from Microsoft, although on its payroll. Article 4 of the Decision imposed on Microsoft an obligation to refrain from repeating any act or practice which would have the same or equivalent object or effect as the anti-competitive conduct. This exemplified the forward-looking role of the Monitoring Trustee, as it was clear that 'the obligation to disclose interoperability information must apply 'in a prospective manner' to future generations

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is complementary to the Commission's specific enforcement Decisions. The choice of the instrument of guidance on enforcement priorities offers to the Commission more leeway in presenting its approach on Article 82 EC. The Commission could not have adopted guidelines contrary to the rulings of the EU courts (see the most recent reminder by Advocate General Kokott in Case C-8/08 *T-Mobile Netherlands BV and others*, para. 29). The Commission maintains the ability to reject a complaint when it considers that a case lacks priority for other reasons (e.g. lack of Community interest).

of Microsoft's products'.[190] Microsoft successfully challenged this part of the Decision at the CFI for lack of legal basis.

The CFI found that Regulation 17/62, in force at the time of the Decision, did not provide the Commission with the authority to compel Microsoft to grant to an independent monitoring trustee powers which the Commission itself was not authorized to confer to a third party.[191] The Court questioned the independence that the Monitoring Trustee would have had from both the Commission and Microsoft and the broad scope of his powers and mission. It also noted that no limit in time was envisaged for his continuing intervention in monitoring Microsoft's compliance. Furthermore, the principle of proportionality required that the costs associated with the enforcement of the remedy and compliance should not be borne by the undertaking but by the Commission, in fulfilling its own investigation and enforcement responsibilities.[192]

The conservatism showed by the CFI in envisioning an effective compliance mechanism seems misplaced. First, the independence of the Monitoring Trustee from Microsoft, but also from the Commission, ensured his impartiality, which was an essential characteristic in order to enhance compliance and cooperation from Microsoft. This was crucial for the success of the remedy (providing adequate information on specifications). After all, it was because the Monitoring Trustee had developed a relation of confidence with Microsoft's technical staff that he had been able to mediate successfully between Microsoft and SAMBA, ironically during the period following the Court's judgment and before the Commission formally replaced him with a system of ad hoc external experts.[193] It may have not been possible to achieve the same degree of cooperation from Microsoft had the Commission employed internal or external experts for the enforcement of the Decision, as in this case no direct relation (without the intermediation of lawyers) would have existed between Microsoft's technical staff and the technical staff of the parties requiring interoperability. It is true that the Commission's Decision should have included a realistic time horizon for the monitoring of the Decision and should have quantified the costs. However, as became clear in the compliance procedure under the US antitrust decision, the extent and time scale of monitoring was an unknown factor depending on the clear articulation of what the government wanted Microsoft to produce and on the will-

190 CFI judgment, para. 1270.
191 CFI judgment, para. 1271.
192 CFI judgment, para. 1277.
193 Page and Childers, n. 125 above, 346.

ingness and ability of Microsoft to provide detailed specifications for its interoperability information. Sharing the costs of the enforcement mechanism would have limited the exorbitant costs for Microsoft, which may seem out of proportion, but at the same time it would have reduced to a minor extent Microsoft's incentives to comply with the Decision. The Commission could nevertheless have taken in charge a larger proportion of the expenses during the first period of the operation of the enforcement mechanism, Microsoft's share progressively increasing in order to incur the costs of delayed compliance.

The appointment of the Monitoring Trustee illustrates the blurring of the distinction between competition law and regulation, when it comes to the enforcement of far-reaching and forward looking remedies, with regard to the scope of the obligations imposed and the time-horizon of the remedy. The European Monitoring Trustee intervened three years after the Technical Committee in the US antitrust case began to monitor Microsoft's compliance. The US Technical Committee had become at that time a quasi-regulatory entity with 40 experts employed and the ability to persuade the US Department of Justice and the states that additional obligations and burdens should be imposed in order to ensure effective interoperability. The Technical Committee had the ability to receive complaints, interview Microsoft's staff and examine the Windows' source code, subject to confidentiality; the expenses of the Committee, including the salaries, being covered by Microsoft.[194] The Monitoring Trustee was able to build on these efforts to ensure interoperability and to benefit from the US experience but he also contributed to the compliance effort in the United States. Indeed, in 2006 the US Technical Committee started working closely with Microsoft's experts in order to improve the technical documentation provided to licensees, using 'as a starting point the specification agreed upon between Microsoft and the Monitoring Trustee' in the EC case.[195]

One could envision a higher degree of cooperation at the remedial stage of multi-jurisdictional cases, such as Microsoft, if compliance is ensured by an independent entity, like a Monitoring Trustee or a Technical Committee, including the sharing of the costs of the compliance mechanism between jurisdictions. It is clear that despite the different theories of antitrust liability in Europe and in the United States, the remedies imposed with regard to the interoperability part of the Decision it the end

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[194] 224 F.Supp.2d, final judgment, Part IV.B.

[195] Joint Status Report on Microsoft's Compliance with the Final Judgments, 7 September 2006, available at www.usdoj.gov/atr/cases/f218000/218096.htm.

converged. This type of international cooperation at the remedial stage of antitrust cases could be enhanced if the Commission had the ability to appoint independent compliance officers/experts. The procedure has been used in the context of commitment Decisions under Article 9 of Regulation 1/2003, such as the *Deutsche Bundesliga*[196] and *FA Premier League*[197] cases concerning the collective selling of media rights to football matches, where the Commission appointed a monitoring trustee to monitor the auctions of the Premier League rights, and in *Repsol*,[198] where the monitoring trustee had the task of monitoring the opening up of the fuel distribution system in Spain. Monitoring trustees have also been used in merger cases cleared with obligations and commitments, where the trustees enjoy important powers, such as the supervision and management of the divested business, the exercise of shareholder rights or the appointment of board members.[199] The CFI's decision in the Microsoft case raises questions as to the legality of this practice, in particular as the company giving the commitment is usually required to incur the trustee's costs. Regulation 1/2003 does not grant the Commission any power to establish such monitoring mechanisms and this is certainly an issue that has to be tackled in the recent review process of Regulation 1/2003.[200]

'Failure' of the Windows N Remedy and the 'Must Carry' Proposal

As discussed above, the Commission Decision, upheld by the CFI, found Microsoft liable for tying WMP with Windows. WMP participates in a market where it and its substitute media-players are distributed without charge. Since there are always costs of developing such software, both Microsoft and its competitors sell below the production and distribution cost of media-players. Of course, as part of Windows, WMP forms part of the Windows revenue.

Companies such as Microsoft and its competitors (for example,

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[196] Commission Decision 2005/396/EC, *Bundesliga* [2005] OJ L134/46.

[197] Commission Notice published pursuant to Article 19(3) of Council Regulation No 17 concerning case COMP/C.2/38.173 and 38.453, *FA Premier League* [2004] OJ C115/3.

[198] Commission Decision 2006/446/EC, *Repsol* [2006] OJ L176/104.

[199] See e.g. Commission Decisions COMP/M.5406 *IPIC/MAN Ferrostaal AG* [2009] OJ C114/8; COMP/M.5253 *Sanofi-Aventis/Zentiva*, 4 February 2009; COMP/M.5224 *EDF/British Energy*, 22 December 2008. Commission Notice on remedies acceptable under Council Regulation 139/2004 and under Commission Regulation 802/2004 [2008] OJ C267/1.

[200] Although nothing is included on this topic in European Commission, *Report on the Functioning of Regulation 1/2003*, COM(2009)206 final.

RealAudio) distribute their media-players for free with the hope that their software development costs will be recouped if (i) in the future the product is sold at a positive price, or (ii) the firm will be able to sell upgraded versions of the software (with more features) at a positive price, or (iii) the firm will be able to sell products or services complementary to the free product (for example, music or video downloads at a positive price or software that produces audio or video in a compatible format). Although media-players have been distributed for free for almost a decade and have experienced significant technological advances, there is no evidence that their basic versions will ever be sold at a positive price. Additionally, with the exception of Apple's iTunes, there is no evidence of substantial revenues from sales of complementary products,[201] and iTunes profits come almost exclusively from sales of the complementary hardware (iTunes players). Thus, there are no damages arising from higher prices because of restriction of competition, since no company charges a positive price. The only possible damages could arise from a restriction of the full extent of varieties and qualities of media-players that might be available in the absence of the tying behaviour of Microsoft.

The variety issue is further complicated by the fact that a number of companies distribute media-players that each have a 'favoured' format but can also play content in a number of other formats, to the extent that the other format owners allow it. So, for example, WMP plays WMA (the Microsoft-favoured format) as well as MP3 (based on a public standard) but does not play the RealAudio format because its specifications have not been made public. Similarly, RealAudio plays its proprietary format, as well as WMA, MP3, and others. Thus, wide distribution of WMP does not necessarily imply dominance of the WMA *format* since WMP can play many formats. It is possible, however, to argue that even dual encoding (i.e. encoding in a number of different formats) may confer a distributional advantage to Microsoft. Ian Ayres and Barry Nalebuff noted that 'Microsoft would still have the unique ability to ensure that its media player would be on all new machines—and thus eventually on all machines' and that 'in turn, would mean that a content provider that encoded its content in the WMP format would be ensured nearly 100% reach in the market' and would have therefore little incentive to engage

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201 Of course there are attempts to get revenue from complementary goods. For example, RealNetworks offers an upgraded version at a positive price as well as subscription services for content. However, these revenues are not substantial and have led to the decline of companies that are essentially only in the software media-player business, such as RealNetworks.

in dual encoding.[202] The conclusion that WMP will eventually be on *all* PCs is true only under restrictive modelling assumptions, and empirical evidence attests that it is certainly not true today. Additionally, the fact that WMP plays a number of other formats, including some based on open standards, makes the exclusivity argument of including WMP with Windows weak. In the aftermath of the US case settlement, any consumer as well as any computer manufacturer can set up any media-player as the default one, thereby severely limiting any distributional advantage of the joint distribution of WMP with Windows. However, they do not benefit from the same distributional opportunities as WMP, precisely because dual encoding may not be materially equivalent to ubiquitous encoding. Finally, one could argue that the distribution advantage that any player enjoys is also limited because any rival media-player can be downloaded and installed in a few minutes. If consumers do not think it is worth spending a couple of minutes to download and install rival players, clearly consumers do not see significant value in the variety and quality that rival players may add. Thus, the damages that can be ascertained from Microsoft's distributional advantage cannot be substantial. The Commission and the CFI may have overestimated the distributional advantage conferred on WMP by its joint distribution with Windows.

The Commission imposed as a remedy on Microsoft the requirement to produce and distribute in the European Union a version of Windows without WMP, which became known as Windows XP N. The Commission's remedy allowed Microsoft to continue producing and distributing in the EU the US version of Windows that included WMP but was subject to the requirements of the consent decree that resolved the US case The CFI did not mandate a specific price difference between Windows and Windows XP N.[203] The two versions of Windows were sold

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[202] See Ian Ayres and Barry Nalebuff, 'Going Soft on Microsoft? The EU's Antitrust Case and Remedy' (2005) 2 *The Economist's Voice* 1, 5.

[203] The lack of a price difference requirement is in sharp contrast to the proposal to the district court by the nine states ('litigating states') which did not agree with the US Department of Justice Microsoft settlement that was also signed by nine other states. The litigating states proposed to 'freeze Windows' in its pre-1998 condition and impose on Microsoft the requirement to sell any additional functionality at an additional price. It is interesting, however, that the CFI noted in its judgment that '[s]hould Microsoft now decide to sell the unbundled version of Windows at the same price as the bundled version, the Commission would examine that price by reference to the present market situation and in the light of Microsoft's obligations to refrain from any measure having an equivalent effect to tying and, if necessary, adopt a new decision pursuant to Art. 82 EC'. CFI judgment, para. 908.

in the EU at the same price, and practically no OEM bought and adopted Windows XP N.[204] Thus, the remedy imposed by the Commission had no noticeable effect in the marketplace. At the same time, the dire predictions of expanded dominance of WMP never materialized in the long period between the beginning of the EC case and the Commission's Decision, or even later. In contrast, a new, until recently proprietary, format promoted by Apple (tied to hardware also produced by Apple!) has become the dominant format in the market for song downloads, a key market for goods that are complementary to media-players. Additionally, Flash Player, a new player from Adobe, has become the standard video-player in web-browsers.

We are at a loss to understand why the European Commission thought that requiring Microsoft to produce and distribute Windows without WMP was going to change significantly competition in media-players. It was almost mathematically certain that Windows XP N (without WMP), sold at the same price as Windows (with WMP), would not sell well, and therefore would have little impact on the market share of WMP. It is also hard to imagine how depriving consumers of WMP in Windows XP N in the post-US settlement environment, where both the OEM and the final consumer can designate any media-player as the default one, would have enhanced consumers' choice. The Commission rather considered that consumers expected a media-player but argued that the OEMs should be free to build PCs that feature a non-Microsoft media-player.

In negotiations before the Commission's Decision was announced, the Commission rejected a reported Microsoft proposed remedy to include in the distribution of Windows three rival media-players besides WMP and let the consumer designate the default player.[205] This proposal, which would have guaranteed as wide a distribution of RealAudio and other players as WMP, would have erased any distributional advantage of WMP, would have dispelled any tying concerns, and would have given full decision power to consumers. Such a remedy would have addressed the competition law concerns raised by Microsoft's abuse much more effectively than the proposed remedy.[206] At the same time, its adoption would

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[204] Windows XP N sold less than 2,000 copies.

[205] See Byron Acohido and Noelle Knox, 'Regulators Want Microsoft to Pull Media Player Out', *USA Today*, 25 March 2004, available at www.usatoday.com/money/industries/technology/2004-03-25-msoft-cover_x.htm.

[206] Indeed, the issue in this case was 'not that Microsoft integrates [WMP] in Windows, but that it offers on the market only a version of Windows in which [WMP] is integrated, that is to say, that it does not allow OEMs or consumers to obtain Windows without [WMP] or, at least, to remove [WMP] from the system

have at least guaranteed the ability of even a dominant firm (Microsoft) in the complementary good (Windows) to innovate and distribute in the way it finds most appropriate. The benefits of this proposal both for consumers and innovation are obvious and substantial in comparison to the imposed remedy.[207] It provides consumers with the best of both worlds: the benefits of stand-alone media-players and the benefits of an integrated solution.

We argue that the requirement that a dominant firm 'must carry' the competitors products should, however, only be imposed when (i) there are substantial distributional advantages for the dominant firm, and (ii) there are substantial consumer losses arising from the lack of distribution through the dominant firm. Because of the US case settlement, computer manufacturers can install any media-player they want without facing any penalties or retaliation from Microsoft. To the extent that computer manufacturers install what consumers desire, the present extent of distribution of WMP with Windows seems more a reflection of consumers' choice than a decision by Microsoft. Of course, consumers are likely to be better off if they receive more free software delivered with their new computer. This, however, does not mean that the dominant firm should have the obligation to distribute this software, and additionally to do so without collecting practically any revenue from competitors whose software it is forced to distribute, unless the operating system is considered as an essential facility. But in this case the standards of liability are different (allegedly stricter) than those required for tying.[208] It seems to us that, if a

Footnote 206 (*cont.*)
consisting of Windows and [WMP]'. CFI judgment, para. 1149. The remedy could have identified a number of media-players from those existing at the time of the commitment of the abuse that could have been integrated into Windows. It is in this respect different from a common carrier obligation, as it would not necessarily have extended to media-players that would have been commercialized after the termination of the abuse.

207 This is particularly surprising since Prof. Mario Monti, head of the Commission at the time, was quoted as saying as regards the objectives of the Commission in the Decision: 'In the end, we decided to do what's best for innovation and European consumers'. Acohido and Knox, n. 205 above.

208 The Court of Justice took a restrictive view of the obligation of a dominant undertaking to grant access to its facilities by imposing a number of conditions in Case C-7/97 *Oscar Bronner GmbH & Co. KG* v *Mediaprint* [1998] ECR I-7791, paras 41, 45–6. The refusal 'must be likely to eliminate all competition' on the part of the competitor requesting access, such access should be indispensable and not only make it harder for the requesting undertaking to compete, and it should not be capable of being objectively justified. With regard to the indispensability condition, the Court held that access would have been indispensable only if it was not economically viable to create a home-delivery system for a newspaper

competition authority decides to impose a 'must carry' remedy, it should bring a proper essential facilities case, rather than rely on the more favourable liability standards of tying (as regards standard of proof) and then ask for a 'must carry' remedy.

The 'must carry' obligation is of special interest because it has been considered by the European Commission as a remedy in its current investigation of Microsoft for bundling Internet Explorer with Windows, as discussed in detail below.[209] Clearly, the Commission could not require that Windows be distributed without a web-browser and the ability to download a browser because that would severely cripple the ability of the typical user to reach the Internet. But does it make sense for Microsoft to be required to distribute rival browsers?

It could be argued that requiring Microsoft to distribute rival browsers may not provide an appropriate remedy, in the presence of weak anticipative effects. As with media-players, competing web-browsers can be downloaded and installed in a few minutes, so the reluctance of consumers to do so might show that they do not find it sufficiently desirable. To this claim it is possible to respond that consumers may have a status quo bias favouring Internet Explorer, particularly because, having used only Internet Explorer, the user has no real way of knowing what it might mean for a web-browser to be superior.[210] One could also advance a natural reluctance to take on additional learning costs associated with using a different browser. OEMs may also refrain from the additional support costs that are associated with offering another browser. It could be argued, nevertheless, that the damage that consumers may incur from the joint distribution of Internet Explorer with Windows is very limited. In the particular

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with a comparable circulation to the dominant firm's. One could argue that the conditions in *Bronner* set the outer boundaries of the special responsibility of a dominant firm and consequently of the corresponding duty, under Article 82 EC, to abstain from any action that would be likely to exclude rivals from the market. The excluded rival would be granted access only if it is impossible for an undertaking with a comparable output to the dominant firm to develop such facility, which indicates that the Court applies a 'not yet as efficient' as test.

209 MEMO/08/19, available at http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/08/19 (awaiting the publication of the final decision of the Commission).

210 Behavioural law and economics have emphasized the consideration of status quo bias in envisioning consumer behaviour. See William Samuelson and Richard Zeckhauser, 'Status Quo Bias in Decision Making' (1988) 1(1) *Journal of Risk and Uncertainty* 7. On the importance of heuristics and biases in analysing behaviour, see Daniel Kahneman, Paul Slovic and Amos Tversky (eds), *Judgment under Uncertainty: Heuristics and Biases* (Cambridge: Cambridge University Press, 1982).

case of the browser, as contrasted with the media-player, there is almost full compatibility between the various browsers. Additionally, Firefox provides a plug-in that emulates Internet Explorer and can even be used for live updates from Microsoft that require Internet Explorer. As with the media-player analysis, there are no damages because of price competition, since all the browsers are distributed for free. Additionally, the almost full compatibility of browsers implies that the benefits of variety and quality will be smaller than in the media-player market. Thus, it seems likely that imposition of the 'must carry' remedy might be out of proportion in this case.

If the effects on consumers are considered to be more substantial, the 'must carry' remedy might be an appropriate remedy, although it could face some practical difficulties. The issue of the mandatory Java distribution was raised in the US Microsoft case.[211] The court found that a 'must carry' requirement would have not provided a substantial benefit to competition, once Microsoft's anti-competitive restraints on other channels of Java distribution were lifted by the other parts of the court's remedy (exclusivity arrangements).[212] The reason for the court's reluctance was, however, its uneasiness in granting a specific competitor, Sun Microsystems, an advantage in its efforts to compete with Microsoft, not accorded to other competitors in the industry. The court noted that 'favoritism of one market participant over another in a remedy provision places the Court in the improper position of exerting too much control over the market'.[213] An adequate remedy would provide equal treatment to third parties, in order to restore competition. For example, complainants should not be the only ones receiving the benefits of a 'must carry' obligation: any firm that is capable of challenging the dominant firm should be included in the design of this obligation. It follows that for the must carry obligation to function equitably, new products should also be periodically included. This could raise some practical difficulties, such as which browsers (from the five main ones and/or browsers from niche players) to include, and on what licence terms, as well as how to align the release schedule of these browsers with the release schedule of Windows, to be solved by further negotiation between the parties.

Negotiations between the Commission and Microsoft on whether to implement a version of a must carry rule gave rise to important recent developments. As previously explained, the Commission opened formal

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211 *New York* v *Microsoft*, 224 F.Supp.2d at 188–90.
212 224 F.Supp.2d at 189.
213 224 F.Supp.2d at 189.

proceedings on Opera's complaint in December 2007 and issued a Statement of Objections to Microsoft in January 2009. To terminate the Commission's current investigation in the Internet Explorer case, Microsoft initially announced[214] that it would not distribute the standard Windows 7 in Europe. Instead, it intended to produce and distribute in Europe a special edition of Windows 7 called Windows 7 E which would not have Internet Explorer or any other browser pre-installed, adopting the removal approach of the Windows XP N remedy imposed by the Commission in the WMP case, as the sole version of Windows in Europe. OEMs would have the option to install a web-browser of their choice as the default as well as include other browsers before the PC reached the final consumers.

As part of the initial proposal of Microsoft, European consumers who would buy an upgrade to Windows 7 for Windows Vista or XP, as well as those consumers who would buy Windows 7 and install it themselves from scratch on a 'naked' computer (which comes from the manufacturer without an operating system) would be given a version of Windows 7 E that would include a file transfer protocol (FTP) link to a website from which they could download and install Internet Explorer 8. The Commission applauded Microsoft's steps to provide OEMs more flexibility, but was critical of Microsoft's decision on the distribution of the retail upgrade or retail clean install.[215]

Based on that public feedback, as well as on private discussions, Microsoft withdrew its unilateral plan of distributing Windows 7 E[216] and proposed a final resolution that would commit[217] it to (i) distribute a 'ballot screen' through software update[218] to European users of Windows XP,

[214] See www.bloomberg.com/apps/news?pid=newsarchive&sid=abzAzMCoi3Rw.

[215] See Memo/09/272, 12 June 2009, available at http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/09/272&format=HTML&aged=0&language=EN&guiLanguage=en.

[216] See http://microsoftontheissues.com/cs/blogs/mscorp/archive/2009/07/31/windows-7-and-browser-choice-in-europe.aspx.

[217] Microsoft's Commitment to address the competition concerns identified by the European Commission in Case No. COMP/C-3/39.530, available at www.microsoft.com/presspass/presskits/eu-msft/docs/07-24-09Commitment.doc ('Commitment').

[218] The words 'ballot screen' were used inappropriately in the preliminary design of the remedy; the appropriate words are 'choice screen'. There is no ballot here and there is no decision by majority or any other rule that will be imposed on all participants. The screen will allow each consumer to set the default browser for him or herself, and allow the consumer to uninstall Internet Explorer.

Windows Vista, Windows 7, and Windows client PC operating systems, by means of Windows update; and (ii) allow both OEMs and users to turn on or off Internet Explorer.[219] Thus, the remedy does not only concern Windows 7. The European Commission received comments from third parties and finally accepted Microsoft's commitments by adopting an Article 9 Regulation 1/2003 decision on 16 December 2009[220].

This remedy may have far-reaching consequences on the structure of the web-browser industry and the distributional advantage of Internet Explorer. The choice screen will give those users who have set Internet Explorer as their default web-browser an opportunity to choose whether to install (and which) competing web-browser(s) in addition to the one(s) they already have.[221] Users will be able to select one or more of the web-browsers offered through the choice screen. Microsoft commits to distribute and install the choice screen software update 'in a manner that is designed to bring about installation of this update at a rate that is as least as high as that for the most recent version of Internet Explorer offered via Windows Update'.[222] It is also emphasized that 'nothing in the design and implementation of the Choice Screen and the presentation of competing web browsers will express a bias for a Microsoft web browser or any other web browser or discourage the user from downloading and installing additional web browsers via the Choice Screen and making a web browser competing with a Microsoft web browser the default'.[223]

The design of the choice screen attempts to represent as best as possible actual consumer preferences. At the same time, it avoids providing an excessively large choice that would have occupied a lot of disk space. The choice screen will be populated with the 12 most widely-used web-browsers that run on Windows 7 as measured semi-annually by averaging monthly usage share data for the previous six months for which data is available, with only one browser per vendor listed and shares for different released versions of the same vendor's browsers added together to determine the browser's total usage share[224] That will not include Internet

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[219] See www.microsoft.com/presspass/presskits/eu-msft/docs/ANNEX_A.doc for a detailed description of how this will be implemented in Windows 7.

[220] Commission Decision, Case COMP/C-3/39.530 – *Microsoft*, available at http://ec.europa.eu/competition/antitrust/cases/decisions/39530/final_decision_en.pdf (hereinafter EU Microsoft II decision), Microsoft's commitments are included in the Annex of the Commission's decision (hereinafter Commitments).

[221] Commitment above, para. 8.

[222] Commitment, para. 9.

[223] Commitment, para. 10.

[224] Commitment, para. 11 and 14.

Explorer "or any other browser which is based on Internet Explorer's rendering engine and the development or distribution of which is funded in whole or in substantial part by Microsoft"[225]. The choice screen will in a horizontal line and in an unbiased way display icons of the basic identifying information on the web browsers. In addition, the choice screen will prominently display the final releases of the five web-browsers with the highest usage share in the EEA, the remaining seven being displayed if the user scrolls sideways and in a random order[226]. In order to ensure a higher degree of transparency, only those web browsers included in at last two of the three data sources for usage share information for web browsers (ComScore, NetApplications and StatCounter) would be considered for the choice screen. These will be ranked according to the arithmetic means of their numerical ranks in the data sources, taking into account their best ranking in two data sources[227]. It is also specified that 'Microsoft will bear the costs of the technical implementation of the remedy in Windows and may not charge for the inclusion of a third party web browser in the Ballot Screen'.[228]

The 'must carry' remedy is limited to web-browsers and any web-browser vendor eligible to appear on the choice screen should refrain from installing additional software in the same download. This is an interesting hybrid. Microsoft has to include the promotion of competing browsers, but does not have to distribute the code of third parties' browsers. The duration of the commitment is five years, leaving a wide window of opportunity to Microsoft's rivals, and in particular Google, to take hold of a significant part of the web-browser market.

On turning Internet Explorer on or off, 'Microsoft will ensure that if Internet Explorer is turned off, then (i) it can only be turned on through user action specifically aimed at turning on Internet Explorer; (ii) the user interface cannot be called upon by applications; and (iii) no icons, links or shortcuts or any other means will appear within Windows to start a download or installation of Internet Explorer'.[229] A website will provide all necessary information about turning on or off Internet Explorer. In addition, Microsoft 'will maintain that page so that other browser vendors can link to it if they wish'.[230] In essence, the 'OEMs will be free to pre-install any web browser (or browsers) of their choice on PCs they ship and to set any

225 Commitment, para. 14.
226 Commitment, para. 13.
227 Commitment, para. 14.
228 Commitment, para. 14.
229 Commitment, n. 217 above, para. 1.
230 Commitment, para. 1.

browser as the default web browser'.[231] Microsoft has also committed 'not to retaliate against any OEM refraining from developing, using, distributing, promoting or supporting any software that competes with Microsoft web browsers' through an alteration of commercial relations with that OEM, or by withholding the application of preferential terms, or finally by entering into any agreement with an OEM that conditions the grant of any monetary payment, discount or the provision of preferential licensing terms or any other preferential treatment on the choice of Internet Explorer.[232]

In many ways, the European Commission's proposed outcome is similar to that of the US consent decree. The US consent decree allowed OEMs and final consumers to choose the default browser; similarly, OEMs and final consumers will choose the default browser in Europe. But there are also important differences.

First, the US consent decree was broader since it applied to all middleware, while the proposed EC outcome covers only browsers. Besides browsers, middleware includes email clients, audio-players, instant messengers, Java, and other software that functions between the operating system and applications.

Secondly, unlike in the United States, where all final consumers are given the opportunity to choose a default browser (and other middleware) through a 'set defaults' screen, Microsoft's commitment in Europe will give a choice of browser to final consumers *only* if their computer has Internet Explorer set as the default browser.[233] If the computer manufacturer has set up a browser other than Internet Explorer as the default, the final consumer will not be presented with the EC ballot screen or the 'set defaults' screen available to US consumers. Thus, the mechanism is tilted (i) against Microsoft since computers with a non-Internet Explorer default will not have the same choice (that might have resulted in Internet Explorer); and (ii) in favour of non-Microsoft *commercial* browser vendors (Chrome, Opera, Safari, etc.) who can compensate OEMs to set up their

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[231] Commitment, para. 2

[232] Commitment, paras 4–5.

[233] Also note that in the European Union, final users will be *automatically* prompted to choose a browser, if their computer came with Internet Explorer as the default, while in the United States they are not automatically prompted but just have the option of choosing defaults. See http://microsoftontheissues.com/cs/blogs/mscorp/archive/2009/07/31/windows-7-and-browser-choice-in-europe.aspx: 'Shortly after new Windows PCs are set up by the user, Microsoft will update them over the Internet with a consumer ballot software program. If IE is the default browser, the user will be presented with a list of other leading browsers and invited to select one or more for installation'. No choice screen will appear to users if Internet Explorer is not the default browser.

browser as a default (and then will not have the ballot screen appear to final consumers). This may favour non-Microsoft browser vendors that have the deepest pockets.

Thirdly, in the proposed EC outcome, Microsoft is obligated to line up many competitors' browsers for the final consumer to choose from. Thus, the Commission's proposed outcome is a 'must carry' rule imposed on Microsoft, especially since it applies only to computers where the OEM has installed Internet Explorer as the default. In the US middleware default set-up screen, the consumer is faced with a list of browsers chosen by his computer's manufacturer. Depending on the computer manufacturer's choices, this list could be extensive, but could also be limited to a single browser (Internet Explorer or another one) and the consumer would need to take extra steps to download other choices.

Fourthly, the proposed EC outcome allows OEMs and consumers to uninstall more layers of Internet Explorer, if they wish, than just the front end of Internet Explorer that the US decree allows. In the proposed EC outcome, an OEM may choose never to show the existence of Internet Explorer to the final customer. Even so, deeper layers of the Internet Explorer API will remain in Windows when Internet Explorer is 'off' and an applications manufacturer will be able to call and utilize the Internet Explorer API for both the 'on' and 'off' Internet Explorer functions. Additionally, users can always 'turn on' Internet Explorer even if the OEM has turned it off. OEMs cannot permanently disable Internet Explorer.

Fifthly, for an OEM that has chosen a default browser other than Internet Explorer in Europe, the operating system and security updates will not appear to be carried out through Internet Explorer. That is, even if Internet Explorer does the updates in the background, the consumer will see an interface that does not mention Internet Explorer.[234]

4. A CRITICAL DISCUSSION OF THE STRUCTURAL REMEDY OPTION

In thinking about a potential structural remedy in the EC case, it is worth discussing its imposition in the US case. This is because, in both cases, the issue was also leveraging monopoly power to a market of a complementary good.

In the US case, Judge Jackson adopted the plaintiff's remedies proposal

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[234] This means that the Windows updates will be provided in the same way they are provided today in Vista and in Windows 7 Release Candidate.

word-for-word and imposed a break-up of Microsoft into two 'Baby Bills',[235] an operating systems company which would inherit all the operating systems software, and an 'applications' company with all the remaining software assets. Cash and securities holdings of other companies held by Microsoft would be split between the resulting entities. Bill Gates and other officers of the company would not be allowed to hold executive and ownership positions in both of the resulting companies.[236]

In arguing for the break-up, the government put forward a number of reasons. But since there was only an extremely short formal hearing on remedies, there was no chance for both the government's and Microsoft's cases on remedies to be discussed and evaluated. The government and the judge have stated (formally and informally) the following arguments for a break-up:

(i) that they considered the repeated violations of antitrust law by Microsoft as an indication that Microsoft would not follow any conduct or contractual restrictions; in fact, in some informal remarks, government officials believe that they were 'tricked' by Microsoft in settling the 1995 case with terms that Microsoft was able to exploit;
(ii) that the lack of remorse by Microsoft's executives was a clear indication that Microsoft 'could not be trusted' to implement any other remedy;
(iii) that the break-up was a 'surgical cut' that would create the least interference with business;
(iv) AT&T and the rest of the telecommunications industry benefited from AT&T's break-up, and so should Microsoft and the software industry—after all both industries have network effects;
(v) the break-up would eliminate the incentive for vertical foreclosure; and
(vi) the break-up would reduce the 'applications barrier to entry' since now the applications company might write popular Microsoft applications (such as MS Office) for other platforms.

The government failed to show that the proposed (and later abandoned) break-up was the appropriate remedy. The US Department of Justice did

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[235] This is a word-play on 'Baby Bells' that was used in referring to *AT&T* and the first name of the co-founder and then CEO of Microsoft, Bill Gates.

[236] For a more detailed evaluation of the final US remedy, see Nicholas Economides, 'Comment of Nicholas S. Economides on the Revised Proposed Final Judgment in United States v. Microsoft', 22 January 2002, available at www.usdoj.gov/atr/cases/ms_tuncom/major/mtc-00022465.htm#comments.

not perform the appropriate cost-benefit analysis to show that conduct remedies were not sufficient and that a break-up was necessary. None of the affidavits in the remedies phase even approached a discussion on evaluating alternatives. Additionally, a few weeks before Judge Jackson's decision, under the supervision of Judge Posner, the government and Microsoft had reached a compromise that imposed only conduct remedies.[237] The government failed to justify why it was ready to compromise a few weeks earlier (in the settlement negotiated by Judge Richard Posner who was asked to try to find a settlement by Judge Jackson) on behavioural remedies, but later claimed that structural remedies were necessary. Harry First notes that the plaintiffs would probably have been more successful 'had they clearly had such a remedy in mind at an earlier stage in the proceeding'.[238]

The first argument of the government in support of a break-up does not stand to reason. The 1995 case was settled with a decree that explicitly stated that Microsoft could include in its operating system any additional functionality. It is reasonable that Microsoft (or any observer, including the US Department of Justice) would believe, given the 1995 consent decree, that adding browser functionality to Windows did not violate the consent decree.[239] This, of course, does not mean that adding such functionality would not violate antitrust law in general, but it lays to rest the idea that the government was tricked by Microsoft. The fact that companies and antitrust enforcers often have an asymmetry of information is very common and expected, and cannot be considered a 'trick', or a reason not to enter into agreements between antitrust authorities and companies.

The second argument of the plaintiffs in support of the break-up seems excessive. Antitrust enforcement is not an emotional tug of war in which the egos of either the plaintiffs or the defendants need to be satisfied. The show of remorse or lack thereof by Microsoft executives could not possibly define the remedy. We find it hard to believe that the judge would be correct in finding a different remedy appropriate if enough Microsoft executives simply showed public remorse. Moreover, Microsoft, like any other defendant, had a right to appeal (and it did so). A defendant's belief that he will prevail on appeal should not result in punishment.

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[237] The settlement was rejected by the states.

[238] First, n. 178 above, 32.

[239] The dispute regarding the application of the 1995 consent decree ended with a District of Columbia Circuit ruling in favour of Microsoft's understanding of the meaning of the decree. *United States* v *Microsofti,* 147 F.3d 935 (D.C. Cir 1998).

The third argument, that the break-up would be a surgical cut and therefore would disrupt the industry the least, is countered by the facts. A break-up of Microsoft would eliminate Microsoft as a flexible and formidable competitor. The wholehearted endorsement of a break-up by Microsoft's competitors in servers and back office (who were not found in the US case to have incurred damages through the Windows monopoly but would greatly benefit from the confusion and disruption created by a Microsoft break-up) is evidence that the break-up would be one of the most disruptive possible outcomes. Generally, break-ups of large companies are complicated and drawn-out affairs that disrupt the company that is broken up, the producers of complementary goods to its products, and its customers.

The fourth argument, that since AT&T's 1982 break-up was successful, so would Microsoft's, is incorrect. AT&T was divided into the long-distance company (AT&T), and seven regional operating companies, each of which remained a regulated local telecommunications monopoly until 1996. The destruction of AT&T's long-distance monopoly encouraged competition, which brought sharply lower prices and immense consumer benefits. However, there are a number of key differences between the two companies and their competitive situations, and these differences make it very likely that a Microsoft break-up, besides harming Microsoft, would harm consumers and the computer industry.

In 1981, AT&T was a 100-year-old regulated monopoly with many layers of management. For historical reasons, the local phone companies within the old AT&T, such as New York Telephone, were managed separately from the 'long lines' division. Thus, it was not difficult to separate the divisions since they functioned on many levels as separate companies. AT&T also had an abundance of managers to help cope with the break-up. By contrast, Microsoft is a young, entrepreneurial company run by few top executives, and its divisions are fluid. While this has made Microsoft an efficient and successful company, it also means that a break-up would have posed significant managerial problems and severely reduced the company's flexibility. Finally, AT&T was a regulated utility, and regulation guaranteed that the companies emerging from the break-up stayed interconnected. In contrast, the Microsoft break-up would likely to lead to incompatibilities and further loss of efficiency.

The US Department of Justice's two-way break-up plan was premised on the hope that an autonomous applications company would create a new operating system to compete with Windows. But at trial it was stipulated that more than 70,000 applications run on Windows, creating what the government called 'the applications barrier to entry' in the operating systems market. The new applications company, however capable, would be unlikely to be able single-handedly to create a successful rival operating system in short order.

The break-up of Microsoft, first proposed by the government, imposed by Judge Jackson, and, after the District of Columbia Court of Appeal's decision not pursued by the government, would have had detrimental effects. First, the break-up would probably have resulted in higher prices. If the US Department of Justice was correct and Microsoft kept its OS prices low so that it could exercise its monopoly power in the adjacent browser market, the post-break-up 'Baby Bill' that would inherit the operating system would have no incentive to keep the price low. The OS Baby Bill would no longer have the incentive to disadvantage any applications companies. Thus, if the US Department of Justice's theories are correct, the OS Baby Bill would exercise its monopoly power and raise the price of the operating system to the detriment of consumers. If the US Department of Justice was correct and Microsoft has significant monopoly power because of the 'applications barrier to entry', higher prices would be the direct result of the break-up. Secondly, as explained earlier, the break-up would likely eliminate the efficiencies that make Microsoft a flexible and formidable competitor.

A break-up would likely temporarily eliminate the incentive for interference from operating systems to applications and vice versa. Of course, the same can and has been accomplished by conduct restrictions without the cost and the disruption of a break-up. Moreover, the district court's break-up proposal did not impose permanent restrictions on the post-break-up functions of the resulting companies. The OS and the applications Baby Bills would have been able to enter into each other's business soon after the break-up. It is very likely that a few years after such a break-up, one of the resulting companies would dominate both markets.

Alternative Remedies

The difficulty of devising adequate remedies that address the applications entry barrier issue as well as the distributional advantage of Windows, and the alleged 'failure' of the traditional conduct remedies employed in this case,[240] led some commentators to suggest alternative and unconventional remedies, including non-antitrust alternatives.

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240 Carl Shapiro, 'Microsoft: A Remedial Failure' (2009) 75 *Antitrust Law Journal* 739.

Public procurement procedures as an antitrust remedy: reducing the applications barrier

Regulation is not the only way states can intervene in the marketplace. Increasingly, state ownership and/or state contracting/spending are employed in order to achieve specific public policy objectives.[241] Competition in the marketplace might be one of those objectives. Professor Herbert Hovenkamp raised the possibility of public contracting being used as a tool to reduce Microsoft's applications barrier to entry, and gave the example of Alco, where the government sold the productive capacity of aluminum it owned under the conditions of the Surplus Property Act, which 'required the government to consider the impact on competition whenever it sold a significant piece of private property to a private firm' and excluded Alco from participating to the bid for government plants.[242] According to Hovenkamp, '(t)oday the government could do something similar by requiring its departments and agencies to use open-source software as an alternative to Microsoft's products'.[243]

This would increase the open source software installed base, as governments are among the principal purchasers of software products, and would help the economy move from a monopolized to a competitive computer platform network. The benefits for innovation would be particularly important, as recent studies have showed that innovative incentives (investments in applications) are sometimes greater for open source than for proprietary software platforms.[244] Microsoft would be able to participate in the government bidding process, under the condition that it submits its own open source products, either by developing new products or by making public the source code of Windows. This may improve allocative efficiency, as the government would also be able to purchase software products at a lower price (not including remuneration for intellectual property rights), and dynamic efficiency with increased competition between different products (assuming that a competitive market is better suited for innovation than a monopolistic market for software products).

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241 See Christopher McCrudden, *Buying Social Justice* (Oxford: Oxford University Press, 2007).

242 Herbert Hovenkamp, *The Antitrust Enterprise* (Cambridge, MA: Harvard University Press, 2005), p. 302.

243 Hovenkamp, n. 242 above.

244 Nicholas Economides and Evangelos Katsamakas, 'Linux v. Windows: A Comparison of Application and Platform Innovation Incentives for Open Source and Proprietary Software Platforms' in Juergen Bitzer and Philip J.H. Schroeder (eds), *The Economics of Open Source Software Development* (Elsevier Publishers, 2006), available at www.stern.nyu.edu/networks/Economides_Katsamakas_Linux_vs._Windows.pdf.

One could also envision as a condition for Microsoft's participation in a call for tenders the unbundling of its applications from the operating system so as to guarantee an installed base to competing formats, or a wide interoperability with all existing or new formats. Of course, any imposed restriction of software choice would also precipitate reductions in utility of government users, at least in the short run. These utility losses of the Hovenkamp proposal have to be considered and balanced with the potential benefits outlined above.[245]

The decision of the Brazilian government to switch from Microsoft proprietary software to open source software and to pass legislation making the use of open source software mandatory for governmental departments was reportedly aiming to force Microsoft to rethink its business model.[246] The German government has also adopted guidelines for federal, state and local governments, as well as other public sector agencies, interested to migrate from Microsoft proprietary technology to open source software and signed contracts with IBM for computer systems based on Linux operating systems.[247]

These initiatives may have influenced Microsoft's progressive commitment with interoperability, and probably led to the publication of the 'interoperability principles.[248] An example may be the interoperability of Microsoft's former proprietary OOXML (Office Open XML file format), now a formal ISO standard,[249] with the OpenDocument Format (ODF) standard, which is supported by Sun Microsystems, IBM, Novell, Nokia,

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[245] Additionally, there would be far-reaching effects into the realm of industrial policy if the government specified a particular model of software development, predicting what finished software products would provide the greatest value per dollar spent. If Microsoft is forced to make the Windows source code public, this would reduce Microsoft's incentives to drive that product forward with new innovations, as others could then offer essentially the same product for free, possibly only subject to risk of patent infringement suits. Also, there is no significant evidence that the open source model can become a replacement for for-profit software. See Nicholas Economides and Evangelos Katsamakas, 'Two-sided Competition of Proprietary vs. Open Source Technology Platforms and the Implications for the Software Industry' (2006) 52 *Management Science* 1057, available at www.stern.nyu.edu/networks/Economides_Katsamakas_Two-sided.pdf; Economides and Katsamakas, n. 244 above.

[246] See Steve Kingstone, 'Brazil adopts open-source software', BBC News, 2 June 2005, available at http://news.bbc.co.uk/2/hi/business/4602325.stm.

[247] See 'IBM signs Linux deal with Germany', BBC News, 3 June 2002, available at http://news.bbc.co.uk/2/hi/business/2023127.stm.

[248] See www.microsoft.com/interop/principles/default.mspx.

[249] See http://en.wikipedia.org/wiki/Standardization_of_Office_Open_XML#cite_note-0.

Intel and Red Hat. This led to the release of Microsoft Office 2007 service pack 2, a product that, according to Microsoft, 'provides built-in support for more file formats than any other productivity suite on the market' and which comes with a 'new programming interface that will make it easy for developers to make any other document format show up in the drop down menu and be selected by users as their default, putting it on a par with the major formats already supported in Office 2007'.[250] This business culture evolution may have been provoked by the recent competition law challenges on interoperability and the use of public procurement as a way to increase competition in the marketplace. The cumulative impact of these combined antitrust and non-antitrust remedies is outside the scope of this study and should be empirically examined.

Standard setting organization and de facto versus de jure standardization

The alleged de facto standardization of the Windows architecture work group computing environment or the Windows media-player platform through the leveraging of Microsoft's dominant position in the operating systems market was a development that both the European Commission and the CFI abhorred.[251] The CFI was particularly clear that its reservations did not concern the process of standardization, which may provide benefits to consumers, but the way this de facto standardization took place in this particular case. The Court noted that '(a)lthough, generally, standardization may effectively present certain advantages, it cannot be allowed to be imposed unilaterally by an undertaking in a dominant position by means of tying'.[252]

A possible alternative is to delegate the task of developing interoperable standards to an SSO, which will assist the competition law authority or court with a burdensome monitoring mechanism in implementing interoperability requirements. In this case, the standard will not emerge by a process of de facto standardization by a dominant firm but will be the outcome of negotiations. The SSO's activity will be closely monitored

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[250] See http://microsoftontheissues.com/cs/blogs/mscorp/archive/2009/04/28/following-through-on-our-commitment-to-interoperability.aspx.

[251] See Decision, para. 779, where the Commission noted that the position of Microsoft on the client PC operating systems market will enable it to 'determine to a large extent and independently of its competitors the set of coherent communications rules that will govern the de facto standard for interoperability in work group networks'. But note that standardization to WMA and WMV never occurred, but was assumed by the Commission to be later disproved in actuality. Today, as well as before the imposition of the Windows XP N remedy, WMA and WMV are not dominant media formats.

[252] CFI judgment, para. 1152.

in order to avoid cartel-like behaviour or deceptive conduct, and to guarantee transparent and open procedures.[253] However, different problems with this specific solution are the imbalance of power between Microsoft and its competitors in the SSO and the subsequent risk that the standard approved will not be 'sufficiently' interoperable with competitors' products.[254] Additionally, the standard setting process is slow and could thus retard innovation in some dimensions while accelerating it in others. Furthermore, an agreement by competitors on a standard tends to restrict competition because competitors are limited largely to competing within the specific narrow confines of the standard, that is, just the best implementation of it. It follows that breakthrough innovation with alternative approaches tends not to occur because everyone is focused on implementation of the standard.

5. CONCLUSION

The success or the failure of the remedial action in the US and the EC Microsoft cases is still, five years after the District of Columbia Circuit decision on remedies in the United States and the same period since the Commission's Decision, a matter of controversy.[255] Some tend to link the alleged failure of the remedy, or its unexpected costs and scope, with the issue of liability, professing the notion of what has become known as 'if

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[253] See Philip J. Weiser, 'Regulating Interoperability: Lessons from *AT&T*, *Microsoft*, and Beyond' (2009) 76 *Antitrust Law Journal* 271. See, however, the rejection of the 'truth-in-standards' provisions suggested to the non-settling states by the District of Columbia Circuit on the ground that these were unrelated to the violation found. The non-settling states would have required Microsoft to continue supporting any industry standard it has publicly claimed to support until it publicly disclaims such support, or the standard expires or is rescinded by the standard setting body, and to continue to support an industry standard any time it makes a proprietary alteration.

[254] See the recent investigation by the European Commission of the interoperability of OOXML, which was approved as an ISO-recognized international standard in April 2008. However, there have been allegations (currently being investigated by the European Commission) that there have been irregularities or attempts to influence the vote at the European Committee for Standardization and the International Organization for Standardization, thus illustrating the difficulties of guaranteeing the transparency of the process. See www.pcworld.com/article/144036/microsofts_iso_win_may_raise_antitrust_issues.html.

[255] See, most recently, the exchange between Shapiro, n. 240 above and Keith N. Hylton, 'Remedies, Antitrust Law and Microsoft: Comment of Shapiro' (2009) 75 *Antitrust Law Journal* 773.

you cannot fix it, it isn't broken'. Although it is clear that, in principle, the costs of remedies should not outweigh the consumer benefit they achieve, it is also contended that plaintiffs employ a sequential information model that addresses one issue at a time. It would be therefore inappropriate to dismiss a case simply because the plaintiff did not identify an adequate remedy. Harry First rightly observes that 'it seems inevitable that plaintiffs will refine their case as they learn more in the course of the litigation process', in particular in high-tech industries where technological change is so complex and so rapid that there is a need for quick action.[256]

At the same time, the litigation process is cheap compared to competition in price or product development. Thus, rivals have significant incentives to sue global dominant firms on multiple grounds and in multiple jurisdictions with the expectation that some suit will ultimately be successful in some jurisdiction. And, sometimes, one or more of these cases is picked up and pursued by an antitrust authority, as happened with the two cases against Microsoft, one in the United States and one in the European Union. To some extent, the lack of fully-thought-out remedies in both of these cases is a consequence of the history of the cases, i.e., how they were started by allegations of rivals who were primarily interested in improving their competitive position vis-à-vis the dominant firm rather than remedying all the consequences of anti-competitive behaviour.

The anti-competitive effects of these practices were clearly identified and a dominant narrative emerged as a retrospective rationalization of different practices and strategies adopted by Microsoft that harmed consumers: the maintenance of monopoly story in the US case and the leveraging story in the EC case. The identification of a specific consumer harm story could operate as a limit to the identification of adequate remedies. Antitrust liability stories transcend the different stages of a case, including the issue of remedies that need to address the specific consumer harm. The US Microsoft case was problematic in this respect as there was no a direct link between the antitrust liability story of maintenance of monopoly and the forward-looking remedies adopted. It is clear that Microsoft executives were concerned by the potential (but unlikely) erosion of the Windows platform's ubiquity from the joint actions of Sun and Java. The competitive threat to Windows did not materialize but Microsoft raised the walls of its fortress preventively in order to defend its position from Java's and Sun's naval attack (if one employs Carl Schapiro's fortress metaphor).[257] But is it legitimate to require dominant firms to bring down the walls of

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256 First, n. 178 above, 31.
257 Shapiro, n. 240 above, 747.

their fortress or to keep them at the same level they were before, when they identify, perhaps wrongly, the existence of a potential threat of attack? There is a fine conceptual line between an illegitimate preventive wall-raising exercise and a legitimate meeting of competition defence. Lowering the wall some centimetres will certainly be an option, but the question will then be of how much lower and for what reason.

In comparison, the narrative of the first EC Microsoft case fits better with the remedies imposed. The issue here was that the dominant firm was using an existing fort to attack a new area and extend its fortification. The dominant firm would have thus been able to reinforce the defences of its existing fort and to increase the risks for those attacking it. The remedy in this case seems more straightforward in comparison with the previous setting: terminating the extension of the fortification will bring the end of both the ambition to reinforce the existing fortifications and to occupy a new area.

What this metaphor shows is that the choice of the adequate narrative among different consumer harm stories should correspond to the remedy sought. This was certainly the case with the EC Microsoft case but not with the US Microsoft case, where the difficulty for the leveraging argument to be accepted by the courts, as well as a change in the administration and possibly the reframing of the government's claim,[258] led to the development of a narrative (maintenance of monopoly) that had only an indirect link with the bulk of the forward-looking remedies that were finally imposed.

This mismatch between the consumer harm story/narrative and the remedy sought is also manifest in the second EC Microsoft case. Although the Commission seemed to advance a consumer harm story based on the relatively favourable (for its position) case law on tying, establishing some form of quasi per se illegality of tying if a company has a dominant position, the 'must carry' commitment accepted by the Commission as an adequate remedy for the competition problem does not address this particular issue. Unbundling would have certainly looked like the most adequate remedy for a leveraging concern. However, the Commission reacted negatively when Microsoft decided to unbundle Internet Explorer from Windows 7 E. The 'must carry' remedy adopted fits better with an essential facilities case, where Windows would have been considered indispensable for the distribution of a web-browser. We do not criticize the remedy as such, which could perhaps prove to be effective, in terms

[258] Harry First and Andrew I. Gavil, 'Re-framing Windows: The Durable Meaning of the Microsoft Antitrust Litigation' (2006) *Utah Law Review* 679, 682.

of reinvigorating competition in the web-browser market, but rather the apparent mismatch between the consumer harm story and the remedy. It would be particularly damaging for the development of competition law and economic growth in general if plaintiffs could employ the less demanding (in terms of standard of proof) theory of consumer harm in order to achieve the most far-reaching (in terms of commitments from a dominant firm) remedies. The problem cannot be solved by the characterization of the Microsoft case as strictly a 'tying' case. The classification of abuses under Article 82 EC is not a clear-cut exercise and there is always a fine conceptual line that distinguishes different categories of abuses, if one takes an effects-based approach.[259]

[259] See Ioannis Lianos, 'Categorical Thinking in Competition Law and the "Effects-based" Approach in Article 82 EC' in Ariel Ezrachi (ed.), *Article 82 EC: Reflections on its Recent Evolution* (Oxford: Hart, 2009), pp. 19–49.