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Claudia Koch

Incentives to Innovate in the Conflicting Area between EU Competition Law and Intellectual Property Protection – Investigation on the Microsoft Case

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Incentives to Innovate in the Conflicting Area between EU Competition Law and Intellectual Property Protection – Investigation on the Microsoft Case

by

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A. Introduction

On March 24, 2004 the Commission adopted a decision against *Microsoft* in a proceeding under Article 82 EC Treaty (now Article 102 TFEU), which was confirmed by the Court of First Instance (CFI), and applied with 497 196 304 EUR the highest fine so far in European history. The CFI's judgment was the culmination of one of the biggest antitrust battles ever to have taken place in Europe.

Microsoft has abused its dominant position under Article 82 because it had engaged in two kinds of abusive conduct: first the refusal by *Microsoft* to supply its competitors with "interoperability information" and to authorize the use of that information for the purpose of developing and distributing products competing with *Microsoft's* own products on the work group server operating systems market, and second by tying its Windows Media Player to its Windows client PC operating system.[1] As a result, *Microsoft* was able to secure a dominant position in operating systems for work group servers, wherein the Commission saw a risk that competition on this market as a whole is eliminated, the innovative power is curbed and consumers are harmed through higher prices and less choice. As a remedy for the interoperability infringement, the Commission ordered *Microsoft* to disclose complete and accurate interface specifications to its competitors on the work group server operating market.[2]

The *Microsoft* decision started off again the debate on the question of the tension between protecting intellectual property rights (IPRs) on the one hand and the possibilities of intervention of antitrust law on the other.[3] In the present thesis this problem is to be explored on the basis of the EU *Microsoft* case. The question will be addressed of when it is permissible (in the public interest) to encroach upon the exclusivity of ownership of intellectual property rights, by requiring the grant of licenses to third parties seeking to enter or remain in the market.[4] Antitrust intervention in such cases is called "compulsory licensing", named after the remedy usually ordered following the finding of an infringement of Article 82.[5]

1 The consequence of the latter is the restriction of competition in the multimedia player market. However, the tying abuse will not be treated any further in this thesis. Commission Decision of 24 May 2004 relating to a proceeding pursuant to Article 82 of the EC Treaty and Article 54 of the EEA Agreement against Microsoft Corporation (Case COMP/C-3/37.792 — Microsoft) (summary), OJ EU No. L32/23, 06.02.2007, para. 2.

2 This should happen within 120 days, permitting non-*Microsoft* work group server to communicate with Windows PCs and servers without restrictions. This enables rival vendors to develop operating systems for workgroup servers that are competitive in the market. The disclosed information must be updated each time *Microsoft* brings new versions of the products on the market. If the interface information were protected by intellectual property rights in the EEA, *Microsoft* would be entitled to reasonable compensation. „The disclosure order concerns the interface documentation only, and not the Windows source code, as this is not necessary to achieve the development of interoperable products.“; *European Commission*, IP/04/382, 24.03.2004, available at: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/04/382&format=HTML&aged=1&language =DE&guiLanguage=en> (last visit: 30 March 2011).

3 *Lange*, Geistiges Eigentum, 131.

4 *Curley*, Journal of World Intellectual Property 11 (2008), 296 (296).

5 *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 6.

IPRs shall prevent third parties from benefiting from free riding on foreign investment and efforts; they are incentive and motivation to be creative and innovative.[6] Both the intellectual property rights and competition law have the main objective to promote the welfare of consumers and an efficient allocation of resources, both are needed to promote innovation and ensure a competitive exploitation.[7] But while competition law tries to achieve this by eliminating anti-competitive behavior, intellectual property law pursues this aim by creating legal monopolies, a kind of legally guaranteed competition-free zone.[8] Thus, both are fields of law which (can) conflict. However, they have to co-exist and can (or rather should) complement each other to find the most appropriate route to innovation – even if their relationship is very complex. European Courts continue to develop tests to establish the boundaries between these two systems.[9]

Article 82 ECT (Art. 102 TEUF today[10]) is of particular relevance in this respect within the EU competition law system, since the concept of 'abuse of a dominant position' contained in that Article may take the form of an abuse of IPR by a dominant undertaking.[11] According to Article 82, which was the basis in the *Microsoft* decision, it is essential that the owner of an IPR holds a dominant position, which he abuses through the acquisition or use of this protected right.[12] The Article requires deciding whether a company is obliged to grant a license for know-how or provide interface information because the requested information (even if it is protected by IP rights) is an essential facility.[13] Thus, the essential function of an IP right finds its limits where the protected information is such an "essential facility". However, it is not easy to determine under which circumstances interoperability shall be regarded as essential facility – often it is a fine line between "essential to compete" and "it would make my life easier".[14]

The assessment of the Commission and the Court in the *Microsoft* case will now be investigated and reviewed. In addition to the *Microsoft* decision, for a better understanding it will be fallen back to earlier decisions regarding the balancing of competition law and IP protection, and searched for matches and advancements. After all, *Microsoft* is not the first case at the intersection of IP and antitrust, but rather the latest of a series of cases defining the limits of competition law in the presence of intellectual property. The current state of law with respect to the application of Article 82 in such cases will be elaborated and the *Microsoft* decision will be examined critically towards its effects on incentives to innovate. But first, the importance of

6 *Lange*, Geistiges Eigentum, 131.

7 Commission Notice – Guidelines on the application of Article 81 of the EC Treaty to technology transfer agreements (2004/C 101/02), 27.04.2004, para. 7.

8 *Arutyunyan*, IP law 167 (168).

9 *Maher*, The Competition Law Review 1 (2004), 1 (2).

10 The old Article 82 ECT does comply with the new Article 102 TEUF. However, as all the relevant cases and decisions were issued before the Lisbon reforms, I will keep to the old denotation.

11 *Vesterdorf*, Global Antitrust Review 1 (2008), 1 (2).

12 *Lange*, Geistiges Eigentum, 133.

13 The „essential facility doctrine" has been developed in connection with physical assets, e.g. the access to ports, bridges etc. The doctrine will be treated in chapter B.IV.

14 *Reimann*, The Competition Law Review 1 (2004), 49 (51).

innovation and IPRs in general will be addressed, and the tension and conflicts with competition law will be described. After this the relevant legal provisions for this context will be considered.

B. Striking the Balance between Antitrust and IP for Optimal Innovation

I. The Relevance of Innovation and Intellectual Property Rights

Since the 16th Century, the idea of progress and innovation is one of the central principles of our culture.[15] Every company strives for substantial and sustainably profitable growth, so that its ability to act is secured. In this regard, innovations constitute a crucial success factor for a whole economy, an industry and every company – they are the driving forces of our economy.[16]

> „Just as energy is the basis of life itself, and ideas the source of innovation, so is innovation the vital spark of all human change, improvement and progress."[17]

From an economic perspective, innovations are closely linked to economic growth and welfare. Innovation means better products and more choice for consumers, and possibly lower prices.[18] But they are also crucial for every single firm: „Any business faces two basic demands: it must *execute* its current activities to survive today's challenges and *adapt* those activities to survive tomorrow's… The evidence suggests that most companies are far better at the *executing* half of the dialectic than at the *adapting* half"[19]

In a knowledge-based economy, companies need to develop new products and services in order to increase their turnover. In today's business environment, given intense competition and uncertainty of the market, companies must come up with new ideas and concepts in order to remain competitive and profitable. It is only through innovation that they can create values and differentiate themselves from competitors.[20] Still, enterprising spirit and ingenuity may also involve risks – last but not least financial ones.

Launching new products is costly and without protection of intellectual property competitors could appropriate the invention before the original creator was able to earn a profit from her investment. Thus, by assigning exclusive rights, such as patents or copy rights, in the outcomes of intellectual and creative efforts the incentives to develop new products increase. Through intellectual property rights innovations disseminate, the commercial development of ideas gets facilitated and they may also contribute to coordination of follow-on research. All in all, the most frequently noted

15 *Wahren*, Innovationen, 10.
16 *Berndt*, in Berndt (ed.), Erfolgsfaktor Innovation, 3 (3).
17 Attributed to *Theodore Levitt*, see: *Sarkar*, Innovation, 10.
18 *Forrester*, Competition and IP, 7.
19 *Beinhocker*, The McKinsey Quarterly 2 (2006), 76 (77 *et seq.*).
20 *Sarkar,* Innovation, 7 *et seq.*

economic rationale for IP protection is that it encourages private investment in R&D and spurs innovation[21] through "the lure of future profits".[22]

Abraham Lincoln once perfectly summarized the traditional goal of IPRs with his statement that patent law "secured to the inventor, for a limited time, the exclusive use of his invention; and thereby added the fuel of interest to the fire of genius, in the discovery and production of new and useful things."[23] Thus, the very purpose and the very subject-matter of an IPR is that the holder enjoys an exclusive right and that it is therefore for the holder – and for him alone – to decide: if, how, when, and under which conditions he wants to exercise his right. He can decide whether he himself will use the patent to exploit the invention for the purposes of production for example; alternatively he can decide to license the IPR to another party, in which situation he enjoys the right to determine on which economic terms and for how long the license will be granted.[24]

It seems not to be seriously disputed that strong intellectual property rights encourage economic development[25] – and *vice versa* weak IP protection may discourage investment in research and development and reduce innovation.[26] The European Commission as well recognizes the role of IP laws as an important element of the institutional infrastructure for encouraging private investment in research and development.[27] The political philosophy behind IP laws, which is to advance public welfare, can be better understood when one considers what would happen without any IP protection: As invention and creation require the investment of resources such as time and often expenditures on facilities, prototypes, supplies, etc., individuals in a private market economy will not invest sufficiently in invention or creation unless the expected return exceeds the costs from doing so – unless they can reasonably expect to make a profit from the endeavor. Thus, to give inventors control over the use and distribution of their ideas and to encourage them, the legislator has created IP rights.[28]

However, the IP system comes at a price: "Granting exclusive rights in IP denies society the benefit of using and possessing something that all people could use and enjoy concurrently. It interferes with diffusion of ideas, follow-on innovation and limits the options for putting these ideas to work. It prevents competition in the commercialization of artistic works and scientific inventions and usually gives IP holders some power over prices. Though – as outlined above – it may be necessary to allow the creators to recover of R&D expenditure and to create incentives for follow-on innovation, it also means higher prices for consumers in short run"[29] Anyway, IP laws are designed to strike a balance between the divergent interests of IP owners and users by granting the former exclusive rights and protecting the interests of the latter

21 *Czapracka*, Yale Journal 9 (2006/2007), 44 (72 *et seq.*).
22 *Forrester*, Competition and IP, 7.
23 *Dolmans/O'Donoghue/Loewenthal*, Competition Policy International 3 (2007), 107 (108).
24 *Vesterdorf*, Global Antitrust Review 1 (2008), 1 (2).
25 *Forrester*, Competition and IP, 2.
26 *Ibid*, 7.
27 Commission Notice – Guidelines on the application of Article 81 of the EC Treaty to technology transfer agreements (2004/C 101/02), 27.04.2004, para. 7, also see: *Forrester*, Competition and IP, 2.
28 *Lemley*, Southwestern Journal of Law and Trade in the Americas 13 (2007), 1 (5).
29 *Czapracka*, Yale Journal 9 (2006/2007), 44 (72 *et seq.*).

through a variety of exceptions and limitations (limited duration, protection of only certain aspects….).[30]

Concern is also expressed towards IPRs as some claim that too many IPRs are granted and for overly broad subject matters, that patent thickets can stifle innovation and increase costs.[31] Under certain circumstances IPRs may also create barriers to enter a market and enhance market power.[32] Especially the inherent feature of the IPR to grant exclusivity combined with market power may give rise to competitive concerns.[33] Exclusive rights are always open to abuse and so their operation should be observed with caution.[34]

Thus, concerns are especially expressed with emphasis when it comes to dominant undertakings – as in the case of *Microsoft*. Though IPRs equally do apply to such companies as well, being in principle just as entitled to exercise and use the rights as any other (non-dominant) IPR holder or to (refuse to) license,[35] there might occur some problems and limitations to that, as it will be outlined later. Concerning dominant undertakings, one problem might be that they may use their IPRs in an anticompetitive manner and prevent new products from coming into the market.[36] "Difficult questions often arise when standards that allow interoperability of products or services incorporate technologies covered by IP rights held by one person or entity."[37] The key question is whether and how antitrust should intervene when IP rights give rise to such problems.

II. The Intersection of IPRs and Competition Law

The role of antitrust is the protection of competition and the competitive process by preventing certain types of conduct that threaten a free market. It is the guiding principle of modern antitrust law that competition is generally desirable in order to achieve economic efficiency, as the produced output is higher and prices are lower.[38]

The interaction between IP and antitrust however is quite complex. One can argue that there is a tension as IP rights prevent competition in the sale of the protected work or invention by granting the right to exclude (thus creating a monopoly) and therefore may allow the IP right holder to raise the price above the marginal cost of reproduction – fewer people will buy it, paying more for the privilege. IP rights seem to run counter to free market competition. They impose costs on the public which can only be justified if the advantages (thus the encouragement of

30 *Czapracka*, IP and the Limits of Antitrust, 43.
31 *Dolmans/O'Donoghue/Loewenthal*, Competition Policy International 3 (2007), 107 (108).
32 "Barriers to entry are generally defined as factors that allow incumbent companies earn supra-competitive returns without attracting entry. A patent, for example, may be a barrier to entry if it controls the only available technology", *Czapracka*, Yale Journal 9 (2006/2007), 44 (53).
33 *Ibid*, 44 (47).
34 *Turney*, Northwestern Journal of Technology and IP 3 (2005), 179 (181).
35 *Vesterdorf*, Global Antitrust Review 1 (2008), 1 (2).
36 *Czapracka*, Yale Journal 9 (2006/2007), 44 (74 *et seq.*)
37 *Ibid*, 44 (44)
38 *Lemley*, Southwestern Journal of Law and Trade in the Americas 13 (2007), 1 (5, 6).

creation and dissemination of new works) offset those costs. To balance these costs and benefits IP rights are limited in their scope, duration, and effect.

However, it is a much too simplistic assessment to say that IP rights create monopolies and antitrust is designed to prevent monopoly, so both are in conflict – indeed this is wrong, or at least oversimplified! There is a difference between the exclusive right created by IP and the economic monopoly antitrust deals with. Just consider that the majority of patented products are commercial failures and even in the case of success have to compete with many other products. Furthermore it is not true that antitrust forbids monopolies – it never made them illegal, but rather deals with anticompetitive *conducts* designed to achieve market power. The optimal balance between antitrust and IP protection is the key to economic efficiency.[39]

When it comes to efficiency, however, one has to distinguish between *static* and *dynamic* efficiency. The former focuses on *present market terms* with its main concern on the level of prices, and postulates minimal IPRs. Dynamic efficiency is concerned with *long-term* effects such as the level of innovation.[40] Thus, finding the optimal balance is not easy, as IP and antitrust do have some opposing characteristics. While IPRs aim to stimulate *long-term* innovation through excluding others (and therefore restricting competitors), competition law, which aims at ensuring undistorted and unrestricted competition, is more *short-term* oriented. Therefore, from a short-term perspective it would indeed be possible to make consumers better off by making IP freely available (there are benefits but no costs). However, long-term-oriented IP law recognizes that this would make consumers worse off, because innovation will decline. Though IP thus involves static inefficiency, it is socially desirable if its *ex ante* incentives to innovate are sufficiently great.[41]

Indeed, IPR and competition law do share a common economic goal: to maximize wealth by producing what consumers want at the lowest cost. The patent monopoly serves to provide something which consumers value and could not have if there was not patent protection. Both laws share the goal of output expansion. Since there would not be enough incentives to invent without IPRs, and inventions are only profitable if consumers are willing to pay what the patentees charge, consumers are better off than without the invention, even if they are charged "monopoly" prices. Thus, the trade-off (some monopoly restraint for greater output in the long run) is in the interest of socially desirable resource allocation. The two laws therefore are not in conflict – they rather are complementary efforts to promote an efficient marketplace and long-run, dynamic competition through innovation.[42] IP protection "is not separate from competition principles, but rather, is an integral part of antitrust policy as a whole. Intellectual property rights should not be viewed as protecting their owners *from* competition; rather, IP rights should be seen as encouraging firms to engage *in* competition, particularly competition that involves risk and long-term investment. Properly applied, strong intellectual property protection creates the

39 *Ibid*, 1 (9-11).
40 *Czapracka*, Yale Journal 9 (2006/2007), 44 (75 *et seq*.).
41 *Ibid*, 44 (75 *et seq*.).
42 *Lemley*, Southwestern Journal of Law and Trade in the Americas 13 (2007), 1 (11 *et seq*.).

competitive environment necessary to permit firms to profit from their inventions, which encourages innovation effort and improves dynamic efficiency."[43]

However, IP rights may enable creators to obtain unwarranted market power, so antitrust has to address conducts of that sort. Overly strong IP laws unduly interfere with competition and therefore reduce welfare unnecessarily – the same is valid in reverse: overly aggressive competition law may privilege static efficiency over innovation, reducing long-term welfare. Both laws must be balanced.[44] Competition law is a useful tool to balance exceptional individual situations in which IPRs may not achieve (or even obstruct) the innovation policy goal and may infringe competition law.[45] IPRs are not immune from antitrust intervention; nevertheless their special features must be taken into account when antitrust law is applied to them. Antitrust may be used to define the scope of IPRs. However, its application to IPRs can lead to under- or over-enforcement – careful balancing is indispensable.[46] It should not be used in a way which abolishes the very subject-matter of the IPRs, but rather only to the extent necessary to avoid an abuse by the right holder. The difficult question indeed is: When is the use or the exercise of IPRs abusive? In recent years, the most controversial aspect concerns whether and in what circumstances a refusal to license an IPR may constitute an abuse of a dominant position contrary to Article 82.

Just simply because an IPR holder refuses to grant a license as such is not enough to constitute an abusive conduct – there must be other circumstances to make this abusive. Looking at the former European case law on that subject reveals that the problematic question of whether or not the relevant right holder was entitled to refuse to grant a license to another party consists of only a handful of judgments.[47] They were relied upon by the Court of First Instance in its *Microsoft* judgment and will therefore be treated in Chapter C. But first, the legal context with the relevant provisions should be examined.

III. Relevant legal Provisions

1. *Article 295 ECT*

Art. 345 TFEU (former Article 295 of the EC Treaty) reads: *"The Treaties shall in no way prejudice the rules in Member States governing the system of property ownership."* Thus, as this also involves intellectual property, laws governing the ownership of IP are essentially within the domain of the Member States. So Article 295 contains the fundamental principle of EC law that the existence of national IPRs cannot be affected by the provisions of the EC Treaty. However, the national laws must not conflict with the objectives of the EU, namely free competition. As the existence of property is untouchable under Article 295, the European Court of Justice worked its way around this provision by distinguishing the "existence" from the "exercise" of

[43] *Barnett*, Interoperability between Antitrust and IP, 3 *et seq.*
[44] *Lemley*, Southwestern Journal of Law and Trade in the Americas 13 (2007), 1 (14, 17).
[45] *Dolmans/O'Donoghue/Loewenthal*, Competition Policy International 3 (2007), 107 (107).
[46] *Czapracka*, Yale Journal 9 (2006/2007), 44 (74 *et seq.*).
[47] *Vesterdorf*, Global Antitrust Review 1 (2008), 1 (3).

IPRs. Whenever conflicts occur between the provision and the policy goals of IPRs and competition rules, the Commission and European Courts are allowed to curb the exercise of an IPR. To achieve a useful balance, the ECJ furthermore developed the notion of the essential function of an IPR (thus to reward and encourage inventions), which should be respected. Competition law may interfere, if the exercise of an IPR goes beyond what is necessary to fulfill this essential function.[48]

2. *Article 82 ECT*

The conflict between competition law and IPRs occurs most dramatically under Article 82 ECT in the context of refusals to license.[49] Article 82 which shall ensure a system of undistorted competition reads:

> Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States. Such abuse may, in particular, consist in:
> …
> (b) limiting production, markets or technical development to the prejudice of consumers;
> …

So the provision does not forbid the abuse of any intellectual property right, but rather "only" the abuse of a dominant position – whatever this position is based on. Thus, the application of Article 82 premises at first that the owner of the IPR is dominant.[50] Though the legal text does not provide a definition of a "dominant position", one can resort to European case law. The ECJ defines it as

> "a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, its customers, and ultimately of the consumers. Such a position does not preclude some competition, which it does where there is a monopoly or a quasimonopoly, but enables the undertaking which profits by it, if not to determine, at least to have an appreciable influence on the conditions under which that competition will develop, and in any case to act largely in disregard of it so long as such conduct does not operate to its detriment."[51]

Thus, a dominant position in the relevant market is not itself illegal, nor is it prohibited and incompatible with the general purposes of the rules set out for the common market – it is rather the abuse of such dominant position that is proscribed by Article 82.[52] Any practice regarded as usual for non-dominant companies can be

48 *Dolmans/O'Donoghue/Loewenthal*, Competition Policy International 3 (2007), 107 (112 *et seq.*).
49 *Venit*, Exceptional Circumstances, 3.
50 *Lange*, Geistiges Eigentum, 132.
51 ECJ, Case 85/76, *Hoffmann-La Roche/Commission,* 1979 ECR 461, para. 4.
52 „…those who have been more efficient and attained market strength should not be penalized just for being dominant players, but a penalty may be imposed by the Commission for behavior of a

abusive if it is carried out by a dominant undertaking. To maintain the competition on the market (which is anyway weakened through the presence of the dominant undertaking) the courts deduce from this dominant position a special responsibility.[53] As the former European Competition Commissioner *Mario Monti* stated: "Dominant companies have a special responsibility to ensure that the way they do business doesn't prevent competition on [the] merit[s] and does not harm consumers and innovation".[54] However, the pure ownership or exercise of an IPR generally does not constitute a dominant position. But they can help to hedge such a position.[55]

Lit. b of Art. 82 contains as example of an abuse "*limiting … technical development to the prejudice of consumers*". This phrase has to be interpreted broadly, as it does not only involve the own limiting but also the restrictions of such activities on other undertakings. It is directed against such practices which prevent access to an attained level of research and development as well as their use or further development to the detriment of consumers. This may also involve the nondisclosure of interoperability information.[56] However, when it comes to cases of refusals to supply, there is - as a general principal – no duty on dominant firms to license to third parties. Requiring a dominant company to do so is therefore an exceptional measure, which should only be used sparingly by competition authorities. In any case, the factors which demonstrate an abuse highly depend on the specific factual, economic and regulatory context in which the case arises. An obligation to deal pursuant to Art. 82 may only be established after a close scrutiny of this background. However, as a core principle it is held, that in essence, a refusal to deal is abusive if it risks eliminating effective dynamic competition or materially harms consumers in some other way. The most controversial question is whether and in what specific circumstances a refusal to license an IPR may constitute an abuse of a dominant position contrary to Article 82[57] and as a legal consequence leads to compulsory licensing.[58]

In the cases which will be discussed in chapter C. the European Commission and Courts have developed a series of principles to address the question of when a refusal to license is abusive. Those cases involved unilateral refusals by dominant undertakings to supply goods or services, to allow access to facilities or to license intellectual property rights towards third parties, and were bound to be the subject of great debate and controversy.[59] A refusal to supply was found anticompetitive particular in cases where it concerned an "essential facility", which is "a product that is so superior that it is essential for the rivals to compete and cannot practically be

firm with the power over the market that can affect the degree of competitiveness in the internal market.", *Arutyunyan, IES Proceedings 4 (2008),* 167 (169).

53 *Lübbig*, in: Loewenheim/Meessen/Riesenkampff (eds.), Kommentar Kartellrecht, Art. 82, para. 4.

54 Commission of the European Union, "Commission concludes on Microsoft investigation, imposes conduct remedies and a fine", IP/04/382, 24.03.2004, available at: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/04/382&guiLanguage=en>, 24 March 2004 (last visit: 30 March 2011).

55 *Dirksen*, in: Langen/Bunte (eds.), Kommentar, Artikel 82, para. 41.

56 *Ibid*, para. 111, 131, 136.

57 *Dolmans/O'Donoghue/Loewenthal*, Competition Policy International 3 (2007), 107 (114 *et seq.*); *Czapracka*, Yale Journal 9 (2006/2007), 44 (63).

58 *Gauß*, Missbrauchsverbot, 112.

59 *Antoniou*, Cyprus and European Law Review 11 (2010), 2.

duplicated."[60] Insofar the so called "essential facilities doctrine" is highly relevant for the discussion of the intersection between IP and antitrust, forming a framework for curbing overbroad IPRs. The next section will therefore treat this issue.

IV. Essential Facilities Doctrine

To understand how the competition authorities dealt with the tension between IP and European competition law, one has to look more generally at the essential facilities doctrine – a doctrine the Commission not only referred to in the *Microsoft* case but also in other IP cases for requiring access to otherwise protected information. Although never recognized by name, the essential facilities doctrine is said to be exemplified by a string of major cases, besides *Microsoft* namely *Magill*, *Bronner* and *IMS*,[61] which will be briefly discussed in chapter C.

Advocate-General *Jacobs* defined the essential facilities doctrine as being the case where a company in "a dominant position in the provision of facilities which are essential for the supply of goods or services on another market abuses its dominant position where, without objective justification, it refuses access to those facilities."[62] Thus, essential facility cases are special cases of refusal to deal: a rival needs access to the upstream production facilities of the dominant company in order to be able to profitably compete on the downstream market.[63]

The doctrine (which originates in the USA) has been developed in the context of physical assets where access was mandated to ports, bridges etc.[64] In the EU intellectual property, however, may also be treated as an essential facility and competition authorities and courts may request that a dominant company shares its IP with competitors if the refusal to supply is likely to have a negative effect on competition and is not objectively justified. The requested essential input, however, must be indispensable, thus there must be no real or potential substitutes available on the market and it is impossible to duplicate the input.[65] "According to the European Commission, a facility is essential if without access there is, in practice, an insuperable barrier to entry for competitors of the dominant company, or if without access competitors would be subject to a serious, permanent and inescapable competitive handicap which would make their activities uneconomic."[66] The main purpose of this doctrine is to impose upon such a dominant company the duty to negotiate and/or give access to the essential facility (against a reasonable fee) to other companies, which could not pursue their own activities (and therefore would disappear from the market) without access to the facility.[67]

60 *Czapracka*, Yale Journal 9 (2006/2007), 44 (60).
61 *Larouche*, The European Microsoft case, 3.
62 *Antoniou*, Cyprus and European Law Review 11 (2010), 3; citing Opinion of Advocate-General *Jacobs* in ECJ, Case C-7/97, *Oscar Bronner/Mediaprint,* 1998, ECR I-7791, para. 34.
63 *Van Damme/Larouche/Müller*, Abuse of a Dominant Position, 16 *et seq.*
64 *Reimann*, The Competition Law Review 1 (2004), 49 (63).
65 *Czapracka*, Yale Journal 9 (2006/2007), 44 (47, 63).
66 *Hatzopolous*, The EU essential facilities doctrine, 14 *et seq.*
67 *Ibid*, 2.

However, all this moves into focus the fundamental freedom to contract: the "right to choose one's trading partners and freely to dispose of one's property are generally recognised principles [...and] incursions on those rights require careful justification".[68] Nonetheless, it is now clear in Community law, that a refusal by a dominant undertaking to supply essential inputs or allow access to essential facilities can in some cases infringe competition in the Community and be an abuse under Article 82 ECT.[69] Before going deeper into detail of the *Microsoft* case, the former relevant cases will be treated in the next section for a better understanding. There have only been a few cases on compulsory licensing of intellectual property rights – and even fewer on the specific topic of interoperability. Summarizing the principal cases to date is the best way to assess the current state of the law on under what conditions, and against which terms, the dominant firm should be forced to share its facilities.

C. Former EU Case Law and Decisional Practice on Intellectual Property

Microsoft is not the first case in which the Commission assumed that a dominant undertaking refused to supply interoperability information. The case is just the grand finale after a series of developments in EU competition law. The problem of refusal to license and compulsory licensing has been addressed recently in the *Microsoft* judgment of the CFI. In this and preceding cases the conditions for compulsory licensing were laid down – therefore first it will be given a brief overview of the relevant decisions. These judgments established the analytical framework and principles that the courts were to apply in the IP cases.[70]

I. Commercial Solvents (1974)

In *Commercial Solvents*, the first refusal to deal case in the EU (though no IPRs were involved), the Court found that under certain circumstances an undertaking in a dominant position had a duty to deal with another undertaking operating in a downstream market.[71] *Commercial Solvents*, the supplier of a raw material used in the production of a drug, decided to vertically integrate and produce the drug himself. Thus, it refused to continue to supply its former customer (and now rival) in the downstream market. As the former customer would be excluded from the downstream market by the dominant upstream undertaking, the Commission found:[72] "An undertaking which has a <u>dominant</u> position in the market in raw materials and which, with the object of reserving such raw material for manufacturing its own derivates, refuses to supply a customer, which is itself a manufacturer of these derivates, and

68 *Antoniou*, Cyprus and European Law Review 11 (2010), 14, citing the Opinion of Advocate-General *Jacobs* in ECJ, Case C-7/97, *Oscar Bronner/Mediaprint,* 1998, ECR I-7791.
69 *Antoniou*, Cyprus and European Law Review 11 (2010), 14.
70 *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 6.
71 *Arutyunyan, IES Proceedings 4 (2008),* 167 (174).
72 *Bouchagiar*, Mayer Brown LLP. Publication, 2006, 3, 4; *Van Damme/Larouche/Müller*, Abuse of a Dominant Position, 16.

therefore risks eliminating all competition on the part of this customer, is abusing its dominant position within the meaning of Article [82]." [73]

II. *IBM* (1984)

20 years before *Microsoft*, the *IBM* case was the first competition case focusing on interoperability.[74] In response to increasing competition, in the 1970s *IBM* changed from its full disclosure policy to keeping operating system software source code secret, limiting and delaying interface disclosures, which after complaints of competitors prompted the EU Commission to commence an investigation into *IBM's* practices. The Commission alleged *IBM* "to hold a dominant position for the supply of two key products, the central processing unit and the operating system, for its most powerful range of computers, the *IBM* System/370. The Commission objected, *inter alia*, to *IBM's* practice of failing to supply so-called 'plug-compatible manufacturers' in sufficient time with the technical information needed to permit their products - which competed with *IBM's* own products - to be used with System/370."[75] Consequently, the competitors' products emerged significantly delayed after those of *IBM*, thus assuring *IBM's* leadership position in peripherals and other hardware products which attached to the *IBM* computer. However, before the Commission could adopt a decision, the case was settled. *IBM* agreed to disclose interface information and undertook to license these information sufficient to allow hardware and software manufacturers to design their products so that they can be used with *IBM's* System/370, the then most powerful range of computers manufactured by *IBM*. *IBM* was also required to support international standards for open system interconnection for products, systems, and networks of different manufacturers.[76]

For the first time in the history of EU competition law, a unilateral refusal to license was attacked and a compulsory license imposed as a remedy. The case indicated that the European Commission considered that dominant undertakings could be required to supply interoperability information. However, as there was no formal decision, no precise conditions under which this could be the case were established – and the principle was not tested in court.[77]

[73] ECJ, Joined Cases 6 and 7-73, *Commercial Solvents and Others/Commission*, 1974 ECR 223, para. 25.

[74] *Czapracka*, Yale Journal 9 (2006/2007), 44 (102).

[75] CFI, Case T-201/04, *Microsoft Corp./Commission,* 2007, ECR II-3601, para. 737.

[76] *Czapracka*, Yale Journal 9 (2006/2007), 44 (103); "But two points do clearly emerge from the Undertaking itself. First, the information IBM agreed supply was "the interface information necessary to attach and not … product design information."And, second, IBM maintained its IP rights over the information it was licensing: it did not waive its patent rights and was entitled to charge a reasonable royalty for the interfaces it was licensing." *Killick*, IPRs, Competition Rules, and Interoperability, 10.

[77] *Killick*, IPRs, Competition Rules, and Interoperability, 10.

III. *Volvo* (1988)

The EC jurisprudence took up the IP/competition interface for the first time in *Volvo v. Veng.*[78] Since the 1988 *Volvo* case EU courts and the EU Commission have struggled to define the circumstances that would warrant compulsory licensing.[79] In that case, *Volvo* prevented *Veng* from importing cheaper spare parts manufactured without its authorization, relying on its registered design, and refused to license *Veng* against a reasonable royalty. *Veng* raised a competition law defense. But he ECJ held that "… an obligation imposed upon the proprietor of a protected design to grand third parties, even in return to a reasonable royalty, a license for the supply of products incorporating the design <u>would lead to the proprietor being deprived of the substance of its exclusive right</u> and that a refusal to grant such a license <u>cannot in itself constitute an abuse</u> of a dominant position."[80] If the court had stopped here, the judgment would have preserved the existence of IPRs against any and all countervailing claims under competition law. But the court went on, holding that there are <u>exceptional circumstances</u> in which a refusal to license may result in liability under Art. 82, namely "certain abusive conduct such as the arbitrary refusal to supply spare parts to independent repairers, the fixing of prices for spare parts at an unfair level or a decision no longer to produce spare parts for a particular model even though many cars of that model are still in circulation"[81], which, however, were not given in the *Volvo* case. The case established the general principle that a compulsory license of IP could only be ordered in *exceptional circumstances*. As to what could constitute those circumstances, the *Magill* case gave a more concrete indication.[82]

IV. *Magill* (1995)

The possibility of compulsory licensing under Article 82 was revisited a few years later in *Magill* – the case in which a compulsory license of an IP right was granted for the first time.[83] The copyrights concerned in *Magill* were TV listings. Irish TV broadcasters used to publish their own TV guide, covering only their own program. As there was no comprehensive weekly TV guide for all TV stations, *Magill* started publishing one and was therefore sued by the TV stations for infringing their copyright. *Magill*, on its part, lodged a complaint to the European Commission, alleging that the refusal to license was an abuse of a dominant position. Agreeing with Magill, the Commission decided that the TV stations indeed abused their dominant position and imposed a compulsory license on them. This decision was upheld by the CFI and, on appeal, by the ECJ.[84] The Court of Justice emphasized that the mere ownership of an IPR does not confer a dominant position, and a unilateral refusal to

78 *Venit*, Exceptional Circumstances, 3.
79 *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 6.
80 ECJ, Case 238/87, *Volvo AB/Erik Veng (U.K.) Ltd.*, 1988, ECR 6211, para 8.
81 *Ibid*, para. 9
82 *Killick*, IPRs, Competition Rules, and Interoperability, 11.
83 *Forrester*, Competition and IP, 15.
84 *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 7; *Czapracka*, Yale Journal 9 (2006/2007), 44 (79); *Killick*, IPRs, Competition Rules, and Interoperability, 11.

license could not in itself constitute an abuse of a dominant position, but also rejected the argument that a refusal to license a copyright should be considered per se legal.[85]

The ECJ held that the TV stations "were, by force of circumstance, the only sources of the basic information on program scheduling which is the indispensable raw material for compiling a weekly television guide".[86] It then went on identifying the required 'exceptional circumstances' which lead to an abuse:

(1) the TV stations prevented the appearance of a new product, a comprehensive weekly guide to television programs, which they did not offer and for which there was a potential consumer demand.
(2) there was no justification for such refusal; and
(3) by refusing to license, the TV stations reserved to themselves the secondary market of weekly television guides by excluding all competition on that market.[87]

The Court upheld the remedy imposed on the TV stations by the Commission: a compulsory license with the right to charge reasonable and non-discriminatory royalties.[88]

Like *Volvo*, the *Magill* case concerned competition in a market peripheral to the mainstream activities of the IPR holder, with the IPRs at stake giving their owner a *de facto* monopoly. In both cases, a license or breach of the right was indispensable to compete in the downstream market. But the right owners reserved the after markets for themselves, used their IPRs to thwart innovation and prevented a new product from coming into the market for which there was consumer demand, thus obviously harming consumers. Nevertheless, the *Magill* case, too, left questions unanswered: it remained unclear whether and how the decision was influenced by the fact that the IPRs at stake were questionable, whether the conditions stipulated by the court were cumulative or separate, and how they should be interpreted.[89]

V. *Bronner* (1998)

"*Bronner* has been fundamental in the Courts' examination of refusals by dominant undertakings by being the eminent judicial formulation of the contemporary conceptualization of the particular circumstances under which the „essential facilities" doctrine emerges."[90] This landmark case for refusals to deal does not involve IPRs but a physical facility and was referred to the ECJ by an Austrian court. *Bronner* (a small newspaper enterprise) had claimed that in order to compete it needs access to its rival's newspaper distribution network, which is the only nationwide home delivery service in Austria. This service was made available to at least one rival by the defendant, but not to *Bronner*.[91] Advocate General *Jacobs* advised the

85 ECJ, Joint Cases C-241 & 242/91, *RTE and ITP/Commission,* 1995, ECR I-743, para. 46, 48 *et seq.*
86 *Ibid*, para 53.
87 *Ibid*, para. 54 *et seq.*
88 *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 8.
89 *Forrester*, Competition and IP, 16.
90 *Antoniou*, Cyprus and European Law Review 11 (2010), 5.
91 *Venit*, Exceptional Circumstances, 5.

Court to limit the scope of refusals to deal doctrine, noting that forced sharing reduces the incentives to make the original investment in the development of a facility, and the incentives of competitors to develop better products. He concluded that a duty to deal should only be imposed when an essential facility is involved and the refusal leads to elimination of all competition on the part of the company requesting the service.[92] The Court established the following three criteria for assessing an alleged abuse:

(1) the refusal must be likely to eliminate all competition in the downstream market;
(2) the refusal cannot be objectively justified;
(3) there must be indispensability in that there is no actual or potential substitute in existence.[93]

Especially the last criterion must be interpreted very strictly. The requirement of indispensability is not fulfilled if there are other means to obtain the input – even if less advantageous. It is not enough to show that it was not economically viable to create such a system - it has to be proven that the creation of such a system is not a realistic potential alternative. The requirement of indispensability limits the application of Art. 82 to cases involving essential inputs. Under *Bronner* a duty to deal may be imposed only with respect to an input that can be validly characterized as an essential facility.[94] Thus, the ECJ was very cautious, setting criteria which are very difficult to satisfy. This can be regarded as clear indications that the court was not willing to light-heartedly impose a duty to deal.[95]

From this line of cases falling within the „essential facilities" doctrine it can be seen that the differentiating factor is whether *IPRs* are the subject-matter of the refusal on behalf of the dominant undertaking. The „additional" condition of causing the prevention of a new product from appearing in the market for which there is potential consumer demand as in the *Magill* case but not in *Bronner*, has been established as being confined to cases involving a refusal to license information protected by IPRs.[96] The 2004 *IMS* Judgment confirmed that there is a higher standard for compulsory licensing of IPRs, a persuasion also present in Advocate General *Jacob's* Opinion in *Bronner*.[97]

[92] *Czapracka*, Yale Journal 9 (2006/2007), 44 (67) citing Opinion of Advocate-General *Jacobs* in ECJ, Case C-7/97, *Oscar Bronner/Mediaprint*, 1998, ECR I-7791 para. 57, 58, 69.
[93] *Antoniou*, Cyprus and European Law Review 11 (2010), 6.
[94] *Czapracka*, Yale Journal 9 (2006/2007), 44 (68); *Antoniou*, Cyprus and European Law Review 11 (2010), 6.
[95] *Antoniou*, Cyprus and European Law Review 11 (2010), 6.
[96] *Ibid*, 8.
[97] "Jacobs finds that granting intellectual property rights, which are exclusive in nature, at least for a limited period, involves a 'balancing of the interest in free competition with that of providing an incentive for research and development'. …[It] is commonly acceptable that the Community Courts have adopted a higher legal standard for cases involving refusal to license intellectual property rights than for refusal to supply, or provide access to, „tangible" or „physical" property." *Antoniou*, Cyprus and European Law Review 11 (2010), 9.

VI. *IMS Health* (2004)

Thus, the Commission revisited the question of when an IPR might be "essential" for competition and a refusal to license may be abusive in *IMS Health.*[98] The judgment is the ECJ's final and most complete pronouncement on the circumstances making a refusal to license abusive before *Microsoft* and was delivered just weeks after the Commission's decision.[99]

At the relevant time *IMS* Health held a leading position on the market for providing pharmaceutical manufacturers with marketing data on retail pharmaceutical sales in Germany. *IMS* and its customers have developed a geographic format for presenting this data: this structure (the "1860 Brick Structure") divided Germany into 1,860 zones or "bricks" each corresponding to postal codes and carefully designed to group doctors, patients, and pharmacies to deliver useful data for calculations of the pharmaceutical companies. However, this copyrighted structure has become the *de facto* industry standard, while competitor's efforts to array their data in different structure failed as *IMS'* structure was the only one accepted by the customers.[100] Thus, when *IMS'* competitor *NDC* tried to use a similar brick structure in order to provide the same data service in competition with *IMS*, the latter successfully brought an action in German Courts to block the use of its copyrighted system. *NDC* complained to the Commission, presenting it as an essential facilities case. The Commission adopted an interim decision requiring *IMS* to license its brick structure on the basis of there being 'exceptional circumstances'. However, *IMS* successfully sought a suspension of this decision from the President of the CFI (confirmed by the President of the ECJ). Finally, the Commission withdrew its decision.

Meanwhile, the German trial court hearing the copyright dispute referred the principle question, of whether the refusal to license was an abuse under Article 82 to the ECJ, which delivered its judgment on April 29, 2004, providing some important clarifications about the exceptional circumstances under which compulsory licensing is justified.[101] It began with clarifying that bar for exceptional circumstances a refusal to license is presumptively legal, even in cases of a dominant company.[102] However, in giving its judgment the ECJ further stated (combining *Magill* and *Bronner*) that a refusal to license by a dominant company is abusive if four cumulative conditions are met:

(1) the protected product or service is <u>indispensable</u> to compete in a particular market;
(2) the refusal is "such as to <u>exclude any competition on a secondary market</u>";
(3) the refusal <u>prevents the emergence of a new product</u> for which there is potential consumer demand; and
(4) the refusal is <u>not objectively justified.</u>[103]

98 *First*, Wisconsin Law Review 2007, 1369 (1401).
99 *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 8.
100 *First*, Wisconsin Law Review 2007, 1369 (1402); *Venit*, Exceptional Circumstances, 13.
101 *Voelcker*, Wilmer Cutler Pickering Hale and Dorr Antitrust Series 23 (2004), 17.
102 *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 8.
103 CFI, Case T-184/01, *IMS Health/Commission*, 2001 E.C.R. II-3193, 34 *et seq.*

Thus, again, the court reverts to the criteria already set out in *Magill*. However, the court did not clear whether these conditions are necessary or merely sufficient to find a violation of Article 82. Yet, the interpretation of two of the criteria – indispensability and the emergence of a new product – indicates that at least those two may be both sufficient and necessary.[104]

Citing the *Bronner* case, the Court stated that the indispensability requirement should be interpreted narrowly:

"It is clear from … *Bronner* that, in order to determine whether a product or service is indispensable for enabling an undertaking to carry on business in a particular market, it must be determined whether there are products or services which constitute alternative solutions, even if they are less advantageous, and whether there are technical, legal or economic obstacles capable of making it impossible or at least unreasonably difficult for any undertaking seeking to operate in the market to create, possibly in cooperation with other operators, the alternative products or services. According to … *Bronner*, in order to accept the existence of economic obstacles, it must be established, at the very least, that the creation of those products or services is not economically viable for production on a scale comparable to that of the undertaking which controls the existing product or service."[105]

The Court made clear that in addition to the criteria in *Bronner*, the 'new product' criterion is essential to constitute an abuse according to Article 82. Thus, the company requesting the license needs to intend to offer a product which is not offered by the IPR holder and for which there exists a potential consumer demand – a duplication (thus offering the same product) of the right holder's product is not enough to satisfy the criterion.[106] When balancing IPR protection against free competition, "the latter can prevail only where refusal to grant a licence prevents the development of the secondary market to the detriment of consumers. Therefore, the refusal by a dominant undertaking to allow access to a product protected by copyright, where that product is indispensable for operating on a secondary market, may be regarded as abusive only where the undertaking which requested the licence does not intend to limit itself essentially to duplicating the goods or services already offered on the secondary market by the owner of the copyright, but intends to produce new goods or services not offered by the owner of the right and for which there is a potential consumer demand."[107]

What maybe is less obvious in the *IMS* case is that it is also a case about interoperability. As the 1860 brick structure was the industry standard, *IMS'* rivals had to present their data in this format to be compatible to earlier data and to meet customers' wishes. So the dispute was about the right to use the structure and the right to be interoperable. The *IMS* test does take account of interoperability concerns by requiring that the refusal to license prevents the emergence of a new product, which would fulfill consumer demand.[108]

[104] *Czapracka*, Yale Journal 9 (2006/2007), 44 (82).
[105] ECJ, Case C-418/01, *IMS Health GmbH & Co OHG/NDC Health GmbH & Co KG*, para. 28.
[106] *Schmidt/Kerber*, Incentives Balance Test, 6.
[107] *Killick*, IPRs, Competition Rules, and Interoperability, 14.
[108] *Ibid*, 14.

All in all, in *IMS*, the Court did not merely return to the route it followed in *Magill*, but it also expanded the circumstances under which dominant firms could be forced to give access to essential facilities. Emphasizing the new product criterion, *IMS* illustrates a trend in the Court's case law to set higher standards for compulsory licensing under Article 82.[109] Nonetheless, it should be borne in mind that both *Magill* and *IMS* involved questionable IPRs and had been characterized as "oddities" and "unlikely to emerge in the future".[110]

However, it is important to stress the exceptionality of the circumstances in the cases above. The Community Courts have adopted a higher legal standard for cases involving refusal to license intellectual property rights than for refusal to supply, or provide access to, „tangible" or „physical" property.[111] Everyone agrees that compulsory licensing of IP is a very exceptional antitrust remedy, subject to very restrictive conditions. A realistic and predictable framework to determine the circumstances which lead to compulsory licensing is important, regarding the public interest in respect for property rights in general and IPRs in particular.

The state of law before the *Microsoft* decision (summarized in the table below) thus was that a refusal to license was abusive and therefore access was required only in exceptional circumstances. Thus, an IPR holder would have fairly wide latitude (even if not complete freedom) to refuse to license.[112] It was against this legal background that the Commission proceeded to evaluate *Microsoft's* refusal to license.

Table 1: Exceptional circumstances in EU case law

	Magill	*Bronner*	*IMS Health* (cumulative conditions)
indispensable input	X	X	X
eliminating competition	X	X	X
new product	X		X
no objective justification	X	X	X

See: *Arutyunyan*, IES Proceedings 4 (2008), 167 (182).

D. The EU *Microsoft* Case

Microsoft is the most recent and probably most controversial case involving compulsory licensing in the EU. It is the maybe most prominent example of how the essential facilities doctrine may be used to restrict the exercise of IPRs by dominant companies.[113] As mentioned in the introduction, the company was accused of abusing its dominant position in the market for PC operating systems (OS) by refusing to supply interoperability information, necessary for its rivals to compete in the

109 *Czapracka*, Yale Journal 9 (2006/2007), 44 (85).
110 *Antoniou*, Cyprus and European Law Review 11 (2010), 10.
111 *Ibid*, 5.
112 *First*, Wisconsin Law Review 2007, 1369 (1404).
113 *Czapracka*, IP and the Limits of Antitrust, 19.

workgroup server market. In doing so, *Microsoft* wanted to preserve privileged connections between its Windows PC operating system and its work group server system, to the detriment of its competitors in the work group server operating market. Thus, *Microsoft* leveraged its market power from its primary market for PC operating systems into the secondary, complementary market for work group server operating systems, which ultimately allowed *Microsoft* to preserve its monopoly in the market for PC operating systems. The Commission imposed – and the CFI later confirmed - as a remedy the order to license proprietary information concerning the communication protocols by which *Microsoft's* server operating systems communicate with each other.[114]

I. Background Information

Before plunging into the details of the EU *Microsoft* case it is worthwhile to have a look at its background. After a short introduction on the *Microsoft* Corporation, the next section gives some information on the US settlement and then on the technical terms necessary to understand the case.

1. Microsoft Corporation

> "Microsoft is an intellectual property (IP) company. We have no factories of any consequence or natural resources. Indeed, we have no physical assets of any kind that are important to the success of the company. Our products instead consist almost entirely of information we create…"
> —Bill Gates[115]

The multinational corporation *Microsoft*, founded in 1975 and headquartered in Redmond (USA), develops, manufactures, licenses and supports a wide variety of software products for many different types of computing devices. Its software products and services include *inter alia* operating systems for servers, personal computers, and intelligent devices.[116] In the 1980s *Microsoft's* Windows success story started, reaching an extraordinary position with market shares of over 90% at the time of the alleged abuse, becoming the *de facto* industry standard.[117] This does have different reasons: First, as most computers run on Windows and all users are familiar with *Microsoft's* flagship software, users can easily switch from one computer to another. Furthermore, since the prevailing majority of PCs run on Windows, software developers make their software Windows-compatible, which again reinforces the user's preference for Windows. However, this also means that software developers need the information on

[114] *Kühn/Van Reenen*, Interoperability and Market Foreclosure, 4-5; *Czapracka*, IP and the Limits of Antitrust, 53.
[115] Taken from: *First*, Wisconsin Law Review, 2007, 1369 (1369 *et seq.*).
[116] *Microsoft's* Form 10-K Annual Report for the US fiscal year ending June 30, 2009, page 9, available at: <http://www.microsoft.com/investor/Downloads/XBRLFilings/FY09/MSFT_10K_2009.doc> (last visit: 30 March 2011).
[117] Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 431.

how to make their products work with *Microsoft's* Windows. Besides, Windows compatibility is also an indispensable sales argument.[118]

However, initially, *Microsoft* did make its interface information available to its competitors. But after it had gained a dominant position in the secondary market for work group server operating systems, *Microsoft* changed its strategy and broke off existing supply relationships, which led to a foreclosure of the market for work group server operating systems.

2. The U.S. Case

The EU decision was preceded by a settlement of the U.S. case against *Microsoft* in 2002. In 1998, a suit was filed under the Sherman Act, which focused on various measures taken by *Microsoft vis-à-vis* Netscape's web browser and *Sun's* Java technologies, identifying four distinct violations:[119]

(1) unlawful exclusive dealing arrangements in violation of Section 1;
(2) unlawful tying of *Microsoft's* 'Internet Explorer' Web browser to its 'Windows 95' and 'Windows 98' PC operating systems in violation of Section 1;
(3) unlawful maintenance of a monopoly in the market for PC operating systems in violation of Section 2; and
(4) unlawful attempted monopolization of the Web browser market in violation of Section 2.

The United States and *Microsoft* finally agreed on a settlement, requiring *Microsoft inter alia* to disclose all interfaces used by its middleware to operate with other parts of *Microsoft* operating systems and to license the communication protocols necessary for software located on a computer server to operate with Windows for the purpose of allowing third party products to interoperate on reasonable and non-discriminatory terms.[120]

[118] *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 1 *et seq.*

[119] Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 15.

[120] *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 3. "Microsoft made licenses for the Communications Protocols available beginning in August 2002 (…). Microsoft provided licensees with technical documentation that described each Communication Protocol, as well as licenses to Microsoft's relevant patents, copyrights, and trade secrets pertaining to the licensed technology. The requirement to disclose interoperability information was limited to interfaces and other technical information used by Microsoft's applications to interoperate with its operating system. It did not cover the specifications for its server-to-server communications protocols, although it did require Microsoft to license all the protocols implemented in a Windows Client PC operating system used for interoperating with a Windows server operating system. The goal of the licensing obligation under the U.S. settlement was to protect opportunities for the development and use of non-Microsoft middleware by ensuring that competing, non-Microsoft server products on which such middleware could be hosted and served would have the same access and ability to interoperate with Windows operating system products as Microsoft's server operating systems. In addition, the government wanted to make sure that the non- Microsoft server operating systems could interoperate, or communicate, with the ubiquitous Windows PC client." See *Czapracka*, Santa Clara Computer and High Tech. L.J. 24 (2008), 207 (263 *et seq.*).

However, according to the Commission the adopted remedies were insufficient to address the concerns about *Microsoft's* conduct: The information provided by *Microsoft* did not create a level playing field between *Microsoft* and its competitors in the market for work group server operating systems, as its rivals needed more interoperability information to compete effectively with *Microsoft.*[121]

3. Technical Terms

To understand what the case is about, it is necessary to give some information about the technical background of the products concerned.

a) Work Group Server

Competitors required *Microsoft* to give access to interoperability information in order to be able to compete on the work group server operating market. Servers are those powerful computers that organize and manage communications between users of Personal Computers in both large and small organizations. They typically include both hardware devices and software, such as an operating system.[122] The Commission explains in its decision:

"The present case focuses on 'work group server services', which are the basic infrastructure services that are used by office workers in their day-to-day work, namely sharing files stored on servers, sharing printers, and the 'administration' of how users and groups of users can access these services and other services of the network (for example, applications installed on the client PCs or servers). 'Work group server operating systems' are operating systems designed and marketed to deliver these services collectively to relatively small numbers of client PCs linked together in small to medium-sized networks."[123]

As network computing is an inescapable feature of modern office life, it is critical in any computer network that a PC and a server can work effectively together. This leads us further to the notion of interoperability.

b) Interoperability

"In the field of information technology (IT), the term interoperability is generally understood to mean the ability of heterogeneous IT networks, applications, or components to exchange and use information (i.e. to 'talk' with each other). In simple terms, when two computer programs interoperate, the information generated by one

[121] *Czapracka*, Santa Clara Computer and High Tech. L.J. 24 (2008), 207 (264); Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 273 *et seq* .
[122] *Curley*, Journal of World Intellectual Property 11 (2008), 296 (297).
[123] Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 53.

can be used by the other."[124] In its *Microsoft* decision the Commission refers to the preambles to Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs (the 'Software Directive') which harmonizes copyright protection of computer programs in the Member States, and reads:

> "Whereas the function of a computer program is to communicate and work together with other components of a computer system and with users and, for this purpose a logical and, where appropriate, physical interconnection and interaction is required to permit all elements of software and hardware to work with other software and hardware and with users in all the ways in which they are intended to function; …
>
> Whereas this functional interconnection and interaction is generally known as 'interoperability'; whereas such interoperability can be defined as the ability to exchange information and mutually to use the information which has been exchanged."[125]

Thus, interoperability describes effective communication within a computer network. As outlined above, compatibility is of enormous importance to all software developers as it is an indispensable sales argument. The Commission also outlined this with respect to *Microsoft's* Windows:

> "When a non-Microsoft work group server is added to a Windows work group network, the degree of interoperability with the Windows domain architecture that such a work group server is able to achieve will have an impact on the efficiency with which that work group server delivers its services to the users of the network …. This means that 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."[126]

Anyhow, interoperability is a matter of degree: though the term implies an ability to communicate and share data, it does not necessarily imply complete compatibility! Thus, the degree of interoperability between products sold by different vendors is clearly important when businesses make their purchasing decisions for servers for their computer network.[127]

However, it gets interesting when the information to achieve interoperability is protected by IPRs and the right holder is unwilling to allow direct access to interface information[128] for example by means of a license.[129] In such cases, the typical approach

[124] *Killick*, IPRs, Competition Rules, and Interoperability, 4.

[125] Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs, recitals 10, 11 and 12.

[126] Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para.183 *et seq.*

[127] *Curley*, Journal of World Intellectual Property 11 (2008), 296 (298).

[128] "In practice, this is not so frequently an issue, as the right holder will often have strong commercial and legal incentives to enable interoperability by publishing the application programming interfaces (APIs) and implementing industry standards." See *Killick*, IPRs, Competition Rules, and Interoperability, 6.

[129] „The licensing business model is one that has been adopted by Microsoft and it has embarked on a strategy of expansion of its IP portfolio with the intention of driving revenues from licensing." See *Curley*, Journal of World Intellectual Property, 11 (2008), 296 (298).

of a third party seeking interoperability and quite commonplace in the IT industry would be to use reverse engineering or decompilation, whereas the former involves the analysis of information flows and network traffic and the latter involves using a set of software tools to recreate the original source code from the object code of the program under study.[130] However, although this might help to solve the obstacles, the Commission also notes that "[d]epending on the size of the program to be decompiled, reverse-engineering may be very costly and time-consuming, and there may also be technical barriers."[131] Besides, enshrined in the EU Copyright Directive, there is a limited right for software developers lawfully to decompile a computer program without infringing copyright.[132] In the current state of EC law, if there are circumstances where IPRs are preventing interoperability, then it is competition law that is likely to be invoked.[133]

In its discussion paper on the application of Article 82 the Commission gives some general remarks on the issue of interoperability from the antitrust perspective:

> "A special case arises when an undertaking refuses to supply information in a way that allows it to extend its dominance from one market to another. This is the case for information necessary for interoperability between one market and another. Although there is no general obligation even for dominant companies to ensure interoperability, leveraging market power from one market to another by refusing interoperability information may be an abuse of a dominant position. Even if such information may be considered a trade secret it may not be appropriate to apply to such refusals to supply information the same high standards for intervention as those [applicable to refusals to license IP rights]."[134]

II. The Commission's Decision on *Microsoft*

As outlined above, *Microsoft* was accused of two offenses. However, the accusation of tying Windows Media Player with the Windows operating system will not be discussed in the following, as it does not concern the relation between competition and innovation as directly as the refusal to license.[135] The focus will therefore be on the complaint of refusing interoperability information.

The case was triggered by *Microsoft's* competitor *Sun Microsystems Inc.* in 1998, complaining that *Microsoft* infringed Art. 82 "by reserving to itself information that (…) work group server operating systems need to interoperate fully with *Microsoft's* PC operating systems. According to Sun, the withheld interoperability information is necessary to viably compete as a work group server operating system supplier."[136] The

130 *Killick*, IPRs, Competition Rules, and Interoperability, 6 *et seq.*
131 Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 36.
132 *Curley*, Journal of World Intellectual Property 11 (2008), 296 (298).
133 *Killick*, IPRs, Competition Rules, and Interoperability, 9.
134 *European Commission*, Article 82 Discussion paper, para. 241 *et seq.*
135 *Gauß*, Missbrauchsverbot, 118.
136 Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 3.

Commission took up investigations, establishing that *Microsoft* indeed abused its dominant position because the interoperability information was an essential facility and a refusal to supply it amounted to illegal leveraging its dominant position in the market for client PC operating systems into a secondary market (the market for workgroup server operating systems). This resulted in market foreclosure and ultimately preserved *Microsoft's* monopoly in the market for PC operating systems.[137]

At the beginning, the Commission put straight that undertakings are, as a rule, free to choose their business partner, but nevertheless under certain circumstances a refusal to supply (also in cases of refusals to license IPRs) by a dominant undertaking may constitute an abuse pursuant to Art. 82, unless it is objectively justified (para. 547). The Commission then went on reviewing former cases (as treated above) and the current state of law on the exceptional circumstances. However, it decided that there was no particular set of circumstances making a refusal to share IP illegal. Instead, the Commission decided that all relevant circumstances surrounding the specific instance of the refusal to supply must be taken into account, basing its decision on the results of such a comprehensive examination. (para. 557-558).[138] Thus, the reasoning adopted by the Commission in the *Microsoft* decision significantly differs from the ECJ's recent line of essential facilities case law.[139] The Commission then carried on examining the relevant circumstances under which *Microsoft's* refusal to supply occurred.

The Commission revealed that *Microsoft's* refusal to license was not a singular case but rather a part of a general pattern of conduct, which did not only affect Sun but also many other competitors in the work group server operating system market (para. 573, 577). Finding then that *Microsoft's* conduct involves a disruption of previous levels of supply (para. 584), the Commission further identified as an abusive element that the refusal risked eliminating competition due to the indispensability of the refused information. It therefore referred back to the previous case law, stating that - according to *Bronner* - in order to proof such a risk it was necessary to show that supply is indispensable to carry on business in the market, which means that there is no realistic actual or potential substitute to it (para. 585). Considering *Microsoft's* extraordinary market strength and the significant competitive importance of interoperability, the Commission established that *Microsoft's* refusal has put its competitors at a strong competitive disadvantage, to an extent where there is a risk of elimination of competition (para.586, 589). It was recognized that there are no substitutes for a supply of interoperability information, since all alternatives are not sufficient to offset *Microsoft's* interoperability advantage. Reverse-engineering for

137 *Czapracka*, Santa Clara Computer and High Tech. L.J. 24 (2008), 207 (263 *et seq.*), *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 4.

138 "On a general note, there is no persuasiveness to an approach that would advocate the existence of an exhaustive checklist of exceptional circumstances and would have the Commission disregard *a limine* other circumstances of exceptional character that may deserve to be taken into account when assessing a refusal to supply." Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 555.

139 *Czapracka*, Santa Clara Computer and High Tech. L.J. 24 (2008), 207 (268).

example requires considerable efforts with uncertain chances of success, with technical obstacles causing a significant time lag (para. 586, 666 *et seqq.*).[140]

The Commission further showed that *Microsoft's* refusal <u>limited technical development to the prejudice of consumers</u>, as the latter were locked into a homogeneous Windows solution, depriving them of the benefits of innovative work group server operating systems, and competitors' prospects to successfully market their innovation were limited, discouraging them from developing new products (para. 694). It was found that "[i]n a longer-term perspective, if Microsoft's strategy is successful, new products[141] other than Microsoft's work group server operating systems will be confined to niche existences or not be viable at all. There will be little scope for innovation - except possibly for innovation coming from Microsoft."[142]

The Commission then asserted that there was no objective justification for a refusal. *Microsoft* tried to justify its refusal by stressing its IPRs that it holds over the information requested by Sun.[143] But the Commission stated that in the view of the exceptional circumstances outlined above "Microsoft's refusal cannot be objectively justified merely by the fact that it constitutes a refusal to license intellectual property. It is therefore necessary to assess whether Microsoft's arguments regarding its incentives to innovate outweigh these exceptional circumstances."[144] The Commission then applied a test (the "incentive balancing test"), which weighs *Microsoft's* incentives to innovate against the incentives of the whole industry to innovate if *Microsoft* was required to license its interoperability information. According to this test, a compulsory license is appropriate when the negative effects of a license on a dominant company's incentives are prevailed by the positive effects on the innovative climate in the whole market.[145] In the course of its assessment the Commission rejected *Microsoft's* fear that it will be cloned as soon as it discloses the interoperability information, underlining that *Microsoft* would still have an advantage in time compared to its competitors and other companies would still have to offer additional service in order to be competitive, as interoperability solely would not be enough (para. 721-722). The Commission's assessment involved a comparison of an

140 Critics claim that by rejecting *Microsoft's* assertions that reverse engineering and the licensing program under the U.S. settlement give its rivals the necessary access to interface information, the Commission weakens the *IMS* and *Magill* requirement of indispensability. *Czapracka*, Yale Journal 9 (2006/2007), 44 (90).

141 It was criticized by some commentators that the Commission only marginally addressed the new product criterion established in former case law, probably because *Microsoft's* rivals were not able to show that the disclosure of interoperability information would allow them to make new, different products. *Czapracka* Yale Journal 9 (2006/2007), 44 (90).

142 Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 700.

143 *Microsoft* stated: "The objective justification for Microsoft's refusal to disclose its intellectual property rights is self-evident: those rights are meant to protect the outcome of billions of dollars of R&D investments in software features, functions and technologies. This is the essence of intellectual property right protection. Disclosure would negate that protection and eliminate future incentives to invest in the creation of more intellectual property." Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 709.

144 Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 712.

145 *Schmidt/Kerber*, Incentives Balance Test, 8; Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 783.

obligation to disclose the requested information with the alternative situation where *Microsoft's* anti-competitive behavior remained unfettered (para. 742 *et seq.*).

In its assessment of the competitive effects of a refusal, the Commission looked on the effects on incentives to innovate in the work group server market, and found – not surprisingly – that nondisclosure adversely affected competitor's incentives to innovate (para. 700). The Commission then also examined the effects on *Microsoft* itself. If *Microsoft* continued with its behavior, according to the Commission, there is a risk that *Microsoft* successfully eliminates all effective competition, which would have a significant negative effect on its incentives to innovate.[146] On the other hand, if *Microsoft* were to supply competitors with interface information, *Microsoft's* work group server operating system products would have to compete with implementations of other companies now being able to interoperate. The competitive landscape would liven up, with competitive pressure increasing *Microsoft's* own incentives to innovate (para. 725). The Commission thus concluded "that in the short run a compulsory license would have negative effects on Microsoft's incentives to innovate. However, these negative effects on Microsoft are outweighed by the positive impact on the innovative behavior of its competitors (…). Moreover, in the long run, this would also strengthen Microsoft's incentives to innovate as it needs to defend its leading position in the market against its competitors."[147] Thus, the Commission finally comes to the "conclusion that, on balance, the possible negative impact of an order to supply on Microsoft's incentives to innovate is outweighed by its positive impact on the level of innovation of the whole industry (including Microsoft). As such, the need to protect Microsoft's incentives to innovate cannot constitute an objective justification that would offset the exceptional circumstances identified." (para. 783).

With the findings outlined above the Commission finally ruled that *Microsoft's* refusal to supply interoperability information violated Article 82 of the Treaty, imposing remedies which go further than the U.S. settlement. *Microsoft* was ordered to disclose complete and accurate specifications for the protocols necessary for its competitors' server products to be able to interact on an equal footing with Windows PCs, and hence compete on a level playing field.[148]

1. *The most significant Differences to the previous Case Law*

The test developed by the Commission significantly differs from the criteria for a compulsory license adopted by the ECJ in *Magill* and in the *IMS* case,[149] facing broad criticism. Though the Commission did analyze some of the criteria set by *Magill*, it did not base its decision on the four-stage *Magill/IMS* tests.[150] The inconsistency with these tests will be outlined in this section.

146 "Microsoft's research and development efforts are indeed spurred by the innovative steps its competitors take in the work group server operating system market. Were such competitors to disappear, this would diminish Microsoft's incentives to innovate." Commission decision, *Microsoft v. Commission,* (Case COMP/C-3/37.792 *Microsoft*), 24.3.2004, para. 725.
147 *Schmidt/Kerber*, Incentives Balance Test, 8, 9.
148 *Czapracka*, Santa Clara Computer and High Tech. L.J. 24 (2008), 207 (263 *et seq.*).
149 *Korah*, IPRs and the EC Competition Rules, 157.
150 *Killick*, The Competition Law Review 1 (2004), 37.

First, and most obviously, the decision did not address the new product criterion, only providing a short section discussing whether the refusal to supply "limits technical development to the prejudice of consumers", which is a very unclear and unpredictable approach for future cases. Secondly, the application of the criterion of elimination of competition is different from *Magill/IMS* as well. In *Microsoft* the Commission less stringently uses only the test of "risk of elimination of competition" (at some point in the future) – thus a test based on hypothesis - instead of whether the refusal to license was "likely to eliminate all competition" (more imminently) – a rather absolute standard. This distinction is quite fundamental: The *Microsoft* decision provides a lower threshold, relying on less absolute criteria: risk, probability, uncertainty.[151]

Concerning the indispensability criterion, the Commission seems to have applied a lower standard as well. The test set out in *Bronner* and confirmed in *IMS* includes that it is not required to have optimal access to the market be granted, but it is necessary to examine whether there are alternative solutions, even if they are less advantageous. In *Microsoft*, the Commission admits that such alternatives exist (e. g. reverse engineering) but argues that they are so disadvantageous as to not in reality constitute alternatives. However, "there are compelling policy arguments which point against granting too easy access to a dominant company's resources. If access is granted too easily, there may be a short-term benefit in terms of an increase in competition. In the long term, however, there would be a decrease in competition as there would be no incentive for a competitor to develop competing facilities and a chilling effect on investment in R&D and innovation by the dominant undertaking as well."[152]

The new Incentives Balance Test provoked a strong controversy – both from a legal and economic perspective. Especially questions arose whether this test is conceptually appropriate, economically founded, and capable of providing an administrable legal tool. The following section shortly examines some opinions.

2. *Criticism on the new Incentives Balance Test*

Some commentators welcome the new approach providing a sounder test for ordering compulsory licensing than the new product test. From an economic point of view, to find out whether consumers are harmed, balancing incentives to innovate – in contrast to the new product criterion – is a good proxy of consumer's benefits, substituting the questioning of product newness.[153] Furthermore, economic theory that IPRs encourage innovations by overcoming the free-riding problem has been considerably refined in the past: it has been shown that intellectual property rights

151 *Forrester*, Competition and IP, 21 *et seq.*

152 *Killick*, The Competition Law Review 1 (2004), 38, 42.

153 "Economic theory predicts that wherever incentives are present firms will innovate to propose valuable improvements to consumers. Indeed, in so far as firms seek to maximize their profit, if there is an opportunity to make money in investing in R&D, they will grab it. (…) [If] a refusal to license reduces the incentives to innovate, we can infer that the technical development will be limited to the prejudice to consumers." *Lévêque*, Innovation, leveraging and essential facilities, 7, 9.

may also stifle innovation in certain circumstances, such in the case of complementary innovations. In the *Microsoft* case such a complementary relationship exists between interoperability information and work group server software. Here it can be affirmed if companies cannot get access to innovation 1 (interoperability information), they can not make innovation 2 (advanced features of workgroup server software). Thus, the incentives balance test applied in *Microsoft* seems to be in line with the most recent economic thinking on IPRs and could move attention to identifying the special circumstances in which IPRs do not fulfill their original function.[154] However, though the new test is praised for correctly focusing on innovation, the common denominator by which antitrust and IP should be measured and compared,[155] harsh criticism has been expressed as well.

Major difficulties are raised especially when the test is "considered against the background of our still limited, albeit growing knowledge about the working of innovation processes."[156] The simplification of the Commission's arguments to demonstrate that *Microsoft's* incentives to innovate do not decrease is not considered robust: Though it is true that *Microsoft* – albeit the compulsory licensing – will still be interested in innovating, it is also true that this interest decreases.[157] Furthermore, it is not clear whether through compulsory licensing, innovation on the work group server market will increase substantially. This is not easy to predict and though the Commission's reasoning seems plausible, it is undoubted that considerable investments have been made in this market also before the disclosure order was issued.[158] Concern has also been expressed because this test calls for a highly complex economic analysis, which makes it difficult to apply. It is said to require "prophetic skills" and gives a high degree of discretion to antitrust enforcers, negatively affecting legal certainty.[159] For some critics the test appears arbitrary, *inter alia* because the Commission gave little guidance on how to assess the value if the information at stake.[160]

All in all, the approach adopted in the Commission's *Microsoft* decision is regarded as more economically sound than the new product criterion. It would contribute to and be entirely in line with the "more economic approach" to Article 82 (the basic philosophy and theoretical basis of recent reforms of European competition policy), because it focuses on the "economic effects" (here: on innovation) as the crucial criterion for refusal to license cases. Nevertheless, it is argued that such a test must be much broader and more differentiated than it has been applied so far in *Microsoft*.[161] On the other hand, however, it is also criticized by many commentators as it is a looser and less predictable test because it is not based on the criteria established in former case law.[162] Though the Court of First Instance later upheld the

154 *Vezzeso*, The Incentives Balance Test, 8.
155 *Czapracka*, Yale Journal 9 (2006/2007), 44 (91).
156 *Vezzeso*, The Incentives Balance Test, 8.
157 *Lévêque*, Innovation, leveraging and essential facilities, 12.
158 *Vezzeso*, The Incentives Balance Test, 9.
159 *Czapracka*, Yale Journal 9 (2006/2007), 44 (90).
160 *Czapracka*, Santa Clara Computer and High Tech. L.J. 24 (2008), 207 (262).
161 *Schmidt/Kerber*, Incentives Balance Test, 1 *et seq*.
162 *Killick*, The Competition Law Review 1 (2004), 37.

Commission's finding that *Microsoft* violated Article 82, its ruling casts doubt on the validity of the balancing test. In its assessment whether *Microsoft's* refusal to license violated Article 82 of the EC Treaty by refusing to provide its rivals with interoperability information, the court relied on the test established in *Magill* and *IMS*.[163]

III. The Judgment of the Court of First Instance

On September 17, 2007 the CFI confirmed the decision of the Commission that *Microsoft* did violate Article 82 by refusing to provide interoperability information, upholding the imposed remedies. This clear judgment of the CFI for many scholars was as surprising as the ensuing decision of *Microsoft* to accept it and not to appeal to the ECJ, announcing the disclosure of the required information. The judgment has been long awaited, as it was a great opportunity for the CFI to clarify the criteria set in former case law for solving conflicts between IPRs and competition law which were not developed clearly so far, but also in regard to the new approach used by the Commission.[164] However, whereas the Commission took a significantly different approach to assess the refusal to license than it was done in *IMS*, the CFI did base its assessment on the *IMS* test. The CFI proceeded to show how *Microsoft* fits within the set of exceptional circumstances so far identified in the case law and left open the issue whether other conditions might also be relevant.[165]

The Court defined the scope of its review and stated that according to the case law of the Community Courts the review of complex economic appraisals made by the Commission is necessarily limited to "whether the facts have been accurately stated and whether there has been any manifest error of assessment or a misuse of power." (para. 87).[166] The Court as well as the Commission clarified at the beginning that only in exceptional circumstances a refusal to supply may constitute an abuse.[167] It then held that following from former case law "the following circumstances, in particular, must be considered to be exceptional:

- in the first place, the refusal relates to a product or service <u>indispensable</u> to the exercise of a particular activity on a neighbouring market;

[163] *Czapracka*, Santa Clara Computer and High Tech. L.J. 24 (2008), 207 (262).
[164] *Schmidt/Kerber*, Incentives Balance Test, 1.
[165] *Larouche*, The European Microsoft case, 7.
[166] *Ahlborn/Evans*, The Microsoft Judgment and its Implications, 6.
[167] „Although undertakings are, as a rule, free to choose their business partners, in certain circumstances a refusal to supply on the part of a dominant undertaking may constitute an abuse of a dominant position within the meaning of Article 82 EC unless it is objectively justified.
The refusal by an undertaking holding a dominant position to license a third party to use a product covered by an intellectual property right cannot in itself constitute an abuse of a dominant position within the meaning of Article 82 EC.
It is only in exceptional circumstances that the exercise of the exclusive right by the owner of the intellectual property right may give rise to such an abuse and that, accordingly, it is permissible, in the public interest in maintaining effective competition on the market, to encroach upon the exclusive right of the holder of the intellectual property right by requiring him to grant licences to third parties seeking to enter or remain on that market." CFI, Case T-201/04, *Microsoft Corp./Commission*, 2007, ECR II-3601, para. 6.

- in the second place, the refusal is of such a kind as to exclude any effective competition on that neighbouring market;
- in the third place, the refusal prevents the appearance of a new product for which there is potential consumer demand.

Once it is established that such circumstances are present, the refusal by the holder of a dominant position to grant a licence may infringe Article 82 EC unless the refusal is objectively justified." (para. 332-333). Though the CFI just built upon the *IMS* ruling and thus left open the question how other circumstances may influence the assessment of a refusal to deal under Article 82, it did develop and re-interpret a number of important points of law, significantly relaxing the *IMS* test and lowering the threshold.[168]

Taking the *indispensability* criterion, the CFI embraced the Commission's reasoning and found that the interoperability information were indispensable for *Microsoft's* competitors in order to compete viably on the market (para. 369-436). The Court rejected *Microsoft's* argument that there are other sufficient ways to ensure interoperability, stating that "competitors' operating systems must be able to interoperate with the Windows domain architecture on an equal footing with those Windows systems" (para. 374), enforced by the fact that *Microsoft* has established a *de facto* standard. The CFI relied, in substance, "on two premises: first, that the indispensability criteria is not a technical, objective criteria but must be based on an appreciation of 'economic viability'; and secondly, an appreciation of economic viability presupposes an analysis of a complex economic character, which under the case law is subject only to limited review by the Court."[169] In comparison, in former cases such as *Commercial Solvents*, *Volvo*, *Magill* and *IMS* there were no substitutes at all, thus access to the product or service at stake was really indispensable and the only way to enter or stay in the market. However, in *Bronner* access to the competitor's newspaper distribution network was not indispensable, as there were alternatives – though maybe less advantageous. With the ruling in *Microsoft*, the CFI broadened the criterion of indispensability to also cover 'economic indispensability', which makes it easier to find a refusal to license abusive and may leave a dominant undertaking holding IPRs with less legal certainty as and under which circumstances it will have to grant a license in order to avoid infringing Article 82.[170]

The detection of indispensability goes hand in hand with the assessment of *elimination of competition:* Finding that the good or service to which access is demanded is indispensable to compete on the secondary market, than the refusal to supply is on the verge of eliminating competition on that market.[171] *Microsoft* argued that there is only an abuse if the refusal is "likely to eliminate all competition" (para. 439), the mere risk would not be enough. But the Court rejected this argument and found – in line with the Commission – that a risk of elimination of all *effective* competition was indeed sufficient. The fact that *Microsoft's* shares in the market for work group server operating systems grew rapidly and the evidence of declining shares

[168] *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 11.
[169] *Vesterdorf*, Global Antitrust Review 1 (2008), 1 (7).
[170] *Ibid.*
[171] *Schmidt/Kerber*, Incentives Balance Test, 12 *et seq.*

and interoperability problems of its competitors supported the finding of the risk of eliminating all effective competition.[172] "[T]he fact that the competitors of the dominant undertaking retain a marginal presence in certain niches on the market cannot suffice to substantiate the existence of such competition." (para. 563). With this shift from "all competition" how it was established until *IMS* to "all effective competition" (thus competition which might present a real constraint or a real competitive challenge to the dominant undertaking) again loosened the conditions to find an infringement of Article 82, making the test less strict. However, this change is probably well-founded, as what is necessary is that there is room for some effective and not just some, however toothless, competition.[173]

Another development can also be seen with regard to the *new product* criterion. *Microsoft* claimed that the Commission failed to identify any new product for which there is consumer demand and which is prevented from being marketed (para. 621). However, the Court held that it was not necessary to identify such a particular product, but a refusal to license may also be abusive when it (according to Article 82) "limits technical development to the prejudice of consumers" (para. 643 *et seqq.*). Through its refusal *Microsoft* created an "artificial interoperability advantage, and together with its strong market position, discouraged the development of competing server operating systems (para. 653). Thus, the decisive criterion now is whether consumer welfare is reduced: As due to lacking interoperability consumers are locked in to Windows products, thus competitors cannot successfully offer their own innovative products. The occurring effect according to the CFI was similar to a prevention of a new product.[174]

"Even though the Court initially declares that it follows the new product requirement, it extends this criterion in a manner that it entails also technical development, which need not necessarily result in the development of a new product but may comprise some technical improvements or add-ons. From an economic point of view, this extension can be assessed positively. Generally, European competition law aims at the increase of consumer welfare. Restricting the interpretation of Art. 82 ECT to the appearance of new products does not cope with this standard. Moreover, broadening the scope of this criterion allows a better promotion of innovation."[175] However, there are also critics who claim that this approach broadens the scope of antitrust intervention, providing little guidance as to when exactly a refusal to license is anticompetitive.[176] Proponents of strong protection of IP may wish that this broadened criterion must be interpreted restrictively.[177]

172 *Czapracka*, IP and the Limits of Antitrust, 59.
173 *Vesterdorf*, Global Antitrust Review 1 (2008), 1 (8).
174 *Schmidt/Kerber*, Incentives Balance Test, 10 *et seq.*
175 *Ibid*, 14.
176 *Czapracka*, IP and the Limits of Antitrust, 60; *Czapracka* in this regard strongly defends the new product criterion established in *Magill* and *IMS* as it – in contrast to the *Microsoft* criterion – „can arguably serve as a reasonable limiting principle, granting some level of legal certainty for dominant companies holding IP rights in valuable technologies. (…) The use of antitrust to define the scope of IP rights ex post is limited to cases where it is very clear that the refusal to license paralyzes follow-on innovation. The new product test limits the risk of over-enforcement, is feasible to administer, and leads to more predictable results than the new CFI test focusing on future technical progress.".

Having found that the above three conditions were fulfilled the Court also decided that there was no *objective justification*. The CFI decided that neither the fact that the requested information "are covered by intellectual property rights" nor the innovative or original character of the protected subject-matter can constitute objective justification within the meaning of *Magill* and *IMS*" (para. 690, 693). *Microsoft* failed to sufficiently show that the disclosure "would have a significant negative impact on its incentives to innovate." (para. 697). Moreover, the CFI rejected the objective justification by reasoning that the Commission had shown that *Microsoft's* fear of cloning its products is unjustified, sharing interoperability information is a standard practice in software industry, and *Microsoft's* incentives to innovate have not been adversely affected by the obligations imposed in the U.S. settlement (para. 701 *et seqq*.).

Regarding the application of the Incentive Balance Test which has been explicitly challenged by *Microsoft*, the Court argued that *Microsoft* has misread the decision, as the Commission did not base its decision on that test, but rather showed that *Microsoft's* arguments were not solid (para. 704 *et seqq*.). Having failed to prove any objective justification, no balancing was necessary anyway and has not been conducted by the Commission. Thus, the CFI is very reluctant regarding the test: The Court does not endorse the test on the one hand, but on the other hand it does not reject it either. This is important, because if it had rejected the test, it would have closed the door for such a balancing. Ignoring it provides an opportunity for applying the test in future cases.[178] Nevertheless, many commentators are disappointed that the Court was hesitant to review the test and opted for the more conventional and formalistic solution (or one can say "safe approach") of applying the *IMS* criteria.[179] Further regrets are expressed with regard to the fact that the Court did not clarify what might constitute an objective justification for refusal to grant a license of an IPR.[180] There is no single Article 82 refusal to license case in which an objective justification has been accepted (or at least in which any clarification on what would have been accepted was made). However, as this criterion goes exactly at the heart of the potential conflict between antitrust and IP law, any clear criteria or at least approach to solve it would be desirable.[181] In addition it is also severely criticized that the burden of proof is placed on the dominant undertaking, especially considering the negative effects of a compulsory licensing.[182] Thus, from "a purely academic point of view, it may be regretted that the judgment was not brought on appeal before the ECJ so Europe's highest Court could have its final say in the case.[183]

All in all the judgment has significantly lowered the threshold for an obligation to license IP rights, having become less predictable.[184] Though many questions have been left open and the CFI (despite its clear backing of the decision of the EU

[177] *Vesterdorf*, Global Antitrust Review 1 (2008), 1 (9).
[178] *Schmidt/Kerber*, Incentives Balance Test, 15.
[179] *Komninos/Czapracka*, in: Etro/Kokkoris (eds.), Competition Law, 17.
[180] *Vesterdorf*, Global Antitrust Review 1 (2008), 1 (10).
[181] *Schmidt/Kerber*, Incentives Balance Test, 15.
[182] *Czapracka*, IP and the Limits of Antitrust, 61.
[183] *Vesterdorf*, Global Antitrust Review 1 (2008), 1 (14).
[184] *Ahlborn/Evans*, The Microsoft Judgment and its Implications 28, 30.

Commission) has not used its decision in this landmark case to clarify the legal test for refusal to license cases and its position towards this new economic Incentives Balance Test, many regard this test as a very interesting starting point – as the decisive criterion should be whether compulsory licensing would lead to more overall innovation.[185]

E. Conclusion

The issue at the heart of the *Microsoft* case was innovation, whereat the opinions on the final decision and its effects widely differ. Of course it is acknowledged that striking the balance between Intellectual Property Rights and competition law is an extremely difficult exercise that will rarely meet everybody's expectations. According to some commentators, the weaponry of the Commission and competition authorities has been reinforced with this judgment. It has been underlined that the Commission has not lost its reputation – if it had suffered another defeat after a string of rulings against it in the past, the damage would have been immeasurable, maybe seriously undermining the Commission's ability to effectively enforce competition law. This strengthening is considered good for competition.[186]

However, the decision is harshly criticized by others as being "an example of overeager application of antitrust laws to intellectual property."[187] Many authors fear that the judgment may have far reaching negative consequences for holders of IPRs, as the scope of protection has been weakened considerably and the already shaky legal certainty that they had before *Microsoft* has been rendered even more shaky.[188] Fierce criticism comes especially from the United States with a senior U.S. antitrust official commenting on the decision that it was "protecting competitors, not competition, in ways that may ultimately harm innovation and the consumers that benefit from it."[189] It is claimed that the impact on business will be felt by both, *Microsoft* itself but also all other companies which have built up dominant market positions on the back of IPRs, in which they may have invested significant amounts of money.[190]

Thus, especially the decision's effects on innovation are assessed contradictory. On the one side, there are authors who – more in line with the Commission's reasoning - assess the impact on innovation more positively. As competitors in the case of *Microsoft* now do have access to interoperability information, the value and sales of

[185] *Schmidt/Kerber*, Incentives Balance Test, 2, 32

[186] *Israel,* Marc, CFI's Microsoft verdict highlights differing US and EU stances, 24 September 2007, available at: <http://www.thelawyer.com/cfi%E2%80%99s-microsoft-verdict-highlights-differing-us-and-eu-stances/12894 8.article> (last visit: 30 March 2011); *Vesterdorf,* Global Antitrust Review 1 (2008), 1 (13).

[187] *Czapracka*, Santa Clara Computer and High Tech. L.J. 24 (2008), 207 (271).

[188] *Vesterdorf,* Global Antitrust Review 1 (2008), 1 (13 *et seq*).

[189] *U.S. Department of Justice*, Press Release 24 March 2004, Assistant Attorney General for Antitrust, R. Hewitt Pate, Issues Statement on the EC's Decision in its Microsoft Investigation, available at: <http://www.usdoj.gov/opa/pr/2004/March/04_at_184.htm> (last visit: 30 March 2011).

[190] *Israel,* Marc, CFI's Microsoft verdict highlights differing US and EU stances, 24 September 2007, available at: <http://www.thelawyer.com/cfi%E2%80%99s-microsoft-verdict-highlights-differing-us-and-eu-stances/ 128948.article> (last visit: 30 March 2011).

their products will increase, which will increase rival's return to R&D and finally the incentive to innovate. They do not longer have to wastefully incur costs to overcome technical barriers to interoperability. As rivals can compete on a level playing field with the disclosed information, this will have effects on *Microsoft* as well. Higher quality of rivals' products, increased price competition and reduced market shares will maybe lead to some reduction of *Microsoft's* incentives to invest.[191] But because a company can escape harsh competition through innovation, investment incentives of all firms – including *Microsoft* – will increase. Thus, to summarize this opinion, it is believed that there likely will be positive effects on competitors' innovation and ambiguous effects on *Microsoft*. It is far from clear that the compulsory license will reduce industry-wide innovation – but there are many reasons to believe in a positive effect on aggregate innovation.[192]

However, based on the idea that owners of IPRs should be free to decide on their use, many opinions decry the judgment as a threat to innovation,[193] weakening the protection for IP. It is regarded as an attack on Intellectual Property Rights which reduces companies' incentives to innovate in two ways. First, successful firms must risk that their inventions will be disclosed to competitors, allowing them to simply copy or adopt the inventions.[194] "Inventors and creators will not know in advance whether their rights will be whittled down or upheld by competition authorities. They will not be able to estimate correctly the return on their investments. This heightened legal insecurity reduces incentives and, consequently, R&D efforts."[195] But secondly, competitor's incentives to innovate are deterred as well. Why should they invest in R&D, when they could get it cheaper from the leading company, just threatening it to file antitrust complaints? Competitors will devote their resources to legal challenges rather than innovation. This seems rational from an individual's perspective, as it is likely to be low cost and low risk, whereas innovating on your own is risky and expensive.[196] Thus, by "eroding the foundations of IP" both, successful firms and their competitors, in any industry, will be reluctant to innovate.[197]

The *Microsoft* judgment seems to raise more or less concern. As outlined in the last chapter it presents some legal developments or evolutions of the European case law. However, regarding the future it should not be forgotten that *Microsoft* was about very particular and special factual circumstances and a company with extraordinary worldwide market power – thus the judgment should be read and understood in its special context.[198]

In the last sections it has been outlined that there are circumstances in which a refusal to supply or to grant access to an 'essential facility' by a dominant undertaking can amount to an abuse of a dominant position according to Article 82. As *Microsoft*

[191] However, unlike its competitors, *Microsoft* will still gain substantial profits from general innovation in the Computer operating systems market, where it still has a monopoly. Thus innovations in that sector will certainly not substantially fall.
[192] *Genakos/Kühn/Van Reenen*, Centrepiece 12 (2007), 2 (6).
[193] *Howarth/McMahon*, CFI Judgment in Microsoft, 30.
[194] *Spulber*, Competition Policy and the Incentive to Innovate, 103 *et seq.*, 161.
[195] *Lévêque*, Innovation, leveraging and essential facilities, 12.
[196] *Barnett*, Interoperability between Antitrust and IP, 13.
[197] *Spulber*, Competition Policy and the Incentive to Innovate, 103 *et seq.*, 161.
[198] *Vesterdorf*, Global Antitrust Review 1 (2008), 1 (14).

has shown this is a controversial and difficult topic at the intersection of IP law and antitrust for a variety of reasons. First, the commonly supported view that companies have the freedom to conclude contract with whomever they want leads to compulsory licensing not being a generally accepted legal norm. Furthermore, the views on the circumstances that require compulsory licensing and especially the opinions on what constitutes an objective justification vary significantly. And third, there are discussions on the impacts on economy and economic welfare.[199]

As intellectual property rights are granted according to very general principles, the specific IPRs are seldom optimal from an economic perspective, which in exceptional circumstances opens the possibility for a correction of these imperfections of IP through compulsory licensing.[200] Thus, IPRs are not immune from antitrust intervention, but the premise is that their special features should be taken into account when antitrust law is applied to them. Cautious balancing is required when the scope of IPRs is defined by competition laws, as any over- or under-enforcement may undermine the objective of IPRs – the promotion of innovation. But it should be kept in mind that IPRs may also be used in an anticompetitive manner, for example to erect barriers to entry to a market, preventing new products.[201] Ideally IP laws should encourage innovation up to the optimal level, but no further, since overly strong IP laws unduly interfere with competition and therefore reduce welfare unnecessarily – and in reverse. Thus, a balance is required between antitrust and IP protection, between competition and monopoly. This means that if IP laws are strong, competition laws should be strong as well, and *vice versa*.[202] Both should work unison to maximize wealth by promoting innovation and economic progress.[203]

The challenge is to coin clear limiting principles for the application of antitrust laws to IPRs. Relying on the Essential Facilities Doctrine to cure flaws in IP is a very controversial issue. Compulsory licensing as a clear limitation of IPRs through the application of Article 82 requires courts and antitrust authorities to be particularly careful and to consider all short and long term consequences. Such a limitation should always be proportionate and kept to the minimum necessary to avoid abusive behavior. Each case must be looked at in light of its specific circumstances. The competition authorities need to be cautious and choose their cases with great care in order to avoid running the risk of adopting in reality anticompetitive decisions.[204] The European case law with the last judgment in *Microsoft* shows that more guidance on this issue and legal certainty for companies holding IPRs are necessary.[205]

199 *Arutyunyan, IES Proceedings 4 (2008),* 167 (169 *et seq.*).
200 *Schmidt/Kerber*, Incentives Balance Test, 34.
201 *Czapracka*, Yale Journal 9 (2006/2007), 44 (74 *et seq.*).
202 *Lemley*, Southwestern Journal of Law and Trade in the Americas 13 (2007), 1 (2, 18).
203 *Czapracka*, Yale Journal 9 (2006/2007), 44 (74 *et seq.*).
204 *Vesterdorf*, Global Antitrust Review 1 (2008), 1 (14).
205 *Ibid,* 1 (2); *Czapracka*, Yale Journal 9 (2006/2007), 44 (107 *et seq.*); *Schmidt/Kerber*, Incentives Balance Test, 23.

REFERENCES

Antoniou, Anastasios A., The Essential Facilities Doctrine Before the European Community Courts: Ostracised or Expanded?, Cyprus and European Law Review 11 (2010), available at: <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1641125> (last visit: 30 March 2011).

Ahlborn, Christian / *Evans*, David S., The Microsoft Judgment and its Implications for Competition Policy towards Dominant Firms in Europe, 2008, available at: <http://ssrn.com/abstract=1115867> (last visit: 30 March 2011).

Arutyunyan, Arutyun, Intellectual Property Law vs. Essential Facility Doctrine. Microsoft vs. Commission, in: Kirch, Aksel/Kerikmäe, Tanel/Talts, Mait (eds.), Socio-Economic and Institutional Environment: Harmonisation in the EU Countries of Baltic Sea Rim, IES Proceedings 4, (2008), Tallin, 167-193, available at: <http://www.ies.ee/iesp/No4/ Arutyunyan.pdf> (last visit: 30 March 2011).

Barnett, Thomas O., Interoperability between Antitrust and Intellectual Property, U.S. Department of Justice presentation on September 13, 2006, available at: <http://www.justice.gov/atr/public/speeches/218316.pdf> (last visit: 30 March 2011).

Beinhocker, Eric D., The adaptable corporation, The McKinsey Quarterly 2 (2006), 76-87, available at: <http://www.synetz-international.com/Artikel_Adaptable_corporation_McK .pdf> (last visit: 30 March 2011).

Berndt, Ralph, Bildungskonzepte im innovatorischen Zeitalter: Das Beispiel GSBA unter Rektor Dr. A. Stähli, in: Berndt, Ralph (ed.), Erfolgsfaktor Innovation, Berlin 2005, 3-11.

Bouchagiar, Antonios, Soft-Wars: The Role of the Essential Facilities Doctrine as Jus in Bello, Mayer Brown LLP. Publication, January 2006, available at: <http://www.mayerbrown. com/publications/article.asp?id=3787&nid=6> (last visit: 30 March 2011).

Bunte, Hermann-Josef/*Langen*, Eugen (eds.), Kommentar zum deutschen und europäischen Kartellrecht, Volume 2, 10th edition, Luchterhand 2005.

Curley, Duncan, Interoperability and Other Issues at the IP–Anti-trust Interface: The EU Microsoft Case, The Journal of World Intellectual Property 11, (No. 4, 2008), 296–320.

Czapracka, Katarzyna, Intellectual Property and the Limits of Antitrust: A Comparative Study of US and EU Approaches, Cheltenham 2009.

– Antitrust and Trade Secrets: The U.S. and the EU Approach, Santa Clara Computer and High Technology Law Journal 24 (No. 2, 2008), 207-273, available at: <http://www.chtlj.org/sites/default/files/media/articles/v024/v024.i2.Czapracka.pdf> (last visit: 30 March 2011).

– Where Antitrust Ends and IP Begins – on the Roots of the Transatlantic Clashes, Yale Journal of Law and Technology 9 (Fall 2006-2007), 44-108, available at: <http://www.yjolt.org/files/czapracka-9-YJOLT-44.pdf> (last visit: 30 March 2011).

Dolmans, Maurits/*O'Donoghue,* Robert/*Loewenthal,* Paul-John, Article 82 EC and Intellectual Property: The State of the Law Pending the Judgment in Microsoft v. Commission, Competition Policy International 3 (No. 1 Spring 2007), 107-144, available at: <http://ssrn.com/abstract=987331> (last visit: 30 March 2011).

European Commission DG Competition, DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses, Brussels 2005.

First, Harry, Microsoft and the Evolution of the Intellectual Property Concept, Wisconsin Law Review 2007, 1369-1432, available at: <http://lsr.nellco.org/cgi/viewcontent.cgi?article=1078&context=nyu_lewp> (last visit: 30 March 2011).

Forrester, Ian S., Regulating Intellectual Property Via Competition? Or Regulating Competition Via Intellectual Property? Competition and Intellectual Property: Ten Years On, the Debate Still Flourishes, 2005, available at: <www.eui.eu/RSCAS/Reserch/Competition/2005/200510-CompForrester.pdf> (last visit: 30 March 2011).

Gauß, Nicolas, Die Anwendung des kartellrechtlichen Missbrauchsverbots nach Art. 82 EG (Art. 102 AEUV) in innovativen Märkten, Baden-Baden 2010.

Genakos, Christos/*Kühn*, Kai Uwe/*Van Reenen*, John, The European Commission versus Microsoft: competition policy in high-tech industries, Centrepiece 12 (2007-06), 2-7, available at: <http://eprints.lse.ac.uk/4600/1/The_European_Commission_versus_Microsoft_Competition_Policy_in_High-Tech_Industries.pdf> (last visit: 30 March 2011).

Hatzopoulos, Vassilis, The EU essential facilities doctrine, European Legal Studies – Research Papers in Law, 6/2006, available at: <http://www.coleurop.be/file/content/studyprogrammes/law/studyprog/pdf/ResearchPaper_6_2006_Hatzopoulos.pdf> (last visit: 30 March 2011).

Howarth, David/ *McMahon*, Kathryn, "Windows has performed an illegal operation": The Court of First Instance's Judgment in *Microsoft v Commission,* 2008, available at: <http://ssrn.com/abstract=1531575> (last visit: 30. March 2011).

Israel, Marc, CFI's Microsoft verdict highlights differing US and EU stances, 24 September 2007, available at: <http://www.thelawyer.com/cfi%E2%80%99s-microsoft-verdict-highlights-differing-us-and-eu-stances/128948.article> (last visit: 30. March 2011).

Killick, James, IPRs, Competition Rules, and Interoperability - Who Has Priority?, Stockholm Network Experts' Series on Intellectual Property and Competition, 2007, available at: <http://www.stockholm-network.org/downloads/publications/d41d8cd9-Killick%20Final.pdf> (last visit: 30. March 2011).

– *IMS* and *Microsoft* Judged in the Cold Light of *IMS*, The Competition Law Review 1 (No. 2, 2004), 23-47, available at: <http://www.clasf.org/CompLRev/Issues/CompLRevVol1Issue2.pdf> (last visit: 30. March 2011).

Komninos, Assimakis/*Czapracka*, Katarzyna, IP Rights In the EU Microsoft Saga, in: Etro, Frederico/Kokkoris, Ioannis (eds.), Competition Law and the Enforcement of Art. 102, Oxford 2010.

Korah, Valentine, Intellectual Property Rights and the EC Competition Rules, Oxford/Portland 2006.

Kühn, Kai-Uwe/*Van Reenen*, John, Interoperability and Market Foreclosure in the European Microsoft Case, 2007, available at: <http://ssrn.com/abstract=1013929> (last visit: 30 March 2011).

Lange, Knut Werner, Europäisches Kartellrecht und geistiges Eigentum – der Fall Microsoft, in: *Lange*, Knut Werner (ed.), Geistiges Eigentum und Wettbewerb, Tübingen 2009, 131-146.

Larouche, Pierre, The European Microsoft case at the crossroads of competition policy and innovation, Tilburg 2008, available at: <http://ssrn.com/abstract=1140165> (last visit: 30 March 2011).

Lemley, Mark A., A New Balance Between IP and Antitrust, Southwestern Journal of Law and Trade in the Americas 13 (2007), 1-20, available at: <http://ssrn.com/abstract =980045> (last visit: 30 March 2011).

Lévêque, François, Innovation, leveraging and essential facilities: Interoperability licensing in the EU Microsoft case, Paris 2005, available at: <http://ssrn.com/abstract=927900> (last visit: 30 March 2011).

Loewenheim, Ulrich/*Meessen*, Karl/*Riesenkampff*, Alexander (eds.), Kommentar zum Kartell-recht, Band 1: Europäisches Recht, München 2005.

Maher, Imelda, Editorial, The Competition Law Review 1 (No. 2, 2004), 1-5, available at: <http://www.clasf.org/CompLRev/Issues/CompLRevVol1Issue2.pdf> (last visit: 30 March 2011).

Reimann, Carsten, Essential Function vs Essential Facility, The Competition Law Review 1 (No. 2, 2004), 49-64, available at: <http://www.clasf.org/CompLRev/Issues/CompLRev Vol1Issue2.pdf> (last visit: 30 March 2011).

Sarkar, Soumodip, Innovation, market archetypes and outcome: an integrated framework, Heidelberg 2007.

Schmidt, Claudia/*Kerber*, Wolfgang, Microsoft, Refusal to License Intellectual Property Rights, and the Incentives Balance Test of the EU Commission, November 2008, available at: <http://ssrn.com/abstract=1297939> (last visit: 30 March 2011).

Spulber, Daniel F., Competition Policy and the Incentive to Innovate: The Dynamic Effects of Microsoft v. Commission, 2008, 101-162, available at: <http://ssrn.com/abstract =1146451> (last visit: 30 March 2011).

Turney, James, Defining the Limits of the EU Essential Facilities Doctrine on Intellectual Property Rights: The Primacy of Securing Optimal Innovation, Northwestern Journal of Technology and Intellectual Property 3 (No. 2, Spring 2005), available at: <http://www.law.northwestern.edu/journals/njtip/v3/n2/5/> (last visit: 30 March 2011).

Van Damme, Eric/*Larouche*, Pierre/*Müller*, Wieland, Abuse of a Dominant Position: Cases and Experiments, August 2006, TILEC Discussion Paper No. 2006-020, available at: <http://ssrn.com/abstract=925626> (last visit: 30 March 2011).

Venit, James S., Article 82 EC: Exceptional Circumstances – The IP/Antitrust Interface after IMS Health, 2005, available at: <www.eui.eu/RSCAS/Reserch/Competition/2005/ 200510-CompVenit.pdf> (last visit: 30 March 2011).

Vesterdorf, Bo, Article 82 EC: Where do we stand after the Microsoft judgement?, Global Antitrust Review, Issue 1, 2008, 1-14, available at: <http://www.icc.qmul.ac.uk/GAR/ Vesterdorf.pdf> (last visit: 30 March 2011).

Vezzoso, Simonetta, The Incentives Balance Test in the EU Microsoft Case: A More "*Economics-Based*" Approach, Trento 2005, available at: <http://eprints.biblio.unitn.it/ archive/00000930/01/EPRINTS_Incentives_Balance_Test_in_the_EU_Microsoft_Case .pdf> (last visit: 30 March 2011).

Voelcker, Sven, The Implications of Microsoft and IMS Health: Interesting Times for Dominant Intellectual Property Holders in Europe, Wilmer Cutler Pickering Hale and Dorr Antitrust Series, Working Paper 23, June 2004, available at: <http://law.bepress.com/wilmer/ papers/art23> (last visit: 30 March 2011).

Wahren, Heinz-Kurt, Erfolgsfaktor Innovationen: Ideen systematisch generieren, bewerten und umsetzen, Berlin 2004.

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