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Mandatory access to essential facilities in the IT sector: Extending or Limiting the scope of Article 82 of the EC Treaty?

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1. Introduction

In modern information economy, firms employ competitive strategies which are fundamentally different from those that prevail in other – more traditional – economic sectors. This differentiation could be primarily seen as an entrepreneurial and intuitive response to the distinctive characteristics of a rapidly changing and fluid economic environment to which competing firms in the IT sector have constantly to adapt. On the other hand, however, this differentiation also calls for a new understanding regarding the role of competition law and policy in those high-tech industries.
One of the most debatable topics in this antitrust-related searching for solid and consistent economic and legal foundations in the IT sector is the interface between intellectual property (IP) law and competition law, for both legal frameworks carry with them the seeds of a potential destructive and tense relationship. The central question appears to be whether an intellectual property right (IPR) holder is entitled to be immune from the enforcement reach of competition laws exactly due to very existence of the IPR he enjoys which is by its very nature a monopoly conferring privilege. Answering negatively to the latter question poses, however, two additional dilemmas: if an IPR holder is to be subjected to antitrust law, under which circumstances could a refusal to provide access to a competitor to an IP-protected product (or service) be regarded as abusive exploitation of a statutorily conferred monopoly? And secondly, having established the presence of such circumstances that render the refusal as abusive, is mandatory licensing of the IPR itself the most efficient remedy that could be effectively imposed in order to reconcile IP and competition law?

The issue of mandatory access to an essential facility has gradually become a topic of great concern for the IT sector due to the fact that IPRs are serving a distinguished "market allocation" function which is absolutely necessary for the preservation of the incentives to innovate in the IT market, while many IP-protected products of modern economy have evolved to become industrial standards. For more that a decade now, US and EU antitrust relations have struggled to find a balanced level of common methods and values employed to judge such "mandatory access" cases. The tool so far used in the two sides of the Atlantic may have incorporated different elements in each jurisdiction but has been commonly based on a version of the "essential facilities" theory, originally developed in US case law and theory. In this paper, it will be argued that recent enforcement actions in both EC and US reveal that whereas the European Commission may be ready to expand the circumstances under which dominant firms could be forced to give access to an "essential facility" they control, at the same time the US Supreme Court is rather moving towards a more restrictive approach regarding "refusal to deal" cases. Chapter (II) offers some of the basic principles that influence competing firms in the information economy and highlights the implications for the consistency of antitrust analysis that will follow. Chapter (III) discusses in more depth the concept of the interplay between IP and competition law and the problems it poses for a coherent antitrust analysis. Chapter (IV) analyses the US case law regarding the employment of Section 2 of Sherman Act in cases involving refusal to deal conducts with a particular interest in the applicability of the essential facilities theory. Chapter (V) explores the European approach regarding refusal to deal and essential facilities, but this time with an explicit reference to the IP-related aspects of the information economy involved. Finally, Chapter (VI) concludes.

2. Information Economy: the peculiarities for the IP/antitrust interplay

2.1 The peculiar role of cost structure in IT sector – Supply-side economies of scale

The successful commercialization of many new products in the IT sector presupposes frequently huge fixed and sunk costs incurred in the research and development (R&D) level. For example, it has been reported that Microsoft and IBM spend annually over 6 and 5 billion dollars respectively on R&D.[1] On the other hand, however, once the product has been successfully introduced in the market, the reproduction of additional copies adds only minimally to the total cost due to the fact that, as it will be explained below, the marginal cost of replication is very low (e.g. the formulation of a mathematical algorithm and its incorporation into a software code or interface, created under the R&D activities of a software company, may be the result of substantial and costly investments, however the costs of reproduction and re-implementation of the algorithm in subsequent applications are only minimal, for the latter may be characterized in economic terms as a non-rival good[2]). Additionally, most of the production costs in today's digital economy are by their nature "first copy costs":[3] modern industry sells products that are technologically speaking very easy to copy; anyone who buys a Sony-produced set of music compositions in a digital format may reproduce additional copies with a very small incremental cost. The cost-related peculiarities of IT industry are reinforced by the fact that information goods exhibit also very low distribution costs; the easy-to-transfer character of information goods adds to the complexity of the issue, since physical replication is not any more necessary and the shipping component may thus become very easy and cheap.[4] All these parameters taken together reveal a peculiar sector of the economy with very high fixed (sunk) costs of production, very low marginal cost of replication and low distribution costs resulting to the emergence of significant supply-side economies of scale[5] with fundamental antitrust implications in terms of market structure, size and efficiency.[6] Additionally, the minimal level of marginal costs poses a second and also antitrust-related concern: if the marginal cost is zero, whereas the production costs involve huge investments in R&D and are of a "first copy costs" nature, allowing considerable room for free-riding once the R&D proves to be in commercial terms viable, an incentive deficit arises, for no rational firm will find it ever profitable to enter this competitive race for R&D without a legal guarantee that would offer to some extent a degree of monopoly power over the possible rewards that such a R&D activity could generate in future. It will be argued that the above incentives deficit is being dealt partially by the assignment of intellectual property rights to such non-rival goods, as software interfaces and protocols, music, database structures and data, etc. [7] However, this legal construction carries with it inevitably the seeds of a possible contradiction between those two legal frameworks: the intellectual property law (IP law) and competition law.[8]

2.2 Demand-side economies of scale: Networks effects

Information economy exhibits also strong demand side economies of scale: modern IT economy is characterized by strong "network effects" which occur when a person's benefit from using a product increases proportionally with the number of people who also use it. Network effects may be socially beneficial as they play a leading role in making technology affordable for ordinary consumers. For example, application software written for Windows Operating System (OS) has gained widespread users' acceptance exactly due to fact that enough users (in fact, the majority) have been also attracted to the same OS, lowering thus the costs for consumers who just have to follow a single and fully integrated platform in order to accomplish their tasks. Problems, however, may arise when a firm controlling an "essential" part of a network through interfaces and standards (an "information bottleneck") may be tempted to "lock-in" customers and extent its control to adjacent markets. Accordingly, the growing importance of those networks in our modern economy raises also new competitive concerns: interoperability and the control of interfaces. A coherent competition law approach should be concentrated on how to deal with both issues in order to prevent the use of such a monopoly power as a mechanism to destroy competition in adjacent markets, while not destroying the incentives mechanism which generates beneficial social wealth by rewarding the risky, ingenious and talented entrepreneur.

2.3 Standardization

Related also to this "network effects" theory is the fact that in the complex and fast-changing world of information economy simplicity and standardization are the "key" words. In the IT sector, a huge number of different products are tightly bound up through interfaces.[9] A personal computer, for example, consolidates different products (microprocessors, chips, monitors, application software, etc.) which taken together comprise an overall system. This integrated system is allowed to function properly only because an Operating System (e.g. the most popular is Microsoft's Windows) checks and balances thousands of different applications and commands. The operating system offers the standard upon which programmers and ultimate users rely in order either to release and commercialize compatible software or ultimately use various software programs in the same personal computer, respectively. Thus, this standard provides two market functions: a) allocates efficiently scarce resources necessary to develop new software, as programmers preserve time and funds by writing one code version compatible to each OS, and b) enhances consumers welfare, as users do not waste time and money searching around among dozens of incompatible with each other OS in order to find the one compatible with the particular software they are interested in. A standard may also be adopted *de facto* by the relevant industry itself, as is the case for the *IMS* database which is apparently governing fundamental aspects (marketing) of the commercial activity of most pharmaceutical companies in Europe.[10] Both cases represent a new competitive concern: once the relevant standard has been widely adopted, the combined reading of "network effects" and "lock-in" theories suggests that the relevant industry will face great difficulty in switching to an alternative standard, since switching costs may constitute an insurmountable barrier to entry and this implication may have adverse effects on future innovation. The whole concept implies that there is inherently a further standardization/innovation tradeoff that an antitrust analysis should also incorporate.

2.4 Innovation is the King – Intellectual Property Rights (IPRs) as a Sword and a Shield

The distinctive characteristic of IT economy lies, however, to the inevitable recognition that any failure to follow the rapid innovation race may be fatal for any firm, even a dominant one, competing in the market. As Shapiro states it, *"the classical notion of the sleepy monopolist just does not fit this sector"*.[11] Accordingly, the evaluation of performance in IT industries is governed mainly by the innovation element and not pricing. The increased importance of innovation has awarded to IPRs a greater role in establishing competitive advantages compared to the traditional sectors of agriculture and industry,[12] for IPRs appear to be the last weapon, a sword, against infringing firms that try to take a "free-ride" on an IP-protected product or the shield as well, mounting counterclaims against those firms that bring infringement claims.[13] In practice, recent data confirm the substance of the argument for the importance of IPRs in the technology industry: for the year 2004 in the comprehensive list of US patent award recipients, the top ten ranking includes only firms active in the IT sector, with IBM, as top of the list, being awarded the astonishing number of 3.248 patens, 68% more than second placed Matsushita (also a "high tech" firm).[14]

2.5. The role of monopoly power

It appears from the above analysis that in high-tech, knowledge-based markets, firms actually compete *for* the market rather than *in* the market.[15] The vigorously competitive nature of the innovation race leads to a paradox: by pursuing under extremely competitive conditions the primacy at the "election of the de facto standard" phase, firms envision and pursue their transition into a situation which economists would describe as *"the winner takes it all"*; hence, the market is dominated at any given time by a single product, while the continuous innovative struggle offers competitive pressures which inevitably come from the future.[16] Accordingly, there is a clear co-existence between competition and quasi-monopoly which may be seen at odds with traditional antitrust principles. Indeed, Judge Penfield Jackson, when dealing with the Microsoft case in US,[17] could not avoid reaching the strange and contradictory conclusion that Microsoft was simultaneously a quasi-monopolist and a fierce competitor.[18] However, one must be cautious before arguing that this aura of innovation alone, as a potential competitive constraint, is in the position to discipline effectively the market and erode monopoly power. It could be, though, fair to argue that in the antitrust analysis of the information economy the simple presumption of monopoly power must be always contrasted to the self-evident fact that most of today's leading companies in the IT sector are obliged to continuously improve the quality of their products and/or offer new products in order to protect their current positions and sometimes even their sheer existence.[19]

3. The Interface between Intellectual Property Law and Competition law

3.1 Intellectual property law as a "market creator"

From an economic point of view, property rights in general are viewed as a necessary condition to achieve both static and dynamic efficiency.[20] They constitute the essential part of a legal framework that ensures society's peace and order and allows innovative and risky entrepreneurs to control their assets and collect peacefully the rewards of their creative efforts. This is achieved by creating strong and legally enforceable rights of exclusivity. The exclusive nature of property rights is well equipped to deal with the usage of the so-called "rival" goods, i.e. private goods which are characterized by *rivalry* in usage; a classical example is a particular set of clothes: only one person can wear that particular piece of clothing at that instant.[21] Because of this characteristic in terms of rivalry, economic theory suggests that it is generally optimal to let that single person (who owns this rival and private good) to decide exclusively how it ought to be used.[22]

However, a "non-rival" good, i.e. one that can be used simultaneously by many people (e.g. a mathematical theorem), exhibits a different characteristic: the marginal cost of reproduction of a non-rival good, once it has been discovered, is zero (e.g. it costs me nothing to use the Pythagoras' theorem once it has been formulated).[23] This circumstance does not permit the existence of an efficient market, since economic theory suggests that resources are only allocated efficiently when price is equated with marginal cost. In the case, however, of a non-rival good, if its price is to be set above zero, there will be inevitably an inefficient outcome; on the other hand, if the price must be equated with zero, there will be no incentive for private agents to undertake the risks and costs of the underlying research activity at the first place due to the inherent risks of imitation once the creation is marketed which will jeopardize the appropriation of rewards on behalf of the original creator.[24]

The resolution of this "Gordian Knot" is achieved through the assignment of intellectual property rights (such as copyrights and patents) for non-rival goods: IPRs are the artificial catalysts that convert non-rival goods into private goods by legally securing for creators and inventors appropriate rewards deriving from their activity in the form of a legally enforceable right to exclude other individuals from accessing the protected good.[25] In other words, intellectual property law may be seen as a statutory framework with "market allocation" functions, for (at least to some extent) it creates a market where possibly none could have been existent out of the interplay of normal laws of supply and demand.

3.2 The tradeoff between intellectual property law and competition law

This legal construction, namely assigning exclusive and legally enforceable property rights to non-rival goods, involves inevitably a tradeoff: by assigning to any intellectual property a legal right of exclusion, IPRs may also confer to their holders the ability to exercise market power which can lead

to allocative inefficiencies. Hence, IPR holders may restrict output levels in order to achieve higher prices and maximize their profits. Thus, IP law may encourage innovation, while at the same time bears the risk of promoting monopolistic outcomes.[26]
Accordingly, there seems to appear, at first glance, an inherent conflict between two different legal frameworks: the intellectual property law and competition law. However, it can be argued that these two bodies of law are actually complementary in nature, even though they contain both convergent and opposing elements, which render the final balance uncertain.[27] The convergence lies in the stated *"common purpose of promoting innovation and enhancing consumer welfare"*[28]: in fact, both laws are equally aimed at encouraging innovation, industry and ultimately competition itself.[29] However, whereas antitrust law seeks to achieve this through the elimination of behaviors and practices that restrict competition, intellectual property law pursues the same aim in the opposite way, i.e. by creating legal monopolies and altering the competitive paradigm.[30] It is from this friction between these two different and opposing policies that conflicts may arise.

Economists and antitrust scholars have long attempted to define the balance and the boundaries of an economically efficient tradeoff between the protection of intellectual property and the reach of the antitrust laws.[31] At the core of this tradeoff are a) the grant, scope and duration of IPRs, and b) the exploitation of IPRs. The first element (grant, scope and duration) goes beyond the reach of competition law and policy considerations.[32] In the case law of the European Court of Justice (ECJ) the clear message has been established that the determination of the conditions and the procedures of the grant of IPRs lie to the competency of Member States according to Article 295 EC, which dictates a robust no-interference rule in favour of national property law systems.[33]

The exploitation, however, of IPRs under certain circumstances has been traditionally within the proper function of competition law as a legitimate limitation of the exercise of the IPRs. The ECJ has repeatedly resorted to the idea of "core rights", according to which EC law must refrain from intervening into the "specific subject matter" of an IPR which corresponds to the existence of the protected right and offers therefore immunity from the application of EC law.[34] This interpretation includes efforts by IPR holders to enforce an exclusive right to sell or manufacture an IP protected product,[35] as well as refusals to grant a license, even if that is an act by a firm holding a dominant position.[36] Beyond that "normal exercise", however, there is created a conflict: a practice that may be perfectly lawful under IP law, may nevertheless infringe competition law.

Accordingly, there is an urgent need for defining a "safe haven" for the exercise of IPRs. Within the EC context, the tool used for that purpose has been the "exceptional circumstances" test introduced in 1995 by the ECJ's judgment in *Magill*,[37] even though in 1988 the court had already left the door open for determining abusive conduct under such circumstances in its *Volvo*[38] *and Renault*[39] judgments. However, it will be argued below that the boundaries of that test are far from clear and well established, as is shown by the insistence on behalf of the European Commission to apply a different "essential facilities" test in its *IMS*[40] and *Microsoft*[41] decisions and the ECJ's subsequent judgment in *IMS*,[42] which unfortunately did not address adequately all the open issues.

3.3 IPRs and market power

In order for competition law to be allowed to act as a limitation at the "exercise level" of IPRs under the "exceptional circumstances" test, there must be properly established, according to the fundamental principles of competition law, that the IPR holder is enjoying a considerable degree of market power in a properly also defined geographical and product market. As noted above, IPRs ensure the exclusion of rival firms from the exploitation of the IP-protected product. This proposition led naturally the US Supreme Court to declare in a 1984 judgment that *"if the government has granted the seller a patent or similar monopoly over a product, it is fair to presume that the inability to buy the product elsewhere gives the seller market power"*.[43] This presumption was, however, rejected in the concurring opinion where Justice O' Connor explained that market power exists only when there are no close substitutes to the IP-protected products. Following the above 1984 judgment, courts have been extremely reluctant to establish market power based solely upon the ownership of intellectual property.[44] Indeed, market power may be associated with IP-protected products only insofar there are no alternatives which can be considered to a sufficient degree as potential substitutes. Hence, in a market survey conducted in 1981, only in 27% of the reported cases there was established that IPR licensors did not face any alternative supplier.[45]

3.4 Innovation and market structure

Competition law is concerned with its traditional aim of encouraging competition by limiting the exercise of market power by firms in oligopolistic/monopolistic markets. IPRs, such as patents and copyrights, on the other hand may confer market power on the IPR holder with a view actually to encouraging innovation by protecting the IPR holder from competition. The tension that is potentially created between those two legal frameworks has commanded the attention of academics and policy makers regarding another issue: the relationship between innovation (and intellectual property) and market structure. The central concern is whether concentrated market structures, which actually induce allocative inefficiencies from an economic point of view, tend nevertheless to promote socially beneficially R&D by lowering costs and/or offering new products and technologies, in which case antitrust prohibitions which tend to interfere with and alter the competitive paradigm may in fact be detrimental to the social welfare.[46]

Much of the debate emanates from Schumpeter's work[47] which provoked a long line of economists into considering the effects of this interplay between market structure and innovation. Schumpeter argued that there is a positive relationship between innovation and market share and that large firm size and innovation are also correlated. Taken together these arguments formed the Schumpeterian hypothesis that large firms operating in concentrated industries, instead of competitive markets, are the engines of technological progress, for these large and diversified firms are well-suited to take advantage of scale economies in order to undertake risky R&D projects, some of which will lead to commercially viable innovations.[48] On the other hand, however, there has been a totally opposing theoretical argumentation, based mainly on Arrow's work,[49] that competition, and not monopoly, drives innovation; a monopolist has fewer incentives to be involved into further innovative and research activities, as he is already enjoying a "quiet life" by capturing most of the business there is to get.

The relevance of this debate to the intriguing concept of IP/antitrust interface in the IT sector lies to fact that a) information economy is characterized anyway by strong supply-side economies of scale which tend to favor large market sizes, b) the high rate of innovation is also one of its distinctive features leading to a situation where often "winner takes all", and c) IPRs role is increasingly important as a temporary protection from competition and a potential source of market power. The natural question then comes forward regarding the appropriate role for antitrust policy that has to accommodate the traditional principles of promoting competitive market structures, while being cautious enough not to destroy the so important incentives-reward mechanism that supports the whole IT market. In other words, the real question is whether an antitrust prohibition in the form of a mandatory license of an IPR, while intending to establish more competitive outcomes by introducing new players in the market, is in fact destroying concentrated structures that may be more beneficial for society.

Several recent studies, despite their methodological problems, have established that older Schumpeterian ideas regarding the positive relationship between firm size and innovation find little empirical support.[50] Baker analyses the validation of those arguments in the light of opposing argumentation and establishes that the issue of appropriability through various means, as IPRs, may offer a connective factor: *"These theories, which framed the traditional debate about the connection between market structure and innovation, are not necessarily inconsistent. They can be rationalized as suggesting that competition promotes innovation if the innovator can assure reasonable appropriability through means other than prior monopoly, for example by relying upon intellectual property protections"*.[51] His argument is that when the competition is in the form of *"winner takes all"*, competition is actually promoting innovation, for the prize of success in this innovation race, i.e. the assignment of an exclusive right as a patent, is large enough for every firm to induce innovative incentives. That presupposes that there is an appropriation mechanism after the innovative product has been marketed, e.g. in the form of IPRs, which give to the inventive entrepreneur the necessary reward and a priori incentive to innovate and commercialize his inventions without there being any need for prior monopoly to provoke investments in R&D. However, when competition is "winner takes all" competition and there are fringe firms in a collaborative and/or complementary relationship with the dominant player (a very common concept in IT markets), the analysis of innovation incentives takes a new form. The dominant firm is tempted to use exclusion tactics in order to preserve its dominant position and deter fringe innovation in complementary markets e.g. by refusing access to its IP-protected product or changing/redesigning its format. This line of reasoning suggests, according to Baker, two important points: *"first … it is unlikely that the dominant firm's innovation incentives would decline substantially as a consequence of antitrust enforcement in industries where innovation competition has strong winner-take-all properties. Secondly, antitrust enforcement can make a big difference to rivals when the dominant firm is exploiting a collaborative or complementary relationship to exclude them. Enforcement of antitrust's prohibition against monopolization thus can be expected to encourage fringe firm innovative effort without markedly discouraging dominant firm innovate effort when innovation competition is winner-take-all and the dominant firm takes advantage of a complementary or collaborative relationship to exclude"*.[52] In a following chapter, it will be argued that the approach adopted by the European institutions (Commission, ECJ) is mainly based on an analogous presumption regarding the positive effects that rigid antitrust enforcement in the form of mandatory access to IPRs may have in adjacent markets to the dominated one. The Commission particularly has already introduced in its *Microsoft* decision an incentive-related balancing test that has significant implications for the analysis of IP/antitrust interplay. However, it should be noted in advance that the debate is far from settled.

4. Refusal to deal and essential facilities theory in US

The most practical question of the interface between intellectual property and antitrust law is whether the exercise of the privilege which is permitted by an IPR, i.e. the right of exclusion conferred upon an IPR holder regarding the exploitation of an IPR-protected product, may cause antitrust liability and under which circumstances. Section 2 of the Sherman Act in US and Article 82 EC within the European context attempt to deal with the demanding issues of determining the range of permissible acts that are acknowledged for firms that enjoy a certain degree of market power. Taken as granted that authorities and courts manage to establish market power in case the alleged conduct involves conduct by a firm which relies on an IPR to exclude firms from the market, in both sides of the Atlantic the competent institutions have expressly or tacitly embraced a version of the "essential facilities" theories as a subset of the wider concept of "refusal to deal" theory. In this chapter, we explore the historical evaluation of the essential facilities theory in US case law.

4.1 Anticompetitive conduct under Section 2 of Sherman Act

Section 2 of the Sherman Act is analogous to Article 82 EC and makes it unlawful *"to monopolize, or attempt to monopolize … any part of the trade or commerce among the several states"*.[53] Both claims (monopolization and attempt to monopolize) require a degree of market power and some form of anticompetitive conduct.[54] The term *"anticompetitive conduct"*, however, retains willfully in US case law a rather open-ended dimension; hence, a US court has once declared that *"anticompetitive conduct can come in too many different forms, and is too dependent upon context, for any court or commentator ever to have enumerated all the varieties"*.[55] It would be, though, fair to note that in cases of unilateral refusals to deal (generally speaking, not only in IP-related unilateral refusals to deal), US courts have established that such conduct may fulfill the criterion of "anticompetitiveness" in specific circumstances, as when the alleged conduct reveals an anticompetitive intent,[56] when there is no valid business justification for the refusal[57] or where the refusal involves an "essential facility".[58]

4.2 Essential facilities theory (in a general context)

The essential facilities theory in US case law does not constitute an independent cause of action but rather a monopolization claim (Section 2) as a subset of the wider category of antitrust concerns analyzed under the wider heading *"refusals to deal"*.[59] As a general rule, US courts have repeatedly recognized that *in most circumstances* antitrust law does not impose to dominant firms a general obligation to deal with competitors;[60] however, the Supreme Court has also established that *"the high value that we have placed on the right to refuse to deal with other firms does not mean that the right is unqualified"*.[61] Hence, in the presence of those *extraordinary circumstances*, *"… where facilities cannot practically be duplicated by would-be competitors, those in possession of them must allow them to be shared on fair terms … [as] it is illegal restraint of trade to foreclose the scarce facility"*[62]. Thus, the essential facilities theory may be seen as a limitation principle on a monopolist's property right, as it grants to competitors (under some *extraordinary circumstances*) a general right of access to a scarce (essential) facility owned and controlled by a monopolist.

The applicability of the essential facilities theory depends upon the ability on behalf of any claimant who has been denied access to a monopolist's product or service and therefore seeks judicially mandatory access to this essential asset to prove the existence of those *extraordinary circumstances* that may render this unilateral refusal to deal as a violation of Section 2. US courts have adopted a rather stringent test for that purpose which must be satisfied before imposing antitrust liability under the essential facilities theory. In *MCI Communications,*[63] it was established that a party must prove four factors, and particularly that a monopolist (a) controls a facility which is regarded as essential for competitors, in the sense that (b) it constitutes an input without which no firm can compete with the monopolist because competitors are unable to practically or reasonably duplicate it and its control by the monopolist carries with it the power to eliminate competition, and (c) refuses to grant to competitors access to that facility provided that (d) access to that facility is practically feasible and there is no legitimate business justification for such a refusal.[64] Applying analogous tests, US courts have labeled as an "essential facility" various assets ranging from railway bridges[65] and local telecommunication networks[66] to "multi-area" ski tickets[67] and newspapers.[68]

Before turning to the enquiry regarding the applicability of the essential facilities theory in EC competition law, it is useful to address three interesting issues, with significant implications for the IP/essential facilities interplay, regarding (a) the classification of the theory within the wider concept of "monopolization claims", (b) the existence (or not) of a further requirement that there must be two separate relevant markets in order for antitrust liability to be established under this theory, and (c) the implications of the recent Supreme Court *Trinko*[69] judgment for the evolution of the theory.

4.3 Essential facilities and Monopolization Claims

One of the most-often cited cases regarding unilateral refusals to deal is the decision by the Tenth Circuit Court of Appeals in *Aspen Skiing*,[70] where the court applied explicitly the essential facilities theory and established antitrust liability on behalf of a ski resort firm which decided unilaterally to terminate a long-standing agreement with a competitor in providing a joint "multi-area" ticket that allowed customers to visit and use both resort's facilities at a discounted price. The asset that was characterized by the court as essential was the "multi-area" ticket itself. When the case reached the Supreme Court,[71] however, the latter upheld the antitrust liability but declined to characterize this asset as "essential" for competitors; instead, it condemned the conduct under the wider concept of "monopolization", as the Court found no valid business justification for the termination of this long-standing, profitable and joint practice; the only explanation for this unilateral refusal to deal could be that the defendant company had *"an anticompetitive intent"* which was demonstrated, according to the Court, by the *"decision by a monopolist to make an important change in the character of the market"*.[72] The *"anticompetitive intent"* criterion was also employed by lower federal courts. In *Image Technical v. Eastman Kodak Co.,* the Ninth Circuit cited

Supreme Court precedents which condemned unilateral refusals to deal in cases where there was *"purpose to create or maintain a monopoly"*.[73] In *Intergraph Corp. v. Intel Corp.* also, a Federal Court stated that *"a refusal to deal may raise antitrust concerns when the refusal is directed against competition and the purpose is to create, maintain, or enlarge a monopoly"*.[74] These rather broad statements have led some courts to reach the conclusion that it is not necessary that *"[a plaintiff] either alleges or proves that each of the services involved in its specific claims is an essential facility before it may proceed against [defendant]…"*.[75] In other words, antitrust liability may be established in unilateral refusal to deal cases, even though the access denied does not involve an "essential facility", provided that the denial is provoked by *"an anticompetitive intent"*.[76]

4.4 The concept of two separate markets

In the *Aspen Skiing* case (Court of Appeal), one of the main counter-arguments on behalf of the defendants was directly challenging the antitrust claims on the basis of the essential facilities theory by arguing that *"… a duty to deal can arise only in different circumstances where, through vertical integration, one firm has come to monopolize or control the supply of a component necessary for production, distribution or sale of a rival's product or service"*.[77] The underlying hint was that for the essential facilities theory to stand antitrust scrutiny, there must be two separate, vertically-related markets, where a monopolist in a primary market stifles competition in a secondary market by denying access to an essential input for firms operating in such a secondary market. This argument, however, was explicitly rejected by the court which declined to adopt such a narrow rule regarding the restrictive applicability of the essential facilities theory only in vertical integration cases. [78] The clearest statement on the issue of the "related-vertical markets" requirement came from the *Intergraph* court which explicitly acknowledged that *"although the viability and scope of the essential facility doctrine has occasioned much scholarly commentary, no court has taken it beyond the situation of competition with the controller of the facility, whether the competition is in the field of the facility itself or in a vertically related market that is controlled by the facility"*.[79] In general, it could be argued that for US courts the truly crucial element that determines the applicability of the essential facilities theory is the proof that the facility in question is truly "essential", irrespectively of any further requirement that would distinguish between different levels of production and establish antitrust liability only in cases where the elimination of competition would follow in a secondary product market.[80] As it will be analyzed below, this proposition has significant implications for the applicability of the essential facilities theory within the IP context where the IPR itself creates a legal right of a refusal to deal: accordingly, in the light of the above analysis it is debatable whether the application of the essential facilities theory could legitimately outlaw refusals to deal with the IP-protected product (or service) and mandate mandatory access to the IP-related market itself or it should be restricted in cases where the alleged conduct distorts competition in a secondary, vertically-related market.

4.5 The Trinko judgment and the future evolution of the theory

The serious consequence of the essential facilities theory, i.e. the mandatory access to an essential facility it offers, has led many academics to urge for its full abandonment or (at least) its very narrow and limited interpretation.[81] US courts, however, have adopted a rather less demanding approach: they have rejected the idea of condemning the doctrine altogether; instead, they have recognized the applicability of the theory under certain circumstances proceeding, however, to a very cautious imposition of liability under the stringent requirements of the *MCI* test.[82]

The recent *Trinko* judgment, issued by the Supreme Court on January 13th, 2004,[83] seems to have fuelled again the debate regarding the applicability and the role of the essential facilities theory. In that occasion, the Supreme Court was confronted with the difficult task to determine the range of permissible acts for Verizon Communications Inc., an incumbent local exchange carrier for the State of New York, in the light of the introduction of federal legislation (the 1996 Telecommunications Act) which allowed new entrants into the US telephone industry to benefit from mandatory sharing of incumbents' local networks on an "unbundled basis", particularly access to operation support systems which allow new entrants to fill their customers' orders. After a series of complaints by new entrants and extensive investigation on behalf of the Federal Communication Commission, Verizon entered to a consent decree. At the same day, Trinko, a Law Firm, suing in the capacity of a customer for telephone services, alleged that Verizon had violated Section 2 of the Sherman Act by providing to competitive local exchange carriers access to its network in a discriminatory manner in order to discourage customers from becoming customers of the new entrants. The District Court dismissed the suit, but on appeal the claim was reinstated for trial under the essential facilities theory. In its judgment, the Supreme Court rejected the claim that Verizon had violated Section 2 of the Sherman Act by refusing to deal with competitors citing as relevant and authoritative case law the *Aspen Skiing* case, discussed above.

The *Trinko* judgment presents three significant implications for the evolution of the essential facilities theory, particularly within the IPR-dominated context of the IT economy: a) by referring to *Aspen Skiing* as the leading "refusal to deal" case in US jurisprudence, the Court attached greater importance to the concept of *"anticompetitive end"* as *the* decisive factor in establishing a Section 2 act of monopolization. The Court stated that *"Aspen Skiing is at or near the boundary of §2 liability. The Court there found significance in the defendant's decision to cease participation in a cooperative venture. The unilateral termination of a voluntary (and thus presumably profitable) course of dealing suggested a willingness to forsake short-term profits to achieve an anticompetitive end. Similarly, the defendant's unwillingness to renew the ticket even if compensated at retail price revealed a distinctly anticompetitive bent"*.[84] Thus, the Court proceeded to examine the case before it just to find that *"the refusal to deal alleged in the present case does not fit within the limited exception recognized in Aspen Skiing"*,[85] b) the most important dicta in *Trinko* arose out of the Court's attitude towards the essential facilities theory, which was characterized as a *"doctrine crafted by some lower courts"*. The Court went one step further later by declaring emphatically that *"we have never recognized such a doctrine [citing Aspen Skiing and AT&T v. Iowa Utilities] and we find no need either to recognize it or to repudiate it here"*, and c) finally, the Supreme Court took a position on the issue whether courts are well equipped to balance efficiently the pros and cons of mandatory licensing regarding its influence on incentives to innovate: *"Firms may acquire monopoly power by establishing an infrastructure that renders them uniquely suited to serve their customers. Compelling such firms to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities. Enforced sharing also requires antitrust courts to act as central planners, identifying the proper price, quantity, ant other terms of dealing – a role for which they are ill-suited"*.[86] These three parameters, taken together, reveal that the Supreme Court is favouring a clearly restrictive interpretation of Section 2 of the Sherman Act in refusal to deal cases, based on *Aspen Skiing*, as well as a hostile attitude towards the essential facilities theory. In the following chapter, and particularly in the Commission *Microsoft* decision, it will be shown that the Commission is rather moving to an entirely opposite direction.

5. Refusal to deal and essential facilities theory in EC competition law

Although the essential facilities theory has never been officially recognized by the ECJ, its basic premise, namely that in certain circumstances a refusal to deal on behalf of the owner of an essential input may be held as incompatible with Article 82 EC, has a long-standing tradition within the European legal tradition.[87] Its origin can be found initially in "refusal to supply" cases, like *Commercial Solvents*,[88] decided by the ECJ in 1974. The doctrine was later explicitly invoked by the Commission in order to condemn unjustified refusal to give access to physical infrastructures (like ports, in the *B&I/Sealink* case[89]) and later assessed by the ECJ regarding refused access to intangible infrastructures (like a newspaper's home delivery scheme in *Bronner*[90]). The implications of the essential facilities theory on the exercise of an IPR came also under antitrust scrutiny in cases like *Magill*,[91] *Ladbroke*[92] and *IMS*.[93] More recently finally, the Commission seems to have applied the doctrine on its much discussed *Microsoft* decision.[94] This chapter will explore the historical development of the wider concept of "refusal to supply cases" from *Solvents* to

Microsoft with particular reference to the application of the essential facilities theory within the IPR-dominated IT sector.

5.1 Refusal to supply: Commercial Solvents

Commercial Solvents constitutes the first case where the ECJ had to decide whether a dominant supplier of a raw material (nitropropane) was actually abusing its dominant position by refusing to continue to supply a firm operating in a downstream market (the production of an anti-tuberculosis drug, called ethambutol). The peculiar facts of the case were that: a) Commercial Solvents Corp. (CS) had an almost world monopoly in the manufacturing of that raw material which was an essential input for the production of the drug ethambutol, b) CS had originally supplied the raw material to a small, Italian firm, Zoja, which was manufacturing ethambutol, c) at some point, CS decided to enter the market for the production of ethambutol, therefore refused to continue to supply Zoja (now a downstream competitor), and d) due to that refusal, Zoja was practically unable to obtain supplies from alternative sources. The ECJ supported an earlier Commission's decision that CS had violated Article 82 by stating that: *"An undertaking which has a dominant position in the market for raw materials and which, with the object of preserving such raw material for manufacturing its own derivatives, refuses to supply a customer, which is itself a manufacturer of these derivatives, and therefore risks eliminating all competition on the part of this customer, is abusing its dominant position within the meaning of Article 82"*.[95] Thus, the ECJ attached greater importance to the fact that CS had previously supplied Zoja and suddenly, without any adequate commercial reason, decided to withdrawn from this profitable commercial relationship *"with the object of preserving such raw material for manufacturing its own derivatives"* rather than to the fact that the raw material was "essential" for Zoja in order for the latter to stay at the market.
This line of argument resembles the Supreme Court's reasoning in *Aspen Skiing*, analysed above under IV 2.1, where the court declined to follow the Court of Appeals dictum and refused to characterize the "multi-area ticket" as an "essential facility", but instead proceeded to an antitrust evaluation of the underlying *"anticompetitive intent"* which was the only plausible explanation for the defendant's unilateral decision to terminate a long-standing and profitable commercial agreement with plaintiffs. Analogously, the ECJ was apparently disturbed by the fact that CS was trying *"… to make an important change in the character of the market"*[96] by eliminating an existing customer and competitor on the downstream market; as Goyder explicitly states it, *"the case would, of course, have been less clear had CSC never supplied Zoja, and even more so if Zoja had been merely a potential entrant to the market rather than an actual competitor; in those circumstances it is doubtful if CSC would have had an obligation to supply"*.[97] Accordingly, *Commercial Solvents* established what some authors have defined as "classic refusal to supply theory", i.e. a wider "monopolization" concept in the line of US jurisprudence established in *Aspen Skiing* and *Intergraph Corp. v. Intel Corp.*; the focus on an essential facility and the mandatory access to it rather than simply on a refusal to supply theory would emerge at a later stage, as a particular application of this general theory.[98] However, it will be argued below that the *Commercial Solvents* dictum has been unjustifiably neglected within the IPR context, especially in *Microsoft*.

5.2 First Essential Facilities Cases: mandatory access to physical infrastructure

The first case that really addressed the issue of mandatory access to an essential facility was *B&I/Sealink*[99] which involved a physical infrastructure, and particularly the port of Holyhead in Wales. Sealink and B&I Line were both using the same port to provide ferry services between Britain and Ireland; at the same time, Sealink was also controlling the port through a subsidiary. B&I complained to the Commission that Sealink, as port manager, had changed its own ferry schedules deliberately and in a way that was interfering adversely with B&I's loading and unloading of ferries in order to disrupt and undermine B&I's business. The Commission acknowledged for the first time that the harbor in question was "an essential facility", as *"a facility or infrastructure without access to which competitors cannot provide services to their customers"*,[100] and condemned Sealink under Article 82 for the discriminatory and less favourable access it provided to B&I.[101] Two years later, the same defendant, Sealink, and a different plaintiff, Sea Container, were involved in a dispute that arose out of complaints that Sealink was willfully reducing the capacity of Holydead port in order to undermine Sea Container's effort to introduce a new catamaran fastcraft to the harbour.[102] In that occasion, the Commission was again worried that Sealink, as a dominant company providing an essential facility to competitors, i.e. the Holyhead port itself, was abusing its dominance by granting access to them only on less favourable terms without there being any objective business justification. The practical distinction of these new cases, compared to the older and classical *Commercial Solvents*-like cases, lies to the fact that the Commission was trying mainly to limit defendant's proprietary rights rather that to interfere simply with its contractual relationship with an existing customer (and potential downstream competitor); the issue under review was not whether the refusal to supply was motivated by *"an anticompetitive intent"* to eliminate all competition on part of a regular customer (as in *Commercial Solvents*), but whether any firm (actual or potential customer/competitor) had, under some circumstances to be defined, a right of access to a facility which was *owned* by the dominant company, but was also indispensable for the new entrant in order for the latter to compete effectively with the former.[103]

5.3 The clarification of the essential facilities theory in Oscar Bronner

The occasion that gave the chance to ECJ to rule on the essential facility theory was a preliminary reference ruling in the *Bronner*[104] case. The facts of the case could be summarized as follows: Oscar Bronner was the owner of a small newspaper company in Austria where another company, Mediaprint, had a dominant position. Mediaprint had established a nation-wide home delivery scheme for its own newspaper. After Bronner's application to Mediaprint seeking access to its delivery scheme was eventually rejected, Bronner brought actions before national courts claiming that Mediaprint's refusal was contrary to Article 82.

The ECJ in a much-quoted paragraph (para.41) held that: *"… it would be still necessary … not only that a refusal of the service comprised in home delivery be likely to eliminate all competition in the daily newspaper market on the part of the person requesting the service and that such refusal be incapable of being objectively justified, but also that the service in itself be indispensable to carrying on that person's business, inasmuch as there is no actual or potential substitute in existence for that home-delivery scheme… Moreover, it does not appear that there are any technical, legal or even economic obstacles capable of making it impossible, or even unreasonably difficult, for any other publisher of daily newspapers to establish, alone or in cooperation with other publishers, its own nationwide home-delivery scheme and use it to distribute its own daily newspapers. It should be emphasized in that respect that, in order to demonstrate that the creation of such a system is not realistic potential alternative and that access to the existing system is therefore indispensable, it is not enough to argue that it is not economically viable by reason of the small circulation of the daily newspaper or newspapers be distributed. For such access to be capable of being regarded as indispensable, it would be necessary at the very least to establish … that it is not economically viable to create a second home-delivery scheme for the distribution of daily newspapers with a circulation comparable to that of the daily newspapers distributed y the existing scheme"*. Thus, the ECJ confirmed that mandatory access to an essential facility may be ordered only in a very narrow set of circumstances, and particularly when three conditions are fulfilled: a) the refusal of access is *"likely to eliminate all competition"* on the applicant's market, b) the refusal of access is not *"objectively justified"*, and c) the access is *"indispensable"* for carrying on the applicant's business. Compared to the earlier Commission's decisions regarding essential facilities theory in *Sealink* cases, it should be noted that firstly, *Bronner* clarified that mandatory access to an essential facility could also involve intangible assets or infrastructures, secondly, the refusal of access should be likely to eliminate *all* competition on the market instead of simply causing any kind of "inconveniency" to a firm being refused access to the facility involved, and thirdly, the issue of the facility's "indispensability" should be judged not subjectively (*could Bronner replicate the scheme?*) but objectively (*was it economically viable for a company like Mediaprint to replicate the scheme?*).[105] Thus, the ECJ's judgment clarified that a) EC competition law does not impose on a dominant undertaking a general duty to grant to its competitors access to an essential facility it controls, and b) however, in certain circumstances (above a'-c') a duty to provide such an access may arise. It is easy to conceive that both propositions brought EC competition law in line with the US approach, for the *Bronner* test was incorporating the same requirements adopted by US courts under the *MCI* test.[106]

5.4 Essential facilities and IPRs

Volvo v. Veng[107] was the first case where the ECJ dealt with the interplay between intellectual property law and competition law. The case involved an infringement action brought by Volvo against a UK dealer who attempted to import spare parts for Volvo cars which infringed Volvo's design rights. In its judgment the ECJ confirmed that the exercise of Volvo's exclusive right to manufacture and sell its registered design regarding spare parts for its cars could not *by itself* be regarded as an abuse of a dominant position within the meaning of Article 82, even if that meant that Volvo had the right to refuse to license third parties to manufacture and sell such spare parts, as this refusal constituted the substance of the IP-protected design right.[108] However, in paragraph 9 of the same judgment the ECJ left the door slightly open for companies relying on competition law to attack a refusal to license an IP right when it stated also that: *"it must however be noted that the exercise of an exclusive right by the proprietor of a registered design in respect of car body panels may be prohibited by Article [82] if it involves, on the part of an undertaking holding a dominant position, 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, provided that such conduct is liable to affect trade between Member States"*. Thus, the Court made it clear that in an "aftermarket" dependent on the IP-protected market, in that instance the maintenance and service market for Volvo cars, a refusal to license could in certain "exceptional circumstances" be regarded as abusive conduct under Article 82. The latter proposition was the first indication that the ECJ was very skeptical regarding the adverse effects of unilateral refusals to license IPRs upon the competitive conditions in a "secondary" market. This skeptical attitude would be firmly confirmed later in *Magill,*[109] as a new, compared to *Bronner*, necessary condition would emerge for the establishment of antitrust liability in cases where a refusal to license an IPR exists.
In *Magill* the television companies in UK and Ireland used to publish separately weekly TV magazines listing their own programmes only and invoked the copyright they enjoyed at that time over their TV listings in order to refuse to give those lists to an independent magazine, Magill, wishing to introduce a new product, namely a comprehensive and weekly TV guide. Magill complained to the Commission for this refusal by the TV companies to license their copyright-protected listings and after extensive investigation the Commission eventually ordered the mandatory licensing. The ECJ on appeal confirmed the Court of First Instance (CFI) judgment[110] which found in favour of the Commission and determined the "exceptional circumstances", first implied in *Volvo*, which must be met in order for a mandatory licensing of an IPR to be upheld, as follows:[111] a) the refusal must concern a product that is indispensable for the production of a *new* product for which there is clear and unsatisfied demand, b) the IPR holder must attempt by refusing access to this essential input to monopolize a separate (downstream) market, and c) there is no objective business justification for such a refusal. Compared to *Bronner* which did not involve an IP-protected product, the *Magill* test had a new concept included among the "exceptional circumstances" test, used to define the boundaries between lawful and unlawful conduct, i.e. the concept of the "new product". Particularly, in *Magill* the ECJ stated (paragraph 73) that: *"conduct of that type – characterized by preventing the production and marketing of a new market of television magazines and thereby excluding all competition from that market solely in order to secure the applicant's monopoly – clearly goes beyond what is necessary to fulfill the essential function of the copyright as permitted in Community law"*. The "new product" condition was also later confirmed in *IMS*.

In *IMS* case,[112] an information technology company, IMS, was providing to pharmaceutical companies regional sales data using a so-called "brick structure" which had been developed in collaboration with the relevant industry and constituted a database protected under German copyright law. A rival firm, NDC, brought proceedings against IMS after IMS refusal to grant a license which would allow NDC to use this brick structure and stay in business, as the “brick structure” had evolved to a de facto standard in the market and subsequently was indispensable for any company wishing to enter the market for the presentation of regional pharmaceutical sales data. The ECJ confirmed that a refusal to license an IP-protected product may be regarded as abuse of dominant position when *“the undertaking which requested the license intends to offer, on the market for the supply of the data in question, new products or services not offered by the copyright owner and for which there is a potential consumer demand (emphasis added)”*. The second significant development in *IMS* was the explicit recognition that there must be established that the refusal to license an IPR has the effect of eliminating *all* competition on a secondary market. NDC, the company seeking compulsory access and the Commission, claimed before the ECJ that the essential facilities theory should not be interpreted as imposing such a strict precondition; the argument seems to comply with the established interpretation of the doctrine in US case law, as analysed above. On the other hand, IMS, the IP-protected company, insisted that the *Magill* test could only apply in a two-markets scenario.[113] The Court relied on *Bronner* case law and defended the two-separate-markets requirement: *“it is sufficient that a potential market or even a hypothetical market can be identified”* and *“it is determinative that two different stages of production may be identified and that they are interconnected, the upstream product is indispensable in as much as for the supply of the downstream market”* (paragraphs 44 and 45 respectively). The third important implication of the *IMS* judgment is the recognition that the *Magill* “exceptional circumstances” are cumulative but not exhaustive: the ECJ carefully referred to the *Magill* as a case where it held that *“such exceptional circumstances were present”* and held that *“it is sufficient to satisfy the three Magill criteria in order to show an abusive refusal to license”*.[114] A contrario, this careful wording chosen by the Court could mean that for ECJ these *Magill* criteria are *sufficient* but not *necessary* which would be the only wording implying that the list is exhaustive.[115]

5.5 The application of the essential facilities theory in Microsoft

In 2001 and 2001, Sun Microsystems, one of Microsoft’s competitors in the work group servers market, complained that the Redmond-based giant was unlawfully leveraging its Windows PC operating system (OS) near monopoly to obtain a further monopoly in the workgroup server OS market. The complaint was based on Microsoft’s refusal to disclose crucial information that was essential for competing workgroup server OS to interact with Windows OS. The consequence of that refusal was that Sun’s servers could not interoperate smoothly with Windows and Office Suite and consequently Sun’s server OS could not offer certain services to Windows and Office users, thus allowing Microsoft to extend its dominant position in a secondary market. The Commission in a decision, issued on 24 March 2004,[116] found that Microsoft had indeed abused its dominant position and imposed a fine amounting to 497 million Euros. Regarding the refusal to supply interface information, the Commission ordered Microsoft to disclose all the necessary interface information to competing workgroup server vendors within 120 days and, insofar as this information was IP-protected, the Commission opted for a mandatory license, provided that Microsoft would be reasonably remunerated.

The interesting aspect of the Commission’s decision in *Microsoft* is that the Commission seemed to depart partially from the *Magill* “exceptional circumstances” test towards the new concept of the “entirety of circumstances”. It did so by correctly concluding, as ECJ implied in *IMS*, that the *Magill* test was not an exhaustive checklist and that it was entitled to consider also other “exceptional circumstances”.[117] No one could object to such a comprehensive approach; in any case, the Commission when analyzing antitrust cases is obliged to consider all the relevant circumstances. [118] However, it will be argued below that, while *Microsoft* may be characterized as successfully offering a new paradigm of an unlawful refusal to grant access to an essential facility, based on the *Commercial Solvents* authority, at the same time, however, the decision, by failing to explicitly refer to the latter and relying instead erroneously on the *Magill* qualifications, missed the opportunity to enhance the reach of Article 82.

The Commission starts its analysis referring to the *Magill* case in order to defend firstly, the proposition that the exercise of IPRs may in "exceptional circumstances" involve abusive conduct [119] and secondly, the proposition that the *Magill* test is not an exhaustive checklist.[120] However, it then proceeds to cite *Commercial Solvents* in order to explain that the disruption of previous levels of supply is of a particular interest when *"assessing instances of refusal to supply"*.[121] This reference to the "disruption of previous levels of supply" and to *Commercial Solvents* will eventually constitute the Decision's central argument despite Commission's effort to prove that all the *Magill* criteria were fulfilled.[122] Hence, one could argue that the Commission (assuming that the facts and the technical details of the case are correct) did manage to establish that Microsoft's refusal to disclose IP-protected information concerns a product that is truly "essential", bears the risk of eliminating competition in a downstream market and serves no objective business justification; however, the criterion of "new product for which there is clear and unsatisfied demand" has been approached in a manner that does not fit well with *Magill*.[123] It must be remembered that in *Magill* it was logical for the ECJ to conclude that the weekly magazine was a "new product. In Microsoft, however, the Commission does not specify any "new product", but limits itself in analyzing the deterrent effects that the refusal to disclose this essential information will have on competitors ability to develop *future* new products.[124] This interpretation is very doubtful whether it fulfills the criterion established in *Magill* and confirmed also in *IMS*.

Additionally, one must be also very cautious regarding the Commission's interpretation of the "risk of elimination of *all* competition" criterion introduced in IMS. It is apparent from the factual background of the case that even after Microsoft's refusal to supply anymore the essential information, the competition had not been *eliminated* from the secondary market; indeed, Microsoft's market share was approximately 60%, while there were other competitors with market shares ranging from 5% to 15%. However, one should be aware that in IT, high-tech, markets which tend to change dramatically within a very short period of time, failure to provide essential information to compete may lead to almost certain monopolization in the foreseeable future.[125] As Ridyard states it, in such circumstances *"if this outcome can be forestalled only by prompt action today, then it is just arguable that the alternative to intervention today is indeed "the elimination of all competition" that is laid down as a requirement in the IMS judgment"*.[126] However, it is fair to argue that such a conclusion requires *"some heroic leaps in the empirical analysis as well as some elastic manipulation of the legal concepts"*,[127] a difficult task definitely left open for the appellate court.

The Commission had at hand another powerful weapon which in the author's opinion had been mishandled. The peculiar fact of the case was analyzed in paragraphs 587 and 588 of the Decision: *"A historic look at the work group server operating system market shows that Microsoft entered this market relatively recently. UNIX vendors and Novell were the first developers with significant activity and success in this area. Customers had started to build work group networks that contained non-Microsoft work group servers and Microsoft's competitors had a distinct technological lead. The value that their products brought to the network also augmented the client PC operating systems' value in the customers' eyes and therefore Microsoft – as long as it did not have a credible work group server operating system alternative – had incentives to have its client PC operating system interoperate with non-Microsoft work group server operating systems. … Once Microsoft's work group server gained acceptance in the market, however, Microsoft's incentives changed and holding back access to information relating to interoperability with the Windows environment started to make sense. With Windows 2000, Microsoft then engaged in a strategy of diminishing previous levels of supply of interoperability information …"*. In other words, Microsoft initially opted for an "open system" as a market strategy in the workgroup server operating systems providing full interoperability to its competitors, whereas, after the de facto recognition of its IP-protected product as the market standard, it refused to continue to supply the much needed and essential interface information in order to stifle competition on that market. This argumentation is in full conformity with the ECJ's judgment in *Commercial Solvents*,[128] as analyzed above, and the Supreme Court's reasoning in *Aspen Skiing*[129] and *Trinko*,[130] which have established that such a conduct towards dependent *existing* customers, motivated by *"anticompetitive intent"*, may infringe Article 82. It remains to be seen on appeal whether the court will support the Commission's interpretation of the "new product" criterion based on the theory that Microsoft's conduct is likely to limit the innovation incentives for future "new products" or it will attach greater importance to the *"anticompetitive intent"* criterion and follow the general refusal to deal theory formulated in *Commercial Solvents* and adopted also recently in the US *Trinko* case.

Another interesting dimension of the *Microsoft* decision, which emanates from the distinctive characteristics of IT markets, is the extensive antitrust analysis of the tradeoff between mandatory licensing as an antitrust remedy and the incentives to innovate. We noted in chapter (II) that IT markets exhibit three significant for the analysis characteristics: (a) innovation is the *king*, in the sense that even a monopolist is obliged often to be constantly active in costly R&D activities; indeed Microsoft spends a vast amount of money on a yearly basis, (b) however, once an innovation is marketed, there is a continuous risk of free-riding due to the fact that the marginal costs of reproduction are only nominal; IPRs serve the role of rewarding innovative efforts by offering an exclusive right of exploitation for the innovator, and (c) there is also an open debate whether technical development in IT industry is best promoted by a competitive market or an oligopolistic one. Microsoft complained that if the Commission was to proceed to a mandatory licensing regarding its interface information, such a decision would eliminate future incentives to innovate and invest in the creation of intellectual property and offered this argument as an *"objective business justification"* as required by the *Magill* and *IMS* tests. The Commission in its decision responded by completely rejecting this argument and introduced a new balancing test: *"… a detailed examination of the scope of the disclosure at stake leads to the conclusion that, on balance, the possible negative impact of an order to supply on Microsoft's incentives to innovate its 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"*.[131] However, the Commission failed to offer some guidelines regarding its methodology and the process it will follow in subsequent also cases in the IT sector regarding the outcome of such a balancing process.[132] Such an open-ended, free-style balancing test may have significant and adverse effects on the level of legal certainty which must characterize EC law in general, as no firm will be in the position to know *ex ante* its outcome.[133] The only clear and general conclusion that can be deducted is that the Commission seems to accept an innovation theory based on the premise that innovation is best promoted by competitive market conditions, i.e. when a sufficient number of firms innovate rather that one.[134] But this attitude implies also that the Commission feels confident that it can efficiently draw the line between the two extremes explained above in chapter (III): economic theory has not firmly settled whether a disincentive to innovate appears either in the case of the "lazy" monopolist or in the case of firms operating in a perfectly competitive environment;[135] given the specific circumstances of the markets examined and the methodological angle employed, the outcome of even the most reliable economic studies may vary, which means that, when an antitrust enforcement institution is called to decide which option is more efficient, namely either to shake a monopolized industry through compulsory licensing or to allow adequate room for the exploitation of exclusive rights on behalf of dominant firms, adopting the one side or the other may not be wrong on economic terms, however, as Ridyard states it, *"one must wonder whether the Commission is really capable of making this key judgment"*. The latter proposition is equally reinforced by the fact that the US Supreme Court itself has recently in *Trinko* expressed its doubts whether courts in general are well equipped to accomplish such a task without causing more social costs than the gains expected. As it stands, one can also predict that this issue remains to be resolved in future litigation.

6. Conclusion

The above analysis reveals that the European approach regarding the role antitrust has to play in IP-related conducts is rather confusing. On the one hand, the ECJ has (deliberately?) left many issues open for further litigation: the new product criterion, the obligation to distinguish between two related markets, the width of the objective justification criterion, etc., all are significant concepts that are far from settled. On the other hand, the Commission is exhibiting in *Microsoft* a tendency to depart from those existing principles in a rather disorganized manner: while it refers to the latter principles, it then proceeds into an incoherent application that fails to fulfill the tests imposed by the ECJ under the same principles, as established in previous cases like *Magill* or *IMS*, extending thus the scope of Article 82. At the same time, the US Supreme Court is rather moving towards an opposite direction: it attaches greater importance to the concept of anticompetitive intent; it seems to limit the circumstances under which mandatory licensing may be imposed under Section 2 of the Sherman Act and generally speaking seems to abandon the essential facilities altogether. This state of confusion may have adverse effects on the further evolution of the modern information economy.

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*Draft. Please do not quote without permission

[1] "Smart assets: a successful strategy for intellectual property, now being pirated", *The Economist*, February 19th-25th 2005, p.56

[2] For the meaning and the significance of the distinction between rival and non-rival goods, see below under III.1

[3] Shapiro, C., "Competition Policy in the Information Economy", *Foundations of Competition Policy Analysis* (2000), p.4 (available at: http://faculty.haas.berkeley.edu/shapiro/comppolicy.pdf, visited 10/02/2004)

[4] Farell, J. and Shapiro, C., "Intellectual Property, Competition and Information Technology", Competition Policy Center, University of California, Institute of Business and Economic Research, *Paper CPC 04'-05, Year 2004*, p.3

[5] Shapiro, C. (2000), p.4; see also, OECD, WORKING PARTY ON THE INFORMATION ECONOMY, WORK PROGRAMME ON BROADBAND CONTENT, June 2004, p.3 (available at: http://www.oecd.org/dataoecd/56/52/32167250.pdf, visited 05/02/2004)

[6] See below, III.3 and 4

[7] See below, III.1

[8] Ibid

[9] Shapiro, C. (2000), p.4

[10] For the factual background regarding the *IMS* database, as well as the legal issues that arose during the relevant litigation at an EU level, see below, IV

[11] Shapiro, C. (2000), p.3

[12] Farell, J. and Shapiro, C. (2004), p.4

[13] Shapiro, C. (2000), p.3

[14] *The Economist,* (2005), above n.1

[15] Renda, M., *"Catch me if you can! The Microsoft Saga and the Sorrows of Old Antitrust"*, Erasmus Law and Economics Review 1 (February 2004): 1-22, p.14

[16] Ibid

[17] *US v. Microsoft Corp.,* Findings of Fact, 253 F.3d 34 (D.C. Cir., June 28, 2001)

[18] McKenzie, R.B., *Trust on Trial,* (2000)

[19] Shapiro, C. (2000), p.6

[20] Regibeau, R. and Rockett, K., *The Relationship between Intellectual Property Law and Competition Law: An Economic Approach,* University of Essex and CEPR, (revised June 2004), p.5

[21] Dixon, P. and Greenhalgh, C., *The Economics of Intellectual Property: A Review to Identify Themes for Future Research*, (November 2002), p.4

[22] Regibeau, R. and Rockett, K. (2004), p.7

[23] Dixon, P. and Greenhalgh, C. (2002), p.4

[24] Ibid

[25] Ramello, G., "Copyright and Antitrust Issues", *Liuc Papers n.114, Serie Economica e Impresa, (2002),* p.5

[26] Nordhaus, W., *Invention, Growth and Welfare: A Theoretical Treatment of Technological Change,* (1969)

[27] Ramello, G. (2002), p.1

[28] US Federal Trade Commission and Department of Justice, *Antitrust Guidelines for the Licensing of Intellectual Property,* par.1

[29] *"The aims and the objectives of patent and antitrust law may seem, at first glance, wholly at odds. However, the two bodies of law are actually complementary, as both are aimed at encouraging innovation, industry and competition"* [*Atari Games Corp. v. Nintendo of America, Inc.,* 897 F.2d 1572, at 1576 (Fed. Cir. 1990)]

[30] Ramello, G. (2002), p.1

[31] Gilbert, R. and Shapiro, C., "An economic analysis of unilateral refusals to license intellectual property", *Proc. Natl. Acad. Sci. USA,* Vol.93 (November 1996), Colloquium Paper, p.12749

[32] Ganghi, "Competition Policy and the Exercise of Intellectual Property Rights". Working Paper, LUISS (Libera Universta Internazionale degli Studi Sociali), (1999) 353, p.358

[33] Case 241 & 242/91, *RTE and Others v. Commission,* [1995] ECR I-743, para.49; see also, Anderman, S., *"Does the*

Microsoft Case offer a New Paradigm for the "Exceptional Circumstances" Test and Mandatory Copyright Licenses under EC Competition Law", The Competition Law Review, Vol.1, Issue 2, (2004) 7, at p.8

[34] Ramsauer, T., *"Just another Brick? The European Court of Justice on the Interface between European Competition Law and Intellectual Property (IMS Health v. NDC Health, 29 April 2004)",* e.Copyright Bulletin, April-June 2004, p.6

[35] See Case 53/87, *CICRA et Maxicar v. Renault,* [1988] ECR 6039: *"… the mere fact of securing the benefit of an exclusive right granted by law, the effect of which is to enable the manufacture and sale of protected products by unauthorised third parties to be prevented, cannot be regarded as an abusive method of eliminating competition"* (quoted in Anderman (2004), p.8)

[36] See Case C-418/01 *IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG,* [2004] 4 CMLR 28: *"According to settled case law, the exclusive right of reproduction forms part of the owner's rights, so that the refusal to grant a license, even if it is the act of an undertaking holding a dominant positition, cannot in itself constitute an abuse of dominant position …"* (quoted in Anderman (2004), p.8)

[37] *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v. Commission*, Joined Cases C-241/91 and C-242/91, [1995] ECR I-743; on appeal from *RTE v. Commission*, Case T-69/89 [1991] ECR II-485 and *ITP v. Commission*, Case T-76/89, [1991] ECR II-575

[38] *AB Volvo v. Erik Veng (UK) Ltd*, Case 238/87, [1988] ECR 6211

[39] *CICRA v. Renault*, Case 53/87, [1988] ECR 6039

[40] Case COMP D/338.044 *NDC Health/IMS Health*, July 3, 2001

[41] Case COMP/C-3/37.792 *Microsoft*, C(2004)900 Final

[42] *IMS Health GmbH & Co. v. NDC Health GmbH & Co. KG,* Case C-418/01, [2004] 4 CMLR 28

[43] *Jefferson Parish Hosp. Dist. v. Hyde*, 466 U.S. 2, 16 (1984)

[44] See Myrick, R. and Gleklen, J., *Antitrust Liability for the Exercise of Intellectual Property Rights under U.S. Law*, p.5, citing subsequent case law rejecting the presumption of market power based solely upon IPRs (available at www.aippi.org, visited at 02/02/2005); see also Hovenkamp, H., Federal Antitrust Policy: the Law of Competition and its Practice (1994), p.136: *"… presuming market power in a product simply because it is protected by intellectual property is nonsense"*; see also § 2.2 of the FTC/DoJ Antitrust Guidelines for the Licensing of Intellectual Property, above n.28, which rejects the same presumption.

[45] *"Competition Policy and Intellectual Property Rights"*, Organization for Economic Co-operation and Development (1989), p.16-17

[46] Dixon, P. and Greenhalgh, C. (2002), p.6

[47] Schumpeter, J., *Capitalism, Socialism, and Democracy,* (1942)

[48] Dixon, P. and Greenhalgh, C. (2002), p.7

[49] Arrow, K., *Economic Welfare and the Allocation of Resources for Innovation,* in Essays in the Theory of Risk-Bearing, (1976)

[50] Scherer, F.M., *"Schumpeter and plausible capitalism",* Journal of Economic Literature, Vol.30, p.1416-1433; Geroski, P., *Market structure, Corporate Performance and Innovative Activity,* (1994)

[51] Baker, J.B., *"Promoting Innovation Competition Through the Aspen/Kodak Rule"*, Prepared Remarks before the George Mason University Law Review Antitrust Symposium: The Changing Face of Efficiency, October 16, 1998 (available at: www.ftc.gov/speeches/other/mason1098.htm, visited 18/02/2005)

[52] Ibid

[53] 15 U.S.C. § 2

[54] Myrick, R. and Gleklen, J., above n.44

[55] *Carribean Broadcasting v. Cable & Wireless plc.*, 148 F.3d 1080, 1087 (D.C. Cir. 1998)

[56] *U.S. v. Colgate,* 250 U.S. 300 (1919), 307

[57] *Aspen Skiing Corp. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985) 610-611

[58] *U.S. v. Terminal Railroad Association,* 224 U.S. 383 (1912)

[59] Pitofsky, R., Patterson, D., Hooks, J., "The Essential Facilities Doctrine under U.S. Antitrust Law", *Antitrust Law Journal,* Vol.70 (2002) 443, p.446-447

[60] *Twin Labs., Inc. v. Weider Health & Fitness,* 900 F.2d 566, 568 (2d Circ. 1990): *"antitrust law … does not require one competitor to give another a break just because failing to do so offends notions of fair play …"*; see also *Carribean Broadcasting v. Cable & Wireless plc.*, 148 F.3d 1080, 1088 (D.C. Cir. 1998): *"A monopolist has no general duty to share his essential facility …"*

[61] *Aspen Skiing Corp. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985), at 601; see also *Eastman Kodak Co. v. Image Technical Servs., Inc.,* 504 U.S. 451, 483 (1992): *"it is true that as a general matter a firm can refuse to deal with its competitors. But such a right is not absolute; it exists only if there are legitimate competitive reasons for the refusal"*; Pitofsky, R., et. al. (2002), p.445

[62] *Hecht v. Pro-Football, Inc.,* 570 F.2d 982, 992 (D.C. Circuit, 1977)

[63] *MCI Communications v. AT&T Co.,* 708 F.2d at 1132-33

[64] See Pitofsky, R., et. al. (2002), p.449, n.23, for subsequent case law where the *MCI Communications* test has been adopted

[65] *U.S. v. Terminal Railroad Association,* 224 U.S. 383 (1912). The *Terminal Railroad* was in fact the case in which the Supreme Court first articulated the theory, see Pitofsky, R., et. al. (2002), p.446

[66] *MCI Communications,* above n.63

[67] *Aspen Skiing Corp. v. Aspen Highlands Skiing Corp.*, 738 F.2d 1509, (10th Circ. 1984). It must be noted, however, that the characterization of the "multi-area" ticket as an essential facility was given by the Court of Appeals. In the same case, the Supreme Court, when reviewing the Court of Appeals decision a few years later, did not consider it as necessary to address the question of whether the defendant's facility was actually "essential". For the implications of the Supreme Court judgment in *Aspen Skiing,* see below, 2.1

[68] *Lorain Journal Co. v. United States,* 342 U.S. 143 (1951)

[69] *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko,* 540 U.S. 682 (2004)

[70] 738 F.2d 1509, (10th Circ. 1984)

[71] 472 U.S. 585 (1985)

[72] Ibid, at 604; see also, above, n.66

[73] 125 F.3d 1195 (9th Circ. 1997), at 1210-1211

[74] 195 F.3d 1346, (Fed. Circ. 1999), at 1358

[75] *CTC Communications Corp. v. Bell Atl. Corp.,* 77 F.Supp. 2d 123, (D.Me. 1999), at 147

[76] Pitofsky, R., et. al. (2002), n.4 and p.451

[77] 738 F.2d 1509, (10th Circ. 1984), at 1518

[78] See Pitofsky, R., et. al. (2002), p.459

[79] 195 F.3d 1346, (Fed. Circ. 1999), at 1357

[80] Pitofsky, R., et. al. (2002), p.460

[81] See Pitofsky, R., et. al. (2002), n.1, citing Areeda, P, and Hovenkamp, H., Antitrust Law, (2002), 771c (*"the essential facility doctrine is both harmful and unnecessary and should be abandoned"*) and Areeda, P., *Essential Facilities: An Epithet in Need of Limiting Principles,* 58 Antitrust L.J. 841 (1989), 852 (offering principles to limit the application of the essential facilities doctrine)

[82] Pitofsky, R., et. al. (2002), p.450

[83] above n.69

[84] above n.69

[85] Ibid

[86] above n.69

[87] Gerardin, D., "Limiting the Scope of Article 82 of the EC Treaty: What can the EU learn from the U.S. Supreme Court's Judgment in *Trinko* in the wake of *Microsoft, IMS,* and *Deutshe Telekom*?", to be published in *Common Market Law Review*, December 2005, p.7, (available at www.ulgac.be/ieje)

[88] *Commercial Solvents v. Commission,* Cases 6 & 7/73 [1974] ECR 223

[89] B&I/Sealink, [1992] CMLR 255

[90] *Oscar Bronner v. Mediaprint,* Case C-7/97, [1998] ECR I-7791

[91] above, n.37

[92] *Tierce Ladbroke SA v. Commission,* Case T-504/93, [1997] ECR II-0923

[93] above, n.42

[94] above, n.41

[95] above, n.88, para.25

[96] *Aspen Skiing Corp. v. Aspen Highlands Skiing Corp.*, o.c., above n.72

[97] Goyder, D.G., EC Competition Law, (1998), p.335

[98] Fine, F., "NDC/IMS: A Logical Application of the Essential Facilities Doctrine", (2002) 9 *European Competition Law Review,* 457

[99] above n.89

[100] Ibid, para.41

[101] See also Fine, F., (2002), p.463

[102] *Sea Containers v. Sealink,* 1994 OJ L 15/8

[103] Fine, F, (2002)

[104] above n.90

[105] Forrester, I., "Mandatory Licensing in Europe: a rare cure to aberrant national intellectual property rights?", Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy: Comparative Law Topics, Presentation before the Department of Justice/Federal Trade Commission Hearings, May 22, 2002, p.19

[106] See above, IV.3

[107] above, n.38

[108] above n.38, para.8

[109] above n.37
[110] *Radio Telefis Eireann v. Commission,* Case T-69/89, [1991] ECR II-485
[111] above n.37, at para.53-56
[112] above n.42
[113] Lang, J.T., "Anticompetitive Abuses under Article 82 involving Intellectual Property Rights", Presented at the Eight Annual EU Competition Law and Policy Workshop, The Robert Schuman Centre for Advanced Studies, European University Institute, 6-7 June 2003; Gerardin, D., (2005), p.10, n.36
[114] above n.42, para.38
[115] Anderman, S., (2004), p.13
[116] above n.41
[117] Ibid, para.555
[118] Killick, J., "IMS and Microsoft Judged in the Cold Light of IMS", The Competition Law Review, [2004] Vol.1, Issue 2, p.23, at p.36
[119] above n.41, para.550
[120] Ibid, para.555
[121] Ibid, para.556
[122] Geradin, D., (2005), p.14
[123] Ibid, p.17
[124] above n.41, para.694 and 700
[125] Ridyard, D., "Compulsory Access under EC Competition Law – A New Doctrine of "Convenient Facilities" and the Case for Price Regulation", [2004] *European Competition Law Review* 669, at 670
[126] Ibid, p.670
[127] Ridyard, D., (2004), p.670
[128] above n.84
[129] above n.72
[130] above n.69; *".. the defendant's prior conduct sheds no light upon the motivation of its refusal to deal – upon whether its regulatory lapses were prompted not by competitive zeal but by anticompetitive malice"*
[131] above n.41, para.783
[132] See Geradin, D., (2005), p.21
[133] Killick, J., (2004), p.44
[134] Anderman, S., (2004), p.20; see also above, II.4, on Baker's interesting argumentation regarding the significance of antitrust enforcement in *"winner takes all"* cases with complementary or collaborative dimensions
[135] Ridyard, D., (2004), p.671