

# Berkeley Center for Law and Technology

*Law and Technology Scholarship (Selected by the  
Berkeley Center for Law & Technology)*  
(University of California, Berkeley)

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*Year 2005*

*Paper 5*

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Did Apple's refusal to license proprietary  
information enabling interoperability  
with its iPod music player constitute an  
abuse under Article 82 of the EC Treaty?

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# Did Apple's refusal to license proprietary information enabling interoperability with its iPod music player constitute an abuse under Article 82 of the EC Treaty?

## **Abstract**

This article concerns the decision taken in November 2004 by the French Competition Authority on Apple's refusal to license its digital rights management (DRM) technology to a competitor in the downstream market for music downloads. The analysis herein finds that neither the indispensability test spelled out in the Magill/IMS doctrine nor the new, controversial test advocated by the EU Commission for compulsory licensing of interoperability information in the 2004 Microsoft decision was applicable to the leveraging by Apple of its proprietary DRM technology into the music downloads market. The article draws on this analysis of the case to show that property rights and trade secrets in respect of DRM technologies have the potential to establish a "bottleneck" between content providers and media player manufacturers in the near future. To avoid such a bottleneck, the conclusions of the article suggest that interoperability and competition may be structurally supported and pursued either by more permissive "reverse-engineering" exceptions in the field of DRM software protection or, more effectively, by the collective establishment of an open DRM standard. In the absence of these structural remedies, compulsory licensing of proprietary DRM technology should remain subject to the "exceptional circumstances" doctrine made famous in the Magill judgment.

Forthcoming in: *World Competition*, Kluwer Law International, June 2005.

*Did Apple's refusal to license proprietary information enabling interoperability with its iPod music player constitute an abuse under Article 82 of the EC Treaty?*

Giuseppe Mazziotti<sup>1</sup>

**Introduction**

This article concerns a decision of the French Competition Authority (*Conseil de la Concurrence*, hereinafter “FCA”) in early November 2004.<sup>2</sup> The antitrust investigation involved a refusal to license proprietary technology that allowed Apple, as the creator of a successful on-line music platform, to link these components to each other and secure the operation of several platform peripherals including a well-known portable music player, known by the brand name iPod.<sup>3</sup> This article attempts to locate the findings of the FCA’s decision into the debate ongoing

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<sup>1</sup> The Author wishes to thank Hanns Ullrich, Robert Merges, Graeme Dinwoodie, Mel Marquis, Fred von Lohmann, Tambiama Madiega, Andrea Gallice and the editors of *World Competition* for their invaluable comments on the draft of the article. A special acknowledgement to Mel Marquis and Orla Sheehy for having kindly taken care of language editing and corrections. The Author is also grateful to Howard Shelanski and François Leveque: without the benefit of having followed their Comparative Antitrust course at the UC Berkeley School of Law (Fall 2004), this article would never have been written. The usual disclaimer applies. Please send e-mail comments to: giuseppe.mazziotti@iue.it

<sup>2</sup> See *Conseil de la Concurrence, Décision N° 04-D-54 du 9 Novembre 2004 relative à des pratiques mises en œuvre par la société Apple Computer, Inc. dans les secteurs du téléchargement de musique sur Internet et des baladeurs numériques*, available at: <http://www.conseil-concurrence.fr/pdf/avis/04d54.pdf> (hereinafter “FCA’s decision”). As an authority responsible for the enforcement of competition rules, the FCA (*Conseil de la concurrence*) has legal powers of inquiry and can sanction companies for anticompetitive behaviour by imposing fines and/or by ordering them to cease their infringing conduct. If a complainant considers that the practices he is reporting pose a *serious and immediate threat to competition*, he may request that the FCA impose interim measures (*mesures conservatoires*) by means of an expedited procedure. The FCA’s decisions can be appealed before the Court of Appeals (*Cour d’appel*) of Paris.

<sup>3</sup> Desktop computers, video game consoles and operating systems are examples of such technology platforms, while modems, videogames and applications software are peripherals. A “platform” is, therefore, a good that can be purchased by consumers at a non-zero price to enhance the value of a number of independently purchased goods, while a “peripheral” is any purchased good whose value is in that manner increased: see LICHTMAN, *Property Rights in Emerging Platform Technologies*, 29 *The Journal of Legal Studies*, 2000, 615.

in the EU over the risks that the radical measure of compulsory licensing poses to the reward/incentive rationale of intellectual property rights. Following an analysis of the reasoning of the above-mentioned decision and having given an account of the relevant EU case law that the FCA relied upon, this article will explain why a compulsory license was not appropriate in the case of Apple's refusal to license its digital rights management (hereinafter "DRM") system. As we will see, Apple's conduct was found to be perfectly lawful, given that access to proprietary technology governing the operation of its music platform was not *indispensable* to preserve competition on the downstream market for downloaded music, where a competitor claimed that competition would be eliminated or unfairly restricted. The article concludes first of all that, on the facts of the case, Apple could not have held a dominant position under the competition rules in the sense that it was not in a position of economic strength enabling it to prevent competition in complementary markets due to its interfaces and specifications. On the other hand, *other* DRM technology may be subject in the near future to a private, *de facto* standardisation, as a result of which compulsory licensing under Article 82 (b) may ultimately prove to be an effective pro-competitive remedy.<sup>4</sup>

### **I. Background to *Virgin v. Apple***

The case in question arose from a complaint submitted to the FCA by Virgin Mega, who acquired the right to use the English trademark *Virgin* for a digital platform offering online music services and downloads to consumers. Virgin Mega's complaint referred to allegedly abusive conduct on the part of Apple Computer France (a branch of the U.S. corporation Apple Computer, Inc., based in California), which has believed to hold a dominant position on

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<sup>4</sup> Article 82 of the EC Treaty provides that "Any abuse by one or more undertakings of a dominant position within the common market or in a substantial part of it shall be prohibited as incompatible with the common market in so far 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 [...]"

the same market in which the plaintiff operates. This alleged conduct concerned a refusal to license a particular kind of proprietary DRM information technology, the use of which was reserved by Apple in order to ensure interoperability between products complementary to its platform. This highly original and complex platform enables internet surfers to download fully licensed copyright songs from Apple's website (iMusicStore) to be played on customers' computers by means of a media player (iTunes) which is provided by Apple through its website free of charge. The novelty of Apple's business lies in the way that downloaded songs can be transferred to another piece of hardware produced and successfully launched on the market in October 2001 by Apple under the brand name iPod. This further (and crucial) element of Apple's platform is a portable hardware that allows customers to store a considerable amount of music and other kinds of files (up to 40 gigabytes) and to play either downloaded songs or tracks copied from CDs. This transfer from customers' PCs to iPod music players is made possible and safe by secret DRM information technology (Fairplay), which was developed by Apple and protected by means of both patented application programming interfaces (API) and other secret specifications that ensure compatibility with the iPod. In other words, downloaded music from platforms *other* than iTunes can be "read" by iPod only if they are provided with interface information and specifications that are created and privately owned by Apple.

In this case, the French complainant, Virgin Mega, sought to obtain a license to use Apple's proprietary information, which would have permitted Virgin's downloads to run on iPod. The FCA was then asked to assess whether this met the requirements of an abuse of a dominant position under French and EU competition law. If so, the Authority could have issued interim measures compelling Apple to give access, in return for fair and non-discriminatory remuneration to its Fairplay DRM technology and to all secret information

allowing Virgin Mega to make music downloads compatible with and accessible to Apple's portable player.

As we will see, the FCA was thereby obliged to determine the applicability of the so-called 'essential facility' doctrine in the scenario depicted above and, more generally, to re-examine the extent to which the scope of intellectual property rights might be limited in order to preserve and enhance competition.

## **II. Identification of the relevant markets**

The FCA's analysis highlighted the complex layers of Apple's platform, consisting of an inextricable bundle of products and services. The decision acknowledged that the *downstream* market for downloaded music could not be identified and delimited correctly without examining and identifying the relevant markets for *complementary* goods that enabled consumers to purchase, store and listen to these downloads. In this light, the markets for DRM technologies, portable music players and downloaded music were examined separately.

*A. The market for DRM technologies.* The FCA began by considering the existence of a competitive market for DRM technologies. It found that these encryption and management devices were used to protect information contained in several types of content and that they were produced by the largest suppliers of information goods, including Microsoft and Sony. The Authority correctly pointed out that DRM systems should be distinguished from audio coding technologies such as the well known MP3,<sup>5</sup> which has traditionally been used by unauthorised file sharers on peer-to-peer networks such as Kazaa, Morpheus and e-Donkey. While DRM technologies guarantee the enforcement of "contractual" conditions negotiated

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<sup>5</sup> The MP3 technology format is owned by the Fraunhofer Institut and licensed by Dolby. Since the creation of the MP3 format in 1987, the Fraunhofer Institut has been able to develop a number of even more sophisticated encoding audio technologies which, without data reduction, "compress" original sound without losing sound quality. The most recent technology developed by Fraunhofer is MPEG-4, which provides additional functionality over simple media compression. See <http://www.iis.fraunhofer.de>

directly with right holders (or their licensees) to access and use copyrighted content,<sup>6</sup> audio coding technologies deal only with the format in which such content is digitally made available through a process of file “compression” and “decompression”. The FCA acknowledged that music services usually implemented DRM systems together with an audio coding technology in such a way that each platform is characterised by the use of a particular pair of these technologies which establish their own “digital gateway”. Microsoft, for instance, has secured its Windows Media Player by virtue of its own DRM coupled with the Windows Media Audio (WMA) coding format, while Sony combined the Open MG with its proprietary ATRAC format on its Sony Connect platform. In contrast, Apple applied the Advanced Audio Coding (AAC) technology, coupled with the above-mentioned proprietary Fairplay, to its iTunes Music Store. The FCA’s decision emphasised that Apple’s DRM technology was not currently licensed to any third party and that it was only installed on the iTunes music player software, the iTunes Music Store online platform and the iPod machine.<sup>7</sup>

In defining the market for DRM technologies, the FCA argued that it was still unclear whether these new goods should be distinguished with regard to the kind of content (music, videos, software, etc.) they aim to protect and manage, or in light of the devices (music players, mobile phones, etc.) they are installed upon. However, the FCA noted that DG Competition of the EU Commission was due to examine the joint venture that Microsoft and Time Warner were seeking to establish with regard to the takeover of Content Guard, a U.S. enterprise

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<sup>6</sup> Economists explain that digitisation potentially abolishes *excludability* and *rivalry*, which characterise the economics of intellectual property law, and copyright in particular. In the absence of the cost of making copies, digital goods are no longer scarce (rival) and nobody can be excluded from consuming them without technical barriers to access. The implementation of DRM systems aims to re-establish *excludability* and *rivalry* in the digital environment: see BOMSEL, *Enjeux économiques de la distribution des contenus*, Etude Riam-Contango, CERNA, Paris, January 2004, downloaded at <http://www.cerna.ensmp.fr/Documents/OB-REI95.pdf>

<sup>7</sup> See FCA’s decision, paragraph 17.

specialising in the manufacture of DRM devices.<sup>8</sup> In carrying out its in-depth investigation of this proposed joint acquisition, the FCA explained, the Commission would for the first time have to consider how the market for these technological devices could be understood and defined. While referring to the above-mentioned EU merger case, the FCA did not take a position on how the relevant market for DRM devices should be defined.<sup>9</sup> This was a fundamental defect in the FCA's reasoning, if one considers that the alleged "bottleneck" effect in the iTunes platform stemmed from the operation of Apple's DRM system. How could Apple's market power be assessed without a clear idea of the boundaries of the market within which the alleged abuse took place? Notwithstanding the relevance of the position that the Commission will be forced to take on this issue, it is worth pointing out here that a market definition based on the type of content protected by DRM devices would be more appropriate than a definition on the kind of formats/devices that such technologies are installed upon. Indeed, to define the market for DRM systems based on the type of "devices" used would lead to an excessive fragmentation of relevant markets. For such a result to be avoided, the fast technological development of devices such as portable players and mobile phones suggests that markets for DRM technologies could be better delimited with regard to the "content" they protect. A technologically neutral approach in this fast developing field would immunize market definition from the mentioned risk of excessive fragmentation.

***B. The market for portable music players.*** A crucial aspect of the dispute concerned the correct delimitation of the market for portable music players on which Apple was alleged to be dominant thanks to the commercial success of iPod. Virgin Mega claimed, firstly, that the iPod should be assigned to the category of *hardware* music players and, secondly, that a specific

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<sup>8</sup> See Case No. COMP/M. 3445 *Microsoft/Time Warner/Content Guard/JV*, OJEU, 2004/C 184/02, Prior notification of a concentration pursuant to Article 4 of Council Regulation (EEC) No. 4064/89.

<sup>9</sup> See the FCA's decision, par. 26-27.

market for hardware protected by DRM technologies should be distinguished from such a generic category. Virgin thus tried to narrow the market for portable digital players as much as possible by relying on the fact that iPod was a peripheral that was protected by Apple's DRM technology and made inaccessible to external peripherals. Apple responded by arguing that the relevance of a distinction based on technical features (i.e., such as DRM protection of portable players) was excluded by the fact that consumers' demand did not seem to be influenced by the presence of DRM devices on portable players. Nor did the first distinction claimed by Virgin between hardware players and other kinds of devices permitting the storage of music content on the memory of the device itself seem to suggest that "RAM flash" and other smaller hard disc players had to be separated from the same relevant market which included Apple's iPod. The position taken by the FCA decision on this issue was rather unclear. Indeed, on one hand the FCA agreed with Apple that neither a relevant market for hardware music player nor a more specific market for DRM-protected portable players was clearly identifiable. On the other hand, the FCA concluded by emphasizing the very fast emergence on the French market of new portable players similar to iPod and equipped with Microsoft's DRM protection. Under these circumstances, the FCA concluded, the existence and relevance of markets for hardware and, as a more specific category, for DRM-protected portable players "could not be excluded".<sup>10</sup>

*C. The market for downloaded music.* In the definition of the relevant market for music downloads the FCA recalled that, until a short time ago, such market did not exist at all. The fear of easy and uncontrollable "piracy" dissuaded the music industry from distributing and selling online what they distributed and sold on physical media. Even after the

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<sup>10</sup> See the FCA's decision, par. 27-28: "Toutefois, à ce stade de l'instruction, on ne peut pas exclure l'existence d'un marché pertinent des baladeurs numériques à disque dur [...] non plus l'existence d'un marché pertinent des baladeurs numériques sécurisés à disque dur."

implementation of technological protection devices permitting the establishment of such a previously non-existent market, alternative sources of music supply continued to exist and develop. The FCA's decision recognised that the exchange of files on peer-to-peer networks, even if it exerted a considerable competing pressure on the market for lawful downloads, could not be considered to be part of the above-mentioned relevant market.<sup>11</sup> The FCA reached that conclusion after having emphasised that the market for music downloads would have to coexist for several years with the unauthorised "sharing" of copyrighted works on peer-to-peer platforms.<sup>12</sup> Moreover, in line with the view re-stated recently by the Commission in a decision authorising a partnership between Bertelsmann and Sony for global recorded music businesses, the FCA rejected the claim that online delivery and the distribution of recorded music through physical media might form part of the same relevant market. Differences in business methods and price levels contributed to the conclusion that the online music market is not part of the market for physical recorded music.<sup>13</sup> After having excluded peer-to-peer downloads and distribution of physical supports such as CDs in order to delimit the relevant market in question, the FCA failed to clarify its position with regard to another important market delimitation that is mentioned and taken into consideration only in the part of the decision dealing with the assessment of Apple's market power and alleged dominance.<sup>14</sup> Indeed, in the commercial distribution of recorded music to French online consumers, Apple's music delivery

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<sup>11</sup> See FCA's decision, par. 30.

<sup>12</sup> For an explanation of the economics of peer-to-peer systems and their complementarities/competition with the industrial distribution of content, see BOMSEL, *Enjeux économiques de la distribution des contenus*, 8.

<sup>13</sup> See FCA's decision, par. 29. Unlike the parties involved in the concentration (authorized under Article 8(2) of Regulation EEC No. 4064/89 - Merger Procedure), the EU Commission held that "[...] from the supply side, the structure of online distribution of downloadable music is completely different from the physical distribution of music both in bricks and mortar shops and e-commerce [...]": see Case No. COMP/M. 3333 – *Sony/BMG*, Commission Decision of 19 July 2004, par. 23.

<sup>14</sup> See the FCA's decision, par. 62.

was confined to a particular business method which consists of selling songs or compilations “one-by-one”, while other platforms such as E-Compil (owned by the giant Universal) and FNAC (another French online platform operator) already offered, or were about to offer, alternative forms consisting of monthly subscriptions giving access to entire libraries of songs.<sup>15</sup> While defining the relevant market for music downloads in France, a systematic analysis would have required the FCA to take a position on this further issue, which could condition the following assessment of Apple’s market power. If the relevant market had been believed to include monthly subscription business methods, a finding of Apple’ dominance would have been more unlikely. Nonetheless, the FCA decision did not take a clear position on such a delimitation. We might assume only that the conclusion reached by the FCA with regard to Apple’s dominance (see *infra*) was based on the assumption that *demand substitution*,<sup>16</sup> as a tool which usually makes it possible to delimit relevant markets, was made substantially unworkable by the high dynamism and uncertainties characterizing the emerging market for music downloads. The decision acknowledged implicitly that it could not be predicted whether French consumers would have regarded online music delivery models (i.e., Apple’s “one-by-one” and E-Compil’s and FNAC’s monthly subscriptions) as interchangeable or substitutable, due to differentiated product characteristics, prices and intended uses. By consequence, the technological advance and commercial success of the iTunes music platform suggested that the

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<sup>15</sup> On the U.S. downloaded music market, this type of subscription model is offered by platforms such as Napster (Bertelsmann) and Rhapsody (Real Networks).

<sup>16</sup> According to the *Commission Notice on the Definition of the Relevant Market for the Purposes of Community Competition Law*, OJ C372, 9 December 1997, relevant product markets are defined as follows: “A relevant product market comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumer, by reason of the products’ characteristics, their prices and their intended uses.”

existence of a relevant market encompassing Apple's business method for online music delivery could not be excluded.<sup>17</sup>

*D. The national dimension of the market for music downloads.* At the end of its analysis which aimed at identifying the relevant markets, the FCA made clear that, unlike the well-known borderless nature of free downloading, the commercial downloading of music songs from platforms such as those of Apple and Virgin Mega was structured in line with a strong principle of territoriality. This rediscovered principle in the dissemination of music online arises from the fact that platform owners offer and negotiate rights on copyrighted downloads on a national basis. Authors' collecting societies and the music industry are indeed accustomed to licensing national copyrights on their works and recordings and, by consequence, they impose a condition on platform operators/distributors restricting downloads distribution to consumers who reside in licensed countries. Such a restriction can be easily implemented thanks to the compulsory requirement that downloaders' payments take place through either debit or credit cards linked to bank accounts based in their country of residence. As a result, the FCA concluded that the relevant geographic market for music downloads was primarily national and that, in the case in question, it was limited to France.

### **III. The alleged dominant position**

Even if the FCA did not take a position on how to define the relevant market for DRM technologies, it quickly excluded that Apple could be found dominant with regard to technologies protecting music platforms such as iTunes. The FCA noted that Apple's Fairplay

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<sup>17</sup> The possibility that a particular "business method" may be a relevant market is not unusual in the field of EC competition law. See for example § 95 of the European Commission's *Guidelines on Vertical Restraints*, OJ C291, 13 December 2000, where it is said that franchisors, as providers of business methods benefiting from the Block Exemption Regulation, need to calculate their market share " [...] *on the market where the business method is exploited* , which is the market where the franchisees exploit the business method to provide goods or services to end users." (emphasis added).

was only implemented on Apple's national platforms and that this DRM device was less developed technologically (and thus less attractive) than the WMA sold by its direct competitor, Microsoft.<sup>18</sup> Even more importantly, it was emphasized that the recent Commission decision not to immediately authorise (and to assess in more detail) the joint venture between Microsoft and Time Warner for the development of Content Guard, suggested that Microsoft would become dominant with regard to DRM technologies.<sup>19</sup> Apart from a possible merger, it seemed more likely that the tying of Windows Media Player to all PCs equipped with Windows operating systems dramatically reinforced the "bottleneck" nature of Microsoft's WMA. In other words, the fact that Microsoft bundled its Windows operating system with Windows Media Player, and finally with its own WMA, may have strengthened the position of Microsoft on the market for DRM technologies to such an extent that WMA may have easily become a *de facto* proprietary standard in the near future.<sup>20</sup> The FCA thus concluded that, in light of

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<sup>18</sup> The FCA emphasized that Microsoft's DRM allowed content providers to set out and enforce usage restrictions for each piece of content on a file-by-file basis, while Apple's Fairplay permitted just the enforcement of restrictions that are pre-determined by the DRM technology provider. Apple, for instance, authorizes through its DRM seven reproductions and downloading on three personal computers: see paragraph 36.

<sup>19</sup> See Case No. COMP/M. 3445 *Microsoft/Time Warner/Content Guard/JV*. As disclosed by a press release of 25 August 2004 following a Phase I merger review, the Commission decided to investigate whether the acquisition of Content Guard by Microsoft and Time Warner might create or strengthen Microsoft's "already leading position" in the "DRM solutions" market. "Under Microsoft's and Time Warner's joint ownership," the Commission stressed, "Content Guard may have both the incentive and the ability to use its IPR portfolio to put Microsoft's rivals in the DRM solutions market at a competitive disadvantage. This joint acquisition could also slow down the development of open interoperability standards. As such, this would allow the DRM solutions market to 'tip' towards the current leading provider, Microsoft." See *Commission opens in-depth investigation into Microsoft/Time Warner/Content Guard JV*, Press Release IP/04/1044 of 25 August 2004, available at: <http://europa.eu.int/rapid/pressReleasesAction.do?reference=IP/04/1044&format=HTML&aged=0&language=EN&guiLanguage=en>.

<sup>20</sup> The Commission Decision of 24.03.2004, relating to a procedure under Article 82 of the EC Treaty (Case COMP/C-3/37.792 *Microsoft*), paragraphs 883 to 891, emphasized that the largest content owners had a strong incentive to encode their digital goods into a format that would achieve the highest percentage of end-users; and due to the "ubiquity" on the global PCs market of Windows Media Player, coupled with Microsoft's DRM,

Microsoft's well-established leadership in this field, it was unlikely that Apple could hold a dominant position on the market (or on the several markets) for DRM technologies.<sup>21</sup>

As regards the assessment of Apple's dominance on the market for portable players, the FCA argued that Apple would have been deemed to hold a dominant position on the French market only if a market for portable hardware protected by a DRM technology were considered to be separable from a wider market including unprotected hardware as well as smaller devices and *flash* portable players. The FCA admitted that, with regard to digital portable players such as iPod, the French market was highly dynamic and characterised by continuous price decreases, the constant emergence of new suppliers and technological development concerning features that are capable of altering consumers' preferences and expectations.<sup>22</sup> The FCA concluded that, if the relevant market had been limited to DRM-protected portable players Apple might be found dominant in light of a market share of 53 % held between June 2003 and May 2004. This hypothetical conclusion confirms that Apple's dominance in the fast-developing field of portable players was assessed mainly by resorting to an implicitly defining the relevant market as the Apple's particular business method.

As seen above, even the relevant market for downloaded music was understood to be limited to Apple's successful business method of music delivery. While downloaded music which was offered on the basis of monthly subscriptions was not clearly excluded from the

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content providers would become even more Microsoft-oriented as far as the use of encoding technology is concerned.

<sup>21</sup> See the FCA's decision, par. 40, where it is acknowledged that such a conclusion was reached without having explained explicitly how the relevant market/markets ("un ou plusieurs marches") for DRM technologies must be defined. However, the reasoning of the decision seems to suggest that the FCA delimited the relevant market with regard to the kind of content (music) that DRM systems protect. This implicit delimitation stems from the wording of paragraph 37, where it is reported that Microsoft's DRM, unlike Apple's Fairplay, allows the implementation of the business method of monthly subscriptions operated in the US by online music platforms such as Napster and Rhapsody.

<sup>22</sup> See FCA's decision, paragraphs 41 to 51.

relevant market, the FCA was persuaded that the assessment of Apple's dominance had to be by reference to online music platforms that worked in the same way as iTunes. As shown by the data mentioned in the decision, Apple and Sony were the only firms to offer on the French market a music platform providing customers with goods and services which included a web-based music store, a computer-implemented software for storing audio content and functioning as an interface of the same platform and, most importantly, a portable audio player. Sony entered the French market one month after Apple and, as its predecessor, it launched its platform on the market while simultaneously marketing a rather innovative portable audio player that looked like the iPod in many respects.<sup>23</sup> In this specific and fast-emergent market the technological advance and the international expansion of Apple's territorially-based music delivery persuaded the FCA that Apple's dominance could not be excluded.<sup>24</sup>

At end of the day, while the FCA found that Apple did not hold a dominant position on the market for the DRM technologies, it reached a different conclusion with regard to Apple's dominance on the relevant markets for portable music players and downloaded music. Although the FCA acknowledged that a finding of dominance was highly problematic and hindered by the very fast-developing structure of the above-mentioned markets, it took a "negative" view according to which Apple's dominance, especially on the market for portable players, could not be excluded. Unfortunately, the decision failed to emphasize that such an unclear assessment of dominance was a direct consequence of the impossibility to apply the so-called SSNIP test for the definition of the relevant market.<sup>25</sup> The relevant product market for

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<sup>23</sup> Apple launched its platform on the French market in June 2004, while Sony did so in July of the same year. Another competitor entered the French music downloads market from September 2004 onwards, when OD2 began to operate the FNAC platform.

<sup>24</sup> See the FCA's decision, par. 64.

<sup>25</sup> As explained in the 1997 Commission's *Notice on the definition of the relevant market*, this "monopoly test" consists of evaluating the likely reaction of consumers to small, non-transitory changes in prices by a hypothetical

portable players and downloaded music was fast developing and differentiated to such an extent as to impede the FCA from evaluating the likely reaction of consumers to changes in prices, technological innovations and business methods. The consequent assessment of Apple's dominance for the purpose of the FCA's investigation was therefore highly uncertain.

#### **IV. Compulsory licensing under Article 82: the case of DRM technology**

The FCA's conclusion on the issue of dominance may arouse the suspicion that it wanted to leave a mark, even a small one, on the current European debate concerning the risks that compulsory licensing poses to those intellectual property rights which exist within digital platforms such as iTunes. In this paragraph, we shall focus, firstly (A) on the fact that the FCA located this case within the relevant case law of the ECJ dealing with compulsory licensing of intellectual property rights. We will emphasize why Apple's refusal to license its DRM could be seen as mirroring, in some respects, the case that recently led the Commission to deliver a decision ordering Microsoft to pay the highest fine ever issued for an abuse of a dominant position under Article 82.<sup>26</sup> In the second part (B), we will return to the FCA's decision in order to show why, notwithstanding some similarities, the anticompetitive effects relating to Microsoft's refusal to license information ensuring interoperability with its work group

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monopolist: "The question to be answered is whether the parties' customers would switch to readily available substitutes [...] in response to hypothetical small (in the range 5%-10%), permanent relative price increase in the products [...]. If substitution would be enough to make the price increase unprofitable because of the resulting loss of sales, additional substitutes [...] are included in the relevant market. This would be done until the set of products [...] is such that small, permanent increases in relative prices would be profitable [...]" (see: *Basic principles for market definition*).

<sup>26</sup> See Commission Decision of 24 March 2004, relating to a procedure under Article 82 of the EC Treaty, Case COMP/C-3/37.792, *Microsoft* (hereinafter "*Microsoft* decision"). The text of the decision is available at: <http://europa.eu.int/comm/competition/antitrust/cases/decisions/37792/en.pdf>. It must be recalled here that the Order of the President of the Court of First Instance of 22 December 2004, Proceeding for interim relief – Article 82 EC, Case T – 201/04 R, dismissed Microsoft's request to have the operative part of the decision suspended in an interim measures procedure.

operating system had little in common with Apple's foreclosure of its platform to external peripherals and competitors.

*A. The Magill doctrine and the 2004 Microsoft decision.* The vast majority of the competitors of Apple and Sony on the French online music market did not produce and commercialize software and portable audio players; rather, they entered into agreements with manufacturers of such devices upon the adoption of the same audio coding formats and DRM technologies that ensure interoperability among music players and downloaded music. If competitors such as Virgin Mega wanted to offer music downloads to owners/users of Apple's iPod and Sony's music player, they were forced to use compatible DRM technologies. Given that such technologies are protected by intellectual property rights (mainly patents), their implementation and use on music online platforms comparable to iTunes and Sony Connect is subject to the licensing power of the right holders over DRM systems.

The alleged abuse concerned Apple's refusal to license its exclusive (and non-dominant) DRM technology that would allow Apple's competitors to access the market for iPod-compatible music. The FCA was asked to assess whether such a refusal was an abuse of the dominant position that Apple held on the market for portable players. The abusive conduct allegedly consisted of the leveraging by Apple of its dominant position on the market for portable players into the market for music downloads. In this context, Apple's DRM system constituted a classical "bottleneck" conditioning access to iPod-compatible downloaded music.

Virgin Mega claimed that access to Apple's DRM, upon payment of fair and reasonable remuneration, was *indispensable* to achieve interoperability between its product and the dominant portable music player on the French market. The FCA argued that access to Apple's DRM could only have been subject to compulsory licensing on the basis of Article L. 420-2 of the

French Commercial Code and under Article 82 of the EC Treaty.<sup>27</sup> The FCA had to verify whether DRM technology which encodes and administers Apple's platform and peripherals may be understood as an asset constituting an "essential facility".<sup>28</sup>

As far as the achievement of interoperability between software and applications is concerned, the FCA could not fail to take into account one of the two main parts of the *Microsoft* decision.<sup>29</sup> In order to determine whether Microsoft had infringed Article 82 of the EC Treaty "by refusing to supply the interoperability information and allow its use for the purpose of developing and distributing work group server operating system products [...]";<sup>30</sup> the Commission was forced to illustrate in its reasoning the factual requirements that it relied upon to justify an order compelling Microsoft to disclose dozens of (patented) information protocols to competitors. The use of Article 82 to limit the exercise by a dominant firm of its intellectual property rights was spelled out by the ECJ and the Court of First Instance in cases such as *Magill*,<sup>31</sup> *Oscar Bronner*<sup>32</sup> and *IMS Health*,<sup>33</sup> two of which (i.e. *Magill* and *IMS Health*) were

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<sup>27</sup> Owing to the fact that the decision relied almost exclusively on the case law developed by the European Court of Justice (ECJ) at the Community level, and due to the substantial uniformity of the above-mentioned French and European provisions, we will refer hereinafter to Article 82 of the EC Treaty exclusively. Article L 420-2 of the French Commercial Code is available at <http://www.legifrance.gouv.fr/texteconsolide/ADFAR.htm>.

<sup>28</sup> MOTTA, *Competition Policy. Theory and Practise*, Cambridge University Press, 2004, 66, defines an essential facility as "[A]ny input which is deemed necessary for all industry participants to operate in a given industry and which is not easily duplicated [...]" The essential facilities doctrine has its origins in American antitrust law.

<sup>29</sup> For a detailed analysis of the *Microsoft* decision, see PARDOLESI & RENDA, *The European Commission's Case Against Microsoft: Kill Bill?*, 27 (4) *World Competition* 2004, 513-566. On the specific issue of interoperability in the same decision, see LEVEQUE, *Innovation, leveraging and essential facilities: Interoperability licensing in the EU Microsoft case*, available at <http://www.cerna.ensmp.fr/Documents/FL-Ms-WorldCompetition.pdf> (forthcoming, *World Competition*, March 2005), 1-25.

<sup>30</sup> See *Microsoft* decision, Article 2 (a).

<sup>31</sup> *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v. Commission*, Joined cases C-241/91 P and C-242/91 P, 1995, ECR I – 743. (hereinafter "*Magill*").

<sup>32</sup> *Oscar Bronner v. Mediaprint*, C-7/97, 1998, ECR I-7791 (hereinafter "*Oscar Bronner*").

specifically concerned with the consideration of intellectual property rights (copyrights) as essential facilities.<sup>34</sup>

By virtue of Article 82 (b), when an undertaking controls an essential facility – that is, a facility or infrastructure without access to which competitors cannot or cannot without difficulty provide complementary or ancillary services on a neighbouring market or sub-market – it may be abusive to refuse to grant competitors access to that facility. Even though the ECJ has assessed fundamental issues relating to the essential facilities doctrine, it has never referred to it directly, not even in the famous *Magill* case. In *Magill* the Court held that freedom of contract might be sacrificed in the case of “exceptional circumstances” under which a refusal to deal opposed by intellectual property right holders (specifically: three holders of copyright covering TV programmes) objectively prevented potential competitors from offering a *new*

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<sup>33</sup> *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG*, Case C – 418/01, Judgment of 29 April 2004, available at: <http://curia.eu.int/en/content/juris/index.htm>. See in particular par. 52.

<sup>34</sup> The first case in which the ECJ considered specifically whether the simple refusal to license an intellectual property right could be abusive under Article 82 was *AB Volvo v. Erik Veng (UK) Ltd.*, C – 238/87, 1988 ECR 6211. Volvo held a UK registered design over the front wing panels of Volvo 200 cars which gave it a monopoly in the UK for the making of that replacement part for its own products. Veng imported and marketed in the UK replacement parts that had been manufactured without the authorisation of Volvo, following which Volvo brought suit against Veng for the infringement of the UK design rights. The case was referred to the ECJ by the national court, which sought clarification regarding the conflict between the protection of national property rights as recognised by Articles 30 and 295 of the EC Treaty and the rules covering the free movement of goods and competition (Articles 28, 81 and 82). The Court held that the mere unilateral refusal by a dominant firm to license its registered design right did not in itself constitute an abuse under Article 82. However, it added 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*”. Para. 9 (emphasis added). This judgment thus laid the foundation for an “exceptional circumstances” test that played a central role in the subsequent case law.

product or service on a *downstream* market.<sup>35</sup> Although the case was highly controversial, the exceptional nature of *Magill* was immediately understood by the most influential commentators, who predicted a narrow application of this judgment in the domain of EC competition law.<sup>36</sup> Many observers have argued (not unpersuasively) that one of the most significant factors which influenced the Commission and both the Court of First Instance (CFI) and the ECJ was that the subject of the English copyright – essentially, a schedule indicating the order in which programmes were to be shown during the forthcoming week – had no intrinsic artistic value and hence was unworthy of protection as intellectual property.<sup>37</sup>

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<sup>35</sup> In the famous *Magill* case, undertakings which were dominant (owing to an English copyright) in the supply market for television listings were required under Article 82 to license third party competitors. In that case, the competitor was a small company (Magill) that wished to publish the listings of three television companies broadcasting in the United Kingdom and Ireland in a single, weekly publication. Owing to the copyright protection available for television listings under British and Irish law, reproduction of the listings on a weekly basis was forbidden in order to avoid competition with the broadcasters' own weekly guides. After having refused to grant a licence of their copyright, the broadcasters collectively enjoined Magill from publishing a multi-channel guide showing all of the broadcasters' programmes side-by-side. During the proceedings in Ireland and before a judgment by the Irish court, the European Commission decided to act on Magill's complaint of abuse of a dominant position and ordered the broadcasters to begin negotiations with Magill for a royalty-bearing licence. The Commission's decision was appealed before the Court of First Instance and the ECJ, each of which upheld it.

<sup>36</sup> See, for instance, WHISH, *Competition Law*, Fourth Edition, Butterworths, London 2001, 700.

<sup>37</sup> From an economic point of view, MOTTA, *Competition Policy*, 68, refers to *Magill* and *IMS Health* as cases where the remedy of compulsory licensing was economically justifiable because those firms were given intellectual property rights without having produced any innovation worth being protected. In those cases, in other words, compulsory licensing could not be understood as a measure deterring innovation. Among the legal scholars who have pointed to the "undignified" nature of the copyrighted material as a subtextual factor influencing the Court's judgment, see FORRESTER, *EC Competition Law As A Limitation on The Use of IP Rights in Europe: Is There Reason To Panic?*, paper presented at the Eight Annual EU Competition Law and Policy Workshop, European University Institute, RSCAS (6-7 June 2003), *What is an Abuse of a Dominant Position?* (forthcoming, Hart publishing). See also WHISH, *Competition Law*, op. cit., 700 ("Perhaps the fifth, unarticulated, exceptional factor was that a mere list of television programmes enjoyed copyright protection").

The recent re-statement of the *Magill* doctrine by the ECJ in *IMS Health*<sup>38</sup> seems to weaken the position taken by the Commission in the above-mentioned case concerning Microsoft's refusal to license its proprietary interfaces.<sup>39</sup> The decision to fine Microsoft for refusing to license proprietary information enabling interoperability with its leading operating system Windows to its competitors in the downstream market for “work group servers operating systems” basically relied on a non-exhaustive check-list of the “exceptional circumstances” identified by the *Magill* test and confirmed by the ECJ in April 2004 (one month after the delivery of the Commission's decision).<sup>40</sup> Microsoft strongly opposed the new

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<sup>38</sup> *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG*, Case C – 418/01. The case arose from a refusal to license a supposedly copyrighted format for presenting regional data sales corresponding to geographic zones. Such a format had been developed by IMS Health in cooperation with its customers and had become a *de facto* industry standard. The format divided the map of Germany into 1860 zones (known as “bricks”) based on postal codes, by reference to which marketing data for deliveries, prices and volumes in those zones were compiled and analysed. When a significant competitor (NDC Health Corporation) appeared on the German market, IMS relied upon its copyright to prevent NDC Health from operating on the market. After having unsuccessfully challenged the anticompetitive use of the copyright before the German Courts, NDC Health complained to the Commission, whose intervention was requested, as in *Magill*, to assess the consequences of a dominant player's successful invocation of a “weak” national IP right at an interlocutory stage. See Case COMP D3/38044 – *NDC Health v. IMS Health*: Interim measures, OJ, 2002/L 59/18.

<sup>39</sup> As the Commission stressed in its decision, Microsoft only entered the promising market of operating systems for “work group server” (WGS) in 1996. In light of its robust quasi-monopoly on the market for client PC operating systems, Microsoft had become used to disclosing information on interoperability to rivals. When Microsoft held approximately 20% of the market for WGS operating systems, it started to reduce the level of disclosure of information in order to achieve interoperability. This made rival products less valuable for consumers and lowered the volume of their sales. PARDOLESI & RENDA, *The European Commission's Case Against Microsoft*, 522-523, explain that “digital systems goods contain different modules, which account for different layers in a system architecture. Each layer performs a different function [...] For example, the PC system is composed by hardware [...], an operating system, middleware [...], application software and content. In a digital system good, each module is linked to adjacent layers through technical specifications known as interfaces. Interfaces are needed in order to have different layers ‘talk’ to each other.”

<sup>40</sup> In the *Microsoft* decision, the Commission recalled (see paragraph 554) that Microsoft interpreted *Oscar Bronner* – in which the so-called indispensability test was spelled out - “as requiring the Commission to show that (i) supply of the information is essential to carry out a particular business; (ii) the refusal is likely to eliminate all

approach to compulsory licensing developed by the Commission under Article 82.<sup>41</sup> According to this new approach, an undertaking such as Microsoft, which holds an undisputed dominant position on the market for PC operating systems, may be compelled to disclose interoperability information (such as patented protocols and software specifications protected by copyrights and trade secrets) where it is likely that such a disclosure increases rivals' incentives to innovate on the market for WGS operating systems without reducing those of Microsoft. The Commission found that the quasi-monopoly held by Microsoft on the client PC operating systems market allowed it – as the holder of the intellectual property covering Windows and its interfaces - to leverage its power in the *upstream* market into the downstream market for work group server operating systems. However, as recently explained by François Leveque, “[t]he Commission has not explicitly applied the *Magill/IMS* test. Instead of discussing openly whether Microsoft’s non-disclosure of information impedes new products being placed on the market, the Commission has introduced an assessment on incentives to innovate”.<sup>42</sup> In assessing such incentives, the Commission emphasized that the non-disclosure of interoperability information impeded Microsoft competitors from capturing the benefits of their own innovation on the market for WSG operating systems.<sup>43</sup> According to Leveque, this

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competition; and (iii) the refusal is not objectively justified. Microsoft argues that the Commission cannot prove any of these three elements [...]”. The Commission stressed that its decision was consistent with *Bronner* due to the fact that disclosure of interface information by Microsoft was “indispensable for competitors in the work group server operating system market to carry on business. Microsoft’s behaviour of progressively diminishing such disclosures risks eliminating competition in the market and cannot be objectively justified” (see par. 554).

<sup>41</sup> See MICROSOFT CORPORATION, *The European Commission’s Decision in the Microsoft Case and its Implications for Other Companies and Industries*, April 2004, available at <http://www.microsoft.com/presspass/legalnews.asp>

<sup>42</sup> See LEVEQUE, *Innovation, Leveraging and Essential Facilities*, 24.

<sup>43</sup> As explained by LEVEQUE, *ibidem*, 11, if we assume that firm A is in the same position of Microsoft and produces innovation 1, while competitors seeks access to innovation 1 in order to produce innovation 2, the new test requires that, “in case of forced access, the increase in incentives for competitors to produce innovation 2 is not offset by the decrease in firm’s A incentives to produce innovation 1 and 2. The demonstration is obviously

examination was proposed by the Commission in order to reject Microsoft's argument that its intellectual property was an objective justification of its refusal to deal.<sup>44</sup> The Commission regarded *all* of the information necessary to enable interoperability with Windows as *indispensable* for carrying out the business of Microsoft's competitors in the market for WGS operating systems.<sup>45</sup> In doing so, the Commission concluded 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)."<sup>46</sup>

The above reference to the European case law on the essential facilities doctrine leads us to draw a basic conclusion. While in *Magill* and *IMS Health* the intellectual property rights that the antitrust investigations and decisions interfered with were weak and rather questionable copyrights, in the *Microsoft* decision the degree of interference with patented, copyrighted and secret specifications was much higher, due to both the undisputed "thick" (i.e., strong) value of the Microsoft's bundle of property rights and the fact that Microsoft's competitors in the downstream market did not seek to offer a new product for which there was an unsatisfied consumers demand (as required in the *Magill* doctrine).<sup>47</sup> In particular, Microsoft relied on

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simplified where compulsory licensing does not diminish firm A's incentives. This is the route followed by the Commission."

<sup>44</sup> *Ibidem*, 7.

<sup>45</sup> From another point of view, PARDOLESI & RENDA, *The European Commission's Case Against Microsoft*, 549, while illustrating the reasons for which the *Microsoft* decision did not meet the requirements of the indispensability test, acknowledged that a fuller specification of Windows interfaces "would be *important* for competitors, but not *essential* to carry on business." Given that market data indicated that client-to-server interoperability was actually achieved in the "server market's everyday life", the authors concluded, there were heavy doubts as to the "essential nature" of the interface information contained in the operating systems marketed by Microsoft.

<sup>46</sup> See the *Microsoft* decision, par. 783.

<sup>47</sup> MICROSOFT, *The European Commission's Decision in the Microsoft Case and its Implications for Other Companies and Industries*, p. 3, emphasized strongly that the compelled disclosure of information stemming from the *Microsoft* decision would "violate" the *Magill* doctrine by favouring competitors operating *on the same primary market* for

patents and copyrights as an objective justification for refusing to license the required information. On one hand, Microsoft informed the Commission that it had been granted at least one patent by the European Patent Office for which its main competitor - Sun Microsystems - would have needed to obtain a licence from Microsoft if it wanted to implement certain Microsoft file server protocols. On the other hand, as far as copyright over Windows was concerned, Microsoft asserted that the degree of interoperability requested by its main competitor went beyond the “full interoperability” contemplated in the EC Software Directive 91/250.<sup>48</sup> In particular, Microsoft fiercely opposed the Commission’s assumption that the disclosure obligation - instead of mere passivity in the face of de-compilation of its software code for interoperability purposes, as provided by Article 6 of the Software Directive – was justified in light of Microsoft’s extraordinary market strength and other exceptional circumstances.<sup>49</sup> The Commission supported its reasoning by emphasising that, as secondary

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WGS operating systems and would – in contrast to *Magill* – deprive Microsoft of “thick” property rights. Although *Magill* did not hold that compulsory licensing of intellectual property rights in “exceptional circumstances” must be limited to “two-market” situations, eminent legal scholars have explained that extending the application of the essential facility doctrine to “one market” cases would discourage competition. See, for instance, TEMPLE LANG, *Anticompetitive abuses under Article 82 involving intellectual property rights*, paper presented in the above-mentioned Eight Annual EU Competition Law and Policy Workshop, European University Institute: “The essential facility principle applies in two-market situations because a competitor in the downstream market that gains control of a necessary input is *not* offering a better or a cheaper product in the downstream market, but only getting power to harm consumers in that market by shutting out its competitors. It is inherently pro-competitive, on the other hand, to allow competitors to develop or invent their own competitive advantages on the markets in which they are operating. If competitors were required to share competitive advantages that are important enough, competition would be discouraged, not promoted.”

<sup>48</sup> Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs OJ, 1991/L 122/42.

<sup>49</sup> Article 6 of the 1991 Software Directive provides that the authorisation of the holder of a copyright over a computer programme shall not be required for the de-compilation of parts of that program, where “reproduction of the code and translation of its form [...] are indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs [...]”. However, this exception to the exclusive right of reproduction is subject to certain conditions. In particular, independently

legislation, the Software Directive could not hinder the applicability of primary legislation such as Article 82 of the EC Treaty and, furthermore, that the Directive excluded the possibility that copyright over computer programmes might be abused to stifle competition.<sup>50</sup> Microsoft replied, on the one hand, that under the above disclosure obligation it would not only have been required to submit proprietary specifications to competitors, which pertain to the essence of Microsoft's business (the development of operating system software); it would even be compelled to create and license specifications that did not yet exist.<sup>51</sup> This was due to the fact that, while patented communication protocols were of course publicly disclosed as part of the patent process, the information contained in these protocols remained highly confidential and

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created programmes must not be “substantially similar in [their] expression” to the de-compiled program. See Article 6.2(c).

<sup>50</sup> See *Microsoft* decision, paragraphs 747-748, where the Commission concluded that it was allowed by the “constitutional” nature of Article 82 to establish a disclosure obligation for Microsoft that went beyond mere passivity in the face of de-compilation of its software code for interoperability purposes. The principle that software copyright protection did not obviate the need to comply with the competition rules was – in the Commission's view – to be found in Recital 27 of the Software Directive, which states that its provisions are “without prejudice to the application of the competition rules under [Articles 81 and 82] of the Treaty if a dominant supplier refuses to make information available which is necessary for interoperability as defined in this Directive”.

<sup>51</sup> MICROSOFT, *The European Commission's Decision*, p. 3, pointed out that such new specifications, which would comprise thousands of pages of valuable information, would actually qualify as copyright works in their own right and as copyrightable preparatory design material for a computer programme under the Software Directive.

protected as proprietary trade secrets.<sup>52</sup> Secondly, Microsoft contended that compulsory licensing was not indispensable to the creation of competing server operating systems.<sup>53</sup>

In spite of the very recent Order of the CFI dismissing Microsoft's request in interim measures procedure to have the operative part of the decision suspended, it is highly uncertain whether the CFI will uphold the Commission's reasoning on its merits.<sup>54</sup> Not only could the CFI note that the exceptional requirements listed in *Magill* were not met in the Commission investigation,<sup>55</sup> it could even find that the application of the new test proposed by the Commission with regard to the so-called "balance of incentives to innovate" was not supported

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<sup>52</sup> We are aware of the inconsistency of the above reasoning with the patent protection rationale. If patents are granted over communication protocols, allowing Microsoft to keep secret the information contained in these protocols runs contrary to the philosophy of patent law. Indeed, patent protection should be afforded only when the patent claim provides full disclosure of the innovation brought to the prior art. Unfortunately, the grant of patents in the high tech sector, especially in the US, seems to have veered away from these principles. We owe this insight to a fruitful discussion with Hanns Ullrich.

<sup>53</sup> See MICROSOFT, *The European Commission's Decision*, p. 4. It is worth noting that the Commission's decision to order a compulsory licensing of Microsoft's proprietary communication protocols runs contrary to the argument according to which, from economic point of view, broader intellectual property rights in platforms such as Microsoft's operating systems reduce transaction costs and are beneficial to consumers instead of stifling competition and lowering consumer welfare. Under this economic model, strong intellectual property rights (or proprietary trade secrets) over interfaces and communication protocols are seen as a tool facilitating a beneficial form of price coordination: see LICHTMAN, *Property Rights in Emerging Platform Technologies*, 618-619.

<sup>54</sup> With regard to the part of the *Microsoft* decision dealing with interoperability, the Order of the President of the Court of First Instance of 22<sup>nd</sup> December 2004, Case T – 201/04 R stated that it was up to the CFI "to ascertain whether a manifest error was made in the evaluation of the interests involved, in particular in connection with the protection of the intellectual property rights relied on and the requirements of free competition enshrined in the EC Treaty." (see paragraph 224).

<sup>55</sup> See PARDOLESI & RENDA, *The European Commission's Case Against Microsoft*, 549-551. According to the authors' conclusion, to assert that the three elements of the *Magill* doctrine were present in the *Microsoft* decision meant "walking on a tortuous path, if not a tightrope [...] the Commission relied on an acrobatic market definition, on a degree of creativeness in the calculation of market share, on a flawed interpretation of the technological leveraging doctrine, and finally on a misconceived application of the refusal to supply doctrine typically referred to essential facility holders".

by strong evidence of significant and very likely prejudice to consumers within the meaning of Article 82(b).<sup>56</sup>

***B. Why Apple's refusal to license was not deemed to be abusive.*** In order to determine whether the measure of compulsory licensing could be applied to the case of Apple's DRM technology, the FCA had to apply the indispensability test spelled out in *Magill* and *Bronner* and recently confirmed in *IMS Health*.<sup>57</sup> As noted above, the fact that the *Microsoft* decision relied upon a non-exhaustive checklist of the *Magill* and *IMS Health* "exceptional circumstances" weakens the new approach taken by the Commission with regard to compulsory licensing of intellectual property rights. While mentioning the Commission's investigation and decision against Microsoft, the FCA did not say anything with regard to the appropriateness and consistency of the Commission's decision with the above-mentioned case law of the European Courts. The FCA only referred to the case of Windows in order to show

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<sup>56</sup> See LEVEQUE, *Innovation, Leveraging and Essential Facilities*, 24-25. While skeptical on the application of the essential facility doctrine in the *Microsoft* case, the author agreed in principle with the Commission that the leveraging argument may serve as an alternative economic tool within the meaning of Article 82 (b) ("Microsoft leveraging is well-documented by facts, especially regarding Microsoft's intent, the dependence of developers and users vis-à-vis network effects and compatibility, and the evolution of market shares of operating systems for work-group server [...]). However, LEVEQUE concludes, "the Commission remains at mercy of the Court regarding the evidence of harm to consumers. If the Court imposes a high standard of proof in requiring a strong evidence of significant and very likely prejudices to consumers, the leveraging argument would likely be rejected."

<sup>57</sup> See *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG*, Case C – 418/01, paragraph 52, where the ECJ re-stated the requirements of the indispensability test. The Court held that the refusal by an undertaking which holds a dominant position and owns a copyright of a brick structure indispensable to the presentation of regional sales data on pharmaceutical products constitutes an abuse within the meaning of Article 82 when the following conditions are fulfilled: (i) the undertaking which requests the license intends to offer, on the market for the data in question, new products or services not offered by the copyright owner and for which there is a potential consumer demand; (ii) the refusal is not justified by objective considerations; (iii) the refusal is such as to reserve to the copyright owner the market for the supply of data on sales of pharmaceutical products by eliminating all competition on that market.

how the lack of interoperability between Microsoft's PC operating systems and WGS operating systems offered by other firms might eliminate competition in the downstream market.<sup>58</sup> The FCA probably found unimportant to stress that, even if the *Microsoft* decision were upheld by the CFI, the new reasoning the Commission has developed under Article 82(b) would not be applicable to the leveraging by Apple of its proprietary DRM technology into the music downloads market. Indeed, Apple's market power on the portable players/downloaded music markets scarcely resembled Microsoft's "extraordinary force" on the markets for PCs/server operating systems. As seen above, Apple's dominance was excluded with regard to DRM technologies. Even more importantly, the highly hypothetical assessment of dominance on the market for portable players protected by DRM devices could not be compared to the Microsoft's quasi-monopoly on the market for PC operating systems. Therefore, the conclusion of the FCA would still have to rely on the *Magill* doctrine, as recently re-stated by the ECJ in *IMS Health* without having to regard the *Microsoft* decision as a possible benchmark.

Following its economic analysis, the FCA found that the indispensability of access to Apple's DRM in the downloaded music market was excluded by several circumstances:

- (i) available data showed that only a small percentage (around the 15%) of music downloaded from the internet was currently transferred and used on portable players;
- (ii) music downloads from platforms other than Apple's could be made compatible with iPod by means of a simple operation (the co-called *ripping*) which consists in converting, for instance, the format of Virgin Mega's downloads into Apple's;

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<sup>58</sup> See the FCA's decision, paragraph 70.

- (iii) vigorous competition between several suppliers characterized the French market for portable players, most of which were compatible with Virgin Mega's downloads.<sup>59</sup>

These factual circumstances demonstrated that access to Apple's DRM was not indispensable. None of the three requirements of the indispensability test was met. As regards the requirement of the elimination of competition, the fact that only a small percentage of consumers transferred downloads from personal computers to portable players demonstrated that competition in the market for music downloads did not depend at all upon the interoperability of such downloads with a commercially successful tool such as iPod. Moreover, the increasing availability of other portable players compatible with Virgin Mega's downloads demonstrated that competition could not be eliminated in the downstream market. Even if Virgin Mega's customers were willing to use their downloads exclusively on their iPod players, the FCA found that they could easily transfer their music downloads - whatever their encoding format were - firstly to a CD, and then, due to a specific iTunes software function, they could convert them into a format with which the iPod was compatible (for instance, the above-mentioned AAC).

Moreover, Apple contended that there were circumstances which objectively justified the refusal to license its Fairplay DRM technology. For instance, Fairplay needed to be modified and updated regularly so as to cope with possible failures of the security system. If Apple had been compelled to license the use of its DRM technology to third parties, it would be required to monitor the system functionality in favour of all its licensees and their compliance with several agreements that Apple signed with the recording industry with regard to specific

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<sup>59</sup> See FCA's decision, paragraphs 96 to 102.

features of DRM protection.<sup>60</sup> While admitting that Apple's refusal to deal was objectively justified, the FCA concluded quickly that even the last requirement of the *Magill* doctrine was unsatisfied. Indeed, the fact that Virgin Mega did not specify whether it would offer a new product or service not offered by Apple and for which there was a potential consumer demand was persuasive enough.<sup>61</sup>

Having reasoned inasmuch, the FCA concluded that, even supposing that Apple held a dominant position on the emerging market for DRM-protected portable players, there were no grounds for a finding that Apple abused its position by refusing to license the DRM technology securing its online music platform and the iPod player.

While the FCA reasoned that, due to market structure and other factual considerations, Apple's DRM did not have any *foreclosure* effect on the downstream music downloads market, it acknowledged that such an effect might occur in the near future as a result of the development of a potential *de facto* standard such as Microsoft's DRM technology (WMA), which is currently marketed with Windows and Windows Media Player.<sup>62</sup> Ironically, this is in our opinion the most important outcome of the reported decision. The Commission's next investigation into Microsoft's "products integration" business strategy may relate very soon to the licensing of its DRM technology. After having dealt with the integration of a browser (Internet Explorer) and a media player (Windows Media Player) into an undisputedly dominant operating system for personal computers,<sup>63</sup> the Commission may be tempted to expand its antitrust scrutiny of Microsoft's unilateral conduct, on the one hand, to the linking of WMA to Windows Media

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<sup>60</sup> See the FCA's decision, par. 93-94.

<sup>61</sup> *Ibidem*, par. 102.

<sup>62</sup> *Ibidem*, par. 58

<sup>63</sup> According to the EU Commission's investigation and economic analysis, Microsoft holds a market share of 92.8 % in the market for PC operating systems.

Player and, on the other hand, to agreements by which the use of WMA may be “imposed” through exclusive contracts with manufacturers of portable hardware and content providers.

#### **V. Final remarks on remedies that may preserve interoperability and competition**

As a conclusion to the review, we believe it is worth pointing out that the anticompetitive effect which Apple’s DRM does *not* have, and which Microsoft’s DRM may have in the near future, stems from the scope of a bundle of property rights and trade secrets (copyrighted software; patented communication protocols; secret know-how on programming information ) that the implementation and operation of DRM technologies relies upon. As long as several DRM technologies compete with each other on the market and secure content provided by a number of online providers, the Commission will not have any competition issue to deal with. By contrast, a significant competition issue would arise if a DRM such as that of Microsoft became a *de facto* proprietary standard which all content providers’ sources of supply were forced to accept and be interoperable with.

We believe that the well-known ‘winner take all’ model may even characterize the market for DRM technologies in the near future unless a specific, structural remedy will be found. The monopolization of DRM technology could be avoided in principle either by virtue of a permissive reverse engineering law or through the establishment of an open standard for that technology. If it were impossible to establish such structural remedies, compulsory licensing could remain an exceptional remedy subject to the *Magill* doctrine requirements. In the next subsections we will give a short account of these remedies.

**A. Reverse engineering.** The relevance of reverse engineering as a tool enabling interoperability in downstream markets has recently been demonstrated by the provisional conclusion of a dispute arising in the US between Apple and Real Networks at the end of

August 2004.<sup>64</sup> Even if not directly concerned with competition issues, the case showed that a claim of copyright infringement over encryption systems and DRM software have the potential to foreclose the downstream market for music downloads. Indeed, when Real offered iPod-compatible downloads through its online music platform, Apple claimed that Real had violated the U.S. Digital Millennium Copyright Act (DMCA) by the reverse engineering of its encryption system and DRM software in order to ensure interoperability with iPod.<sup>65</sup> If the case had gone to court, Real Networks could have claimed (even by invoking the intervention of the U.S. antitrust authorities as *amici curiae*) that the copyright protection enforcement sought by Apple would substantially have the above-mentioned foreclosure effect. However, it is unlikely that such an antitrust defence would have succeeded, as in the U.S. the possibility of a compulsory license of intellectual property rights being imposed under the essential facility doctrine seems to be more limited than in Europe.<sup>66</sup> Whether or not Real originally violated Apple's copyright by "hacking" Apple's DRM, in early January 2005 Apple upgraded iTunes software in order to have the possibility of re-designing the architecture of Fairplay in such a way as to ensure that any interoperability attempts would give rise to liability under the

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<sup>64</sup> More information is available at [http://www.theregister.co.uk/2005/01/13/apple\\_breaks\\_hymn/](http://www.theregister.co.uk/2005/01/13/apple_breaks_hymn/)

<sup>65</sup> The 1998 DMCA modified the U.S. Copyright Act by introducing, at Section 1201(a), two general provisions that prohibit the circumvention of copyright protection systems. Proprietary software, as any copyrighted work, is covered by such further legal protection.

<sup>66</sup> Notwithstanding many similarities, in examining the interface between intellectual property and competition laws, U.S. courts have proven to be more cautious than their European counterparts, in part because of a stronger protection of property rights (for example, U.S. patent holders are explicitly given the right of refusal to deal); and in part, due to a stricter understanding of the indispensability test. PITOFSKY/PATTERSON/HOOKS, *The Essential Facilities Doctrine under U.S. Antitrust law*, 70 Antitrust L. J., 443 (2002-2003), 461-462, pointed out that, notwithstanding the defendant-monopolist's arguments against applying the essential facilities doctrine where the subject was intellectual property or in situations that did not involve vertically related markets, courts in the U.S. have applied this rule in certain cases such as *Kodak*, *Data General* and *Aspen Skiing*.

DMCA.<sup>67</sup> The ability to successfully adopt this strategy demonstrates very clearly that, even if the reverse engineering of DRM platform software is allowed for interoperability purposes - such as under article 6 of the EC Software Directive or under Section 1201(F) of the U.S. DMCA – proprietary/secret inputs of access technologies confer upon their holders the power of making such pro-competitive activity – which is often very costly and time-consuming – ineffective.

**B. Open standardisation.** The significant concerns referred to above regarding the monopolization of DRM technology may suggest that open standardization could be a better alternative to proprietary technologies in this field. Prof. Hal Varian, for instance, has recently emphasized how non-proprietary, open systems facilitate competition and why DRM standards should be open in the same way as Internet TCP/IP and GSM standards in mobile phones technology.<sup>68</sup> Varian described a “nightmare scenario”, in which a middleman provides DRM that offers buyers and sellers a seemingly open platform, but retains enough proprietary pieces to exercise control over platform development. In order to avoid such a scenario, Varian supports the idea that the establishment of a fully open system without proprietary extensions would permit - due to a governance model with many checks and balances so that the system is

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<sup>67</sup> In this respect, it is worth noting that the interoperability exception provided by Section 1201 (F) of the DMCA has been understood as being limited to “software-to-software” interoperability. Under this exception, Apple would be able to argue that Real does not qualify because it establishes “software-to-data” interoperability. For this information and technical comments, we are indebted to Fred von Lohmann, Senior Attorney of the Electronic Frontier Foundation (EFF), San Francisco: <http://www.eff.org>. The EFF has recently released a document – *Unintended Consequences: Five Years under the DMCA* – which, in addition to its discussion of other legal issues, shows the impact of the above-mentioned anti-circumvention prohibitions on innovation and competition. Five years of case law demonstrate that – despite the narrow exception permitting only “software-to-software” interoperability (as recognised in *Universal v. Reimerdes*) – technological, as well as copyright protection of software risks the systematic foreclosure of downstream markets.

<sup>68</sup> We are indebted here to VARIAN, *Economics of DRM*, Presentation made at the 3<sup>rd</sup> DRM Conference, Berlin, 13-14 January 2005.

not subject to capture by any interested party - the implementation of a mechanism to ensure interoperability, compliance and evolution of the system. Nonetheless, even the author of this enlightening approach concludes that the success and the pro-competitiveness of the above-mentioned process of DRM standardization will depend largely on whether and how undertakings who have already invested in DRM (or who are about to invest) will agree upon the allocation of the switching costs entailed by the establishment of an open standard and how they could eventually build up a contractual mechanism that avoids collusion in the process of rights setting (since otherwise standardization could be used as an excuse to avoid competition). In recent years, the private sector has made several attempts to establish standard-setting organizations in the field of DRM technology. However, it remains to be seen whether such a pro-competitive approach will succeed over alternative projects that seek to permit the development and implementation of “trusted computing” platforms, which are potentially inaccessible to unauthorized parties.<sup>69</sup>

*C. The exceptional room for compulsory licensing.* In the absence of structural remedies, we are persuaded that, regardless of whether DRM technologies should be subject to private standardization, compulsory licensing should become a further remedy against foreclosure of competition only in exceptional circumstances. We believe that the European Courts may easily find on the merits that the Commission’s new test in the *Microsoft* decision was based on flawed economics which hardly will offer a sound alternative to the *Magill* doctrine. It is very likely, instead, in our view, that the well-known indispensability test will remain the rule to apply if competition should prove to be foreclosed in the context of high-tech platform/peripherals markets. The *Virgin v. Apple* case demonstrates that new DRM

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<sup>69</sup> The expression “trusted computing” refers to private initiatives such as the Trusted Computing Platform Alliance (TCPA), established by Compaq, HP, IBM, Intel, Microsoft, Sony and Sun Microsystems. See <http://www.trustedcomputinggroup.org>.

technology could very soon raise the same kind of dilemma raised by the alternative proprietary/open source software on the market for operating systems in the last two decades. Due to the potential nature of a “bottleneck” of proprietary standard technology for DRM systems, we are persuaded that pre-empting the acquisition of a *de facto* position of monopoly in this field would be pro-competitive solution. However, it would be anticompetitive to compel the owner of a standard DRM system to disclose the information embedded in its private DRM technology whether such a technology were legitimately secured by means of copyrights, patents and secret know-how. At that point, indeed, the compulsory licensing in question would require, together with the release of copyrighted/patented technologies, the disclosure of secret programming information allowing licensees (i.e., media player manufacturers, content providers) to ensure interoperability of the licensed/requested technologies with their products. If such a disclosure were allowed under Article 82 (b) within the meaning of the *Magill* doctrine, compulsory licensing would amount to depriving intellectual property rights over DRM technologies of all of their substance and economic rationale (i.e., the incentive to innovate). By contrast, if the *Magill* doctrine were understood as the test to apply in case of competition foreclosure in downstream markets, the owner of the dominant DRM system would have an incentive to widely license its technology in such a way that compulsory licensing would never actually become necessary.<sup>70</sup>

## **Conclusion**

While commenting upon the decision taken by the FCA on Apple’s refusal to license its DRM technology to a competitor in the downstream market for music downloads, this article has discussed more generally the applicability of Article 82 (b) of the EC Treaty to cases where undertakings refuse to license their intellectual property rights covering inputs that might be understood as essential facilities. In principle, the case could have been disposed of solely on

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<sup>70</sup> For this last insight we are indebted to Robert Merges, who commented on the draft of the article.

the basis of dominance, which was unlikely due to the dynamism of the relevant markets. However, even supposing, as the FCA did, that Apple could occupy a dominant position, its DRM technology could not be considered indispensable under the test spelled out by the European Courts in cases such as *Magill* and *IMS Health*. The article has also focused on the obligation to disclose interoperability information imposed by the Commission on Microsoft in March 2004. In this respect, as has been explained, even if the new approach to compulsory licensing of interoperability information advocated by the Commission were upheld by the CFI, Apple's market power with respect to online music platforms/peripherals markets scarcely resembles Microsoft's "extraordinary force" on the markets for PC and WGS operating systems. At the end of the article, it was shown that property rights and trade secrets over DRM technologies have the potential to give rise to competition concerns in the near future. In order to avoid a situation in which such technology becomes a "bottleneck" between content providers' supply and media players manufacturers, the article suggests that interoperability and competition may be structurally supported and sought either by more permissive "reverse-engineering" exceptions in the field of software protection or, more effectively, by the collective establishment of an open DRM standard. The article has concluded that, in the absence of structural remedies, resort to compulsory licensing of DRM technology should be limited to the exceptional circumstances specified by the *Magill* doctrine. The owner of the dominant (or standard) DRM technology would thereby have an incentive to widely license its technology in such a way that compulsory licensing would never actually become necessary.