

patent owners agree to join a patent pool for the implementation of the standard, thereby delegating the power to conclude licenses under RAND terms to the pool's administration and, not last, also overcoming the related divergences of interpretation, and the deriving uncertainties, "a priori".⁴² For the patent holders involved this is a "trade-off" between giving up their sovereign exclusivity in the determination of maximum royalties and the eventuality that their technology shall not be included in the standard upon refusal of committing to cooperate at an early stage. However, the threat of being excluded from orchestrated standard-setting endeavours at the outset seems compelling enough to choose the way of cooperation instead.

Alternatively, a complementary, "ex post" solution to counter "hold-up" problems, as advocated by this contribution and tailored around the flexibility of patent pooling arrangements, may consist in making the establishment of a patent pool subject to the "suspensive condition" of positively attracting all essential patent holders identified for implementing the pooled technology. In such a case, patent holders that shall not enter the pool will not be able to "free ride" the cooperative efforts undergone by "holding-up" the pool's licensees with the demand of higher royalties for their essential patent, which they would opportunistically keep outside of the pool. Indeed, following the scheme advanced, the pool itself would dissolve shall attempts to include all essential technologies eventually fail, leaving the need to conclude multiple individual licenses as the only, certainly less attractive alternative, where the sum of marginal costs may eventually result in higher total royalties and, consequently, diminished demand for all patentors, which is certainly an overall less convenient alternative than the one of constituting a pool.⁴³

II. Boosting Access to Standard-Related Patents for a Competitive Market Integration

Looking now at the overall ramifications of standardized applications on the economy, it is clear that they are gaining momentum in business reality today, and it surely represents a major "bonus" to be endorsing a positively established technical specification, taking into account the significant financial repercussions of the widespread adoption of a standardized solution on the marketplace, translated in terms of royalty income for the patent holders involved, ideally organized in the form of a pooling consortium. Besides, from a wider perspective, standards, if properly devel-

42 Approaching the issue from an economic perspective, said solution has been recently advocated by: Leveque F. and Meniere Y., "Early Commitments Help Patent Pool Formation", Cerna Working Paper, June 2008, also available through the Social Science Research Network at: http://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=428080

43 In fact, because of the multiple marginalization costs the demand may fall as the overall price charged may be too high. In simplified exemplificative terms, what happens is that the higher licensing fees demanded by owner A, also diminished the demand for the related technology licensed by owner B, because conveying in higher, less competitive total costs.

oped, play a beneficial role in promoting the efficient dissemination of resources, as has become particularly apparent in hi-tech markets, thereby being advantageous to consumers and to the economy in general.⁴⁴

In order to appreciate the positive effects the adoption of a standard potentially entails, this shall be developed in a truly competitive environment from the outset. Accordingly, as is also true within patent pools, when the choice of technologies to be incorporated into a standard is made in an open and transparent way, on the basis of objective merits and economic convenience, any potential restriction of competition - engendered by the affirmation of a position of market dominance around an aggregation of technologies - is normally outweighed by countervailing economic benefits. In fact, standards have the positive effect of driving economic interpenetration, fostering the developments of new markets of compatible products, providing for improved supply conditions through interoperability and lowering transaction costs, thereby promoting efficiency and convenience for consumers.⁴⁵

1. European Commission: General Policy Concerns and Recently Announced Actions

Moreover, within the frame of the European internal market, standards offer the additional advantage to contribute to the policy objective of market integration within the EU,⁴⁶ as the European Commission, issuing a formal Communication on the role of standardization in the framework of European policies and legislation in 2004⁴⁷ has recognized. In fact, the Commission had already in the past advocated a general set of recommendations to standard setting bodies for the ways to manage standard-related intellectual property rights in order to fully comply with EU competition rules.⁴⁸

44 For a thorough overview and legal analysis on standard-related technology licensing practices, see i.a.: Ullrich H., "Patente, Wettbewerb und Technische Normung", GRUR, 2007, p. 817 *et seq.*

45 On the point, see: Piesiewicz G. and Schellingerhout R., "Intellectual Property Rights in Standard Setting from a Competition Law Perspective", Competition Policy Newsletter, Autumn 2007, no. 3, p. 36 *et seq.*, also available at: http://ec.europa.eu/comm/competition/publications/cpn/cpn2007_3.pdf

46 For a wider, critical overview on the interaction of IP and competition law and the related policy implications within the European Internal Market, see i.a.: Enchelmaier S., "Intellectual Property, the Internal Market and Competition Law", In: Drexl J. ed.: Research Handbook on Intellectual Property and Competition Law, Cheltenham, UK, Northampton, MA, USA, Edward Elgar, 2008, p. 405 *et seq.*

47 Commission Communication on the role of European Standardization in the Framework of European Policies and Legislation COM (2004) 674 final, Oct. 18, 2004, available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2004:0674:FIN:EN:PDF>

48 Commission Communication on IPRs and Standardization, COM 92/445, October 22, 1992.

Indeed, the underlined advantages, inherent in the implementation of standardized specifications for interoperability, may be undermined when a standard encompasses competitive and therefore partly substitute technologies, hence foregoing consumers' choices and alighting antitrust concerns, such as the risk of collusion disguised beyond the typical collaborative framework of a standard-setting process. Such pitfalls were closely scrutinized by the European Commission, when specifically dealing with the applicability of Art. 81 of the EC Treaty to horizontal cooperation agreements.⁴⁹ As a result, under European competition law, standard-setting agreements will be caught by Art. 81, and therefore prohibited, if they "use a standard as a means amongst other parts of a broader restrictive agreement aimed at excluding actual or potential competitors".⁵⁰ However, an exemption may be granted based on the prevailing advantages that a standardization process may boost, conditioned upon the double finding that, on the one hand, (1) the standard-setting agreement does not contain restrictions of competition that are not indispensable to achieve its most creditable goals, such as to facilitate the development of integrated products for the benefit of consumers and to overcome inefficient constraints to innovation,⁵¹ and that, on the other hand, (2) access to the standard must be readily available to new market entrants wishing to comply with it.⁵²

Besides, the current European Commissioner for Competition Policy, Ms. Neelie Kroes, has ultimately intervened during an official speech in Brussels in June 2008 to announce her will to pursue a more pro-active antitrust enforcement policy in order to enhance European competition. In this respect, she expressly acknowledged the fundamental importance of standards for "interoperability", which in its turn "encourages competition on the merits between technologies from different companies, and helps prevent lock-in".⁵³ Accordingly, it is maintained that standardization agreements should be based on the merits of the technologies involved and, in this sense, if comparable solutions are available, non-proprietary technologies shall be preferred in order to avoid "lock-in" problems at the outset. For the case that proprietary technologies are nonetheless included in a standard, the European Commissioner supports the view that "ex ante" disclosure shall help those involved make a "properly informed decision" and this is supposed to encompass both (1) the existence of essential patents and (2) the maximum royalty rates demanded, based on the assumption that "both can increase the effectiveness of the standard setting process, lead to more competitive solutions and reduce the risk of later antitrust problems". Finally, it may therefore be assumed for the future that final commitments taken in

49 Commission Notice Guidelines on the Applicability of Art. 81 of the EC Treaty to Horizontal Cooperation Agreements (2001/C 3/02).

50 *Id.*, para. 165.

51 *Id.*, para. 173.

52 *Id.*, para. 169.

53 See the official EC press release: Kroes N., "Being Open About Standards", European Commissioner for Competition Policy, OpenForum Europe, Brussels, June 10, 2008, available at: <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/08/317&format=HTML&aged=0&language=EN&guiLanguage=en>

this sense before standard-setting organizations by participating patent holders shall be backed-up by appropriate antitrust enforcement remedies.

2. Overcoming the Perceived Shortcomings in the Patent Regime

Within the scope of this contribution, aimed at exploring collaborative IP mechanisms to ensure access to patented technologies, the current debate around the perceived shortcomings in the current patent regime assumes a special relevance. In practice, actual conflicts between IP rights and standards arise when the implementation of the latter necessitates the use of patented technology, in case a right holder refuses to license on reasonable and non-discriminatory terms.

Fundamentally, the tension between standards and patents, as discussed, is greatly alimented by the polar principles that they allegedly incarnate: the former mostly profiting from an “open”, “public” free environment, so that the underlying technologies can be seamlessly spread and widely adopted in the market place, encouraging the diffusion of complying products; the latter being essentially based on a “close”, “private” exclusive system, formed around individual exclusionary rights, which could be employed as bargaining tools to reap the highest achievable commercial benefits from licensing negotiations.

Nevertheless, these two seemingly conflicting systems could in fact be reconciled by coordinating their ultimate, common goal of serving, even if at different levels, the public good of innovation,⁵⁴ which they both finally do, since, as a closer analysis reveals, they are only apparently following antithetical paths. From this perspective, we shall consider possible approaches to overcome the shortcomings detected within the patent regime when it comes to dealing with standard-related technologies in order to afford access for interoperability purposes.⁵⁵ The solutions advanced are essentially based either on an “external”, legislative intervention, or on what we may consider to be an “internal” self-regulatory action.

a. Debated Opportunity of Legislative Interventions

The legislation intended to amend the gaps left by the current patent system, either intervening directly into the applicable IP regime or, indirectly, by way of anti-

54 On the point, see i.a.: Drexl J., “The Critical Role of Competition Law in Preserving Public Goods in Conflict with Intellectual Property Rights”, In: Maskus K. and Reichman J., “International Public Goods and Transfer of Technology Under a Globalized IP Regime”, Cambridge University Press, 2005, p. 709 *et seq.*

55 Frain T., “Patents in Standards and Interoperability”, Colloquia on Selected Patent Issues, World Intellectual Property Organization, Geneva, November 29, 2006, p. 2 *et seq.*, available at: http://www.wipo.int/export/sites/www/meetings/en/2006/patent_colloquia/11/pdf/frain_paper.pdf

trust remedies, belongs to the first category. The second group encompasses, on the other hand, appropriate IPR policies and recommendations internally adopted by standard-setting bodies, eventually binding for the participating institutions, as well as, following the same paradigm, patent pools, these latter involving a stricter commitment from its members, beyond the need for individual implementation.

The biggest challenge, from a policy standpoint, in case essential patents are underlying a given standard, is to strike the proper balance between, on the one hand, the rightful expectation of a patent holder to recoup the costs undergone for the invention, thus fully benefiting from his exclusive right and the freedom of third parties to develop and, on the other hand, market standard-compliant products, giving end-users the choice between alternative technological solutions, thereby avoiding that consumers are locked into a particular proprietary platform.

aa. From an Antitrust Law Standpoint

In this respect, competition law provides for a system of corrections that is external to the patent domain and traditionally addresses serious situations of misuse of IP rights. Relevant abusive practices have then to be well pre-defined in order to avoid unnecessary interferences, thus the available remedies in this area are eventually quite circumscribed. The mainstream jurisprudential developments on the matter, as openly professed in the US,⁵⁶ is to delimit cases of “misuse” only where, broadly speaking, the patent holder detains a position of “dominant supplier” and is abusing it by, for instance, refusing to license, thereby entailing substantial foreclosure on the marketplace. This approach consequently leaves the most recurrent ordinary cases of opportunistic IP exploitation unsolved, which does not appear satisfactory in the actual state.⁵⁷ Indeed, if a dominant position is absent, there is traditionally no mechanism, in the current legal regime, to adequately confront situations where, for example, a patent holder may make leverage to block technical standards, using his right to hinder interoperability and gain an exclusive advantage over competitors.

Ultimately, however, as outlined above, some developments have been announced on the European side by the Commission, which is willing to back-up preliminary licensing commitments assumed by patent holders actively participating in a standard-setting process. This is indeed supposed to open the way to a new set of effective antitrust remedies.

56 For a representative, fairly recent reference, see: the US Supreme Court, in “Illinois Tool Works, Inc. v. Independent Ink, Inc.”, March 1, 2006, In: 547 U.S. 28, 2006, also available at: <http://www.supremecourtus.gov/opinions/05pdf/04-1329.pdf>

57 Frain T., *supra*, fn. 55, p. 3-4.

ab. From a Patent Law Standpoint

Aside from competition measures, other remedies may intervene, as anticipated, within the patent domain itself. The span of the solutions available may range from compulsory licensing provisions limited to interoperability purposes - where, as a matter of right, standard-related patents would be available to third parties under RAND terms - to more drastic substantial amendments to the patent regime, such as a narrow-cut exception to the exclusive rights of the patent holder that would allow the free use of the technology's interface, without the need for a license, to the extent that this would be indispensable for the development and sale of interoperable products.

The latter approach may be eventually softened by introducing the additional requirement that, in order for such tailored limited exception to operate, the holder of a patented interface shall be actually engaging in an abusive conduct, by proving the existence of a casual link between the patentee's alleged obstructive behaviour and its potential impact in the marketplace, irregardless of the formal existence of a dominant position as constructed against the background of competition law.

In other words, following a less strictly limited exception approach, an interface-related patent would only become unenforceable if the patentee's refusal to license⁵⁸ or excessive royalties' charge would render it either commercially or technically unattractive for prospective licensees to make independent, but interoperable products, thereby markedly impairing competition.⁵⁹

Whereas both above-mentioned solutions, and their variants, would have clear advantages for third parties - which could then legitimately develop and bring to the market novel technologies interoperating with existing proprietary platforms, thus particularly benefiting small and medium size enterprises (SMEs), as well as new market entrants needing access to patented interfaces - on the other hand, they may have a disincentive effect on the affected right holders, eventually impairing their willingness to commit important resources for investments into viable interface technologies. This is particularly obvious in the instance of cutbacks in the patent owners' rights, where no license would be needed for interface specifications; nevertheless, this would also be true for introducing compulsory licenses under RAND terms for interoperability purposes, although the economic revenue here will be certainly lessened, in comparison with the royalties that could be freely negotiated on individual basis, but not annulled.

As far as such legislative solutions are concerned - aside from considerations of commercial convenience that could, as observed, entail the undesired side-effects of

58 On the issue of abuse of a dominant position integrated by a refusal to license, see: Drexl J., "Abuse of Dominance in Licensing and Refusal to License - A More Economic Approach to Competition by Imitation and to Competition by Substitution", In: Ehlermann, Claus Dieter / Isabela Atansiu ed.: *Competition Law Annual 2005: The Interaction between Competition Law and IP Law*. Oxford, Hart Publishing, 2007, p. 647 *et seq.*

59 Frain T., *supra*, fn. 55, p. 4-5.

diminishing the incentive for substantial innovation investments into interface technologies in the first place - other limitations ought to be recalled. In particular, any formal intervention that might derogate from the exclusive rights conferred upon the patent holder would have to comply with the relevant international treaty obligations, which member states are to fulfil under the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS).⁶⁰

Specifically, pursuant to Art. 30 of the TRIPS, limited exceptions to patent rights may only be allowed, provided that they do not “unreasonably conflict with a normal exploitation of the patent”, nor “unreasonably prejudice the legitimate interests of the patent owner, taking into account legitimate interests of third parties”. Such strictly tailored derogations are to be read in combination with the provision of Art. 31 TRIPS, setting up the exceptional conditions under which, basically in order to accomplish purposes of public interest, use without the authorization of the right holder can be permitted, as a basis for the granting of compulsory licenses.⁶¹

In a wider perspective, such limitations pertaining to the patent regime shall be interpreted and implemented in conjunction with Art. 7 and 8 TRIPS. The former sets out the ultimate objectives underlying the protection and enforcement of IP rights, serving: “to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations”. As a well-tailored exception to this general principle, Art. 8 TRIPS allows member states to partially derogate to such IP protection only on the base of conflict with higher-ranking collective interests, such as public health, or in case of serious abuses from the IP holders negatively affecting the market.

Because of the constraining formal boundaries within which derogations to patent rights may only be admissible, as binding for all WTO Member States under the TRIPS Agreement, relevant legislative interventions in the field, designed to amend the gaps left by the current patent system in order to ensure access to standard-related technology for interoperability purposes – as outlined above, either intervening directly into the applicable IP regime, i.e. from a patent law standpoint, or, indirectly, by way of antitrust remedies – ultimately may not prove particularly effective when confronted with such operative limitations.

60 See: Part II “Standards Concerning the Availability, Scope and Use of Intellectual Property Rights”, Sect. 5 “Patents” of TRIPS; For a legal appraisal on the discussed implications of TRIPS on patent rights, see i.a.: Janis M., “Minimal Standards for Patent-Related Antitrust Law under TRIPS”, In: Maskus K. and Reichman J., “International Public Goods and Transfer of Technology Under A Globalized IP Regime”, Cambridge University Press, 2005, p. 774 *et seq.*

61 For a critical overview on the fundamental impact of TRIPS on patent rights, see in particular: Straus J., “Implications of the TRIPs Agreement in the Field of Patent Law”, In: Beier F.-K., Schricker G. (Ed.), “From GATT to TRIPS”, IIC Studies, vol. 18, Weinheim, 1996, p. 160 *et seq.*

b. Internal IPR Policies as Self-Regulatory Solutions

For these reasons, we shall eventually also consider alternative approaches, as anticipated in these premises, by turning now to an investigation of the efficacy of self-regulatory solutions, encompassing appropriate IPR policies and recommendations, as internally adopted both by standard-setting bodies, on the one hand, and patent pools, on the other hand, these latter being characterized by an appreciable higher level of inner cohesion and reciprocal commitment.

In order to ensure access to essential standard-related patents by way of self-regulation, it is important that, in the first place, relevant patented technologies can be timely identified through reliable precursory disclosure requirements, and that, in the second place, ensuing licenses are made available on FRAND terms. This complementary pair of principles underlies the developments of commercially sustainable standards, encouraging competitive investments into the implementation of a broad range of interoperable products.

ba. Standard-Setting Bodies' Recommendations

As anticipated, such self-regulations may occur within the collaborative framework of standard-setting bodies,⁶² as here, in an attempt to contain the risk of conflicts once a standard is adopted, and thereby ensuring its seamless and broadest possible dissemination in the marketplace afterwards, patent policies regulating the obligations to which the participating entities shall commit are frequently established beforehand.⁶³ In this respect, many organizations require the parties involved in the standard-setting process to timely disclose information regarding relevant patents and, sometimes, also patent applications, in order to dispose of the relevant facts in the selection procedure.⁶⁴ In a second step, shall any relevant technology be

62 In the EU, standards bodies are actually recognized under: Directive 98/34 of June 22, 1998, "Technical standards and regulations", OJ L 204, July 21, 1998, p. 37 *et seq.*

63 For a critical overview, see *i.a.*: Jacobson K., "Revising Standard-Setting Organizations' Patent Policies", *Northwestern Journal of Technology and Intellectual Property*, Fall 2004, vol. 3, no. 1, p. 43 *et seq.*, also available at: <http://www.law.northwestern.edu/journals/njtip/v3/n1/3/jakobsen.pdf>

64 For a representative instance, see: Art. 4.1, ETSI IPR Policy, Annex 6 of ETSI Rules of Procedure, March 29, 2007, available at:

http://www.etsi.org/WebSite/document/Legal/ETSI_IPR-Policy.pdf, requiring that: "[...] each member shall use its reasonable endeavors, in particular during the development of a standard or technical specification where it participates, to inform ETSI of essential IPRs in a timely fashion. In particular, a member submitting a technical proposal for a standard or technical specification shall, on a bona fide basis, draw the attention of ETSI to any of that member's IPR which might be essential if that proposal is adopted".

The European Telecommunications Standards Institute (ETSI) is a recognized European standardization body, which produces globally-applicable standards for Information and Communications Technologies, including fixed, mobile, radio, converged, broadcast and in-

identified, the patentee is required to agree on appropriate licensing conditions, such as that the license must be granted under reasonable and non-discriminatory terms (RAND) or even that the license must be royalty free.⁶⁵

As far as the timely disclosure requirement is concerned, the main issue is that the reliability of the information revealed is grossly based on the involved company's own internal judgement. As for this point,⁶⁶ the declaration policy of each individual firm may greatly vary, bearing the risk of false or misleading declarations of essentiality, so that the final figure of the overall estimated royalties to be charged is eventually distorted. From a business perspective, the advanced solutions have been undertaken with a view to backing the consistency of specific statements by compelling to include full reference of the claimed essential technology to the standard, as well as by obliging the patentee, when requested by a prospective licensee and on a confidential basis, to provide supporting evidence of essentiality, such as claim charts, in the framework of undertaken bilateral negotiations. Such supplementary commitment is supposed to serve the right owners as a disincentive to "over-disclose" their own patents, thereby slowing down the whole assessment process, in cases of feeble grounds for essentiality.

As far as the commitment to license under RAND or royalty-free (RF) terms is now concerned, other critical issues are raised. However, in the premises, it should be considered that firms participating in standardization activities naturally expect to see some rewards for the investments they have been undertaking in developing interoperable accessible solutions, which is why RAND terms tend to represent a more desirable, and therefore significantly more diffused, model than RF. In fact, whereas some participants may be truly inspired to collaborating within an open and free environment, the requirement of RF conditions may spawn the reluctance, on the other hand, of important technology owners to take part in the process and support the

ternet technologies. ETSI operates as a not-for-profit organization with almost 700 ETSI member organizations drawn from 60 countries worldwide. For the official website, refer to: <http://www.etsi.org>

The ETSI IPR policy was first adopted as an interim policy in November 1994, and confirmed as a permanent policy in November 1997, after protracted negotiations among the membership over many years, and ultimately achieving approval of the competition authorities in Europe, US and Japan. In November 2005 the General Assembly of ETSI approved the creation of a new IPR ad hoc group, whose work officially started in January 2006, to review the IPR policy and investigate issues like FRAND and cumulative royalties.

65 Again, for an illustrative instance, see Art. 6.1, ETSI IPR Policy, *supra*, fn. 64, requiring that: "When an essential IPR relating to a particular standard or technical specification is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an undertaking in writing that it is prepared to grant irrevocable licenses on fair, reasonable and non-discriminatory terms and conditions [...]. The above undertaking may be made subject to the condition that those who seek licenses agree to reciprocate".

66 See in this respect, *i.a.*: Frain T., "Patents in Standards and Interoperability", Colloquia on Selected Patent Issues, World Intellectual Property Organization, Geneva, November 29, 2006, p. 7 *et seq.*

standard, ultimately leading to market fragmentation and lack of interoperability, which means the standard-setting endeavours are failing.

However, on the one hand, even leaving the RF option out, there is actually no undisputed definition of RAND terms yet, missing an unambiguous authoritative interpretation establishing clarity on the point,⁶⁷ beyond the diverse regulatory frameworks of standard-setting bodies, which may anyway solely direct the conduct of parties electively participating in the process. In this respect, some faults also appear from a business perspective, as the implementation of a RAND policy, in principle, does not necessarily lead to a limitative effect as far as the practised licensing fees are concerned, so that these indeed remain subject to different individual interpretations.⁶⁸ Thus, in practice, effective access to interface technologies may still be obstructed, should the patent holders who retain standard-related technologies fail to implement truly reasonable and non-discriminatory terms, exploiting the interpretative gaps left by the undersigned IPR policies to their own individual interest, when eventually concluding licenses with third parties. Moreover, the problem of arising costs for third party licensees only becomes more obvious in the most frequent instance of multiple patent owners all detaining standard-related essential technologies, in which case unaccounted separate charges may sum up and eventually increase the cumulative due royalties.

On the other hand, as with any other policy matter, if the applicable terms have not been unambiguously drafted, different interpretations may be the source of disputes and disparities among the parties involved through their rights and obligations. Nevertheless, even appreciable attempts towards transparent and unblemished IPR guidelines on the part of standard-setting organizations do not make up for the fact that, ultimately, these latter neither get directly involved into the specific licensing arrangements for the relevant standardized specifications, finally concluded among the respective patent owners and third parties, nor into settling disputes with respect

67 In Germany, although ultimately the issue was brought to the attention of the Federal Supreme Court in the context of a patent infringement case, no clear definition on the point has yet been provided, except for relying on the “reasonable discretion” of the patent holder with reference to the common practice in the relevant business sector. See on the point: Bundesgerichtshof, Decision of 6 May 2009, full text of the judgement available at: <http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=en&Datum=2009&Sort=3&Seite=8&nr=48134&pos=269&anz=1424&Blank=1.pdf>. This decision will be analysed in greater depth further in Part III, lett. D, n. 6 of this Contribution.

68 For a legal analysis on the matter in the light of the recent German Federal Supreme Court’s jurisprudence, see i.a.: Conde Gallego B., “Die Anwendung des kartellrechtlichen Missbrauchsverbots auf ‘unerlässliche’ Immaterialgüterrechte im Lichte der IMS Health- und Standard-Spundfass-Urteile”. In: GRUR Int., 2006, p. 16 et seq.; Conde Gallego B., Mackenrodt M., Enchelmeier S. (Ed.), “Abuse of Dominant Position: New Interpretation, New Enforcement Mechanisms?”, Berlin, Springer, 2008; Schoeler K., “Patents and Standards: The Antitrust Objection as a Defense in Patent Infringement Proceeding”, In: MPI Studies on Intellectual Property, Competition and Tax Law – Patents and Technological Progress in a Globalized World – Liber Amicorum Joseph Straus, 2008, vol. 6, Springer ed., p. 177 et seq.

to the validity and scope of the patents at issue, hence leaving a gap of effective enforcement. In other words, in case a participant acts in disregard of the IPR policy adopted by the standardization body of reference, they may eventually face internal sanctions, but the agreement concluded with third parties may irrespectively remain binding. Thus, the option for a patent holder to either adhere to the commitments endorsed or act in spite of them may, from a business perspective, ultimately be simply a choice of prevailing incentives.⁶⁹

bb. Patent Pools' Enforced Licensing Terms

Both the lack of uniform interpretation of RAND terms and the gap of effective enforcement towards the licensing commitments assumed by standard-related patent holders in the standard-setting process may be obliterated by entering a patent pooling agreement.⁷⁰ In fact, the pool's administration is invested with the authority to act autonomously with third parties, thereby concluding licenses with them according to uniform RAND conditions, typically following a standardized, pre-arranged scheme. Therefore, in this case the conventional inclusion of RAND terms is directly effective towards licensees, through the bilateral contracts negotiated, since the collective mandate to the pool in force of which the latter are concluded substitutes the additional need for implementation by the individual patent owners involved - thereby also undermining the risk of divergence between the IPR policy agreed on, in principle, and licensing conditions eventually applied, in practice.⁷¹

69 Some troubling conclusions about the performance of standard-setting organizations have been expressed by: Delacey B. *et al.*, "Strategic Behavior in Standard-Setting Organizations", Harvard NOM Working Paper No. 903214, May 2006, available through the Social Science Research Network at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=903214

70 For an authoritative support, see in this respect the position expressed by WIPO in the outline of its patent law's current issues, dealing with patents and standards, available at: <http://www.wipo.int/patent-law/en/developments/standards.html>; besides, the advocated solution also finds empirical support by recent economic studies, such as: Leveque F. and Meniere Y., "Early Commitments Help Patent Pool Formation", Cerna Working Paper, June 2008, also available within the Social Science Research Network at: http://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=428080

71 For a balanced outline of some of the issues arising in this context, see *i.a.*: Raymond D., "Benefits and Risks of Patent Pooling for Standard-Setting Organizations", Annual Review of Antitrust Law Developments, Summer 2002, p. 41 *et seq.*; Hovenkamp H., "Standards Ownership and Competition Policy", Boston College Law Review, March 2006, vol. 48, p. 87 *et seq.*, also available at: http://bc.edu/schools/law/lawreviews/bclawreview/meta-elements/pdf/48_1/04_hovenkamp.pdf

D. Patent Pools and the Interface between Intellectual Property Rights and Antitrust Law

The legal treatment of patent pools lies at the crossroads between intellectual property rights, as conferred upon the different patent holders who contribute their technologies to the pool for a consideration, and antitrust law,⁷² as these kinds of license agreements may fall under the scrutiny of competition authorities, to the extent that they may represent a significant obstacle to competitors seeking access to the relevant contract product or technology market,⁷³ where concerns arise due to the collective pricing of pooled patents and to the regrouping of a large number of parties, which may entail greater possibilities for collusion.⁷⁴

72 For a comprehensive study focusing on the wider and complex interface between IP and competition law, in the current global context, see i.a.: Drexel J., “Research Handbook on Competition and Intellectual Property Law”, Edward Elgar Publishing, 2008; Ullrich H., “The Interaction between Competition Law and Intellectual Property Law - An Overview”, In: Patent Pools: Approaching an Intellectual Property Problem via Competition Policy, 2007, p. 305 *et seq.*; Anderman S., “The Interface Between Intellectual Property Rights and Competition Policy”, Cambridge University Press, 2007; Ghidini G., “On the ‘Intersection’ of IP and Competition Law”, “Intellectual Property and Competition Law: The Innovation Nexus”, Edward Elgar Publishing, 2006, p. 99 *et seq.*

73 The former defined in the Commission Regulation (EC) No. 772/2004 of 27 April 2004 on the application of Art. 81 (3) of the Treaty to categories of technology transfer agreements, OJ 2004 L 123/11 (hereinafter TTBER), available at: http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=en&model=guicheti&numdoc=32004R0772; Art. 1, para. 1, lett. F “contract product”, as products produced with the licensed technology. Besides, the relevant technology and product market are defined, with regard to competing undertakings, in the same article 1, respectively under lett. J (i) “competing undertakings on the relevant technology market, being undertakings which license out competing technologies without infringing each other’ intellectual property rights (actual competitors on the technology market); the relevant technology market includes technologies which are regarded by the licensees as interchangeable with or substitutable for the licensed technology, by reason of the technologies’ characteristics, their royalties and their intended use” and lett. J (ii) “competing undertakings on the relevant product market, being undertakings which, in the absence of the technology transfer agreement, are both active on the relevant product and geographic market(s) on which the contract products are sold without infringing each other’ intellectual property rights (actual competitors on the product market) or would, on realistic grounds, undertake the necessary additional investments or other necessary switching costs so that they could timely enter, without infringing each other’ intellectual property rights, the(se) relevant product and geographic market(s) in response to a small and permanent increase in relative prices (potential competitors on the product market); the relevant product market comprises products which are regarded by the buyers as interchangeable with or substitutable for the contract products, by reason of the products’ characteristics, their prices and their intended use”.

74 For a broader overview, see i.a.: Hovenkamp H., *et al.*, “IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law”, 2002, para. 34, p. 34 *et seq.*