



By John Temple Lang*

The European Commission has asked for comments on the current regime for the assessment of technology transfer agreements.

This is for the revision of the current block exemption regulation for technology transfer agreements (the “TTBER” or the “Regulation”), and the Guidelines dealing with the application of the TTBER and the assessment of agreements falling outside the TTBER (the “Technology Guidelines” or “Guidelines”).¹ In this paper, these documents are discussed together with the Commission Notice on horizontal agreements, which discusses standards organisations.²

It is useful to make comments in two parts:

- important general comments on recent changes in technology and innovation practice, which necessitate a broad consideration of what needs to be done (*Part I*); and
- specific detailed comments on the text of the Regulation and Guidelines (*Part II*).

Both sets of comments suggest what the Commission should do. It is not yet clear what it will do.

It is not yet clear whether any of the cases that the Commission is currently investigations will raise the questions discussed here. It seems (although even that is not yet clear) that the Commission is likely to consider these cases primarily under Article 102 TFEU. The important

* Cleary Gottlieb Steen & Hamilton, Brussels.

¹ Commission Regulation (EC) 772/2004 of April 27, 2004 on the application of Article 81(3) of the Treaty to categories of technology transfer agreements, OJ 2004 L 123/11; and Commission Notice Guidelines on the application of Article 81 of the EC Treaty to technology transfer agreements, OJ 2004 C 101/2.

The Commission recently published Regibeau & Rockett, Assessment of Potential Anticompetitive conduct in the field of intellectual property rights and assessment of the interplay between competition policy and IPR Protection.

² Commission Communication on the applicability of Article 101... to horizontal cooperation agreements, Official Journal C-11/1, January 14, 2011.

point being made here is that these cases can be, and should be, considered under Article 101, because that is simpler, easier, and more effective, and because it leads to more generally applicable and more balanced rules. The Commission has made difficulties unnecessarily for itself by considering only Article 102, and disregarding one of its own precedents.³

Many of the points made here are familiar to both antitrust and patent lawyers. But they have not yet been included in the Notices or Guidelines published by the Commission. If the Commission accepts them, it would be useful for this to be stated clearly, since many of these points have not yet been authoritatively decided by European courts.

I ■

1. It is now clear that the practices relating to technology licensing have greatly altered in the last few years, and that although the TTBER and the Guidelines, when they have been revised, will still be useful, a much broader perspective is now essential. It is now necessary for the Commission to provide guidance in relation to the issues raised by changed practices, since controversies cause expense, delay, and loss of innovation. The alterations have occurred for several reasons:

- a) Greater complexity of products. A rapidly increasing number of products are now so complex that they include large numbers of patented components, owned by large numbers of companies. This has several consequences. First, there is a risk that the cumulative amount of the royalties may make the end product uneconomic (if patent owners ask for high royalties without consideration of other royalties due by the licensee).⁴ Second, there is a risk that the entire product can be held up if one patent owner is allowed to charge excessive royalties, which risk is even greater if the patent owner succeeds in getting an injunction. Third, there is a greatly increased need for patent pools, and the legal aspects of pools are now more important and more complex than they were when the Guidelines first discussed them. Fourth, both the products and their components are increasingly often the subject of agreements on standards, which themselves raise legal issues similar in some respects to those of patent pools. Fifth,

³ *IGR Stereo Television / Salora*, Commission, Eleventh Competition Policy Report (1981) pp.63-64.

⁴ In addition to other efficiencies, patent pools generally enable the issue of excessive cumulative royalties to be overcome, and should be encouraged.

because of the increasing importance of patent pools and multilateral licensing, the fact that the TTBER is limited to bilateral agreements makes it progressively less important and useful than it used to be. It needs to be supplemented by broader Guidelines.

- b) Companies are increasingly making “strategic” use of patents. This general phrase describes several different kinds of conduct. One strategy is to buy a substantial portfolio of patents to be used for “defensive” purposes, so that if the new owner is sued for infringement of another manufacturer’s patents, the new owner can counterclaim with a reasonable prospect of success, and negotiations and a settlement, usually involving cross-licensing, will follow. The new owner can be a single manufacturer, or a group of companies set up to acquire the portfolio. Another strategy is for a company that is not manufacturing (and which therefore cannot be sued for infringement, and does not need a cross-license, also called a “patent assertion entity” or pejoratively a “patent troll”), to buy a portfolio, and sue as many manufacturers as possible, to force them to pay substantial royalties. Companies acquiring patents for defensive purposes sometimes assign some of the patents they acquire to patent assertion entities, which will in turn sue other manufacturers, generally competitors of the former. A third strategy is for a group of manufacturing companies with portfolios of similar value to cross-license each other at a high nominal royalty rate, so that they pay no royalties to one another, because the royalties are offset against one another, but to charge the high royalty to other manufacturers.
- c) Proprietary technology is no longer the only or the principal basis of innovation. Technology may be licensed royalty-free, and remunerated by advertising or by payment for services provided by the technology providers. These business models often involve two-sided markets, and generate enormous consumer welfare.
- d) Recently statements were made by *Apple* (on cellular telephony standards), by *Google* (on *Motorola* mobility patents), and by *Microsoft*. In briefs; *Apple* and *Google* said they would carry out FRAND commitments made by previous owners of their patents. *Microsoft* and *Google* said that they would require or use best efforts to ensure that companies buying patents from them respected their FRAND commitments. *Microsoft* and *Google* said they would require grant back only of patents essential for the standard for which the licence is given. *Google* specified a maximum per unit royalty for the *Motorola* mobility patents based on the net selling price. *Apple* said the “appropriate”

royalty for essential patents should reflect the licensor's share of the total number of patents essential for that standard. All these companies said they would not seek injunctions, *Google* making this conditional on reciprocity, and defining a willing licensee as one willing to accept a license on RAND terms offered by *Google* subject only to judicial review of the royalty level, including base and rate.

These are important statements. They were prompted by the US Department of Justice. Although they do not claim to state antitrust or competition law rules, they deal with some of the issues discussed here, and they seem compatible with the solutions suggested in this paper.



2. All of these developments give rise to legal issues that, if not quickly resolved, can slow down or prevent innovation. They therefore should be dealt with, as far as possible, by the Commission in the new Regulation and in the revised Guidelines. Because these issues are multilateral, this means reconsidering or adding to the Guidance on Horizontal Agreements⁵ and the Guidance Notice on exclusionary abuses, and perhaps also the Regulation on joint research and development. A great opportunity would be lost if the new Regulation and the revised Guidelines were so narrowly written that the other Commission documents were unaffected. All these documents must be considered together. They should be entirely consistent with one another, and between them they should answer all the questions raised here. At present, the Technology Guidelines and the Guidelines on horizontal agreements are not entirely consistent with each other.



3. Unfortunately, the Commission still has power to adopt group exemption Regulations only for bilateral agreements and licenses, and not for multilateral agreements such as patent pool agreements and agreements to adopt standards. The European economy cannot wait until the Council and Parliament have given the Commission the power to deal with multilateral agreements by Regulation. They must be dealt with by Commission Notices. This has the important advantage that the Notices can be amended as frequently as seems desirable. It also has the advantage that the Notices can include more explanations and examples than

⁵ Official Journal C11/1, January 14, 2011.

would be appropriate in a group exemption Regulation, and that Notices can deal with issues arising under both Article 101 and 102. The Commission should make full use of these possibilities. In fact, since patent pools and agreements to adopt standards would often fall outside the terms of a group exemption for multilateral agreements, the absence of power to adopt multilateral group exemptions may be less serious than might be assumed. The new Guidelines should not be limited to issues arising under Article 101, but should also deal with the principal questions under Article 102 (although the latter are not discussed here).

4. It is convenient to begin by listing the main questions that need to be dealt with, so that the whole picture can be seen clearly. An integrated policy is needed. The problems will not be solved by making a few technical changes to the TTBER and the Guidelines. Nor can they be solved by hoping that standard setting organisations, many of which operate only by consensus, will be able to solve the problems entirely by themselves.
5. It will be seen that, because of the three recent developments mentioned above, the problems that are now arising cannot be resolved only by altering the TTBER and the Guidelines, but rather make it necessary to add to the Guidelines on horizontal cooperation agreements. Most of these questions arise under Article 101, although some may also arise under Article 102.



6. Patent pools are the only types of agreements that give rise to FRAND obligations under Article 101. Some joint venture agreements and many agreements to adopt standards may also give rise to these obligations. It is important to stress that FRAND obligations arise under Article 101, and not merely as a result of contractual obligations. Patent pools are now discussed briefly in the Technology Guidelines (paras. 210-235). That discussion needs to be supplemented to deal with several important questions arising from the changes in technology and practice summarised above. Those questions are in particular:
 - an explanation of what is meant by “fair, reasonable and non-discriminatory” (FRAND) and the legal consequences of FRAND obligations under Article 101; and
 - grant back clauses in license agreements.

Both of these sets of issues are discussed below.



7. Standard setting agreements are now discussed briefly in the Guidelines on Horizontal Cooperation Agreements (paras. 257 ff., and examples). This discussion needs to be supplemented to deal with several important questions:
- the requirements of competition law for small ad hoc standard setting groups (which, in most instances, cannot implement the requirements of open participation as fully as contemplated in the Horizontal Guidelines, for commercial and confidentiality reasons);
 - the ability of standard setting groups to discuss royalty rates
 - the ability of standard setting groups to negotiate cumulative royalty rates with representatives of users; and
 - the legal obligations of members of standards groups and organisations to disclose their patents.

These issues are discussed below.



8. The revised Guidelines must make it clear that companies that buy patents which are subject to FRAND obligations must respect those obligations and must be given adequate notice of them.

These problems raise a series of questions under Article 101.

1



9. The Commission's Guidelines on horizontal cooperation agreements say that, to avoid coming under Article 101(1) TFEU, the rules of a standards setting organization should oblige its members to make FRAND commitments to grant licenses of their technically essential patents on fair, reasonable and non-discriminatory terms.⁶ However, the Guidelines do not explain the legal consequences under Article 101 TFEU if licenses on these terms are

⁶ Guidelines, paras. 278 and 280-286. The Guidelines do not make clear that the FRAND obligation under competition law applies only to technically essential patents, and perhaps also to "commercially essential" patents, although they are difficult to define satisfactorily.

not granted. Since Article 101(1) TFEU imposes conditions, there must be legal consequences under competition law, if these requirements are disregarded.



10. If the owner of patents claimed as technically essential to a standard refuses to license them, or licenses them only on discriminatory terms, the economic effect would be that competition in the downstream market is eliminated or distorted, causing harm to consumers. Once a standard has been agreed and is being practiced, it would not be enough, even if it were legally correct, to say that the agreement to adopt the standard would be void under Article 101(2) as a result. Invalidity would have no economic effect, and would do nothing to remedy the anticompetitive effect of the failure to license on FRAND terms. The standard would still exist, and users would still be locked into it. Relying on Article 101(2) would be disproportionate legally, since it would mean that a single holder of technically essential patents that did not license on FRAND terms could render the agreement to adopt the standard illegal, even though all the other parties had fulfilled their obligations to license on FRAND terms. The duty to license technically essential patents is a duty of each patent owner, and by refusing or failing to license on FRAND terms, a patent owner infringes Article 101. Although unilateral, its conduct is governed by the legal consequences of the standard agreement. The other parties to that agreement, whether they are aware of the refusal or not, may also benefit from by the restriction of competition downstream. The only satisfactory remedy is therefore a duty to grant the license on FRAND terms.
11. The correct analysis is to say that the patent owner may not enforce the patents that it claims are essential unless it is offering licenses on FRAND terms. To exercise its patent rights, the owner must fulfil the conditions that make their exercise legal. As the BGH said in the *Orange Book* judgment,⁷ a national court may not order or permit behaviour that infringes competition law. So this analysis relies on the duty of national courts under Article 4(3) TEU (ex-Art.10 EC) not to cause or permit a breach of competition law. This view should be accepted even by lawyers who assume that there can never be a duty to contract under Article

⁷ Bundesgerichtshof, KZR 39/06, judgment of May 6, 2009, WuW (2009), Vol. 7, 2613. See Temple Lang, *The Orange Book Judgment: when can a dominant patent owner injunct a user?* Competition Law Insight (2009) Vol. 8, Issue 7; Barthelmess and Gauss, *Die Lizenzierung standardessentieller Patente im Kontext branchenweit vereinbarter Standards unter dem Aspèkt des Art.101 AEUUV*, WuW (2010), Vol. 6, 626-636.

101 TFEU. But the practical effect is that if the patent owner wishes to enforce its patent, it can do so only on FRAND terms.

IGR Stereo television / Salora

12. The Commission acted on essentially this view of what is now Article 101 TFEU in the *IGR Stereo television/Salora* case⁸ when it required parties to a patent pool and standard approved by the German authorities to grant licenses to a Finnish company to manufacture and sell stereophonic TV sets. It was not suggested by anyone in that case that the duty to license under competition law in standards cases depends on the existence of a contractual obligation to grant licenses, and the Commission has no jurisdiction to enforce contracts, but only to apply EU competition law.



13. An owner of technically essential patents in practice would probably be in a dominant position, and the refusal to license on FRAND terms would almost certainly be an abuse, contrary to Article 102. However, proceedings under Article 102 would not provide an effective remedy for failure to grant FRAND licenses. The Commission is slow to act in Article 102 cases, and the objective of the FRAND license obligation is precisely to allow users of an agreed standard to go into production quickly, relying on the right to pay a royalty that is reasonable and no more than their competitors are paying. Article 102 cases about the duty to license involve complications that do not arise under Article 101, where the patent owner has given a contractual commitment and is under a clear obligation as a result of competition law, and where the market power is primarily due to the agreement to adopt the standard and not to the conduct of the company in question alone.
14. The Guidelines on horizontal agreements (paras.278-291) say that for standard-setting agreements that risk creating market power, there are conditions under which such agreements would normally fall outside Article 101(1). “Where participation in standard-setting is unrestricted and the procedure for adopting the standard in question is transparent, standardisation agreements which contain no obligation to comply with the standard and

⁸ Commission, Eleventh Competitive Policy Report (1981), pp. 63-64. In the Commission’s Guidelines on Technology Transfer Agreements (OJ2004, C-101/2) para. 167 says that standard agreements giving rise to de facto standards and patent pools are subject to the same competition law rules, and that it is normally required that patents in both situations be licensed on fair, reasonable and non-discriminatory terms.

[which] provide access to the standard on fair, reasonable and non-discriminatory terms will normally not restrict competition within the meaning of Article 101(1)” (para.280). “...the standard-setting organisation’s rules would need to ensure effective access to the standard on fair, reasonable and non-discriminatory terms” (para. 283). A clear and balanced intellectual property rights policy “would need to require” patent owners to provide an irrevocable commitment to license on FRAND terms (para. 285).

15. The clear implication is that if access is not provided on FRAND terms, Article 101(1) will apply. But the Commission does not say that. This is unfortunate, because one possible interpretation of the Guidelines is that the standard-setting agreement itself would be contrary to Article 101, unless it could be justified under Article 101(3). The Commission needs to make clear what it believes the legal position would be if the agreement did not “ensure” that FRAND licenses were given, or if the agreement purported to ensure this, but the obligations of the owners of intellectual property rights were not carried out. The Guidelines say that compliance with Article 101 does not require the standard-setting organisation to verify whether licensing terms fulfill the FRAND commitment (para.288). But “nothing in these Guidelines prejudices the possibility for parties to resolve their disputes about the level of FRAND royalty rates by having recourse to the competent civil or commercial courts” (para.291). Nothing is said about competition authorities. The Commission needs to deal with this issue.



16. It would be wrong to assume that FRAND obligations can come into existence only as a result of contract, and not as a result of competition law. That would be directly contrary to what the Commission did in *IGR Stereo television/Salora* and in other cases under Article 101. It disregards the fact that the duty to grant licenses on reasonable and non-discriminatory terms is imposed by competition law, in certain circumstances involving patent pools, joint ventures, and standard-setting agreements, whether the parties have expressed such an obligation in their contracts or not (and, in the case of a subsequent acquirer of patents subject to such commitments, whether or not the assignment contract provides for the obligation on the subsequent acquirer to live up to FRAND promises made by the transferor).

17. A number of aspects have to be considered. In the case of a second or subsequent license, it is usually easy to see whether the later terms are equivalent to the earlier terms, if both sets of terms are known and the technology licensed identical or substantially similar. In many cases “non-discriminatory” is a more precise criterion than “reasonable”, even where there is *ex ante* evidence of a “reasonable” royalty rate.
18. One license may be for a royalty, and another for a lump-sum payment with a fully paid-up license. That is not necessarily discrimination, since lump sum payments are normally calculated by both parties on the basis that they are equivalent financially to a royalty at a given rate. “Non-discriminatory” terms does not necessarily mean identical terms.⁹ What matters is the economic effect, not the formal legal formula. Comparisons may be complicated by contractual limits on the total royalties payable, or by an artificially defined royalty base (e.g. excluding low-price or high-price products, or specialized products, or allowing unusual deductions), or by a different license period, or by the inclusion of non-essential patents. A specially defined royalty base might be adopted as a result of the special circumstances of the licensee, or as a compromise result of negotiations, or deliberately to make comparisons with other license terms more difficult.
19. Both direct and indirect discrimination are prohibited. So even if the terms of two licenses of the same patents appear formally identical, there would be discrimination if one licensee got additional patents royalty-free, lower lump-sum payments or a more favourable royalty base, or was charged less for other goods or services that the licensor was supplying. Illegal discrimination can occur outside the scope of the licenses themselves, through apparently separate arrangements.
20. Cross-licenses do not necessarily involve discrimination (although of course they can). A licensor may “license out” the same patents to two licensees on the same terms, and “license

⁹ Royalties may need to be calculated in a convenient practical way, if no more precise method is convenient; Case C-52/07, *Kanal 5* [2008], ECR I-9275, paras. 28 et seq. What is convenient for one licensee is not necessarily convenient or suitable for another. For detailed comparisons it is necessary to know the royalty base, any maximum royalty or “cap”, all related side agreements, the value of patents sub-licensed, and any other elements affecting the real or effective royalty rate. See Swanson & Baumol, Reasonable and Non-discriminatory (RAND) royalties, standards selection, and control of market power, 73 *Antitrust Law Journal* (2005) 1, at 25 et seq., (on the efficient component licensing rule).

in” other patents from one licensee by a cross-license. The two royalty payments will be set off against one another. The net payment by the licensee giving the cross-license will be less than that made by the other licensees. This is legal and non-discriminatory, provided that the various royalties are all on an arm’s-length basis.

21. Different royalty rates may be appropriate for different fields of use or applications of the patents, or in light of the expected volume of products sold. It might be right to treat network providers differently from equipment providers, or producers of cheap devices differently from full-feature expensive devices.
22. Changed circumstances do not necessarily justify different royalty rates. The first licensee on FRAND terms knows that there will be later licenses on the same terms. Later licensees have the advantage of seeing how the market is developing, but they have lost the first mover advantage.
23. To avoid being discriminated against, a licensee would be wise to agree separate royalty rates for patents claimed to be technically essential, to which the non-discrimination obligation applies, and which might be subject to renegotiation, as explained below.



24. The *Laboratoires Boiron* judgment of the European Court of Justice¹⁰ shows that a national court may have a duty under EU law to order disclosure of normally confidential information (such as the terms of previous patent licenses) if that is necessary to enable a party to prove its case under EU law. If this is not done, the patent owner has a great advantage, since it can produce only the evidence that supports its case. It should have the burden of proof to show that the royalty it demands is FRAND, since it alone has all the relevant information. This is also because the company has the burden of proving that it has fulfilled the requirements of Article 101(3) (Article 2, Reg.1/ 2003).
25. Non-royalty terms can also be discriminatory or restrictive, e.g. rebates given on condition that the licensee buys only from the patent owner, and all the same principles apply to them. It can be discriminatory, and it is usually illegal tying, to oblige a licensee to pay for a license

¹⁰ Case C-526/04, *Laboratoires Boiron* [2006] ECR I-7529.

of patents that it does not want. A licensee is entitled to choose which patents it wants to license on FRAND terms.



26. Courts should be particularly strict to prevent a patent owner discriminating unjustifiably in favour of its own downstream operations and against a downstream competitor, or in favour of a downstream competitor that is buying raw materials or components from the patent owner against another downstream competitor who does not. A licensor is less likely to have an incentive to discriminate between licensees with which it has no other business relationship. However, the licensor's obligations should be the same whether or not it is vertically integrated. (It would be absurd if its obligations changed when it became, or ceased to be, vertically integrated). None of this is inconsistent with the fact that in other contexts discrimination is often procompetitive.¹¹ Nor does this assume that it will always be easy to assess whether licenses are genuinely "equivalent".¹² But licenses of technically essential patents for the purpose of the same standard are likely to be equivalent, and the purpose of the FRAND obligation in both competition law and standard-setting practice is to enable a user to quickly start production knowing that it will not have to pay more than its competitors for the same rights. This practical objective excludes any interpretation of the non-discrimination obligation that would make it the subject of lengthy litigation and controversy between economists. The FRAND obligation is essential to prevent discriminatory licensing to downstream rivals,¹³ and a simple rule (not the rule against discrimination under Article 102(c)) is essential to ensure prompt implementation.
27. The Guidelines on horizontal agreements say that "[a]ny standard-setting agreement which clearly discriminates against any of the participating or potential members could lead to a restriction of competition" (para.297). This is correct, but it says nothing about the more probable situation in which an owner of intellectual property rights that are technically essential for the standard in question discriminates in its licensing policy, even though this is or may be contrary to its contractual obligations under the standard-setting agreement. Since

¹¹ Temple Lang, Rebates, Price Discrimination and Refusal to contract – The Commission's Guidance Paper on Article 82, 2010 *Europarättslig Tidskrift* 47-78.

¹² "Equivalent" is the word used in Articles 101 and 102.

¹³ Daniel A. Crane, Patent Pools, RAND Commitments and the Problematics of Price Discrimination (Cardozo Legal Studies, Working Paper No. 232, 2008).

discrimination by a single owner of essential patents could effectively prevent potential entrants from entering the market, and could reserve the market to the owner in question, this is a crucial omission, which the Commission should now remedy.

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28. An important question in practice is whether a patent owner which is a party to a standard setting agreement, and is therefore obliged by Article 101 TFEU to license on FRAND terms, may seek an injunction against a creditworthy company that is willing to take a license on FRAND terms of any valid patent that it is using and to which the Article 101 obligation applies. This question can arise when patent owner and license-seeker disagree about the royalty rate or the license terms and their compatibility with FRAND and Article 101.
29. The purpose of the FRAND obligation under Article 101 TFEU is to enable any company that wants to practice the standard to do so promptly, knowing that it has a right to a license of technically essential patents if it pays a reasonable royalty that will be no higher than that paid by its competitors. Such a company needs to be able to proceed with its plans without being delayed by long negotiations or litigation or by threats of being unable to sell its products.¹⁴ The owner of essential patents often itself intends to implement the standard, and it would defeat the purpose of competition law if it were able to delay its own downstream competitors when they are willing to pay a reasonable royalty. An owner of patents that it claims are valid and technically essential may or may not prove to be correct. It would be wrong for a user that is prepared to pay a reasonable royalty for the use of valid and genuinely essential patents to be delayed while it argued, perhaps correctly, that some or all of the patents were invalid, not essential, or not being used. Since a patent owner subject to a FRAND obligation under competition law is irrevocably obliged to grant FRAND licenses, the only effect of a right to seek injunctions against creditworthy companies willing to take the licenses on reasonable terms would be to put pressure on the licensees to pay unreasonably high royalty rates. The threat of an injunction is very serious, because it means that the user may be prevented from entering the market, or from carrying on its business. It is particularly serious after the user of the technology has invested in production and entered

¹⁴ To get quick access on FRAND conditions to all patented technologies is especially important when production as in telecommunications often requires the use of hundreds or thousands of standard essential patents, and one obstructive patent owner could prevent production from starting.

the market. That is when this type of hold-up is most effective. Allowing injunctions to be given before the FRAND royalty rate or the validity of the patent is determined would entirely alter the negotiating positions and could lead to payment of royalties well above the FRAND level.

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30. An injunction can of course be sought against a company that refuses to take a license at all (*e.g.* because it relies on challenging the validity of the patent), or is not creditworthy, or which refuses to pay a royalty that has been determined by a court or arbitrator to be reasonable, or which refuses to cross-license patents that it claims are technically essential,¹⁵ or where there is no reciprocity for some other reason. But it would be contrary to the duties of national courts under Article 4(3) TEU to order an injunction against a user contesting the validity of the patent, or arguing that it had not infringed them, unless the court had first found that the patent owner was offering FRAND terms. The threat of an injunction would deprive the user of the opportunity to make arguments in court that EU law gives it a right to make. Since EU law gives a user a right to pay only reasonable royalties, Article 4(3) TEU obliges national courts to ensure that this right is not taken away by procedural means. National courts must not make it impossible or unreasonably difficult to get a license on terms required by EU law. It would be contrary to EU law to make assertion of one EU law right (the right to pay only a reasonable royalty) conditional on giving up another (the right to challenge the validity of the patent). A company that has given an irrevocable commitment to license on FRAND terms cannot claim that it would suffer irreparable injury if it is not given an injunction.¹⁶
31. The German *Orange Book* judgment concerned similar issues, but did not concern standards set by an industry-wide agreement under Article 101 TFEU. The patent owner had never

¹⁵ Dolmans, Standard Setting – The Interplay with IP and Competition Law – How to avoid false FRANDS, (see footnote 1), at 10. ETSI Rules of Procedure allow a patent owner to insist on reciprocity as a condition for licensing technically essential patents on FRAND terms. In *Siemens v. Amoi*, Regional Court of Düsseldorf, judgment of February 13, 2007, Case 4a O 24/05, paras 64, 67, it was held that the owner of standard essential patents has no right to insist on a cross-license of patents not claimed as essential.

¹⁶ See *Siemens v. Amoi*, judgment of the Regional Court Düsseldorf, Feb. 13, 2007, Case 4a O 24/05, para. 62. See generally on the question of injunctions Lemley & Shapiro, Patent Holdup and Royalty Stacking, 85 Texas Law Review (2007) pp.1991-2049; Shapiro, Patent Reform: Aligning Reward and Contribution, in Jaffe, Lerner & Stern (eds.), Innovation Policy and the Economy (2007, National Bureau of Economic Research) Vol.8 pp.111-156.

given a contractual FRAND commitment. So the BGH did not need to consider the consequences of use of the patents that is legal under Article 101. The case was considered only under the competition law on dominant positions, under which the procedural rights of the user are clearly less than under Article 101 TFEU.¹⁷

32. Surprisingly, the Guidelines on horizontal agreements say nothing about the possibility of the owner of technically essential patents getting an injunction against a user of the patents which is practicing the standard, where there is a dispute about whether the royalty demanded by the patent owner is fair, reasonable and non-discriminatory.

4 Ex-ante

33. A royalty should be based on the “economic value” of the patent.¹⁸ The cost of developing a patent, even if it could be estimated, bears no relation to its value. An expensively-developed patent may be worthless if a better patent for the same function is obtained. One should if possible look at the royalty obtainable in competition with other technologies before the standard was agreed, the “*ex ante*” value.¹⁹ Anything more than this value is the result of the agreement to include the technology in the standard,²⁰ and the patent owner is not entitled to claim it, because it results from a restriction on competition, and because the owner is rewarded in another way, by an assured royalty stream from companies using the standard. In other words, the value of the innovation may be claimed, but not the value of the network effects or the lock-in. The royalty for one patent should not be related to the entire value of the infringing product. The benefit to consumers must be the convenience of the standard, without having to pay more for the technology. *Ex ante* statements might be useful evidence

¹⁷ See Temple Lang, The *Orange Book* Judgment: When can a dominant patent owner injunct a user? Competition Law Insight No. 7, June 2009, 3-4.

¹⁸ Guidelines, para. 289.

¹⁹ See Banasevic/Madero Villarejo, Global Competition Policy, May 2008 (1), at 4.

It is sometimes suggested that *ex ante* disclosure might encourage licensees’ cartels to lower royalty rates. However, as discussed in the text, multilateral agreements to reduce aggregate royalties may sometimes be necessary, and it is not clear why *ex ante* disclosure would make them more necessary or less desirable. Patents pools are a better solution than *ex ante* disclosure, but patent pools often involve *ex ante* disclosure, and they can be criticised for being licensors’ cartels, unless they include a significant proportion of potential licensees. However, neither *ex ante* disclosure or patent pools could be made mandatory.

²⁰ U.S. Federal Trade Commission decision Rambus: FTC Docket No. 9302, February 5, 2007:Swanson & Baumol, Reasonable and Non-discriminatory (RAND) royalties, Standards selection and control of market power, 73 Antitrust Law Journal (2005), 1, at 57.

of *ex ante* value, and an expert opinion might be useful if the expert could be sure what criteria to apply to measure what the Commission calls the “objective centrality and essentiality” of the patent.²¹

34. It follows from the *ex ante* value rule that the “reasonable” royalty per patent may be different for different patents, even for the same standard. It depends on how much more valuable the patent in question was, when compared with the next best technology for the function in question before the standard was adopted. If the next best alternative was almost as good, *ex ante* price competition would have driven down the price of the alternative ultimately chosen to a level at which the royalty represented only the value of its advantages over the alternative not chosen. This comparison of the technical merits of the alternatives can be made, with hindsight, even if there were no negotiations before the standard was agreed.

Ex post

35. *Ex post*, after the standard was adopted, other evidence will be the royalty rates charged by other companies owning essential patents, for the same standard, or in similar but competitive markets.²² The average royalty rate per patent is not likely to be very different for different companies, since all portfolios of patents claimed as essential include both valuable and less valuable patents, if both companies are trying to charge reasonable royalties. Users, when they begin to implement the standard, may realize that one patent owner is charging much more than the value of its patents would justify, or that the cumulative royalty rate is uneconomic. (If all owners of claimed-essential patents were to demand the rate per patent insisted on by the most aggressive licensor, and if that would make the standard uneconomic, that licensor’s demands are unreasonable). Royalty rates influenced by anticompetitive practices of the licensor or other companies are likely to be unreasonably high. The fact that licenses have been signed on the basis of a given royalty rate is not conclusive evidence that the rate is reasonable. The licensees might have had no choice, or might not have realized that the rate would be uneconomic, or discriminatory. The

²¹ Guidelines, para. 290.

²² German competition law mentions prices that are charged by undertakings in comparable markets where effective competition prevails as a relevant benchmark to determine abusive pricing (Section 19 (4) No 2 GWB).

maximum cumulative royalty rate must be looked at in the light of the potential revenues and profits of an efficient user in the competitive downstream market.



36. Since the correct FRAND rate for a patent that is technically essential for a standard is the royalty that was available *ex ante*, it follows that a royalty can be higher than the legally permissible rate under Article 101 TFEU even if it would not be so excessive as to be contrary to Article 102 (a) TFEU. A royalty that exceeds the correct “reasonable” rate under Article 101 is illegal because it is exclusionary, even if it is not necessarily exploitative under Article 102(a) as well.
37. As in the case of excessive prices under Article 102(a) TFEU, it is useful to use as many tests as possible. If they all suggest that the royalty is above the FRAND level, it almost certainly is.



38. It has sometimes been suggested that a FRAND royalty should be what the patent owner could claim in a case of unauthorized infringement, but this would disregard the restrictive effects of the agreement to adopt the standard, and the commitment to license on FRAND terms. It assumes that the competition law obligation under Article 101 makes no difference, which could not be correct. It has also been suggested, in spite of the clear words of Article 102(a) and of the European Court of Justice,²³ that competition authorities should avoid making findings that royalties or other prices are excessive under either Article 101 or 102 TFEU. One reason given is that excessive prices are self-correcting, because they encourage market entry. That assumes that there are no serious barriers to entry, but that is untrue where there is only one standard. Another argument is that competition authorities should avoid “price regulation”, but that argument does not apply under Article 101 TFEU. Under Article 101 the patent owner has voluntarily made a FRAND commitment to license on “reasonable” terms, and thereby limited its own freedom voluntarily. Effective downstream competition depends on the royalty being reasonable and the correct royalty rate depends on the evidence of what the royalty would have been *ex ante*, and not on policy grounds. A

²³ E.g. Case 27/76, *United Brands* [1978] ECR 207, paras. 250, 252; Case 395/87, *Tournier*, [1989] ECR 2521, para. 38; Case 66/86, *Ahmed Saeed* [1989] ECR 803, para. 43; Case C-52/07, *Kanal 5* [2008] ECR I-9275, paras. 28 et seqq.

third argument says that excessive pricing cases discourage innovation, but that is also incorrect in standards cases, in which the patent owner has given a FRAND commitment to get its patent included in the standard, and in which the use of an innovative standard depends on the cumulative royalty rate being reasonable.

39. The Guidelines on horizontal agreements (paras. 289-90) make a useful statement on the subject of the *ex ante* value of the patents.
40. But they do not say that the FRAND rate should be the royalty rate that could have been charged *ex ante* in a competitive environment, that is, in competition with alternative technologies, when that can be estimated with confidence, even if no license was granted at that time. The date of the agreement to adopt the standard, because that is the date when the specification caused the patents artificially to increase in value, is both more precisely identifiable and more relevant than the date at which industry has been locked in. Lock-in occurs over time, and is different for different companies. It does not occur at any precisely defined moment.
41. The Guidelines also say (footnote to para. 269) “High royalty fees can only be qualified as excessive if the conditions for an abuse of a dominant position as set out in Article 102 of the Treaty and the case-law of the Court of Justice of the European Union are fulfilled. See for example Case 27/76, United Brands, [1978] ECR 207”. But, as stated above, a royalty could be higher than would be “fair and reasonable” (and so contrary to a FRAND obligation under Article 101) without necessarily being so high as to infringe Article 102. It is more important to recognise that FRAND obligations result from Article 101, and so they apply to companies even if the companies are not dominant.

5 ■

42. Under patent law, generally, if the owner grants a license and later sells the patent, the buyer takes the patent subject to the existing license. If the owner is a party to an agreement to adopt a standard, and so is bound by a FRAND obligation under Article 101 TFEU, the buyer must take the patents subject to the obligation to grant licenses on FRAND terms. There are several reasons for this.²⁴

²⁴ In the N-Data case, the FTC claimed that N-Data, which acquired standard essential patents related to an Ethernet standard for local area networks (“LAN”), acted anti-competitively by

43. First, the legal reason competition law imposes the obligation is to balance the restrictive effect of the standard, and to ensure that users of essential patents can get the right to use them on reasonable and non-discriminatory terms. That purpose is not affected by the change of ownership. Second, if the right under competition law to obtain licenses on reasonable terms could be lost or avoided on sale of the patents, the safeguard for competition provided by the FRAND obligation would also be lost. Since the original owner is required by competition law to grant licenses on FRAND terms, that requirement cannot be avoided by contract. Third, the agreement for the sale of the patent would be contrary to Article 101 TFEU if either party intended the buyer to act contrary to the seller's obligations under Article 101 TFEU. If the buyer agreed to give the seller a share of higher royalties claimed after the sale, the agreement would clearly be contrary to Article 101 TFEU (and if the intention was not to claim higher royalties, it might be hard to explain why the sale was made purportedly free of the FRAND obligation). A national court in an EU Member State would have a legal duty under Article 4(3) TEU to prevent the buyer from evading its obligations under Article 101 TFEU. Fourth, since the buyer is getting the same benefits from the agreement to adopt the standard as the seller did, it follows that it should be subject to the same obligations.
44. If the seller is obliged by Article 101 TFEU to license on terms corresponding to those on which it has already granted licenses, the buyer is also obliged to license on the same terms. The only possible exceptions to this rule would be if the seller had charged royalties above FRAND levels (in which case the buyer could not become entitled to do so), and where the buyer has a large patent portfolio and a well-established royalty rate that might be better evidence of the FRAND rate than the seller's practice. (However, the correct FRAND royalty rate per patent, even for a given standard, is not necessarily the same for all technically essential patents. As explained above, the correct FRAND rate is the royalty that could have been obtained for each of the patents in question before the standard was agreed,

renege on the original license agreement with the standard setting organization to license the standard essential patents for a one-time fee of \$1,000 (Federal Trade Commission Complaint, In re Negotiated Data Solutions L.L.C., No. 051 0094 (September 23, 2008) – *N-Data*. The ETSI Guide on Intellectual Property Rights as amended in November 2008 fails to deal with the problem of changes of ownership, even as a matter of contract. It merely says that “it is desirable that, to the maximum extent possible in each legal jurisdiction [...] any applicable licensing undertaking should automatically transfer to the new owner” (4.2).

in arms'-length negotiations, in the light of alternative technologies available at that time²⁵). It is particularly important to stress that the FRAND obligation under competition law applies to buyers of the patents who are not themselves using the standard, since they do not need cross-licenses and have no incentive to moderate their demands because they are not dependent on paying fair and reasonable license fees themselves. For corresponding reasons, competition law does not allow the owner of a patent that it claims is essential to avoid its obligation to license on FRAND terms by withdrawing from the standards organization, even if its contractual duty to license is not expressed to be irrevocable.



45. The Guidelines on horizontal agreements say (para.285) that *“To ensure the effectiveness of the FRAND commitment, there would also need to be a requirement on all participating IPR holders who provide such a commitment to ensure that any company to which the IPR owner transfers its IPR (including the right to license that IPR) is bound by that commitment, for example through a contractual clause between buyer and seller”*.
46. The Commission unfortunately said nothing about the effects, under competition law, if an owner fails to impose an appropriate obligation on the new owner, or if the new owner fails to comply with its obligation. They do not say what the position is, under competition law, if the standard-setting agreement does not impose any such obligation on the original owners of the patents. The Commission is no doubt aware that few standard-setting agreements impose any such requirements, and that efforts in various standards organisations such as ETSI to impose these obligations have been unsuccessful.
47. An important specific consequence should be mentioned. If a company has a large portfolio of patents that it claims are technically essential, the value of the portfolio is not determined in proportion to the number of patents. The FRAND royalty rate of the portfolio does not necessarily increase if more patents are added. The total royalty paid by licensees of the portfolio should not be increased if the portfolio is divided and sold to several different owners. To allow it to be increased would defeat the purpose and effectiveness of the FRAND obligation under competition law.

²⁵ Guidelines, para. 289,

48. This does not mean that patents that are claimed as essential cannot be sold. The first owner might prefer to have a capital sum, and the buyer might wish to have a revenue stream. But it does mean that the seller must ensure, by reducing the royalties on any patents that it retains, that the total royalty on all the patents that it claimed are essential does not exceed the FRAND rate.

6 ■

49. A grant back clause in a license agreement is one by which the licensee agrees to give the licensor the right to use some of the licensee's future technology (insofar as the obligation applies to the licensee's existing technology, it is simply a cross-license). The licensee's obligations may be limited to improvements made by the licensee, or the obligations may be wider, and may apply to all of the licensee's future technology that is relevant to the subject matter or purpose of the license.

50. In general, grant back clauses are procompetitive, if they are non-exclusive, that is, if they do not prevent the licensee from licensing the technology in question to third parties. They should not restrict the licensee's freedom to use its own technology. They encourage the licensor to license out its technology, and they give the licensor the benefit of improvements made with the benefit of its own technology. They also promote cooperation between licensor and licensee. However, they may reduce the licensee's incentives to carry out its own research and development.

51. Both the scope and the terms of a grant back obligation may need to be considered under competition law. The first question to be considered is whether the licensor has market power in the relevant technology or innovation market. If the licensor is a patent pool or is a member of a patent pool or a standard setting organisation, the licensor may have very much more power than the licensee, and may be led to impose anticompetitive terms on the licensee. The terms of a grant back obligation may be anticompetitive because the scope of the technology granted back to the licensor is much broader than the technology licensed by the licensor. That would mean that competition between licensor and licensee would be reduced or eliminated to an extent not justified by the procompetitive effects of the basic license. The grant back obligation may also be anticompetitive if the licensee is obliged to grant back its technology royalty-free or for inadequate royalties. That would seriously reduce the licensee's incentive to invest further. A grant back clause might be

anticompetitive because it was not reciprocal, or because it obliged the licensee to transfer ownership of its new technology, or because the royalty for the licensee's technology was too low, or because the grant back obligation would last longer than the initial patent license. An arbitration clause may be essential for the validity of the grant back clause, to ensure that a licensee does not lose its technology without appropriate remuneration, since without that it would have no incentive to carry on further research. A licensee should not get more favourable grant back terms because it is also a licensor in the pool or other arrangement in question.

52. “Pass-through” clauses are provisions in a license to a manufacturer by which the licensor guarantees that customers of the manufacturer who use the licensed products in their own products will not be subject to patent infringement claims from the licensor. They do not inherently cause competition problems, but they may be associated with other conduct that leads to exclusionary effects.
53. “No-challenge” clauses prohibit the licensee from challenging the validity of one or more of the patents licensed to it. Such clauses are anticompetitive. If a licensee cannot challenge a patent that has been licensed to it, it may pay a royalty that it should not need to pay, and it might be unable to prove that it could have adopted a new invention even if it had not obtained the initial license. However, under Article 5(1) of the present Regulation on Technology Transfer, although a no-challenge clause is not exempted, the license may be terminated if one of the patents licensed is challenged. The Technology Transfer Guidelines (paras.113, 229) make it clear that the right to terminate must be limited to the technologies owned by the licensor whose technologies are challenged, and does not allow the other licensors in a patent pool to terminate the licenses of their patents. This is known as “defensive termination”, since it ensures that a licensee cannot challenge a patent that is licensed to it while keeping the benefit of the license in case its challenge fails.



54. Several specific situations should be identified, in which the legal position is clear:
 - (1) The licensor(s) are licensing only patents claimed as technically essential for the purposes of the standard or product in question, and are obliged to license them on FRAND terms. The licensee is obliged to grant back any patents that it claims are technically essential, also on FRAND terms. No competition law question arises. It may be necessary to use a concept

such as “related” patents, e.g. patents that may not prove to be technically essential but are necessary in practice to comply with a standard.

(2) The licensee is not subject to any grant back obligation under the license agreement, but it negotiates a license of some of its later patents to the original licensor, for a royalty negotiated on an arms-length basis. No competition law question arises.

(3) The licensee is obliged by the license agreement to grant back or transfer, royalty-free, all its future patents, to the licensor and to other licensees of the same licensor. Such an obligation is almost always contrary to Article 101, since it is both anticompetitive and exploitative, even if the grant back is limited to the same subject matter. Such an obligation discourages innovation by the licensee.

(4) If the licensee makes a claim against the licensor on the basis of a patent that the licensee has no obligation under competition law or contract to license to the licensor, or if the licensee refuses to license the licensor, the licensor cannot terminate the license despite having expressly provided for it in the license agreement. Similarly, if the licensee challenges the validity of a patent of the licensor that has not been licensed to it, the licensor cannot terminate the license.

(5) Both licensor and licensee should be free to license bilaterally.

7 M

55. Even if each individual royalty claimed by each owner of genuinely essential patents were reasonable, the resulting cumulative royalty rate might be so high that it would be uneconomic for a user to pay them all. This is likely in particular with complex products involving many patents.²⁶ A court cannot resolve this problem, because a court in normal proceedings does not have all the interested parties before it. Courts usually deal only with individual patents or patent portfolios covering only part of the standard. If this problem arises, it can only be solved by multilateral agreement.

²⁶ For instance, the UMTS standard requires the use of 1,500 claimed standard essential patents, which are held by approximately 50 different companies.

56. The Commission²⁷ allows unilateral disclosure *ex ante* of proposed licensing terms, but says that if the rules of the standards organization allow joint negotiation or discussion of licensing terms, in particular royalty rates, Article 101(1) TFEU will apply. Unilateral disclosures, in other words, do not bring the agreement under Article 101(1) TFEU if they are merely to enable the standards organization and its members to estimate the maximum potential cost of a choice of an individual technology. The U.S. Department of Justice has approved an obligation to declare maximum royalty rates and most restrictive non-royalty terms.²⁸
57. After the standard has been adopted, it may become clear that there are so many apparently essential patents for which apparently reasonable royalties are being claimed that the cumulative royalty rate would make it uneconomic to use the standard (the Cournot effect). In practice, this would be unlikely to become clear before the standard was adopted, because not all the technically essential patents and not all the realistic royalty rates would be known by then. *Ex ante* auctions are often impossible to arrange.
58. The Commission's 2011 Guidelines on horizontal agreements are inconsistent with the 2004 Guidelines on Technology Transfer. The earlier Guidelines allow the members of a patent pool to discuss the aggregate royalty rate that the pool will charge, and how that rate should be divided among the members of the pool. The Guidelines on horizontal agreements do not allow the members of a standards group or organization to discuss aggregate royalties. There is no sufficient justification for this difference, and it should be eliminated, by bringing the Guidelines on horizontal agreements into line with the earlier Guidelines.
59. Although neither the U.S. Department of Justice nor the Commission has yet said so, it is suggested that the companies claiming to own technically essential patents should be allowed to agree on royalty rates with potential users of the standard, either before or after the standard is adopted, under Article 101(3) TFEU if the following conditions are fulfilled:
- i. the presumed cumulative royalty rate would otherwise be widely considered to be uneconomic. If that is so, some new agreement is necessary, or the standard will not be used;

²⁷ Para. 299.

²⁸ VME bus International Trade Association business review letter, October 2006.

- ii. all or almost all of the companies claiming to own technically essential patents, and having given FRAND commitments, take part in the negotiations. (If they do not, the negotiations are unlikely to reach a useful result);
- iii. a substantial and representative number of potential users of the standard take part, and participation is open to other companies interested in using the standard. It is essential to have both users and patent owners taking part. A horizontal agreement limited to either users or owners would look like illegal price fixing²⁹, even though a patent pool is composed of owners, who are not necessarily also users;
- iv. the negotiators agree on both a maximum cumulative royalty rate and on the division of the total royalty between the companies claiming to own technically essential patents. Both elements must be agreed if the agreement is to be effective. There is no legal duty to use any particular formula for dividing the aggregate royalty between the owners of the patents claimed as technically essential;³⁰
- v. the agreement makes it clear that it does not limit the rights of any party to challenge the validity of any patent, or to argue that any patent is not technically essential, or to refuse to pay royalties for any patent found invalid, or to argue that it is not using any given patent;³¹
- vi. the agreement does not include any provisions fixing the prices at which the downstream products may be sold; and

²⁹ Department of Justice and Federal Trade Commission report Antitrust Enforcement and Intellectual Property Rights: Promotion, Innovation and Competition (April 2007, the IP2 Report). See Farrell, Hayes, Shapiro & Sullivan, Standard Setting, Patents and Hold-up, 74 Antitrust Law Journal (2007) 603-670, and 632-635.

³⁰ It is often suggested that an agreed cumulative royalty should be divided between the patent owners in proportion to the number of patents claimed as essential by each owner. However, this would be satisfactory only if all the parties agreed, or if there was a mechanism to ensure, that all the patents considered were equally valuable (and equally likely to be valid and technically essential). Any such mechanism would be slow, expensive and controversial, and could be used only if the total number of patents was small. Division of patents would have to be dealt with.

³¹ Clauses in patent licenses preventing direct or indirect (through third parties) challenges to the validity of patents, or penalizing or interfering with challenges by third parties, would often be illegal anyway under Article 101, as would clauses requiring payment of royalties on patents not used.

- vii. the agreement would allow license agreements previously signed to be renegotiated without penalty, at the option of either party, insofar as they relate to patents claimed to be technically essential. This is necessary to enable licensors to carry out their obligation not to discriminate, to facilitate consensus, and to prevent aggressive licensors obtaining an unjustified share of the cumulative royalty.
60. I suggest that if all these conditions are fulfilled, the agreement would fulfil the requirements under Article 101(3) TFEU. The fact that all or most of the licensors and licensees would be involved should ensure that the results are reasonable and balanced. In effect, such an agreement would be a collective technology auction. Competition law should not prevent agreements that promote use of innovations.
61. This conclusion does not depend on any assessment by the Commission of the reasonableness of the royalty levels agreed. There should be no real difficulty in determining whether the above conditions are fulfilled. Several of the conditions are needed only to make sure that the agreement is likely to be effective as well as procompetitive.
62. Any agreement, license or practice that prevented a licensee from negotiating, signing or carrying out an agreement on these lines would be contrary to Article 101 TFEU.

Ex ante

63. The Commission does not discuss the question of agreements on aggregate royalties. Instead, it cautiously says (Guidelines on horizontal agreements, para.299) that if the standard-setting agreement expressly allows *ex ante* disclosure of most restrictive licensing terms by patent owners, “including the maximum royalty rates they would charge”, that will not in principle restrict competition. But the Guidelines say that such disclosure should be made “individually”, that is, unilaterally, and the Commission says nothing about the possibility of an *ex ante* or *ex post* agreement between licensors and licensees to ensure that the aggregate royalty level is economic. It has frequently been pointed out that unilateral disclosure of maximum terms would inevitably show what IPR owners hoped to get rather than what they would ultimately agree to, so the Commission’s suggestion is unlikely to be particularly useful, as it does nothing to discourage this. The Commission seems to have believed or hoped that IPR owners would announce reasonable *ex ante* royalty rates, without trying to bargain, and that a consensus on reasonable aggregate rates would thereby emerge in due

course. This is probably another consequence of the Commission's reluctance to express any view on the right level for a royalty.

8

64. In practice, many companies announce that they have patents that they believe are or will be essential for a standard, and commit themselves to license them on FRAND terms. If this is done, the fact that the patents are identified only later is not important. However, if a company does not claim that it has any essential patents until after the standard is adopted, it has deprived the other members of the standards organisation of the opportunity to choose an alternative technology. Even if there is no evidence that the company concealed its patents deliberately, adapted the inventions they cover in secret to the standard, or influenced the standard so as to make its patents essential, competition law must answer the questions that arise, since the rules of the standards organisation may not answer them.³²
65. This situation needs to be analysed under Article 101 TFEU. If the company in question is a member of the standards organisation or a party to the agreement to adopt the standard, it infringes Article 101 TFEU if it refuses to license on FRAND terms, even if it has not given a contractual commitment to do so. Article 101 TFEU imposes a competition law duty to license on FRAND terms on all parties to the standard setting agreement, if they claim to have essential patents and so claim to benefit from the standard. Competition law does not allow them to take the benefit of the restriction of competition resulting from the standard agreement without granting the FRAND licenses that are necessary to make it lawful to obtain that benefit. This is essentially the same argument as that which shows that the owner of a patent that it claims is essential may not seek an injunction against a willing and creditworthy user. The fact that the patent owner did not disclose the existence of its patents before the standard was agreed cannot put it in a better position than if it had disclosed them. It would be different if it had initially disclosed its patents and said that it would not license them on FRAND terms. In such a case the standard setting organization could choose another technology available on FRAND terms or royalty-free. The duty to license imposed

³² See generally Swanson & Baumol, Reasonable and Non-discriminatory (RAND) Royalties, Standards Selection, and Control of Market Power, 73 Antitrust Law Journal (2005) 1-58, pp.45-56 (on the incentives for disclosure and the obligation to disclose), 55 (on zero royalty). In *Rambus Inc. v. Infineon Techs*, 318 F.3d 1081 (Fed. Civ.2002), the U.S. Court strongly criticized the “staggering lack of defining details” of the contractual disclosure obligations under the rules of the Joint Electron Devices Engineering Council.

by competition law is based on the agreement to adopt the standard and does not depend on the existence or the terms of a contractual commitment to grant licenses. The duty of a national court not to allow the patent owner to enforce the patent if to do so would be contrary to Article 101 TFEU (because the owner is not offering FRAND licenses) does not depend on the existence of a contractual commitment either.

66. This analysis under Article 101 avoids the complexities of dealing with “patent ambush” cases under Article 102, notably the question if there was a dominant position at the time of the abuse, as the European Commission assumed in the *Rambus* case.³³
67. A company can reasonably be expected to know what patents it owns, at least in general terms, and to realise that one or more of its patents may become essential for a standard being discussed by a standards organisation of which it is a member, even if it cannot be sure which patents they will be. The company can always fulfil its obligations by granting FRAND licenses. In other words, the minimum consequence of the failure to disclose is the usual duty to grant FRAND licenses. That, however, would mean that the company would be no worse off than if it had disclosed the existence of relevant patents at the right time, and given the other members of the standards organisation an opportunity to choose another technology. The subjective knowledge or intention of the company is not relevant under competition law. Article 101 should be interpreted as imposing an automatic penalty. If there is an automatic penalty it should be that the patents, the existence of which was undisclosed, must be made available at a zero royalty rate (although licensing costs could be charged). It would not be satisfactory to say merely that the company must charge less than the FRAND rate, because there is no logical, economic or legal basis for saying how much less. Nor would it be satisfactory to make the zero rate dependent on showing that the non-disclosure was intentional, since that would be impossible to prove. Article 102, in any case, would be likely to apply.
68. Neither of the Guidelines say anything directly about late or incomplete disclosure, or “patent ambush”. This may be the result of the mistaken belief, mentioned above, that obligations on parties to standard-setting agreements result only from contracts and not from competition

³³ European Commission, Commitment Decision, December 9, 2010, Case COMP/C-3/ 38 636, available at: http://ec.europa.eu/competition/antitrust/cases/dec_docs/38636/38636_1203_1.pdf.

law. It may also be the result of assuming that cases of late or incomplete disclosure, if not provided for by contract, can only be dealt with under Article 102.

69. All the Guidelines on horizontal agreements say (para. 286) is that “...the IPR policy would need to require good faith disclosure, by participants, of their IPR that might be essential for the implementation of the standard under development.” It is necessary to deal with the situation under competition law if the standard-setting agreement does not include the provisions on the IPR policy that the Commission considers desirable, or if a patent owner does not carry out its obligations under them.

9

70. The Guidelines³⁴ on horizontal agreements say that to be sure to fall outside Article 101 TFEU, the rules of a standard setting organization should make participation in standard setting, and the procedure for adopting the standard, “unrestricted and transparent”. The rules should “guarantee” that “all relevant actors can participate in the process” leading to selection of the standard. There should be procedures which allow “stakeholders” to inform themselves of upcoming, on-going and finalized standardization work.
71. Such rules would obviously be appropriate to a large, permanent, standard setting organization intended to discuss a large number of standards for a wide variety of industries or functions, and no doubt it was organizations of this kind that the Commission had in mind. However, most standard setting organizations nowadays are relatively small groups, concerned with the development of a small number of standards, and perhaps with only one. For small less formal groups, such rules would be not only unnecessary, but harmful. Their work would be slowed down or made difficult if they were obliged to allow “all relevant actors” to take part without restrictions. That would make them too large to be efficient, and would make them vulnerable to obstruction and disclosure of confidential information. Innovation is best promoted by allowing companies that have similar views on how to solve a specific technological problem to cooperate without being obliged to accept participation from companies whose principal interests might be to obtain information, to obstruct or delay a development that would compete with their technology, or to argue for an entirely different approach, rather than to contribute to the standard. Development of standards would be delayed and discouraged, not promoted, by elaborate procedural requirements, which would

³⁴ Paras. 280-282.

encourage controversies about rules or procedures. It would slow cooperative innovation and disadvantage new markets, in which the pace of innovation is most rapid. For innovation, speed and flexibility are often essential.

72. In particular where a group is developing only one or two standards, it is both possible and desirable that membership should be limited, without falling under Article 101(1) TFEU, to companies considered likely to be able and willing to make a useful contribution to the development of the standard envisaged.³⁵ It could hardly be a restriction of competition to limit membership of such a group to the companies able to contribute to the standard in question, even if there are not many of them. Standard setting is already exempted, on certain conditions, by the Research and Development Group Exemption Regulation, and on other conditions by the *de minimis* rule. It may be that limiting participation to companies likely to be able to contribute to developing the standard would be so clearly justified by efficiencies under Article 101(3) TFEU that the question whether Article 101(1) or 101(3) TFEU applies has little practical importance. In contrast it would be undesirable if the Commission's policy were to make it necessary for even small informal ad hoc groups to have elaborate membership rules saying who may join. Small standard setting groups should be encouraged to be efficient and simple.
73. The Guidelines are strict on participation in standard-setting organisations. The explanation seems to be that the Commission had in mind only large industry-wide organisations concerned with adoption of many standards on a wide variety of matters. The elaborate rules envisaged would be unnecessarily cumbersome and bureaucratic for small groups.
74. To say that "significant inefficiencies" must be shown to justify any restriction on membership seems unreasonable and unduly strict in this context (para.316). To say that companies need to show that "in the absence of a limitation on the number of participants it would not have been possible to adopt the standard" (para.295) is unreasonable. This is also surprising because the larger the membership of a standard-setting organisation, the weaker its rules are likely to be, and the less likely they are to include the obligations that the Commission considers desirable. Companies have been known to join standard-setting

³⁵ See Commission decision IV/31.458 *X/Open Group*, OJ No. Decision of February 6, 1987, L 35/36, paras. 42 et seq., stressing the importance of publishing results of cooperation promptly, when membership is legitimately limited.

organisations in order to ensure that the organisations did not develop a standard that would compete with the company concerned.

I ■

A COMMENTS ON THE REGULATION

75. ***Territorial restrictions.*** Articles 4(1)(c) (ii), (iv) and (v) combine territorial restrictions with other kinds of restrictions (customer groups). This is confusing because it suggests that a license for a limited territory needs an exemption under Article 101(3), and that the exemption is limited to “exclusive” licenses. But a licensee never has the right to sell outside the territory for which the license is granted. A license that is limited to the area to which the patent applies does not involve a restriction of competition. Even for convenience in drafting, the Commission should not appear to be making this mistake. A clause by which the licensor reserves its rights outside the licensed territory merely helps to define the geographical scope of the license.
76. A corresponding point arises in Articles 4(2)(b) (i) and (ii).
77. ***Allocation of markets.*** Article 1(c) (ii) allows bans between competitors on use of the licensed technology in specified fields of use, product markets, or territories, but only in non-reciprocal agreements (non-competing technologies, products not competing). But the licensee should normally be free to continue to use its own technology to compete with the licensor, and might well do so. If it does, the net effect of the license is procompetitive even if its scope is limited. These clauses should not be black-listed even in reciprocal agreements.
78. It should also be made clear that a license for one particular site is a legitimate field of use restriction.
79. ***Customer restrictions.*** It is not clear at present whether there is an exempted customer restriction if a licensed producer of a component or intermediate product is licensed to sell only to producers of a final product who are themselves licensees. This kind of arrangement is sometimes justified for quality control or other reasons, but it also creates a situation in which the licensor may be charging twice for licenses of the same patent for the same final product. National patent laws do not all clearly say whether the patent is exhausted by the

license for the component or intermediate product. We suggest that a restriction on who may buy the component or intermediate product should not be exempted.

80. **Resale prices.** Article 4(1)(a) bans maximum resale prices between competitors. This does not seem justified. The licensor may have an interest in ensuring that the licensee does not deprive the licensor of some of the benefit of the license by overcharging. The concern is that maximum resale prices may restrict the value added to the product (important in the case of complex, multi-function products) or restrict investment in related services. However this should not be dealt with under Article 4, but as a “grey list” question requiring a specific analysis.
81. **Software licenses.** A recital, the definitions in Article 1, or the Guidelines should make it clear that the Regulation applies to shrinkwrap and clickwrap software licenses.
82. **Other intellectual property rights.** The Regulation should apply to as many kinds of intellectual property rights as possible, including *sui generis* database rights, merchandise agreements (and copyright and trademark licenses for production purposes), and non-software copyright used in the production of goods or services. Such licenses have less effect on competition than patent licenses, since even when they are exclusive, competitors can still sell products with the same functions. The Regulation should apply to all licenses for production of goods or services, with the exception of on-line content licenses and broadcasting licenses, which raise different issues and need to be treated separately.
83. It would be useful to confirm that the Regulation applies to licenses granted for the purposes of franchising arrangements.
84. **Market share limits.** Since the relevant market(s) may be difficult to define with confidence, or statistics may be unavailable, market share limits are often not useful. Indeed, they may be particularly meaningless if the technology is new, or rapidly changing. It would therefore be useful, as an alternative, to provide in the Regulation that a license agreement would be exempted if there are a sufficient number of independent research centres carrying on similar research (we already recommended using the concept of ‘technology centres’ as an alternative criterion in our comments on the draft of the current Regulation). This idea is already in the Guidelines (paras. 24 and 131) but that is not sufficient. It should be in the Regulation as an alternative to market shares. (There is a similar provision in the US Guidelines on Licensing of

Intellectual Property, para. 4.3). The research centre approach has the important advantage of looking to the future rather than to the past, and it is usually easier to identify competing research centres than to try to estimate market shares when no real market may yet exist, when market share data is unavailable, or when market shares do not accurately represent the market power held by the parties to the license.

85. Market share limits have little meaning in the case of a genuinely new kind of product, but that is precisely the kind of situation in which the aim should be to encourage innovation, in particular as the parties are unlikely to be competitors in any real sense. It might be appropriate to give an exemption for the first e.g. five years of the research and development of a new kind of product (as distinct from an improved version of an existing product).

B **COMMENTS ON THE GUIDELINES**

86. It would be useful to recognise that, although the existing Regulation is framed in terms of bilateral licenses, the practice in most industries usually involves several licenses granted by the same licensor, and all licenses may need to be assessed in that context.
87. Many of the paragraphs of the existing Guidelines might usefully be reconsidered in the light of the probable coming into force of the European Union unitary patent treaty. It will provide owners with patent protection throughout the EU.
88. The link with the Regulation on Vertical Agreements should not be considered a close one. Technology licenses are very much more varied and complex, and raise many more difficult issues. The example of market share limits, which are useful in distribution but often meaningless in technology licenses, shows that it is unwise to follow the other Regulation.
89. ***Cross licensing.*** Para. 80 of the existing Guidelines says that when royalties are based on individual sales, the royalty has a bearing on the marginal cost, and cross licensing can be a way of coordinating prices of the downstream products. However, the Commission will regard this as price fixing only when the agreements are devoid of any procompetitive purpose. Even with the Commission's comment, this paragraph goes too far. A royalty may be a very small proportion of the costs of either company, and unless all their other costs are similar, cross license royalties could not be used to align prices. If both companies use or are likely to use the technology licensed to them, the licenses cannot be devoid of legitimate

purposes. The lawfulness of cross licenses should not depend on the degree to which complementary technologies are integrated.

90. Cross licenses are essential to unblock “blocking” patents. They should therefore be encouraged. The risk of delaying innovation by discouraging cross licensing is greater than the risk that cross licenses will contribute to price fixing. The Guidelines should be more procompetitive.
91. Para. 226 says that the treatment of licensees by patent pools should not depend on whether they are licensors or not. This important point has been mentioned, above in Part 1, in the context of grant back clauses.³⁶ Royalties payable to licensees under grant back arrangements should be negotiated on an arms’ length basis. Royalty-free grant back clauses may suggest that the licensee has been subjected to anticompetitive obligations.
92. **Patent pools.** These have already been discussed, above. What follows are only some specific comments on what are now paras. 210 et seq. of the Guidelines.
93. Para. 212 should be modified to apply to the situation in which the patents in the pool are licensed by the patent owners by parallel bilateral licenses, rather than by a single license granted by a licensing entity. Pools are important to avoid excessive cumulative royalties on complex products, and on this subject also the risk of delaying innovation is greater than the risk of allowing price fixing. Para. 229 should also make it clear that it applies to both types of pools.
94. Para. 220 correctly says that when a pool is composed of essential and therefore complementary patents, Article 101(1) is not likely to apply. It should be made clear that this refers to technically essential patents, and may not be true of patents that are “commercially essential” (in the sense that it would cost too much or take too long to invent around them, although it would be possible to do so). However, it is not always possible to be certain that a patent is genuinely technically essential, particularly if the pool is set up before the technology has become stable, and this should also be recognised. (It is recognised indirectly in para. 222, but that paragraph suggests that a patent that has become non-essential should be excluded from the pool, which would be disruptive and impractical). It is important to explain the distinction between technically essential patents and other patents because, as

³⁶ See Section I.6 above.

explained above, the obligation under Article 101 to license patents on FRAND terms applies primarily or exclusively to technically essential patents that are subject to a pool or similar agreement.

95. The Commission should recognise that neither it nor any other competition authority has competence to determine whether a patent is valid or technically essential or not. The Commission should therefore not purport to order standards organisations to say that a particular patent is or is not essential.
96. The members of a patent pool should normally be free to license their technology to third parties outside the framework of the pool. That makes it much less likely that the pool agreement will seriously restrict competition. The new Guidelines should also make it clear that members of the pool may agree not to give third parties more favourable licensing terms, when they grant licenses for the same purposes, than they give to other members of the pool and to licensees of the pool.
97. **Royalties.** Para. 226 correctly says that different royalties may be charged for different uses or product markets. It would be useful to add that different royalties may be charged for different fields of use, since that is the terminology normally used, and since field of use restrictions are often agreed before it is possible to identify different product markets in any meaningful way.
98. Para. 81 says that Articles 4(1)(a) and 4(1)(d) apply when a royalty is charged on all product sales whether or not the technology is used. If this is intended, it should be made clear in the Regulation. The point is too important to be dealt with only in the Guidelines, on the basis of two provisions that certainly do not make clear the result described in para. 81. However, para. 81 is too restrictive. It is of course correct that a royalty should not be payable on products if they clearly do not embody the licensed technology, but it is often impractical to develop monitoring systems to distinguish between similar products on the basis of whether or not they use one or more of the patents licensed. In such circumstances it is reasonable for the parties to agree that royalties should be paid on all products that seem likely to use the licensed technology, for practical reasons of convenience, for both licensor and licensee.
99. Para. 158 says that Article 101(1) may apply where reciprocal running royalties per unit increase as output increases. That seems reasonable if the royalties are disproportionate but

increasing royalties might be procompetitive and fully justified in the case of an entirely new product, to allow the producers to obtain economies of scale before being required to pay the full royalty rate. It is important not to apply to a dynamic situation the principles that were designed for relatively static markets. The considerations can be entirely different.