



Position Paper on the Revised rules for the assessment of horizontal cooperation agreements under EU competition law

Response to the Public Consultation of the European Commission, DG Competition

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Cerna, Mines ParisTech is a research centre in Industrial Economics. Over the last years, Cerna has carried through various research programs on the interplay between technological standards and Intellectual Property Rights (IPR). Building upon this experience, we wish to comment on those parts of the proposed guidelines for applying European Competition Law to Horizontal Cooperation agreements that are relevant to the setting of technological standards.

1. It is important and very positive that the European Commission (EC) has clarified its stance on standardization agreements; and especially that patents are now explicitly taken into account. We welcome that the EC now explicitly mentions technology markets as relevant markets for assessing the competitive effects of standardization agreements. Technology markets are markets where owners of proprietary technology offer their technology for sale or for licensing. Licensing agreements play an especially important role in the context of standardization, as one of the objectives of standardization is to encourage the spread and wide use of the technology, while Intellectual Property Rights such as patents are generally often used for excluding use of the technology by others. Licensing of technology allows reconciling the objectives of standards and Intellectual Property Rights. Technology markets are crucially affected by standardization, and the analysis of the effects of standardization on competition between technologies is a complex issues for which indeed some guidance is warranted. The failure to take these effects into account (no mention in the previous version of the effects of standardization on technology markets and on the

conditions under which competition between technologies takes place) has led to some confusion on what is allowed and what is not while licensing patents that are essential to standards. As a consequence, there have been important cases of litigation in recent years around licensing conditions for patents essential to technological standards¹. For instance, in important cases such as the enquiries against Qualcomm or Rambus, it has been alleged that patent holders abused of market power conferred to their patents by standardization. It is by now common practice in standardization procedures that holders of essential patents commit to license these patents on Fair, Reasonable and Non-Discriminatory terms in order to attenuate concerns that including patented technology into a standard could be harmful for competition. Nevertheless, due to the lack of specific guidance in the current guidelines, there is no agreement on the concrete conditions that licensing policies for essential patents must respect. We believe that the recent cases of litigation have been a direct consequence of this legal uncertainty.

If no action is taken against this uncertainty, firms could refrain from participating at standardization procedures in order to avoid being condemned for competition law infringement. The consequence would be a suboptimal level of technological standardization. As the EC rightly recognizes, standardization itself is on the balance seen as pro-competitive, as it levels the playing field for product market competition. In that sense, any guidelines providing standardization participants with accurate expectations of the risk of competition law infringement are likely to enhance competition, as they encourage pro-competitive standardization.

The proposed guidelines furthermore have the potential to reduce the uncertainty that standard implementers face when incurring sunk costs for investing in the standardized technology. More precise guidelines on what licensing policies are admissible after standardization will provide standard implementers with better expectations of the cost of investing in standards and thus accelerate the spread of innovative technology throughout Europe.

Finally, a clear and transparent set of rules for standardization can be an important competitive advantage for the European standard setting system. Thereby improved legal guidelines contribute to the objectives of the EC as set out in the Digital Agenda, for instance strengthening Europe's competitive position in high-tech industries through efficient standardization procedures.

The current proposition is hereby a clear improvement on the previous text. Nevertheless, there are still points to be clarified and important shortcomings that the EC should address in order to avoid further problems in the upcoming years.

2. Many of the shortcomings of the proposition are due to the general stance that the EC takes with respect to standardization processes. The vision of the current proposition is too static and does not duly take into account the issues of timing that crucially shape the effects of standardization. Many if not all of the important recent cases implying antitrust enforcement in standardization are due to the dynamic dimension of standardization. For instance in the Rambus case many efforts have been taken in order to analyze whether the standard would have been set such as to include Rambus' patents if standardization participants had known *ex ante* the cost of including this proprietary technology. This exemplifies that standardization implies that many actors make irreversible choices even before the market for the standardized technology

¹ See inter alia the formal proceedings of the European Commission against Qualcomm (MEMO 07/389, October 1., 2007) and Rambus (MEMO 07/330, August 23, 2007)

emerges. It is therefore important to avoid that market participants locked in into their irreversible technology or investment decisions fear prohibitive or discriminatory licensing conditions. To that respect, a clearer statement in favor of ex ante disclosures of most restrictive licensing terms would be a strong tool against ex post contentions and allegations of « hold-up ».

Furthermore, the proposed text views standardization essentially as a form of cooperation between competitors. It is not sufficiently taken into account that standardization is often, not to say mostly, a set of contracts between non-competitors. Firms participating at standardization are often competitors on the downstream product markets. They can also hold rivaling technologies and compete for inclusion of their patents into a standard. But fundamentally, the standardization agreement itself is an agreement to reach compatibility between complementary, non-substitutable technologies; thus standardization is essentially a vertical cooperation. This vertical relationship between technologies generates a series of economic problems. Probably the most important one is a very well-known phenomenon of vertical transactions known as “multiple marginalization”: monopolistic suppliers of complementary inputs charge a price that is higher than if only one monopoly would fix the joint price for both inputs, because each supplier does not take into account the negative effect of the price he charges on the demand that the other input suppliers face. For important standards with dozens of holders of essential patents, multiple marginalization can raise costs of technology to a prohibitive level².

In view of these difficulties, agreements between holders of complementary patents on joint licensing policies are often necessary and pro-competitive. Standardization goes often along with joint licensing programs such as patent pools. Nevertheless, even where they would be beneficial, patent pools often fail to emerge because of lack of agreement between patent holders or legal uncertainty. Prominently, the threat of antitrust enforcement can often dissuade firms from beneficial cooperation. On the other hand, even though many joint licensing agreements are likely to reduce transaction costs and downstream prices, joint licensing of patents can generate distortions of competition or even reduce competition by object. The overall effect of joint licensing schemes on competition thus depends on the pricing scheme and the concrete licensing provisions. Today, a fastly increasing number of very different joint licensing schemes emerge in the context of standardization, and updated guidance on what practices would give rise to Competition policy concerns could facilitate the emergence of pro-competitive agreements while reducing the risk of anticompetitive effects. For these reasons the European Commission should have seized the opportunity to clarify its policy with respect to patent pools and joint licensing agreements. We understand that the EC takes the position that licensing and standardization are issues that should be dealt with separately. Nevertheless, we think that the existing guidelines for application of Competition Law to licensing schemes such as the guidelines for application of 81.3 (now 101.3) to Technology Transfer Agreements from 2004 do not provide sufficient guidance for evaluating joint licensing mechanisms in the context of standardization. Furthermore, it can be observed that the strict separation between technological standardization and cooperation on licensing policies tends to vanish.

² Carl Shapiro (2001) : Navigating the Patent Thicket – Cross Licenses, Patent Pools and Standard Setting

While Standard Development Organizations (SDO) such as ISO or ITU explicitly decline to deal with licensing of patents covering standardized technology, Industry Consortia or Alliances promoting and developing further existing standards (such as the MPEG Industry Forum) act as catalysts for the deployment of joint licensing scheme seen as beneficial for the spread of the standard. Even bodies issuing formal standards such as the Institute of Electrical and Electronics Engineers (IEEE) have signed permanent cooperation agreements with licensing firms to foster patent pool creation. Finally, some SDOs such as ETSI have even started themselves running patent pool programs. Globally it is clear that the chances for launching successful pro-competitive joint licensing programs crucially depend upon the Intellectual Property Rights (IPR) policy adopted by standardization organizations. Due to these fundamental links between standardization and joint licensing programs, it is not understandable why joint licensing and patent pool arrangements are not explicitly addressed by the currently proposed guidelines.

To that respect, attention should be drawn on article 267 of the proposed guidelines, which states that agreements prior to standardization between technology holders on the licensing conditions they will disclose will constitute restrictions of competition by object. It should be made clear that this article does not preclude the possibility of ex ante pooling of patents. Indeed, pooling of patents before the standard is set and manufacturers enter the market is the only form of patent pool that is resistant to profitable deviations (free riding) by single patent holders³. Therefore, it is a promising tool in encouraging early standard implementation and efficient joint licensing.

3. In our understanding the most important part of the standardization section of the guidelines is article 277. It provides standardizing firms with a test of four criteria according to which standardization is « normally » non-infringing. These four conditions are that procedures are unrestricted and transparent, that there is no obligation to comply with the standard and that access to the technology incorporated into the standard is granted on Fair, Reasonable and Non-Discriminatory (FRAND) terms.

We welcome that the EC presents a test of sufficient, but not necessary conditions. In some cases, committing early on specific licensing policies can be risky given the uncertainties of the evolution of nascent markets. Thus a test of sufficient but not necessary conditions leaves standardizing firms with the choice which of two uncertainties is more costly: the uncertainty of potential Competition law enforcement or the uncertainty of prospective market evolution. Leaving this choice open will allow standardizing firms reducing the burden of legal and economic uncertainty. Following this reasoning, firms respecting the conditions of the test should therefore be sure that no enforcement action will be taken. The word « normally » should therefore be dropped in order to avoid any ambiguity; and respecting the four conditions should be understood as sufficient for non-infringement.

The four conditions represent a sensitive and balanced test for pro-competitive standardization procedures. The test is not overly restrictive and strikes a good balance between the interests of technology holders and implementers. While applying

³ François Lévêque and Yann Ménière, 2008 : Ex ante Commitments help Patent Pool Formation, Cerna Working Paper, downloadable at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1121256

Competition Law to standardizing firms, it should be borne in mind that also firms that are NOT participating at standardization can engage in anticompetitive behavior. For instance standardization outsiders can quietly file patents on technology that is about to be included into a standard and eventually hold up standard implementers that had no knowledge of these patents. Such a risk may be exacerbated if standardization associations face exaggerated requirements of transparency. Nevertheless, the current wording seems to leave standardizing firms with sufficient margin in defending themselves against such anticompetitive strategies. We therefore endorse the general wording of the four conditions for non-infringing standardization procedures.

4. The crucial question is therefore whether commitments on FRAND licensing terms will be interpreted as carrying a meaningful content that provides standard implementers and standardizing firms with a reliable cost signal for proprietary technology. It is important that in order to fulfill the sufficient conditions for compliance with Competition Law standardization organizations must adopt reliable and transparent IPR policies. We welcome the fact that these IPR policies are to incorporate an obligation for companies to make reasonable efforts in identifying IPR that may become essential for the technological standard. Nevertheless, in order to be effective, these rules need to be accompanied by specifications how to deal with cases where companies fail to disclose their IPR and what efforts can be requested from standardization participants in identifying their IPR. IPR policies of standardization organizations must reliably rule out that standard implementers will be asked to pay royalties for IPR that have not been disclosed on time. On the other hand, it must be avoided that the rules become excessively restrictive and dissuasive for patent holders engaging in standardization.

It is furthermore positive that in order to respect the sufficient conditions for non-infringements firms must commit on FRAND licensing terms. However, FRAND licensing terms have proven to be contentious: for instance in the Qualcomm case, ex post litigation has taken place in spite of the FRAND commitments of the patent holder, as the patent holder and his licensees did not agree on the interpretation of the commitment. The guidance provided by the guidelines on how to interpret FRAND is not useful in overcoming the ambiguity of the term. If the EC fails to further clarify what is meant by FRAND licensing terms it is foreseeable that further litigation on licensing terms after standardization will emerge.

It is a sensitive objective to link royalty rates to the economic value of the patents. Nevertheless, it should be made sufficiently clear what is meant by economic value: this value must be interpreted as the incremental value added to the standard by a particular patent with respect to its rival patents⁴. Cost-based approaches or attempts to link the economic value to some “intrinsic quality” of the patent must therefore be rejected, as the measure of the value of a patent must take into account the price and quality of existing rivals. For this reason even high quality patents resulting from high research costs can be of low economic value if there is a cheap substitute.

The concrete measurement of the economic value of an essential patent is however a very difficult task. The European Commission suggests comparing royalty rates before and after lock-in of the implementers, which is in practice highly complex. This

⁴ William Baumol and Daniel Swanson, 2005 : Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power, *Antitrust Law Journal*

comparison cannot be understood as a comparison in time, comparing observable royalty rates for a patent before and after standardization: in the big majority of cases a royalty rate before standardization is simply not available. For example a patent holder can only charge royalty rates for patents specifying a way of coding speech in UMTS once the UMTS standard has been set. It must also be borne in mind that the majority of patents essential to a standard are filed and granted after the standard release.

Furthermore, standardization will almost necessarily shift demand and add value to the standardized patents. In the case of complementary patents the whole is worth more than the sum of its components, and this added value of standardization is shared by the holder of its components. This increase in patent value is taken into account by the various methods suggested by economists to evaluate whether licensing terms are FRAND. This is for instance the case of the Shapley Value⁵ or the Efficient Component Pricing Rule⁶, which are both drawn from economic theory on surplus sharing⁷. In the whole economic literature on the subject it is made sufficiently clear that there is no reason why a standardizing patent holder must not have a share of the gains of standardization, while he bears his share of the costs.

Therefore the benchmark of comparison must be at given demand, but with the same level of technological competition as before standardization. This is a theoretical benchmark and an ex post evaluation of licensing terms therefore requires modeling and extensive data on the ex ante availability and feasibility of competing technologies. Probably in most cases this analysis will turn out to be unfeasible or at least highly contentious. An easy way of resolving this problem is not likely to be available, so the second best is to determine a feasible model of governance.

On the governance models for establishing FRAND licensing terms, the proposed guidelines make two suggestions. The first solution is a “technical” solution, i.e. the evaluation of the patent’s “quality” and “centrality” by an independent expert. A priori this model of governance seems highly contentious. It can be expected that courts will find it difficult to decide between conflicting technical expert opinions, and standard setting involves highly complex technological issues.

Therefore we favor the second model of governance, which is reliance on ex ante disclosures of most restrictive terms. In our opinion, a clearer encouragement of ex ante disclosures which make thorny ex post evaluation unnecessary is thus warranted.

5. While IPR and the difficulties in interpreting appropriate royalty rates are absent from the current legislative text, they are extensively dealt with in the proposed revised guidelines. Probably the focus is now unbalanced to the other extreme, as tricky problems besides the evaluation of appropriate royalty rates have not been addressed.

Standardization is *inter alia* a process of choosing technologies. Thereby it is a special kind of technological competition taking place in a specific institutional

⁵ Anne Layne Farrar, Jorge Padilla and Richard Schmalensee (2007) : Pricing Patents for Licensing in Standard Setting Organisations: Making Sense of FRAND commitments, Antitrust Law Journal

⁶ Baumol and Swanson, op. cit.

⁷ David Salant, 2007 : Formulas for Fair, Reasonable and Nondiscriminatory Royalty Determination, MPRA Paper

framework. In practice, technologies compete within standardization, when standardization associations choose among substitutable technologies that may be patented, and outside standardization, when manufacturers and other market participants choose between different sets of technologies that may or may not be standardized. The proposed guidelines acknowledge that extending standardization too far would overly restrict the competition between technologies on the market. Unfortunately, no guidance is provided how to assess whether a standardization agreement is too extensive. Furthermore, as standardization associations choose between competing technologies, it is important that this competition within the framework of standardization is fair and unbiased. Competition between proprietary technologies taking place inside standardization involves complex issues that will become increasingly important and for which there is currently no reliable guidance. Furthermore no specific guidance is provided for assessing potential infringements to competition between standards, even though so-called standard wars have in the past proven to be very peculiar types of competition giving rise to many contentions and allegations of anticompetitive conduct.⁸

Also the possible effects of standardization on downstream product market competition are not sufficiently addressed by the proposed guidelines. For instance, standardization may affect the ability of independent manufacturers to compete with vertically integrated holders of essential patents. The potential exclusive effects of standardization on the downstream product market may be increased by certain types of joint licensing policies, for instance cross licensing between holders of essential patents. Restrictive effects of standardization and cross licensing have been alleged by independent manufacturers for instance in the industry for mobile telephony headsets during GSM standardization or in the optical disc replication industry during the setting of DVD and BluRay standards⁹. Nevertheless, there seems to be little evidence that the competitiveness of the downstream markets has decreased. The effects of the cross licensing agreements on consumer welfare as the benchmark for European Competition Policy are hard to assess empirically. In order to dispose of more reliable guidance for licensing agreements relating to upcoming standardization projects, it is desirable that the European Commission clarifies its position with respect to joint licensing agreements for standard-essential technology.

A related, important point is the competition between patent holders and independent manufacturers on the downstream production market. The European Commission rightly acknowledges that vertically integrated firms (patent holders that are also active on the downstream market) have interests that differ from those of innovation or manufacture specialists, and that this divergence of interests can give rise to conflicts. For independent manufacturers it is important that patent holders do not use standardization agreements to drive other firms out of the production market. It is to this respect unfortunate that there is not a single attempt in the guidelines of explaining what is to be understood by non-discriminatory licensing terms. The notion of non-discrimination is not self-explaining, and has given rise to an increasing body of

⁸ Carl Shapiro and Hal Varian, 1998 : Information Rules : A Strategic Guide to the Network Economy, Chapter 9

⁹ See the complaints of International Telecommunication Standards User Group, 1998; and International Optical Disc Replicator Association, 2005 ; also see Bekkers, R. N. A., & Liotard, I. (1999). The tense relation between mobile telecommunications standards and IPR, European Intellectual Property Review

literature and case law¹⁰. It would be helpful if the guidelines addressed these issues and provided some guidance on how to assess non-discriminatory licensing terms for standard-essential patents.

Nevertheless, in spite of the aforementioned shortcomings, the proposed guidelines make an important step forward for a transparent and consistent application of Competition Law to standardization. Providing market participants with a viable and enforceable price signal for essential patents will be a beneficial tool for fair competition and efficient standardization procedures.

¹⁰See for instance Daniel Crane, 2008 : Patent Pools, RAND Commitments, and the Problematics of Price Discrimination, Cardozo Legal Studies Research Paper