



Reverse Hold-ups: The (Often Ignored) Risks Faced by Innovators in Standardized Areas

The pros and cons of standard-setting
12 November 2010
Prof. Damien Geradin

HOWREY_{LLP}

> Antitrust > Global Litigation > Intellectual Property

Content of the presentation

- During this presentation, I will:
 - Provide some background on SSOs involving technologies protected by IPRs and the IPR policies they traditionally adopt
 - Briefly discuss the “patent hold-up” literature and the fact that while:
 - it exaggerates the risks incurred by standard implementers,
 - it entirely ignores the risks faced by innovators active in standardized fields
 - Argue that the risks faced by innovators in standardized fields could lead to “reverse hold-ups” leaving essential patent holders under-compensated
 - Conclude that the efforts made by some to constrain the ability of essential patent holders to generate revenues will harm innovation and prevent efficient specialization

Standardization and the FRAND regime

- Under traditional standards development procedures IPRs owners:
 - Disclose the patents they consider essential for a standard
 - Typically provide an assurance or commitment that, if their patents are included in a standard, they will license their IPRs on fair, reasonable and non-discriminatory (FRAND) terms, with or without monetary compensation
 - This is not a small commitment as IPRs grant the right to exclude, i.e. not to provide a license at all
- Licensing terms are typically negotiated on a bilateral basis outside the SSOs

Asymmetries of interests between members of SSOs

- SSO members can be helpfully distinguished into the following distinct categories:
 - Pure innovators or upstream-only firms (i.e., firms which develop technologies and earn their revenues by licensing them);
 - Pure manufacturers or downstream-only firms (i.e., firms which manufacture products based on technologies developed by others);
 - Vertically-integrated firms (i.e., firms which both develop and license technologies, and manufacture products based on their technologies and the technologies of others); and
 - Firms which do not create technologies or manufacture products, but buy products which are manufactured on the basis of patented technologies.

The patent hold up conjecture

- The patent hold-up conjecture is usually described as follows:
 - Once a standard has been adopted and manufacturers or users of standard-compliant equipment have incurred significant technology-specific sunk costs, they are “locked-in” to the standard.
 - The bargaining power of the owner of essential IPR will have thus increased as a result of standardisation and it will be able to extract more favourable licensing terms after standardisation than would otherwise have been the case.
- The patent hold-up conjecture is thus a claim that, due to the market power gained through standardization, essential patent holders are able to negotiate royalties in excess of their true economic contribution and are thus over-rewarded

Criticism of the patent hold up conjecture (1)

- While patent hold-up is theoretically possible, the occurrence of this problem is rare and therefore the drastic remedies that the proponents of the hold-up conjecture propose are not justified
- This conjecture is indeed based on premises which, in practice, will rarely occur in the real world
 - This conjecture is **based on the premise that sufficiently close alternative technologies existed at the time of adoption of a particular standard**, and that standardisation eliminated technology competition. That may not be the case
 - The hold-up conjecture **assumes that licensing terms were unknown and unavailable prior to standardisation**, which is often not the case

Criticism of the patent hold up conjecture (2)

- The hold-up conjecture **posits that standards implementers must have made significant technology-specific investments before an owner of essential patents requests excessively high royalties.** The instances where this is likely to occur are not frequent
- The hold-up conjecture is also **based on the premise that firms whose market power may have increased as a result of standardisation will necessarily be able to exploit it.** This entirely ignores the fact that firms which hold patents relevant for a standard also face a number of important constraints (due to vertical integration, standardization is a repeat game, etc.)

Criticism of the patent hold up conjecture (3)

- It can therefore be expected that the only firms which may not be significantly constrained and may attempt to charge royalties that are not fair and reasonable will be those that:
 - Have gained market power through standardisation (because their technology competed with other viable alternative technologies *ex ante* standardisation);
 - Are not engaged in the manufacture of any final or intermediate products compliant with the standard and are thus not constrained by their need to obtain cross-licenses; and
 - Are not actively engaged in standardisation processes and have no expectation whatsoever to participate in such processes in the future.
- These circumstances are sufficiently rare to make clear that, although theoretically possible, hold-up is very unlikely to occur in practice.

Risks faced by innovators in standardized fields

- The patent hold-up literature largely underestimates or even ignores the risks faced by innovators active in standardized fields.
 - Innovation is a risky business and, in standardized fields, it is even riskier considering that even successful technologies, in that they offer a technically viable solution to an important problem, will not necessarily be selected to form part of the relevant standard
 - Even holders of patents essential to a standard may increasingly find it hard to monetize their innovation given the various efforts made by standard implementers to constrain their bargaining power
 - Some standard implementers have used EU competition rules to challenge the licensing terms agreed with essential patent holders on the ground that they breached the FRAND commitment made by these patent holders and thus, they alleged, violated Article 102 TFEU

Innovation is a risky business

- Innovation requires that significant investment be made today to generate uncertain returns tomorrow:
 - Obtaining the necessary capital to pursue R&D requires an innovator to convince investors that a number of strict conditions are met (R&D will achieve results sooner than those of others engaging in similar, there will be an adequate supply of necessary, complementary products, services, and technology, etc.)
 - Even if an innovator manages to obtain the necessary capital to pursue a given R&D project, this gives it no guarantee that its investments will bear fruition
 - Hence, investors will only accept to fund R&D projects provided that, if successful, they generate significant returns

Additional challenges faced by innovators active in standardized fields

- Innovators have no guarantee that, however valuable, their technology will be selected to be part of the relevant standard
- Thus, in a standardized industry even if an R&D project is “successful” in the sense of developing a technically viable solution to an important problem, it may happen that a different solution is eventually included in the standard
- The “loser” of the standardization process may be effectively shut out, obtaining zero return on investment
- This adds to the “uncertainty” that characterizes innovation and the ability of innovators to earn a return on investment

Efforts to weakening the bargaining power of essential patent holders

- At the core of the hold-up conjecture is the fact that holders of patents essential to practice a standard enjoy significant market power conferred by standardization
- This over-simplistic view ignores that:
 - Market power may exist prior to standardization; and
 - Even when (extra) market power is granted by standardization essential patent holders will typically be subject to a series of constraints that will limit their ability to seek unreasonably high royalties or other exploitative licensing terms
- It has nevertheless led to a variety of proposals explicitly or implicitly designed to weaken the bargaining position of such patent holders

Proposals for Collective Negotiations of Royalties (1)

- Some suggest that an appropriate manner to eliminate the risk of hold-up by essential patent holders is to allow standard implementers to engage in joint negotiations of royalties between and among potential licensors and licensees before a standard is formally adopted
- Such collaboration certainly falls foul of Article 101(1) TFEU on several grounds:
 - First, joint *ex ante* negotiations give rise to the risk that potential licensees threaten to exclude a potential licensor's technology unless that potential licensor offers a royalty they considered "appropriate" (although it may be unreasonably low and insufficient to cover the potential licensor's investment)
 - They thus create a significant risk of "reverse hold-up" scenario whereby essential patent holders could be forced to settle for royalties that are lower than the value of their innovation.
 - The uniform licensing terms resulting from joint *ex ante* royalty negotiations would lead to a homogenization of the conditions of competition (giving the setting of a common purchase price for an essential input, i.e. the essential patents) and could facilitate collusion in the downstream product market

Proposals for Collective Negotiations of Royalties (2)

- The question thus arises whether a proposed joint negotiations regime could benefit from the application of Article 101(3) TFEU, which is quite doubtful:
 - Joint negotiations would have an adverse impact on the rewards granted to licensors as they have no other purpose than reducing the royalty burden faced by standard implementers
 - It is far from certain that end-consumers would benefit from what would essentially amount to an exercise in rent-shifting between innovators and implementers
 - Third, a system of joint negotiations of royalty rates is not necessary (i.e. the least restrictive means available) to achieve the objective allegedly sought by the proponents of this *ex ante* regime
 - Finally, joint *ex ante* negotiations would eliminate the competition taking place between standard implementers under the current regime of voluntary disclosure of essential IPR whereby each standard implementer has to negotiate a license with each essential patents holder

Depriving the ability of essential patent holders to seek injunctive relief

- Lemley and Shapiro (2006) claim that a patent holder's ability to seek injunctive relief against downstream producers allows it to negotiate excessively high royalties
- Some have sought to extend and expand Lemley and Shapiro's proposals to standardized fields in arguing that by making a FRAND commitment an essential patent owner waives its right to seek injunctive relief in case of infringement, but:
 - This theory finds no support in law and in the IPR policies of SSOs
 - If it were accepted, it would provide an incentive for implementers of a standard to refuse beforehand to enter into license agreements on FRAND terms, limiting patent owners to enforcing their rights through what could be patent-by-patent, country-by-country damages claims.

Reinterpretation of the meaning of FRAND to constrain essential the ability of patent holders to monetize their innovation

- Some authors have sought to reinterpret the notion of FRAND to claim that it amounts to a promise by essential patent owners “that they will moderate their royalty claims”.
- This claim is, however, contradicted by the plain language of the IPR policies of the main SSOs. No IPR policy can be read as suggesting that FRAND imposes any specific and concrete obligations on the owner of standard essential patents with regard to the actual level of royalties or any other terms and conditions provided for in licensing agreements.
- Nevertheless, a number of methods have been proposed to determine the extent to which the royalty sought by an essential IPR holder is compliant with the FRAND commitment this IPR holder made to the relevant SSO.

Numerical proportionality

- Pursuant to that method an essential IPR holder's entitlement to royalties should be calculated in the light of the proportional contribution of that patent owner's essential patents compared to the total contribution of all other essential patents reading on the standard
- This method makes no sense
 - Numerical proportionality requires the determination of a "cumulative royalty cap". But what is the basis and legitimacy for the determination of such a cumulative royalty cap, which would necessarily limit, pursuant to some unclear basis, the rewards available to innovators
 - It rests on the proposition that every essential patent in a standard is of equal value, which cannot be correct
 - It would inevitably stifle innovation as it would incentivize firms to seek to generate as many essential patents as they could
 - It would require a subjective assessment of the total number of essential patents included in a given standard and the percentage of such patents allocated to the various contributors

Ex ante / ex post analysis

- This method is based on a reasonable is based on a comparison between the rate charged *ex post* standardization by the essential patent holder in question with the rate this patent holder charged for the same patents *ex ante* standardization
- The problem is that carrying such an ex ante/ex post comparison is typically an extremely difficult undertaking as technology licenses are complex instruments comprising different forms of consideration (upfront licensing fees, royalties, cross-licenses, etc.)
- In addition, there seems to be no convincing reason why licensors should be prohibited from charging higher rates ex post than ex ante
- Hence, it should be used as a “safe harbor” whereby if a ex post rates are no higher than ex ante rates, there is no hold up

Incremental value

- According to this auction-type model, proposed by Swanson & Baumol (2003), an essential patent holder should only be able to charge a license fee equal to the incremental value of its technology as compared to its next best alternative
- Swanson and Baumol's model is, however, questionable for several reasons, including the fact it relies on unrealistic assumptions (Geradin et al, 2008).
- The use of ex ante auctions in standard-setting contexts to determine what a reasonable royalty should be may result in serious under-compensation of productive investment and innovation.

No clear method to determine what a reasonable royalty is

- The above discussion shows that there are no obvious mechanisms or benchmarks that can be used to determine ex post whether the royalty charged by an essential patent holder is “excessive” or “unfair.”
- Moreover, the common thread between these benchmarks is that they would generally make essentially patent holders affecting their ability to monetize their innovation.

Use of competition rules to royalties down

- In *Qualcomm* case, six firms filed complaints with the European Commission in the latter part of 2005 alleging that Qualcomm's licensing terms and conditions for its patents essential to the WCDMA standard did not comply with Qualcomm's FRAND commitment and, therefore, breached EU competition rules
- After a long and thorough investigation, the Commission eventually decided to close its formal proceedings against Qualcomm
- This case illustrates the considerable difficulty for the Commission to determine whether the royalty rates sought by an essential patent holders are "fair and reasonable" or "excessive" under the standard set by the ECJ in *United Brands*
- The above suggests that, in the absence of an exclusionary behavior, EU competition law is not the right instrument to address hold up cases allegedly committed by essential patent holders

Preventing hold-ups

- During the *Qualcomm* investigation, Commission officials indicated on a number of occasions that it was preferable to prevent abuses by IPR holders from occurring, rather than addressing such abuses ex post through the application of EU competition rules.
- This seems to be the approach followed by the Commission in its recently released draft guidelines on horizontal cooperation agreements. In order to address the alleged exploitative behavior that may occur in the context of standardization, the draft guidelines provide that all SSOs should adopt “binding” rules on their members if they wish to benefit from the “safe harbor” under Article 101 TFEU
- While these draft guidelines will likely evolve in the months to come, they clearly indicate a desire on the part of the Commission to adopt a preventive approach to possible standard abuses.

Conclusions

- While the economic and legal literature on standardization has vastly exaggerated the risks that would be created by patent hold-up, it has entirely ignored the risks that essential patent holders face from the moment they decide to devote resources to an R&D project to the moment they collect their first dollar on this project
- Innovation is a risky business, even more so when it takes place in standardized fields as technology selection may eliminate the prospect of commercialisation of patented inventions.
- Efforts undertaken to reduce the revenues of essential patent holders may unjustifiably also alter market structure as they will particularly affect firms that have a licensing business model. That is undesirable for several reasons:
 - Many such firms contribute to a significant extent to innovation.
 - Second, these firms are more likely to license – and thus disseminate – their technologies than vertically-integrated firms.
 - Finally, licensing may be an easier path to entry in technology markets than business models based on both innovating and manufacturing and thus may thus stimulate competition.

Contacts

Prof. Damien Geradin

Howrey LLP

9-31, Avenue des Nerviens

1040 Brussels – Belgium

Tel: + 32 2 741 10 11

Email: geradind@howrey.com