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Essential Patents Licensing
Problem

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I. INTRODUCTION

Intellectual property rights were established in both the United States and Europe to protect inventors, to stimulate innovation, and to benefit consumers. We are concerned that specific circumstances affecting some industries like the information and communication technology (“ICT”) sector may limit the effectiveness of intellectual property rights in achieving these goals. In particular, in the case of standard essential patents (“SEPs”), ambiguities in the definition of licensing restrictions as well as weaknesses in the process of intellectual property enforcement appear to contribute to what economists call “holdup” problems that may threaten innovation incentives and harm consumers.²

While these problems are generally difficult to resolve, intellectual property policies of standard setting organizations (“SSOs”) could play a special role by setting up intellectual property rights (“IPR”) policies that would limit hold-up more effectively. In this article we propose reforms to the current intellectual property policies that we believe would greatly improve efficiency in patent licensing.

II. THE ROLE OF SSOs

In the ICT sector, rates of patenting have exploded and—with the convergence among communications technology, device hardware, and software—products have become more complex. Many of the ICT products and services most valuable to consumers require a common standard for interoperability. For example, UMTS, or 3G, is a standard incorporated into many mobile handsets that allows those handsets to send signals to, or receive them from, towers with UMTS equipment installed. A standard will embody specific technology, which industry participants all employ, to allow interoperability. The creation of such a standard and the choice of technology to include in it is the responsibility of SSOs and their members.

Members of an SSO are typically organizations that operate in the industry; membership is voluntary. SSOs usually have established procedures by which they choose a technological path for a standard. That path might involve technology in the public domain, or it might involve patented innovations. If the standard cannot be implemented without practicing (using) a particular patent, the patent is said to be an SEP.

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² We define the concept of hold-up in detail below.

SSOs' rules will typically include an IPR policy. Such policies establish what member firms must disclose concerning their IPR and at what point during the standard-setting process; IPR policies also specify what licensing obligations members must commit to should they wish their IPR to be included in the standard.

A common licensing restriction requires members to commit to license any IPRs they own that are essential to the standard on Reasonable And Non-Discriminatory terms, or Fair, Reasonable, And Non-Discriminatory terms (collectively, F/RAND terms). SSOs typically specify very little as to the meaning of "fair" or "reasonable," perhaps partially because there is heterogeneity among the firms, technologies, and products within a given SSO. Not surprisingly, there are frequently disputes among different parties about what a "reasonable" royalty might be for a particular portfolio of intellectual property.

SSOs constrain the license terms for SEPs because of the substantial market power necessarily enjoyed by the owner of an SEP in a successful standard. Moreover, this market power is achieved through the joint action of entities—the SSO members—that might be in competition with each other outside the SSO. This joint action is acceptable for society because it trades off possible technology competition among SSO members for production of a standard that can speed innovation and expand output.

III. THE HOLD-UP PROBLEM

The risk to society, however, is that once a standard is in place, an SEP owner can use its resulting market power to engage in "hold-up." Hold-up occurs when the SEP owner approaches firms practicing the standard—after those firms have invested in developing their products that depend on the standard—with an onerous licensing demand. Assuming the patent is indeed essential and valid, the firm's product *must* practice the patent in order to be interoperable, placing the firm in a poor bargaining position.

These problems with the existing restrictions on licensing terms arise due to the many uncertainties surrounding both the exact definition of F/RAND offers and the validity of the patent. Potential licensees may claim that the licensing demand is not a F/RAND offer or that the patent is not valid or essential in the first place. However, even when the potential licensee is likely to be correct in the assessment, the owner of the SEP can still make it very costly to resolve such disputes. For example, threatening to engage in expensive litigation, or pursuing an injunction or an exclusion order if the licensee does not pay the requested royalties, creates a powerful incentive for the licensee to settle, even on poor terms.

Thus the SEP owner can obtain payment far in excess of the *ex ante* value of the technology, and appropriate the profits due to the later investments of others. Such behavior raises licensing costs in the industry, distorts markets for innovation and investment, and discourages adoption of standards. In other words, the current processes for resolving disputes on standard essential patents allow the hold-up problem to persist.

IV. USING SSOs TO REDUCE THE HOLD-UP PROBLEM

SSOs can substantially reduce the problem of hold-up and litigation in this sector by reforming their IPR policies. It is the actions of the SSO, a group of competitors jointly creating the standard, which create SEP market power. They have the responsibility to ensure that this

market power is constrained so that consumers can benefit as much as possible from standard-setting activity, and so that SEP owners cannot discourage innovation by engaging in hold-up.

In the view of all three of us, many existing SSO policies are not strong or clear enough to achieve the above goals reliably or efficiently. In particular, we believe that stronger commitments to a clearer F/RAND licensing process can go a long way towards mitigating hold-up problems, reducing litigation costs, and speeding innovation. Any F/RAND commitment should also be understood to include a commitment to certain processes of dispute resolution and transfer of F/RAND obligations. In this spirit we propose the following improvements to current IPR policies of SSOs:

- IPR policies should create as strong a commitment as possible to bind future owners of the IPR to any F/RAND commitments made to the SSO. Clearly a F/RAND commitment that becomes weaker or more vague upon the sale of a patent (or undermines a commitment to effective dispute resolution) will not be as effective in protecting consumers as one in which all F/RAND obligations must be transferred in a sale.
- A F/RAND commitment should include a process that is faster and lower cost for determining a F/RAND rate, or adjudicating disputes over F/RAND, than litigation. The expensive nature of litigation creates frictions in the market for ideas, is a high transaction cost for licensees, and renders this market less accessible for smaller firms. Each SSO can consider alternatives (even if leaving litigation as one possible option) that it thinks will work well for its members and technologies. The types of solutions we have in mind, without meaning to suggest that any one is the right solution in any particular instance, include arbitration and alternative dispute resolution within the SSO. These procedures could be made more efficient by the SSO defining, for example, the specification of the base to which a royalty should apply or other factors that would simplify the assessment as to whether a particular licensing offer is F/RAND. The goal we have in mind is that a third party, such as a judge or arbitrator, should be able to quickly and cost-effectively determine whether an offer is F/RAND.
- The F/RAND dispute resolution process should require that the licensor specify a cash price for its SEPs as an alternative to other pricing arrangements to aid in evaluation of the proposed license terms by the third party. Determining if a complex package of cross-licenses satisfies F/RAND is difficult for a third party. If the licensee has the option to choose a F/RAND cash price, but instead chooses to cross-license, then clearly it is better off.
- The F/RAND commitment should include a process that SEP owners must follow before they can seek an injunction or exclusion order by the licensor. This process would include specifying what steps must be taken by parties to resolve disputes over a F/RAND's rate, validity, essentiality, or infringement before an injunction or an exclusion order may be sought against the licensee. Reducing the ability of licensors to threaten to exclude a product from the market will reduce the ability of the licensor to extract royalties above the F/RAND rate and other significant licensing conditions from willing licensees. The essence of the F/RAND commitment is that the firm has voluntarily chosen to accept royalties rather than pursue a business model based on exclusion. This suggests that there

can be no irreparable harm from the use of the SEP. Limits on the use of injunctions or exclusion orders are therefore appropriate.