

## The Risks Of Applying FRAND Calculations To Non-SEPs

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There has been recent discussion about the possibility of applying the fair, reasonable and nondiscriminatory[1] royalty rates awarded by the courts for standard-essential patents to patents that are not essential to practicing a standard. For patent owners, this would transform the U.S. patent system from a winner-takes-most to a winner-takes-little system by substantially decreasing the damages available for the small percentage of patents that are successfully asserted. Of greater concern, this would decrease the incentives for investing in innovation.

### Background

A participant in a standard-setting organization may be required to agree to license its patents claiming technology necessary to implement the standard, called standard-essential patents, to third parties implementing the resulting standard, on a FRAND basis. In doing so, the participating SEP owner trades off its ability to collect the normal damages or royalties for the advantages of helping to shape an industry standard, such as accelerating adoption of products that conform to the standard.

Not surprisingly, SEP owners and those practicing the relevant standards have disagreed on what the FRAND licensing commitment means. In the resulting lawsuits, the courts have accepted the reasoning that once a standard is adopted, all of the participants in the relevant market would be locked-in to using that standard, which would allow the owner of SEPs to collect a royalty greater than would be possible without the standard. The courts have also held that the participants in standard-setting processes intend that the standard to be adopted and, since the standard must be economically competitive to be adopted, that the cumulative royalties would be low enough to permit adoption. The royalties due for infringing a specific SEP are then calculated as a fraction of the cumulative royalty for the standard. This has resulted in reasonable royalty damages that are awarded for SEPs being orders of

magnitude lower than those sought by the SEP owners.

The problem with this damages model is that the vast majority of patents are never asserted. Many patents are not infringed or are judged at too high a risk of being found invalid. Many large companies maintain large patent portfolios as part of mutually assured destruction standoffs with their competitors. Such standoffs mean that it would be self-destructive to assert them against their similarly situated competitors. Vendors have strong incentives not to assert their patents against their customers and customers against their sole-source vendors. Many patents are already part of multipatent cross-licensing agreements. A new factor is that some companies, as part of positioning themselves within the ongoing patent debate, have been loath to assert their patents offensively. One example is Twitter, which has given its inventors the option of preventing it from asserting its patents offensively.

This very high ratio of nonasserted to asserted patents suggests that only a very small subset of SEPs would be asserted against those implementing the standard. If, in fact, only a subset of the SEPs is asserted, the standard implementers will retain the portion of the cumulative royalties that would otherwise have been collected by the owners of unasserted SEPs. Therefore, the effective cumulative royalty rate will be substantially below what the courts found were necessary for adoption of the standard and the SEPs owners will collect less than the cumulative royalty that the court found was appropriate. This has the effect of transferring wealth from the owners of SEPs, as a class, to the implementers of the standard, as a class.

The courts' decisions as applied to SEPs subject to FRAND licensing commitments has decreased the royalties available for such patents, but, for new standards, patent owners can choose whether to participate in the standard setting process. Of course, if the patent owner can receive greater value from including their innovations in a standard by agreeing to a FRAND licensing commitment, incentives remain for at least some entities to invest in that type of innovation. However, there may be no effective opt-out for innovations for which their main or only application would be as part of a standard. Therefore, a party which is considering investing in an innovation best used in a standard might have a lower incentive to make that investment. Entities that would typically be in this situation would include universities and organizations that engage in research and development and license out their results rather than exploiting them themselves.

### **Possible Overextension**

The application of methodology for imposing FRAND damages for SEPs on patents that are not essential to a standard (non-SEPs) that read on a computer, a tablet, a smartphone or a similar product (a complex system) has now begun to be openly discussed on the conference circuit.

It has been reported that approximately 250,000 patents read on a smartphone. This is because such complex systems are made possible by the aggregation of many technologically sophisticated subsystems that provide computing power, the ability to display video and sophisticated graphics, cellular and Wi-Fi communications capabilities, input devices, batteries and a variety of software modules to control how all of these subsystems interact with each other and the user. The argument has been made that it would be impossible for any company that designs, sells or makes a complex system (a technology aggregator) to investigate and design around the relevant patents. It has also been suggested that once a complex system is designed and manufacturing has begun, lock-in substantially increases the value of the infringed patents over what the cost of designing around the patent or obtaining an a priori license. This has been analogized to the situation with SEPs subject to a FRAND licensing commitment, with the suggestion that the same damages calculation should be applied to non-

SEPs that read on complex systems.

## **Risks**

An important concern with this possible change is that it could, if applied generally, adversely affect the incentives for innovation generally.

If the FRAND damages model were to be applied to non-SEPs reading on complex systems without an option of opting out, this could severely disrupt the incentives for investments in a much broader range of possible innovations. Complex systems did not arise fully formed from the brows of Bill Gates, Steve Jobs, Larry Page, Sergey Brin or Mark Zuckerberg. Complex systems that have become such an integral part of our lives have been possible because past innovations were available to be combined into products with features necessary to get over tipping points for market acceptance. Without those earlier innovations, complex systems as we know them would probably never have been created or, if created, at least not as they exist today. For complex systems to continue to be improved and to enable the creation of new complex systems, the incentives for innovation in their constituent technologies must continue to be available and to be sufficient to outweigh the costs and risks to potential innovation investors.

Our present patent system has provided substantial rewards to those who invest in innovation, with very substantial risks that those investments will be a net loss. There is a very real risk that the research and development funded by the innovation will fail technically or commercially. Even if research and development results in the desired result, the patent may never be asserted for all of the reasons described above. As discussed, only a very small number of patents are asserted in a way that can result in direct and substantial rewards to the patent owner. Of those asserted, only some return those rewards, making the number for which damages are awarded or royalties are collected even smaller.

The fact that many contribute and only a few benefit is hardly unique to patents. The advancement of science and technology depends on many incremental advances, with the scientist or engineer who, with the addition of one or a few more incremental advances, is able to achieve a differentiating result (a result that answers a question or solves a problem in a manner that overcomes some threshold for acceptance or adoption), receiving almost all of the acclaim and financial rewards. The financial investment of venture capitalists and the investment of time, sweat and tears by workers in startups are made knowing that most startups will fail, but that a few will be great successes.

Although in each of these cases the outcome is partially under the control of the actor, their skill, knowledge and will to succeed may be necessary, but it is not sufficient. Without the necessary contributions of others who went before, and the necessary good timing and luck, no actor will achieve a differentiating result. Despite not knowing in advance whether the proper preconditions exist, whether the timing is right, whether they have all the necessary resources and whether they personally have the characteristics to achieve a differentiating result, year after year scientists, technologists and entrepreneurs gamble that they are the ones who will succeed. Although these systems, as well as the patent system are winner-take-most, that does not mean they do not operate to incentivize desired results.

## **Variations on the Proposed Change**

The discussion that has begun around this change to damages calculations seems to leave open different possibilities for how it would be implemented. For example, a speaker at a recent conference

has suggested that injunctions should continue to be available to the owners of non-SEPs that read on complex systems. This could somewhat ameliorate the effects of this change on operating companies provided that they have deep enough pockets to seek injunctive relief. The remaining patent owners, including universities, research institutions, and small companies, would still be subject to the loss of patent-based incentives to invest in innovation. It is possible for such institutions to get around this problem by transferring their patents to companies that make or sell products, but whose profits are low enough so that they are not at risk for counter-suits, provided they are not part of broad patent cross-licenses and are not beholden to their customers. Such transfers are possible, but hardly efficient.

## **Conclusion**

Our technology-driven society is already very much the beneficiary of a winner-take-most patent system. The possible application of the FRAND damages calculations to non-SEPs would result in an even greater accrual of the rewards for innovation to technology aggregators than which occurs today. However, to move from a winner-takes-most to a winner-takes-little patent incentive system could drastically undermine the incentives for innovation in the technologies on which complex systems are based. Even if there was a consensus that such a change might be desirable, it should only be undertaken in slow, carefully measured steps. Once an innovation system is destroyed, it can be difficult if not impossible to rebuild.

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[1] SEPs may also be subject to a reasonable and non-discriminatory (RAND) licensing commitment. For purposes of this paper, FRAND and RAND are treated as being the same.