Challenges in the Path to Harmonization on Patent Damages Calculation: Key Issues in a Comparative Approach (*)

Invited Researcher: Tatiana MACHADO ALVES (**)

One of the elements that indicate the strength of a country's intellectual property system is its aptitude to adequately compensate damages caused by patent infringement. Patents are known for having a dual – and seemingly contradictory – purpose: they must award enough incentives to promote innovation without hampering fair competition and the development of new technologies. This delicate balance requires an adequate and proportional system of remedies that can properly address violations of a patent right and discourage future infringement. The deterring effect, albeit controversial within the general framework of tort law, is a reality to patent law. As increasing limitations are imposed on the possibilities of obtaining injunctive relief in patent infringement disputes, the importance of an effective damage system grows. In this context, the proposed research investigated the issues that represent a challenge to the efforts of harmonization of IPR systems in terms of patent damages. To this purpose, we performed a comparative analysis of theory and practice in Japan, the United States, England, Germany, and Brazil, focusing on the treatment given to the issues of enhanced damages, patent damage apportionment, and damages for indirect infringement. Based on our research, we presented our view on possible ways to deal with these topics to attempt to close the gap between the referred jurisdictions without undermining national particularities.

I. Introduction

This report discusses the challenges that lie in the path of patent damages harmonization by conducting a comparative study focused on three controversial issues: enhanced damages, apportionment and indirect infringement. The jurisdictions analyzed are the United States, Japan, Brazil, England, and Germany.

The importance of adequate damages compensation for an effective patent system is undeniable. Together with injunctions, damages are considered the traditional and primary forms of legal relief for patent infringement. However, for a long time, their incidence encompassed mainly acts of past infringement and exceptional situations in which injunctive relief was deemed not adequate.

Recently, though, limitations have been imposed to the granting of permanent and/or preliminary injunctions under the grounds that they would represent an abuse of the patent right. Although this trend has been, in most countries (with the exception of the United States), limited to

(*)This is a summary of the report published under the 2017 Collaborative Research Project on Harmonization of Industrial Property Right Systems under a commission from the Japan Patent Office .

(**) Ph.D. Candidate, Law School, Rio de Janeiro State University

infringement cases related to Standard Essential Patents (SEP), there is, at least in theory, no impediments preventing this understanding from spreading to other situations. After all, as put by certain scholars discussed in this report, the right to exclude third parties is not of the essence of the patent right, but a policy choice made by the legislator. The system must provide enough protection to the patentee and to his invention; however, if this will be done by means of injunctive relief or by strengthening other forms of legal relief is a choice of public policy.

Within this context, the role played by patent damages in the costs-benefits analysis performed by patentees when deciding whether to seek the enforcement of their IPRs in certain jurisdictions will likely grow in importance.

1. Premises to the analysis

Preliminarily, this report defined five premises that underlie the study performed herein. First, that various elements influence the calculation of patent damages, which makes it harder to perform a comparative analysis on the disparities in term of damages awards across jurisdictions. This analysis can lead to misleading results if one tries to pinpoint as the cause of such disparities only one element that influence the calculation of patent damages.

Second, that patent law strong connection with general private law should be, at least, questioned, in view of the particularities of the former. Third, that the deterrent effect, albeit refuted by general private law scholars, is a real goal of patent law. Patent remedies should not only compensate for a private wrong but also sanction the wrongdoer and discourage (i.e. provide a deterrence for) future acts of patent infringement.

Fourth, that patent damages are a matter of public policy (as well). This means that any changes to the patent law of a given country is influenced not only by the legality and constitutionality of the proposed amendment, but also by political considerations related to that country commitments before the international community (e.g. treaties and agreements signed, participation in international organizations, concern for its image before other countries, etc.), and the political priorities at a national level (e.g. the executive and legislative agenda, the interests of relevant players, etc.).

2. Scope of the analysis and methodology

The report focused on three issues that, in its author's view, present significant challenges to patent damages harmonization: enhanced damages, apportionment, and indirect infringement.

The research adopted a comparative methodology, with the analysis of legislation, case law,

and literature of five countries: the United States, Japan, Brazil, England, and Germany. Further, this report used available empirical studies on patent litigation and, more specifically, patent damages in the referred jurisdictions. Additionally, five interviews were conducted with experts in Japanese patent law.

Based on that analysis, this report outlines general proposals that could be considered when promoting further harmonization.

3. Structure of the report

This report is divided into five chapters. It starts with an overview of the civil remedies available in each jurisdiction, followed by a comparison that allows identifying the main similarities and differences between them. Next, the report presents the general aspects related to patent damages, including some controversial issues on the methods of calculation adopted by the analyzed countries. After, the three topics that are the focused of this study are examined separately, as the treatment awarded by each jurisdiction is described and compared. Finally, this report concludes by proposing a few measures that could be helpful when considering the implementation of changes that could improve the system of patent damages.

II. Civil remedies for patent infringement: an introductory overview of national frameworks

The violation of a patent right generates many grievances that can not only harm the patentee, but also have a negative impact on the patent system as a whole. Patents cannot meet their primary goal of rewarding and fostering innovation if their infringement goes unanswered. For that reason, legal systems have to provide remedies that can provide an effective and satisfactory answer whenever a patent right is violated.

The five jurisdictions analyzed for this report make available a good number of different forms of relief for the event of patent infringement. The application of these remedies varies according, first, to the national frameworks, and, second, to the particularities and necessities of each individual case.

By comparing the five countries, this report identified the main similarities and difference among them in term of patent remedies. For instance, although some remedies have the same source in all analyzed countries (e.g. injunctive relief and damages compensation are always statutorily provided), other forms of relief can have different grounds (e.g. destruction of infringing goods, which are provided by statute in Japan, England and Germany, and admitted as judicial remedies in Brazil).

In addition to different combinations of remedies, there are disparities in terms of the *treatment* awarded to each form of relief. The analyzed countries adopt different criteria for applying similar remedies, which can result in gaps in terms of their availability and extent, depending on the jurisdiction. Perhaps the most notable example is injunctive relief; whereas U.S. courts apply a strict test to decide on the granting of a permanent injunction, making it very hard to obtain a preliminary injunction as well, in the other countries there are fewer limitations being imposed, especially to permanent injunctions. Save for exceptional situations (to this date, mainly SEP cases), injunctive relief will be automatically granted as a consequence of a finding of infringement.

The imposition of further limitations to the granting of injunctive relief should be conditioned, though, to the strengthening of other legal remedies, particularly of monetary relief. On one hand, additional monetary relief that could encompass collateral damages caused by the infringing acts would be helpful in discouraging infringement by increasing its overall cost to the perpetrator without having a direct sanctioning and deterrent purpose. On the other hand, it is important to establish proper rules and standards that allow for a correct and precise determination of damages compensation. The *methods* for calculation, the rules of *evidence* applied to prove the occurrence and extent of damages, and the *elements* taken into account in the determination of monetary relief need to be properly defined and applied by national legislation and case law, in order to secure adequate patent protection and confer predictability to the outcomes in damages disputes.

III. Methods of patent damages calculation in a comparative approach

Basically, there are *three* methods being commonly used in the calculation of patent damages across the world: lost profits, infringer's profits, and reasonable royalties.

According to a strict conception, strongly tied to tort law, lost profits are considered the only true form of "damages compensation", as they accurately reflect the losses suffered by the right owner's due to the legal injury. However, due to the particularities of patent infringement – notably the difficulties in determining the occurrence and extent of damages, and the goal of deterring future infringement – it is accepted that other methods of calculation might be better suitable in certain situations to determine the monetary award.

This report presents a comparative analysis of empirical data that indicates in the analyzed jurisdictions the lost profits' method is the *least* adopted one. In countries wherein infringer's profits is available as a method of calculation – Japan, Brazil and Germany – this is the most adopted method, followed by reasonable royalties. In the United States, where the infringer's profits cannot be used as a method for calculation of patent damages, reasonable royalties are, by far, the most adopted method, followed by lost profits and by a combined application of the two methods.

1. Controversial topics on the application of the methods

This report also identifies some of the key controversial issues surrounding the interpretation and application of the three methods of calculation. First, there is the requirement adopted by certain jurisdictions for the patentee to either work the invention or be a competitor in the relevant market in order to claim the application of the lost profits and infringer's profits methods. As a correlated question, in the United States and in Japan, the amount of damages award can be impacted if the patentee is found to not have had the capability of working the same amount of product as the infringer.

A second controversial issue is the requirement of proof of the causal nexus between claimed lost profits and infringement, under which the patentee must prove a demand for the patented product and the lack of acceptable noninfringing substitutes.

Third, there is the possibility of combination of different methods. This can be particularly useful when a country refuses granting lost profits or infringer's profits when the patentee could not have worked the same amount of products as the infringer. In these cases, admitting a calculation of reasonable royalties in relation to that amount of product the patentee could not have worked is important to secure compensation for the use of the patented technology and prevent unjust enrichment by the infringer.

Finally, there are divergent views on the admittance of *ex post* elements in the calculation of reasonable royalties. In the United States, at least in theory, if not so much in practice, the determination of royalties in the context of litigation should be done according to a "hypothetical negotiation scenario", through which the court should try to define the amount of royalties the parties have agree upon if they have negotiated a license prior to first infringement. On the other hand, in Japan and in Germany, *ex post* elements are allowed to take part in the assessment of reasonable royalties in order to provide the deterrent effect of patent infringement.

IV. Enhanced damages

1. The deterrent effect in Patent Law

It is widely accepted in patent law that remedies in this field must encourage good-faith negotiations of licensing agreement by discouraging infringement. This goal can be achieved by making violation of patent rights not-economically viable for the infringer.

While this might seem simple in theory, in reality complications arise from the difficulty in detecting the occurrence of infringement. Patents are, after all, immaterial property, making it

considerably harder to know when they are violated. It is not unusual for infringement to fly under the patentee's radar. The underlying difficulties in detection of infringement combined with the high costs of research and development of new technologies can impose an excessive burden on the patentee and, consequently, impair innovation. Further, they can provide incentives for third parties to infringe, as they know their chances of getting caught are slim.

Traditionally, injunctive relief has been the main source of the deterrence effect for patent infringement. By barring the infringer from further commercializing the patent-covered product, injunctions also prevent him from obtaining a return for the investments made to manufacture and market the product – especially if the infringer cannot design around the patent, or assign the investments made for the manufacturing and marketing of other products. However, in some cases, the potential economic losses derived from a future prohibition of continued exploitation of the patented invention may not be sufficient to discourage potential infringers.

For the situations in which the threat of injunctive relief cannot provide an effective deterrent effect, careful thought should be given to how other remedies (including monetary relief) can perform the deterring purpose with equal effectiveness. One way to achieve this goal is by allowing the granting of *enhanced damages awards* that surpass solely compensatory damages in view of certain circumstances and factors.

The problem with enhanced damages is that in most jurisdictions principles of general tort law deny the deterrence effect for damages compensation. According to this conception, damages awards should be solely of compensatory nature, as the sanctioning and deterring effect are understood to be better left for criminal and administrative law.

2. Current scenario for punitive damages across the globe

This report adopts a conception that differentiates between enhanced damages and punitive damages. The former are thus understood as a category that encompasses the latter. In this sense, damages awards can be enhanced in view of different factors and circumstances, one of them being the infringer's reproachable conduct. In this situation, when the increase in the amount of damages compensation is determined as a mean to punish the behavior of the agent of the violation and/or to prevent similar acts, there is the specific (and controversial) figure of punitive damages.

There are arguments both in favor and against punitive damages. The main arguments supporting the adoption of this institute for patent infringement are the deterrent effect they can provide, helping to prevent future occurrences of violation of patent rights. As for the arguments against punitive damages, in addition to the claims that the system of damages upon tort is not intended for general prevention and/or sanctioning, and that sanctioning and prevention are properly

addressed by criminal and administrative law, many also argue that punitive damages allow for an unjust enrichment of the victim, and that it can generate legal uncertainty and a risk of arbitrary decisions by the judge, as the application of punitive damages require a finding of willfulness.

Taking into consideration these arguments, there are alternative approaches that could be adopted to address the problem of deterrence while avoiding incurring on the same objections rose against punitive damages. The admittance of *ex post* elements in the calculation of reasonable royalties is an example. Another one cited by this report is the determination of damages as a lump sum based on the facts and evidence on the dockets. Allowing a certain degree of flexibility in the determination of damages awards can be useful to circumvent the difficulties that might be present in certain cases to produce evidence on the extent of damages.

V. Damages apportionment

In patent infringement litigation, *apportionment* of damages is necessary in view of the many factors that can influence the selling price of a product, making it hard to clearly identify the causal nexus between the infringing acts and the damage suffered by the patentee. Apportionment thus aims at determining the portion of the value of the product that can be attributed to the patented invention and, as such, give rise to a compensation for its undue exploitation.

This report analyzed two approaches to apportionment. First, it considers the factors that can influence the profits obtained by the patentee or by the infringer. Even after determining the marginal profits of the patentee or of the infringer, as well as the amount of sales the patentee lost or the ones the infringer made, it is not certain that the entire profits obtained by either party can be attributable to the patented invention. Factors such as the seller's brand power, marketing efforts, higher quality of the product, lower price, consumer's preference, amongst others, can influence the amount of profit made by them. Whether such factors should determine (or not) an apportionment of patent damages, and to what extent is a question dealt with differently by the five analyzed jurisdictions.

A second dimension of the issue relates to the apportionment of damages in a multi-component product. Not always will the infringing product be entirely covered by a single patent. More often than not, the patent will cover only a part (which can be significant or not) of a product that comprises other non-patented features. Furthermore, in many cases, other infringed patent may have been combined in a product with other patented features that also increment the value of the infringing product. Also in regard to apportionment under this perspective the compared countries adopt different approaches.

1. Comparative analysis of the factors that can influence apportionment

Overall this research found that there is some uniformity in the criteria that are admitted by each jurisdiction to influence the apportionment of patent damages on this perspective. Elements such as the consumer's preferences, the power of the infringer's brand in the market, and technical qualities of the infringing product that are not linked to the patented feature and provide a better performance, have been found to be generally accepted in the five countries as factors that can be taken into account when determining the amount of damages, as they might influence the financial results of the infringing product sales.

On the other hand, factors such as the infringer's selling capabilities (i.e. experience, business relationships, etc.) and his marketing efforts, as well as the infringing product lower price, have been denied in some jurisdictions as grounds to reduce the amount of patent damages.

2. Do all roads lead to Rome? The different methods to apportion damages in multi-component products

In regard to the determination of the value of the patented feature against other – patented or non-patented – features in a multi-component product, apportionment of damages can be made by different methods. In theory, as they are essentially evidentiary means to comply with a substantive requirement, these methods should all lead to the same result.

In the United States, the rule is to determine the value of the patented technology in regard to the smallest salable patent practicing unit (SSPPU) in a multi-component product that implements the invention. Exceptionally, when the patentee can prove that the patented invention drives consumer demand, the court will adopt as the royalty basis the entire market value (EMV) of the product to determine the incremental value of the patented technology.

In other countries, though, courts will use as their starting point the entire product and apply a "contribution/non-contribution ratio" to apportion between the patented feature and other features of the product. This approach can, at least in theory, better account for the complementarities resulting from the combination of features, as they are included in the initial assessment.

VI. Indirect Infringement

1. Damages for indirect infringement: determination of liability and quantification

The purpose of indirect infringement is to secure the effectiveness of patent protection in the

situations where it is harder or impossible to obtain relief against the direct infringer. Nonetheless, the configuration of indirect infringement should not lead to an undue extension of the scope of the patent.

When it comes to determining the damages compensation for acts of indirect infringement, there are two sets of questions that one must deal with: first, the issues that impact on the determination of liability, and, second, the subject of quantification of damages.

In terms of liability, the two main questions this report analyzed were whether compensation for indirect infringement is conditioned to the existence of direct infringement, and how far in the chain of supply the liability for indirect infringement can go. Within the scope of the former, the correlated theories adopted in the United States (atomistic and evidentiary approach) and in Japan (dependent and independent theories) were presented and evaluated. As for the latter, the report discussed the understanding adopted by Japanese and English courts.

Regarding the apportionment of damages for indirect infringement, the main controversy relates to the difficulty in establishing the precise causal nexus between the damages suffered by the patentee and the acts practiced by the infringer, in order to determine the amount of compensation that should be awarded. It seems logical to assert that even if the indirect infringer is jointly liable for the damages caused to the patentee, not all methods of patent damages calculation may be applied to him in the same way and to the same extent as to the patentee. In this sense, whereas the application of the infringer's profit method should reflect only the profits that were actually obtained by the agent from his indirect infringing acts, the lost profit's method could be claimed in its entirety from both the direct and the indirect infringer.

VII. Conclusion

As countries try to make their systems more attractive in terms of patent enforcement, it is only natural that they aim at closing the gap with other jurisdictions seen as strong IP systems. Harmonization is, after all, a natural consequence of a globalized world, where the exchange of information and experiences happens at a fast pace.

In terms of patent law, history has shown that harmonizing substantive provisions – related, for instance, to the requirements of patentability – may be easier than doing the same with the rules related to enforcement. After all, whereas the former involves, on a legal-normative level, only aspects of patent law, the latter will cross the line with procedural law, private/civil law, and administrative law, making it significantly harder to promote harmonization. However, if complete harmonization is not feasible, at least countries might try, wherein it is within their public policy goals, to close the gap of the disparities in terms of patent damages awards.

This report concludes by presenting a few proposals that may help in this task. In a nutshell, five general proposals were introduced. First, the incorporation of additional/alternative forms of monetary relief, which can help to increase the overall costs of willful infringement and, consequently, discourage future acts of violation, while avoiding putting a strain on fair competition.

Second, allowing the combination of the methods of calculation could help the full compensation of patent damages, by accounting for the portion of the profits that was deducted from the calculation based on lost profits or infringer's profits. In this sense, it is worth reminding that the methods are provided with the intent of enabling the assessment of damages and determination of the compensation. If the best way to calculate damages in a given case is by combining different methods to reach a more precise definition of the monetary award, then this should be allowed.

Third, providing better standards that can guide the courts when apportioning patent damages in order to confer enough predictability while still providing a good margin of flexibility. In this sense, more attention should be given to try to systematize the *factors* that can be allowed to be taken into account and the *means of evidence* that can be employed to determine the incremental value of the patented technology in relation to either the entire product or the smaller unit that incorporates the invention.

Fourth, in terms of liability for indirect infringement, it is recommended the adoption of a case-by-case evaluation that takes into account whether, in each particular situation, the acts of indirect infringement should be addressed notwithstanding the lack of direct infringement.

Finally, as a final proposal this report recommends the adoption of measures that can improve the proceeding to determine the occurrence and extension of damages. Here, both provisions of procedural design and of evidence law are briefly analyzed to present the ways through which, notwithstanding the substantive provisions, the procedure to calculate patent damages could become more efficient.