

# PATENT DAMAGES ECONOMICS—THE SIMPLE VIEW

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There are several factors that a possible party to a patent litigation must assess, either prior to filing as the patentee, or during licensing discussions prior to suit as an alleged infringer. While there are a multitude of things to consider, at a certain level, the analysis can be simplified to a few key factors in deciding the best course for your client. A simple economic analysis is comprised of the following factors:

- **Prospective damages** and other economic consequences to the outcome of the litigation;
- The **likelihood of success**, i.e. the likelihood the patents being /not being found not invalid and infringed, depending on whether you are the patentee or the alleged infringer;
- The **cost** of litigating the patents;
- **Time to money** (note, this is not the same as time to trial, nor time to judgment in the court...).

In this discussion, I will ignore the likelihood of obtaining injunctive release from the courts, in light of the Supreme Court's decision in *eBay Inc. v. MercExchange* 547 US 388 (2006) as it may be applied to non-practicing entities (NPEs). This is not a concession that injunctive relief is unobtainable for NPEs following the *eBay* decision, but ignoring the likelihood helps to focus the basic economic analysis that illustrates the current state of patent law and litigation decisions. If you are representing an alleged infringer where the patentee is a "practicing entity", your economic analysis will have to account for the higher likelihood of being subject to injunctive relief in addition to back damages.

In short, it is clear that potential damages are but a factor in the total economics of patent litigation. A simple (and thus inherently inaccurate) formula would be:

$$\text{Potential Damages} \times \text{Likelihood of finding of validity/infringement} - \text{Cost of Litigation}$$

This number then would need to be discounted for the present value of the notional damages to account for the actual Time to Money, which in my formulation is the time from initiation of suit to actual receipt/payment of any damages.

As we all know, statistics can be, and often are misleading. Having provided this disclaimer, I will now present some statistics to help illustrate the principle above. This information is taken from some well-known studies of the patent law, specifically from the AIPLA and some of the PricewaterhouseCoopers studies conducted over the past few years.

**Cost of litigation** – A survey conducted by the American Intellectual Property Law Association (“AIPLA”) found that the average costs of taking a patent case through trial where the amount at stake was \$25 million or more was \$6.25 million. AIPLA, Report of the Economic Survey 2009 (“AIPLA Report”) at I-129. The average cost where \$1-25 million was at stake was \$3.1 million. *Id.* The relevant question in the AIPLA survey asked: “What is your estimate of the total cost of a patent infringement suit (i) through the end of discovery, and (ii) inclusive of discovery, motions, pretrial, trial, post-trial, and appeal?” The \$3.1-\$6.25 million figures were for the latter category (i.e., inclusive of trial and appeal). For survey respondents located in Los Angeles, the third quartile reported costs through trial and appeal of \$11.5 million (substantially higher than the \$6.25 million nationwide average). AIPLA Report at I-129. There were also other major metropolitan regions where the third quartile costs were \$10 million or more, including the San Francisco area. *Id.* In short, for patent-infringement actions where substantial sums are at stake, it is not unusual for costs of litigation to exceed \$10 million.

**Time to Money** – A 2008 PricewaterhouseCoopers study reported that the median time for complaint to trial was just over 2 years for 394 patent trials that occurred between 1995 and 2007. *See* PricewaterhouseCoopers, 2008 Patent Litigation Study: Damages awards, success rate, and time-to-trial (“2008 PWC Study”) at 11. In the 2010 PWC report on the same topic, the median had moved up a bit too about 2.5 years. (PWC 2010 Patent Litigation Study at 18) A significant percentage of cases, however, take much longer; a 2009 study by PWC found that more than 30% of patent cases that went to trial took more than three years from the time the complaint was filed to the time of trial and more than 10% took over five years to get to trial. PWC, 2009 Patent Litigation Study: Patent litigation trends and the increasing impact of nonpracticing entities (“2009 PWC Study”) at 15. Of course, this only reflects time-to-trial, not time-to-money.

**Mortality Rates** – The 2008 PWC study found that patent holders were successful at summary judgment or trial only 37% of the time. 2008 PWC Study at 8. A 2009 PWC study found that NPEs have a lower success rate of 29%. 2009 Patent Litigation Study at 12. The 2010 PWC Study indicated that this rate had risen slightly, to 31%.

**Actual Damages Awards** – In studies from 2008 through 2010, PWC found that there has been no clear trend in median damage awards since 1995. 2008 PWC Study at 2; 2009 PWC Study at 5; 2010 PWC Study at 5. The median damages award since 1995 for both NPE’s and practicing entities has been just over \$5 million. 2009 PWC Study at 6. That median award level is not significantly greater (and in many cases, will be far less) than the costs of litigation described above.

**ILLUSTRATION:** Acknowledging that numbers are somewhat mixed and matched among studies, the following numbers can be plugged together to illustrate, hypothetically only, the economics of a pre-litigation analysis.

Assume a judged damage claim of \$25 million. Apply the 29% validity/infringement rate from the 2009 PWC Study for NPEs. Assume the AIPLA cost of litigation at the low end of \$3.1 million. The judged “value” of the hypothetical litigation, using these statistical assumptions, is \$4.15 million, before accounting for time value of money, i.e. applying a discount for the reality of Time to Money. Using 2.5 years time to trial average from the 2010 PWC Study, plus a completely arbitrary addition of 2 years for post-trial motions and ultimate appellate resolution, Time to Money is 4.5 years. Using a discount rate of 5%, the “value” for the hypothetical litigation is \$3.33 million, before accounting for credit worthiness of the infringer.

As already acknowledged, this illustration is heavily dependent on many assumptions, and completely ignores other factors. But it does tend to illustrate a method of looking at patent litigation. As each of the identified factors change, the analysis is substantially changed. For example, an increase in the “judged damages” by itself substantially increases the value of the litigation. On the other hand, a substantial increase in the actual costs of litigation tends to reduce the value, as does an increase in the Time to Money.

The studies do not indicate whether, or to what extent, these four identified factors scale with each other. It stands to reason that as potential damages increase, both parties will increase their litigation spending to defend their positions. This may result in substantially increased discovery and related costs, additional motions filed, etc. To a certain extent, the increased spending may also extend out the Time to Money as discovery slows proceedings in many jurisdictions, as do motions.

## **OTHER FACTORS**

Potential parties to patent litigation should also be aware of other risks and factors that affect the strategies and decisions they adopt. These include, but are certainly not limited to the following:

- The ability of the party to properly fund the litigation for the duration, which may not be so easy to predict, keeping in mind the concept of Time to Money, not time to trial;
- The dilemma of the passage of time creating a larger and larger settlement problem, as prospective “back damages” theoretically continue to accrue during the pendency of the litigation;
- A related phenomenon, where a defendant may begin to view the “real cost” of the litigation as his quarterly legal expenditures rather than the ultimate risk of paying substantial back damages over and above the quarterly legal expenses. This view can arise when the time horizon for ultimate payment of damages, if any, is beyond the view of the management of the alleged infringer.

## **SUMMARY**

As the discussion goes forward on calls for patent reform, it is important to remember that the current patent system is just that: a system. Discussions of reforming damages formulations should not be removed from the discussion of the overall system. Damage determinations are only one factor in the economics of patents, and must be viewed in the context of the entire system. As I hope I have illustrated, changing the damages formulation in patent cases without changing the costs associated with the litigation, and especially the time to money for those potential damages, could severely undermine the entire US patent system. Given that economics drives the patent system, we all need to remember the basic principle that the higher the risk (including the incursion of substantial cost) and the longer the delay to the ultimate reward (damages payments), the higher the reward must be to keep the system alive.

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