



Industrywide Patent Enforcement Strategies

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Part One of a Continuing Series

Enforcement strategies in an industrywide patent enforcement campaign may differ from strategies advantageous in a single litigation. In a single litigation scenario, the goal is to maximize the recovery in the present case without any consideration given to possible effects the present lawsuit may have on future cases. Although this may be somewhat shortsighted as the same players (plaintiff, defendant, and attorneys) are likely to cross paths again and their previous experience will undoubtedly affect their mutual expectations and behavior in subsequent encounters, in reality it is not taken into consideration as often as it should be. Not so in an industrywide enforcement campaign, where the goal is to maximize the monetary recovery for the patent or patent portfolio with respect to all infringers. In this scenario, each case must be considered not in isolation but in the context of the overall enforcement campaign.

For the purposes of this article we shall assume that the plaintiff seeks to maximize monetary recoveries.

Decision Analysis

How does one make decisions involving different monetary payoffs associated with different probabilities? Let's say you are driving across the border of New York and New Jersey and remind yourself that tonight both states have lottery drawings. New York offers \$10 million as the prize and New Jersey offers \$20 million as the prize. New York sold 20 million tickets, and New Jersey — 30 million tickets. You have only \$1 in your pocket. Which lottery ticket will you buy: New York or New Jersey?

The problem with this question is that it is hard to compare two options, as both lotteries have different payoffs and different probability of winning. To make an intelligent decision, we need to be able to compare apples to apples and that requires bringing both variables to one common denominator expressed in dollars. This common denominator is called an expected value and is calculated as the product of the payoff and the probability to attain it.

Expected Value = Payoff X Probability

In our example, in New York, the payoff is \$10 million and you have one chance in 20 million to win. (For the purpose of this example it is assumed that the chances of winning the lottery are based on the number of tickets sold, and not the probability of the balls drawn from the hopper.) Therefore, the expected value of this lottery ticket is 50 cents: $10,000,000/20,000,000 = 0.5$. In New Jersey, the payoff is greater: You can win \$20 million. However, you have only one chance

in 30 million to win. Therefore the expected value of your lottery ticket is 66 cents: $20,000,000/30,000,000 = 0.66$. Now you can compare two lottery tickets: The New York ticket has the expected value of 50 cents and the New Jersey ticket has the expected value of 66 cents. Clearly, the New Jersey ticket is better, but neither is worth the dollar it costs to buy a ticket!

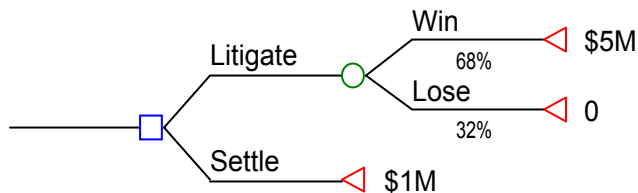
Similarly, to compare different cases with different possible outcomes having different likelihood of achieving these outcomes, we first need to bring these cases to a common denominator, ie, calculate their respective expected values. Let's say we have three patent infringement cases: A, B and C. Their respective payoffs (damages awarded by jury or settlement amount if the case is won or settled), probabilities of achieving these payoffs and the expected values are summarized in Table 1:

Case	Payoff	Likelihood	Expected Value
A	\$1,000,000	70%	\$700,000
B	\$2,000,000	50%	\$1,000,000
C	\$2,500,000	45%	\$1,125,000

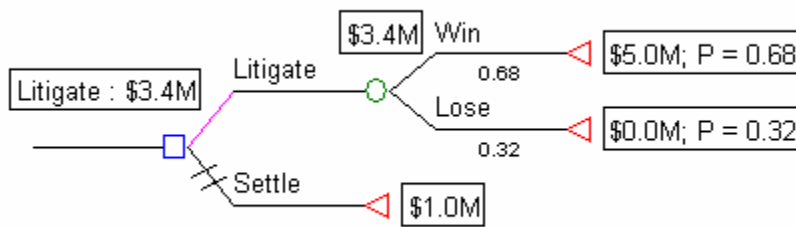
Table 1

Litigation Risk Analysis

In order to make a settlement decision in a single-litigation patent infringement lawsuit we need to calculate the expected value of the lawsuit and compare it with the proposed settlement. Let us consider the following hypothetical scenario: The plaintiff in a patent infringement lawsuit expects damages of \$5 million. The defendant offered to settle the case for \$1 million. How do we compare the two numbers? Statistically, a patentee has 68% chance to prevail in a patent infringement lawsuit if the case goes to trial. Therefore, in the absence of a better estimate of the probability of success, we can estimate the expected value of this lawsuit at \$3.4 million ($\$5M \times 68\%$). Since the median cost of patent infringement litigation is \$2 million, we have to assume it will cost us \$2 million to get the \$5 million we expect to win. This further reduces the expected value to \$1.4 million. Any number higher than that is a "good" settlement. One million dollars offered by the defendant falls just short of the settlement threshold established by the expected value. This analysis is well illustrated by a simple decision tree:



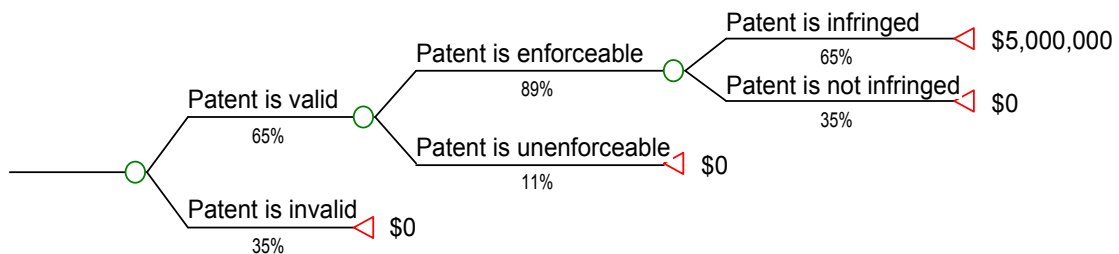
After we roll back this tree the decision becomes obvious, below:



Even if we account for the expected cost of litigation, say \$2 million, the expected value of the case, \$1.4 million, is still better than the settlement offer of \$1 million.

Needless to say, this is not the only consideration that goes into the decision to settle or not to settle the case. For example, if the defendant is a competitor, a permanent injunction may be desirable. Or the company may wish to "send the message" that it will defend itself vigorously if sued and will not be an easy target.

A more sophisticated analysis will consider separately the likelihood of prevailing on the issues of validity, enforceability and infringement. This analysis is best illustrated with a decision tree:



We can further refine our analysis by considering the likelihood of prevailing on each asserted claim and each disputed term in a *Markman* hearing, as well as the possibility of recovering lost profits or the likelihood of enhanced damages. (For more information on litigation risk analysis in patent disputes see Poltorak, Alexander and Lerner, Paul J.: *Introducing Litigation Risk Analysis. Managing Intellectual Property*, May 2001; and Vermont, Sam: *Business Risk Analysis: The Economics of Patent Litigation. From Ideas to Assets: Investing Wisely in Intellectual Property* (edited by Bruce Berman, New York: John Wiley & Sons, Inc., 2001).)

In evaluating a settlement offer it is always useful to compare the settlement offer with the expected value of the case rather than comparing it with the anticipated damages award, which does not account for the uncertainties of litigation.

A cautionary note: A probabilistic approach is more meaningful when we can replay the same scenario over and over again. This is an example of the law of the large numbers, which in effect states that the average outcome tends to asymptotically approach the probabilistic outcome as the number of events increases. For example, if you have a perfect coin that has a 50% probability of landing heads up, then the greater the number of times you flip the coin the closer the average number of times it lands heads up will approach 50%. However, there is no way to predict which way the coin will fall in any particular toss. Similarly, it is meaningful to say that the house has an advantage over a player in a casino game because of the very large number of games played in the casino. It is less meaningful to gauge a probability of winning for any

particular player because this player doesn't get to play enough times for the law of large numbers to take effect (this is actually a good thing, because a player who plays every game in the casino will certainly lose more than he wins due to the statistical house advantage.) Litigants in any particular litigation do not get to replay the litigation over and over again. They play this game only once. And, all predictions notwithstanding, one will win and the other one will lose. When asked to estimate the probability of winning by a client, it may be useful to remind the client that, whatever the estimate, the case has a binary outcome — you either win or lose. Whenever the loss is unacceptable, one should not gamble whatever the odds. It is never wise to bet the farm. Going to trial is always trying your luck. This seems to be the most compelling argument in favor of settling. Having said that, it is still useful to estimate the probability of winning in order to calculate the expected value of the case.

The analysis is quite simple in the case of a single-litigation enforcement. However, in an industrywide patent enforcement campaign, the analysis is complicated by the fact that each case will affect all subsequent cases. We will explore this scenario next month in Part Two of this article.

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