

Making Informed Decisions

Decision-Tree Analysis: An effective method to manage litigation in a business setting



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INTELLECTUAL PROPERTY
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When approaching litigation, outside counsel focus on legal issues, litigation strategy and winning. At the same time, in-house counsel and management approach the litigation from the viewpoint of costs, probability of success, the potential value of the litigation either in terms of potential benefit or potential loss, and whether settlement is feasible.

Outside and in-house counsel need a mechanism that bridges the gap between litigation strategy as envisioned by outside counsel, and business strategy as envisioned by corporate counsel. These two perspectives of the possible outcomes of litigation need to be mutually understood and *most importantly, aligned*.

That is why decision-tree analysis is such a useful tool in bringing value to litigation. It creates a way of comparing different strategies, allowing in-house and outside counsel to work together to transform imprecise terms such as "good chance" or "reasonably likely" into probabilities and dollar values.

The real benefit of decision-tree analysis is its ability to deconstruct a complex lawsuit into discrete steps and possible outcomes that can pave the way for appropriate decision-making.

What is decision tree analysis?

At its most basic, a decision tree is a diagram that starts with two branches that represent a choice, for example

to litigate or settle a lawsuit. Each branch expands into a series of sub-branches that represent all of the possible occurrences associated with each choice. The sub-branches end when a final outcome is reached, for example, the defendant is found liable, the defendant is found not liable, etc.

By assigning probabilities to all of the possible occurrences and dollar values to all of the potential outcomes, you can determine and calculate the probabilistic value of each choice. Commercial software products automate this process and provide lots of bells and whistles.

Use decision tree analysis early on in litigation

The legal profession — despite the obvious benefits of decision trees — has been cautious in embracing and applying this approach to problem solving.

Yet it has long been recognized in other professions that analytical tools such as decision analysis are helpful in dealing with complex factual and legal factors in business environments.

That is why decision analysis techniques are used in so many industries and sectors: for example, banking (to make cost effective risk management decisions); manufacturing (to evaluate new product development,

market entry and exit strategies and product improvement introduction); consulting (to create, analyse, choose and implement decision maker business strategies); medicine (determination of resource allocation and training to equip medical professionals with the ability to make optimal decisions under pressure and time restraints).

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Decision-tree analysis forces in-house and outside counsel to reduce complex litigation to discrete quantifiable issues and to assign monetary values to different outcomes.

For this reason, it makes sense to include decision-tree analysis early in the litigation process. The decision-tree can be updated as the case progresses.

Co-operative nature of decision tree analysis

Decision tree analysis provides for a co-operative environment in which both outside counsel and in-house counsel/decision makers contribute.

In a situation involving legal analysis of, for example, a potential infringement of intellectual property rights, the outside counsel can:

- Provide many of the qualitative inputs to the analysis, as well as the structure of the analysis, including a breakdown of all the relevant legal questions that must be determined.
- Assign quantitative inputs for each of the relevant legal questions based on a legal analysis and the outside counsel's experience and confidence in assessing the likely outcomes.

In order to complete the analysis, the decision maker/in-house counsel:

- Provides outside counsel with the qualitative and quantitative inputs that frame the structure of the analysis, including the business factors that may affect the ultimate outcome.
- Provides quantitative input that assists the outside counsel in assessing the probabilities associated with particular variables, e.g. infringement, validity, regulatory approval, etc.

Decision tree analysis cannot take risk aversion into account. This is important if the numbers suggest that the decision maker may face a risk of suffering a loss that the company cannot bear. Despite any expected benefits, that may be too great a risk to take.

Rationale and justifiable business decisions

Both in-house and outside counsel — through the use of decision tree analysis — have a clear understanding of possible outcomes, based on factors and probabilities that both inside and outside counsel have agreed on.

The use of decision tree analysis — with its ability to avoid the misunderstandings that result from the use of imprecise terms — also reduces the impact of emotion on decision-making.

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While decision-tree analysis is not infallible and does not predict outcomes, it does provide decision makers/in-house counsel with a rational and justifiable basis for making business decisions in a litigation context. ■

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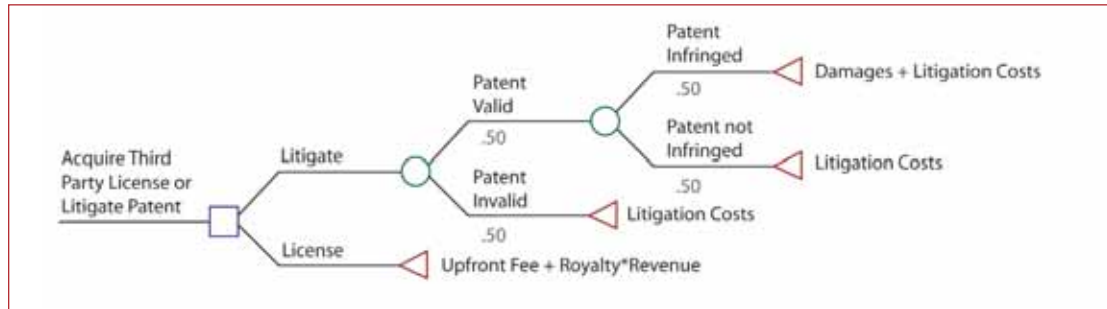
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Litigation Decision Tree Risk Analysis

In this example, the decision maker is developing a new technology. A third party is claiming that use of the technology will require a license under its patent rights. The business person must evaluate the cost of the license versus the cost of litigation, taking into account the likelihood of success on issues such as validity and infringement, and make an economically justified decision to either litigate or acquire a license.

The actual issues involved in a litigation scenario may be much more complex, and the decision tree would be structured accordingly.



Once estimated or known values are added to the decision tree, the decision analysis model can be calculated and the probabilistic values associated with each outcome can be compared.

Let's assume that the decision maker must decide whether to license the technology for \$700,000 or defend an infringement action. The infringement action will cost \$500,000 in fees and expenses, win or lose. If the case is lost the decision maker will also have to pay \$1,000,000 in damages. The probabilities of the patent being valid/invalid and infringed/not infringed are shown on the diagram. As the tree below shows, the probabilistic value of litigating (\$750,000) exceeds the cost of acquiring a license (\$700,000). Hence, the decision maker should acquire the license.

