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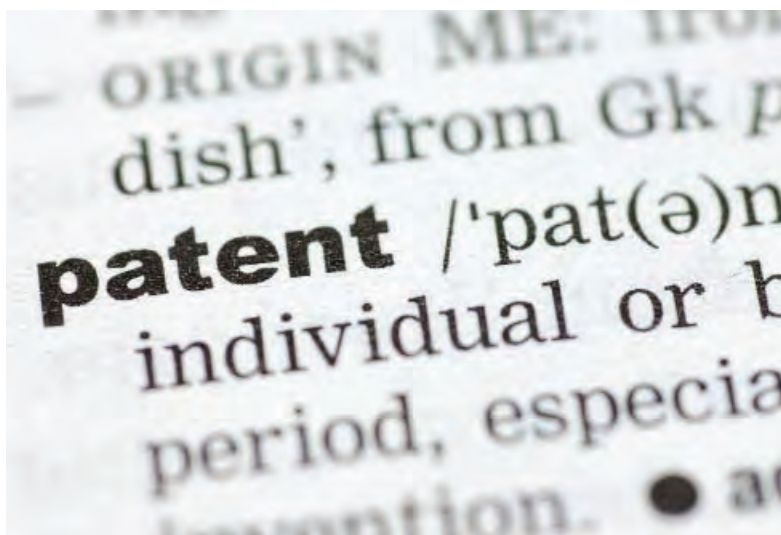
## What's Your Patent Worth? A Quick Guide to Estimating a Patent's Market Value

*Matthew M. Roy*

Patents, which bestow a right to exclude others from making, using and selling an invention, are a form of intellectual property. Patents for commercially successful inventions can be extremely valuable. However, unlike tangible forms of property, patents — like other forms of intellectual property — can be very difficult to value.

A full-blown patent valuation by a professional valuator in conjunction with a patent attorney, is an expensive and time-consuming process. The valuator and patent attorney consider the validity of the patent, conduct due diligence to ascertain that it has been properly issued and is still in force (i.e., that all maintenance fees have been properly paid) and determine the remaining term of the patent. In addition, the full-scope valuation typically involves an analysis of the patent claim, and seeks to place it in its context among any interlocking or blocking patents, such as base patents for which licences would be required before a patented technology could be commercialized. The value of a patent, or of a family of patents, will also depend on the correlation between the jurisdictions in which patents have been obtained and the markets where the products are being manufactured or sold. Many other factors may be considered, such as the results of foreign litigation, threats of litigation, the question of patent adoption as a part of an industry

standard and any other relevant technological trends. In some cases, the cost of performing a detailed analysis may become disproportionate to the market value of the patent.



So how can a patent holder or corporate in-house counsel estimate the market value of a patent? The following guidelines provide some tools for arriving quickly at a rough approximation. An approximation makes it easier to decide whether a more detailed professional valuation is warranted.

### **Market Exclusion Effect**

The market exclusion effect of a patent is a result of the statutory right to exclude competitors from making, using, selling or importing a patented

technology. The following example helps illustrate the market exclusion effect and how it translates into a quantifiable market value.

Consider a national market in which only four car manufacturers (A, B, C and D) sell their automobiles. If A invents and patents feature X, then manufacturers B, C and D are excluded from selling cars with feature X in that national market. Assume, for the sake of illustration, that prior to the invention and patenting of feature X, each manufacturer had a market share of 25 per cent. Feature X proves highly commercially successful, and as a consequence, manufacturer A's market share jumps from 25 per cent to 40 per cent, while the market shares for B, C and D drop to 20 per cent each. Accordingly, if the market for automobiles in that country is worth \$100 million in sales per annum, then A's patent on feature X increases its sales by \$15 million per annum. If profits are assumed to be 10 per cent of sales, then the patent generates \$1.5 million per year in profits for A. (This assumes that feature X is solely responsible for the augmented sales of the cars, and that other factors, such as marketing or branding efforts are not.)

The deleterious effect that the patent has on the competition — effectively causing market share to drop five per cent, sales to drop \$5 million and profits to diminish by \$500,000 per competitor — are notable. However, as this effect is not always lasting, extrapolating these results over the lifetime of the patent may be unrealistic. As new technologies emerge, the market may become saturated with the product, and competitors might find ways to design around the patent. Nevertheless, the example illustrates how the market exclusion effect can be used to quantify the market value of a patent.

Exceptionally, a pioneering invention may engender its own market niche (e.g., the Rubik's Cube). Where the technological barrier to entry is low, as it would be in the case of an easy-to-manufacture plastic toy, the

value of the patent portfolio may be approximated by the profits that the patented product generates (or by the licensing royalties that the patent generates), with due allowances made for marketing and branding effects.

### **The Cost Approach**

Another valuation technique is to estimate the cost for a competitor to develop an equivalent technology. For example, an engine manufacturer might consider that it would take a team of 10 engineers (paid \$100,000 each) one year to design an engine of comparable power and efficiency, in which case a competitor would value the patent at a minimum of one million dollars.

### **Auction Prices and Other Data**

IP auctions houses, such as Ocean Tomo® ([www.oceantomo.com](http://www.oceantomo.com)) and ipAuctions ([www.ipauctions.com](http://www.ipauctions.com)), provide useful data on market prices that have been paid to acquire patents and patent families in various technology sectors. However, sales numbers from the Ocean Tomo site (typically in the six-figure range) are generally for patents and patent applications that have been filtered prior to being showcased.

Royalties earned by comparable patents can also be used to estimate the value of a patent. Licence royalties are often pegged at 3–8 per cent of net sales, although the royalty rate will vary depending on other factors. Similarly, judgments and published settlements for comparable patents can provide benchmarks in assessing market value. Finding comparable patents, however, can be challenging.

The market exclusion effect and cost analysis, coupled with any relevant auction pricing or other data, provide a starting point for approximating the market value of a patent. Once the approximate value is estimated, patent holders can then decide whether a detailed valuation is warranted.