Patent Purchase Price Is Useful In Damages Analysis

Law360, New York (September 08, 2014, 10:02 AM ET) --

A nonpracticing entity that purchased a patent for $750,000 seeks $125 million in damages from multiple defendants. Does the large discrepancy between these two numbers suggest something is wrong here? Or can the two numbers be reconciled?

In a recent article, "Misuse of Patent Purchase Price in Damages Analysis," Bruce Burton and Scott Weingust warned against the "misuse" of patent purchase prices when evaluating a reasonable royalty damages claim in a patent infringement case. However, the most grievous misuse of patent purchase prices would be to ignore them.

The price at which a patent was purchased provides a useful indicator of the royalties that the patent was expected to generate for the buyer. Substantial deviations between the expected royalties implied by the patent purchase price and the damages the patent owner later seeks in patent litigation, as in the example given above,

Stephen Rusek

should raise serious questions about the validity of the patent owner's damages claim. In some cases, the patent owner may have a legitimate economic explanation for the discrepancy; however, in many cases, the discrepancy reflects a damages claim that is inconsistent with the economic reality of the patent's value.

It is generally accepted that existing licenses involving the patent-in-suit are a factor that should be considered in a damages analysis (under the first Georgia-Pacific factor) in a patent infringement case. Even existing licenses involving other patents may be considered (under the second Georgia-Pacific factor). The reason that existing licenses are given substantial weight in damages analyses is that experts in the field, as well as courts, widely recognize that when evaluating a hypothetical transaction (e.g., a hypothetical license), actual market transactions provide a reliable benchmark as long as the surrounding economic conditions are sufficiently comparable.

The purchase of a patent is just another type of market transaction. As such, the purchase of a patent should also be accorded substantial consideration in a damages analysis. Of course, as with any potentially comparable market transaction (including an existing license), it may be necessary to make adjustments to account for any significant dissimilarities in the underlying economic conditions between the market transaction and the hypothetical transaction.

We now examine the factors that determine the purchase price for a patent. A patent is an asset. Since economist Irving Fisher's 1930 book "The Theory of Interest," financial economics has taught that the value of an asset is equal to the present discounted value of the cash flows the asset is expected to generate in the future. A patent generates cash flows for its owner generally either by providing a competitive advantage in product sales or through licensing royalties. For an NPE, the sole source of value is licensing and, thus, the value of a patent to an NPE is the expected future cash flows derived from licensing the patent. Cash flows from licensing will be equal to the royalty revenues less the NPE's incremental costs of licensing the patent. It is possible that NPEs vary in their expectations regarding the licensing cash flows they could generate with a given patent.

Patents, like other assets, may be sold in arm's-length market transactions. While no rational buyer would pay more for an asset than what it perceives its value to be, the seller has a strong economic incentive to maximize the price that it receives and it has a powerful tool to achieve this goal: It can entertain more than one potential buyer and thereby generate competition for the purchase of the asset. Even in the absence of a formal auction, the sale of a patent (and other assets not traded on organized exchanges) can be thought of as an informal auction. Economic research, both theoretical and empirical, has shown that a seller can capture a large portion of the value the buyer places on the item being auctioned with even a relatively small number of bidders.

To illustrate the relationship between the patent purchase price and the buyer's expectations concerning future royalties, we will use an example of an NPE that paid $750,000 to purchase a patent, and later claims reasonable royalty damages of $125 million against multiple defendants one year later.[1] Can these two numbers reasonably be reconciled? Applying the discussion above, the following equality must hold:

Purchase Price = [Portion of the Buyer's Valuation Captured by the Seller]
*[Expected Damages/Royalties from all Parties]
*[NPE's Incremental Profit Margin]
/[1 + Discount Rate]

The NPE's incremental profit margin and the discount rate typically are readily estimated using financial data from the parties; assume for the purposes of discussion that they are 50 percent and 15 percent, respectively. Under these assumptions, and assuming for the moment that at the time of the patent purchase the NPE expected to get the damages that it later claimed, the equality can be written as follows:

$750,000 = [Portion of the Buyer's Valuation Captured by the Seller]
*[$125 million]
*[0.50]
/[1+0.15]

Rearranging terms and solving for the "Portion of the Buyer's Valuation Captured by the Seller" yields the following:

Portion of the Buyer's Valuation Captured By the Seller = ($750,000)/(($125 million*0.50)/1.15) = 1.38%

This result tells us that the $125 million damages claim is consistent with the $750,000 purchase price

only if the seller was able to capture just 1.38 percent of the buyer's valuation; that is, that the patent purchase price was only 1.38 percent of the present discounted value of the licensing profits the buyer expected to generate. It is useful to identify scenarios under which a seller could manage to capture only such a small fraction of the buyer's valuation and then ask whether those scenarios are economically plausible.

One scenario in which the seller may capture only a tiny portion of the buyer's valuation is if the seller has no ability to generate licensing revenues and profits by licensing the patent to others on its own; the seller has little or no understanding of the true economic value of the patent it owns; and the only potential bidder for the patent was the buyer. However, this scenario is unlikely to apply to most real world patent purchases.

For example, if the seller was a manufacturer in the relevant industry, it is not plausible that it was unable to execute a licensing program or was naive about the value of its own patent. More generally, any seller has a strong incentive to maximize the sale price. A rational seller would recognize that having at least two potential bidders would be a good step toward achieving this end. Approaching other NPEs would be a natural way to broaden the pool of potential bidders, and if the patent is truly valuable other NPEs should be interested in bidding.[2]

In our experience, most sellers of patents do, in fact, have more than one potential buyer. As noted above, economic research into auctions demonstrates that having even as few as two or three bidders can result in the seller capturing a substantial share of the buyer's valuation. This is the case even if the seller is naive — competition between the bidders drives the price upward toward its true value. For example, in a standard auction model where each bidder does not know the other bidders' valuations, but knows that those valuations may be as low as zero and as high as some upper bound value, the seller captures 50 percent of the buyer's valuation with two bidders and two-thirds of the buyer's valuation with three bidders.[3]

A second scenario would be if the bidders tried to avoid competition by colluding among themselves to put in extremely low bids (this scenario would also require that the seller be unable to execute its own licensing program). However, such behavior could constitute a criminal antitrust violation.

A third scenario in which the buyer could retain the overwhelming share of its valuation is if the buyer has a unique ability to earn royalty revenues that cannot be even remotely matched by any of the other potential bidders (or the seller). In that case, the buyer can offer a price just above the other bidders and retain the remainder of the value it expects to earn. However, there are many high-profile NPEs — Acacia Technologies, Intellectual Ventures Management LLC, Mosaid Technologies Inc.,Rockstar Consortium LP, Vringo Inc. and Unwired Planet Inc. are just a few examples.[4] As such, unless supported by substantial evidence, it would be implausible that one NPE could be so vastly superior to others that it could extract value from a patent that is several orders of magnitude greater than the value that could be extracted by other NPEs.

So far, we have explained how a patent purchase price can be used to assess a damages claim by asking whether the implied fraction of the buyer's valuation that the seller was able to retain is economically plausible given the circumstances. Another approach is to use economic principles and the facts of the case to assess the likely fraction of the buyer's valuation that the seller was able to retain and then, using this figure, determine the implied damages amount. For example, suppose there had been two bidders and each seemed a priori equally able to extract royalties from the patent. In such a situation, it

is likely conservative to assume that the seller was able to extract only 50 percent of the buyer's valuation. Plugging this figure into the formula discussed above yields the following:

$750,000 = (0.50*[Expected Damages/Royalties]*0.50)/(1.15)

which implies:

Expected Damages/Royalties = ($750,000)/((0.50*0.50)/1.15) = $3,450,000

This approach can be used to derive a reasonable estimate of the expected damages. Before doing so, it may be necessary to apportion this amount over the various potential licensees as well as to the damages period (versus the remaining life of the patent).

Burton and Weingust object to the use of the patent purchase price in a damages analysis because, among other reasons, the "market to buy and sell patents is not 'efficient' in the economic sense."[5] They also state that "many NPE buyers of patents for assertive licensing or litigation purposes are often, through education and substantial experience, highly skilled negotiators."[6] As a result, "purchasers/plaintiffs are often not pushed or compelled by competition to pay 'top dollar' for a patent,"[7] and, therefore, the difference between the patent purchase price and damages claim can be large.

However, the authors do not attempt to quantify these claims. A measure of the efficiency of a market is the share of the buyer's valuation that the seller captures. Above, we have demonstrated that the market would have to be extraordinarily inefficient, with the seller capturing only a tiny portion of the buyer's valuation, for there to be consistency between the patent purchase price and the damages claim in our example ($750,000 versus $125 million).

To demonstrate just how extraordinary the inefficiency would need to be, one can compare the required level of inefficiency with the level of inefficiency in what are viewed by economists to be highly inefficient markets, such as markets for thinly traded securities or other illiquid assets. As discussed above, in our example the seller captures only 1.38 percent of the buyer's valuation. This equates to an inefficiency or illiquidity discount of 98.62 percent. In contrast, the financial economics literature has found illiquidity discounts in inefficient markets generally to be in the range of 5 percent to 50 percent, depending on the type of asset — much less than the 98.62 percent discount required to explain the discrepancy between the patent purchase price and the damages claim in our example.[8]

One of the largest average illiquidity discounts found for any asset in any study is for restricted institutional shares of a Chinese company stock. These share are "almost completely illiquid" and carry the "astoundingly high" discount of 86 percent for private placements.[9] Thus, the level of inefficiency required to explain the discrepancy between the purchase price and damages claim in our example exceeds the level of inefficiency in other inefficient markets by such a degree as to be economically implausible absent a legitimate economic explanation for the discrepancy well supported by sound evidence.

Two other objections to the use of the patent purchase price have been raised by Burton and Weingust, both concerned with the possibility that the damages/royalties expected at the time of the patent purchase transaction may have differed from the expectations at some later date. The first objection is that, at the time of the patent purchase, the validity and infringement of the patent was uncertain and therefore, at that time, the expected damages/royalties may have been discounted to account for any such uncertainty. At the hypothetical negotiation, in contrast, validity and infringement are assumed to

be certain. We first note that the possibility of uncertainty regarding validity and infringement is not a valid justification for completely ignoring the patent purchase transaction.

Indeed, if that were the case, consideration of existing licenses also frequently would have to be ruled out because most licenses are negotiated before validity and infringement have been adjudicated. In fact, of course, existing licenses are a mainstay of damages analysis in patent cases. Instead of ignoring transactions (purchases or licenses) where there was the possibility of uncertainty regarding validity and infringement, if the evidence suggests such uncertainty had an effect, this effect can be explicitly and easily taken into account in the formula above by amending it to be as follows:

Purchase Price = [Portion of the Buyer's Valuation Captured by the Seller]
*[Expected Damages/Royalties from All Parties Assuming Validity and Infringement]
*[1 - Discount for Uncertainty Regarding Validity and Infringement]
*[NPE's Incremental Profit Margin]
/[1 + Discount Rate]

Burton and Weingust argue that the discount for uncertainty regarding validity and infringement could be 75 percent or more. Whether such a large discount applies in a given case should depend on the facts of that case. However, even a discount of 75 percent could not come close to accounting for the discrepancy between the patent purchase price and the damages claim in our example — incorporating this level of discount would change the implied bound on damages calculated above from $3.45 million to $13.8 million, still an order of magnitude lower than the damages claim of $125 million.

The second objection concerns the possibility that new information concerning the value of the patented technology (either positive or negative) emerged between the date of the patent purchase and the date that the purchaser/plaintiff ultimately presents its damages claim in court. We note that the relevant date through which to consider new information regarding the value of the patented technology is the date of the hypothetical negotiation, not the date of trial. If new information did become available, the expectations of the parties to the hypothetical negotiation concerning the value of the patent may have been different than the expectations of the buyer at the time of the patent purchase.

However, as with the issue of uncertainty concerning validity and infringement, the issue of new information is not limited to patent purchase transactions. It is also an issue that must be considered for existing licenses for the patent-in-suit. For example, an existing license that was negotiated at a point in time very distant from the time of the hypothetical negotiation, or a patent purchase transaction that was executed at a point in time very distant from the time of the hypothetical negotiation, may be deemed to not be a good comparable because the information sets available to the two parties was sufficiently different.

In conclusion, patent purchase prices, just like license agreements involving the patent-in-suit or other comparable patents, are an important piece of evidence to consider when evaluating the reasonable royalty damages in a patent infringement case.

The purchase price for the patent and the damages/royalties expected at the time of the purchase are directly related. As such, significant deviations between the purchase price and the patent owner's damages claim should raise concerns. Only under unusual circumstances, e.g., when the seller is able to capture only an exceedingly small portion of the buyer's valuation or the value of the patented technology increased significantly between its acquisition and the date of the hypothetical negotiation, does it make sense for a damages claim to deviate significantly from the expected licensing profits implied by the

purchase price of the patent. Any plaintiff that claims damages well above the patent purchase price should be required to demonstrate that such unusual circumstances, in fact, existed.

—By Gregory K. Leonard and Stephen P. Rusek, Edgeworth Economics LLC

Gregory Leonard and Stephen Rusek are partners in Edgeworth Economics' San Francisco office.

Disclosure: The authors were retained as experts by Trend Micro in Intellectual Ventures v. Trend Micro Incorporated and Trend Micro Inc. (USA).

The opinions expressed are those of the author(s) and do not necessarily reflect the views of the firm, its clients, or Portfolio Media Inc., or any of its or their respective affiliates. This article is for general information purposes and is not intended to be and should not be taken as legal advice.

[1] What follows is a simplified model that could be expanded to the specifics of an actual case. The discussion, for example, can easily be extended to the case of multiple years between the purchase of the patent and damages claim. Note also that the same principles could be applied to the purchase price of a patent portfolio, as long as the portfolio purchase price is apportioned down to the patents-in-suit.

[2] If other potential bidders declined to participate in negotiations to purchase the patent, this is a further signal that the patent was not expected to generate substantial royalty revenues.

[3] Specifically, the equilibrium strategy for a bidder in a first bid private values auction where the private values are each drawn from the same uniform distribution with a lower bound of zero is to bid an amount equal to x*(N-1)/N where x is the bidder's private value and N is the number of bidders. If there are two bidders, the seller gets a price equal to x/2 where x is the winning bidder's value; if there are three bidders, the seller gets a price equal to x*(2/3); and so on. The seller gets an even larger fraction of the buyer's value in this model if the lower bound of the value distribution is greater than zero or if the seller has its own ability to earn profits from licensing, in which case it may set a reservation price greater than zero.

[4] See http://www.ipcheckups.com/npe-tracker/npe-tracker-list/; Vringo, Inc. Form 10-K for the fiscal year ended December 31, 2013; and Unwired Planet, Inc. Form 10-K for the fiscal year ended June 30, 2013.

[5] Misuse of Patent Purchase Price in Damages Analysis, Bruce W. Burton and Scott Weingust, Law360, August 11, 2014.

[6] Misuse of Patent Purchase Price in Damages Analysis, Bruce W. Burton and Scott Weingust, Law360, August 11, 2014.

[7] Misuse of Patent Purchase Price in Damages Analysis, Bruce W. Burton and Scott Weingust, Law360, August 11, 2014.

[8] See, e.g., A. Damodaran, Demodaran on Valuation (2nd Edition, 2006), pp. 497-539; and R. Reilly and R. Schweihs, The Handbook of Business Valuation and Intellectual Property Analysis (2004), pp. 192-195.

[9] Damodaran, p. 518.