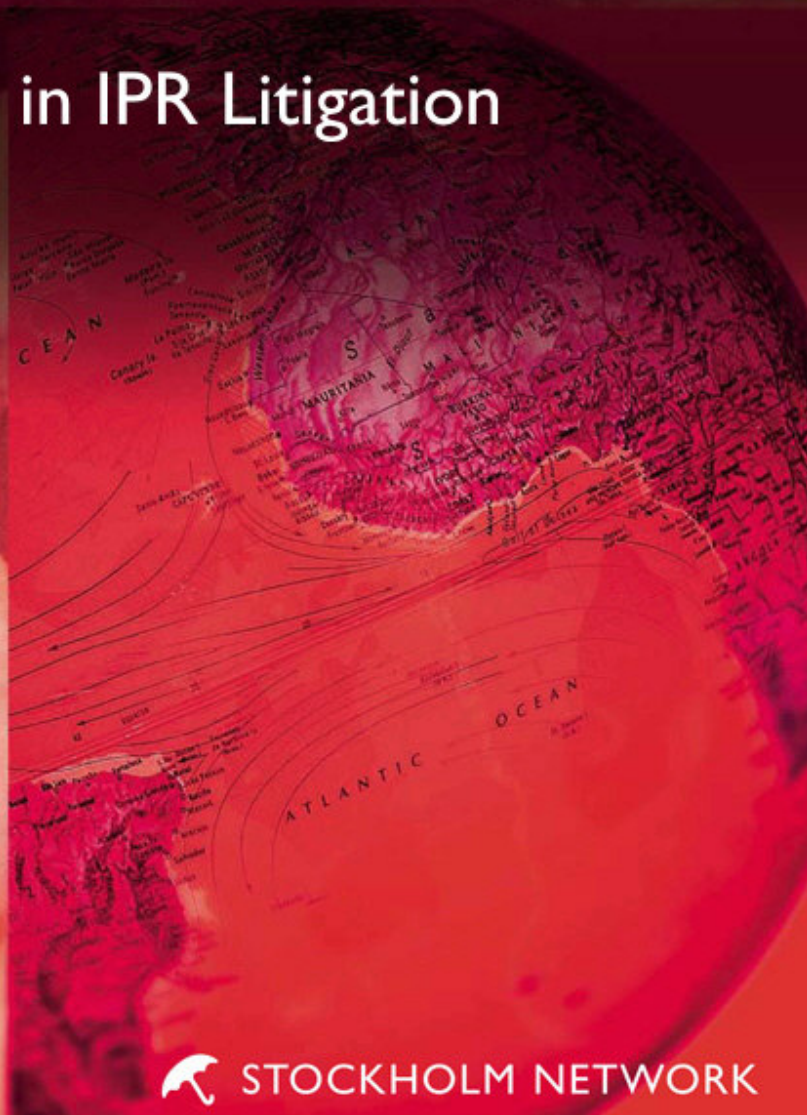




The Stockholm Network Experts' Series on Intellectual Property and Competition

The Role of Economists in IPR Litigation



By Joe Cook



STOCKHOLM NETWORK

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NERA Economic Consulting

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Economists are now widely used in the United States in intellectual property, particularly patent, litigation. There are a number of issues that arise in such cases that are particularly well-suited to the economist. The use of economists in IPR litigation in Europe appears to occur with substantially less frequency. This may have been said to be the case in the US some years back; however, over time the use of economists as experts has seemed to grow each year. One might ascribe part of the increase to a change in the relevant questions, particularly for damages; a change that would require addressing more sophisticated economic issues with greater frequency. Perhaps Europe is poised for growth in the role of economists and the US experience may be probative.

Of course, outside litigation, economists are consulted regarding valuation of intellectual property rights and, in particular, transfer prices for intellectual property rights. Patents probably represent the widest involvement for economists in a litigation context. A myriad of issues arise in patent litigation upon which an economist might be consulted, including those related to: damages, commercial success, and antitrust or competition policy claims. Discussion here is focused on the economics of these issues, rather than any legal interpretations of what might be appropriate in any given circumstance or jurisdiction.

The economic analysis is often complicated and requires more than simply reviewing existing financial and accounting records. Such records are prepared for other purposes, predominantly taxes and securities filings, and are not typically addressed to the types of issues that arise in patent litigation. As such, they will not typically address the particular questions raised in the litigation. For example, a firm's existing records may provide information on the profitability of a division, but will not likely provide a breakdown of profitability by product. Even less likely would be an analysis that assigns a particular profit stream to a particular patent.

Moreover, the measures of profitability are likely to be in the aggregate or an average, and not the incremental profits. Of course, it is the incremental profits in which we are interested for the calculation of economic damages. Incremental profits can be higher than the average, as not all the incremental expenses need be borne to sell one (or one-hundred) additional units of the product. Thus, such documents often provide a useful starting point but must be used and applied with care and making the appropriate adjustments.

Patent Damages

In any calculation of economic damages, one compares the world that has been observed with a model of what the world would have been like but for the alleged wrongful conduct. The calculation of economic damages from alleged patent infringement employs this same basic approach; however, under US law, the patent holder is entitled to no less than a reasonable royalty. Typically, in a study of patent damages, the economist will investigate the question, "Had the defendant not engaged in the alleged infringement, what sales would have taken place in the market and at what prices?" If one finds that no sales were lost to the alleged infringer and, hence, no lost profits on those sales, then the "reasonable royalty" will likely be the primary basis for damages. Damages can be trebled in the US if the infringement is found to be wilful infringement.

The lost profits are modelled using the patent holders' profitability on incremental sales, i.e., those additional sales, if any, that the patent holder would have made in the absence of the alleged infringement. It is important to recognise

that the focus is on the profits made on additional units sold, rather than, say, the average profit on all the units sold previously.

The *Georgia-Pacific* factors for determining a reasonable royalty are widely cited in the US and serve as a useful starting point; however, most, if not all, of the relevant factors in any case are captured in what has become known as the “hypothetical negotiation.”¹ The hypothetical negotiation is, essentially, a model of what would have happened if, on the eve of infringement, the parties had negotiated a license. Assuming the parties were willing and sensible economic agents, what would the patent holder and alleged infringer – taking into account all the relevant economic factors and information – have agreed to? The exercise is principally one of determining the alleged infringer’s maximum willingness to pay and the minimum amount that the patent holder would be willing to accept—both of which will be based on their next best alternative. Of the topics discussed here, the availability of an alternative technology is the most relevant to the determination of a reasonable royalty. But, before turning to that, let us examine some of the economic issues that principally relate to lost profits.

Price Erosion

Lost profit calculations in patent cases can be complicated by price erosion. The patent holder may argue, not only that the defendant is infringing, but in so doing also pulling down prices, and profits, in the market. So, the patent holder may also be interested in claiming price erosion damages. Here, one must be careful because lower prices typically mean a greater quantity sold in the market – by the law of demand. In constructing a sensible model of the world, absent the alleged infringement, raising the price to account for the removal of the infringement-based price competition will mean fewer sales in the market and can mean less in the way of lost profit damages. Consider the simplest case with identical products sold only by two manufacturers, one the patent holder and the other the alleged infringer. As an economic matter, it would be having one’s cake and eating it too to say that the patent holder ought to get price erosion damages on all its own sales and lost profits on all the sales of the alleged infringer—for, if, in the “but for” world the alleged infringer’s price were higher, it would not be likely to have made as many sales as it did.

¹ *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), modified on other grounds, 446 F.2d 295 (2nd Cir.), cert. denied, 404 U.S. 870 (1971) (“A comprehensive list of evidentiary factors relevant, in general, to the determination of the amount of a reasonable royalty for a patent license may be drawn from a conspectus of the leading cases. The following are some of the factors *mutatis mutandis* seemingly more pertinent to the issue herein: (1) The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty. (2) The rates paid by the licensee for the use of other patents comparable to the patent in suit. (3) The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold. (4) The licensor’s established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly. (5) The commercial relationship between the licensor and the licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter. (6) The effect of selling the patented specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales. (7) The duration of the patent and the term of the license. (8) The established profitability of the product made under the patent; its commercial success; and its current popularity. (9) The utility and advantages of the patent property over the old modes or devices, if any, that used for working out similar results. (10) The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention. (11) The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use. (12) The portion of the profit or of the selling price that may be customary in the particular businesses or in comparable businesses to allow for the use of the invention or analogous inventions. (13) The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer. (14) The opinion of qualified experts. (15) The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, the obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

Market Expansion

There is another sense in which a market may expand or contract, however. This provides yet another consideration in the calculation of economic damages. Suppose that the products of the alleged infringer and the patent holder are not identical. Rather, assume that the patent holder has a true pioneer patent in the sense that no product is likely to enter in competition with the patent holder's product without practicing the technology embodied in the patent. Nevertheless, let us also assume that the alleged infringer is also an innovator and has invented a technology that permits a substantial improvement in the product. Such a scenario can be the type in which we see another type of market expansion that can lead to a constraint on lost profit damages.

Consider the following example. Suppose that one firm has invented a medical device that is implanted in the human body. Further, let us say that the patent rights of this firm are, for this purpose, assumed to be both strong enough and broad enough that no other firm could make this type of medical device without infringing its patents. However, there is a second firm that has an innovation of its own. It has found a way to make the same device, only much smaller. Being much smaller, the device can now be implanted in more places in the body, places that might have been too risky previously. Thus, a whole new group of patients can be treated with the infringing device that could not have been treated with the original medical device. That portion of the infringer's sales then, that reached this new group, represent sales which were not truly lost by the patent holder but to which he would still, under US law, be entitled to a reasonable royalty.

Antitrust Counterclaims

In the US, there is a wide experience with the alleged infringer in a patent infringement case counterclaiming against the patent holder. In short, such claims argue that the patent holder has fraudulently obtained its patent and that it knows it to be invalid. Its persisting in attempting to enforce its patent is the monopolisation, or an attempted monopolisation, of a relevant antitrust market. Such arguments bring us back to the fundamental question of where the alleged infringer's sales would have gone had it not been on the market, and they can put the patent holder on the horns of a dilemma.

The patent holder would typically prefer to be able to argue that the alleged infringer's sales would have all come to it; that is, that it is the only non-infringing alternative to which the consumers could have turned, as such a claim typically leads to a claim for lost profits on all of the alleged infringer's sales. If, in the alternative, there are other non-infringing alternatives to which the alleged infringer's customers could have turned, then the sales that would have been made by these firms typically represent only a reasonable royalty for the patent holder. Therein lies the rub: if the patent holder argues that it is the only non-infringing alternative to which the alleged infringer's customers could have turned, it has helped provide some measure of support for one of the elements of the alleged infringer's antitrust counterclaim—that is, that it has some substantial measure of market power due to a lack of close substitutes.

Commercially Available Technological Alternatives

The ability to design around the patent can put a cap on the reasonable royalty. If the alleged infringer can spend a few thousand dollars to change their product so as to achieve the same perceptions from consumers as to quality

and at no greater cost of production, why would they ever pay more than a few thousand dollars in royalties? The answer is that no rational economic agent, no matter how willing, would exceed their maximum willingness to pay in negotiating a royalty. In the US, there is still the question of availability. It need not be the case that the alternative is actually “on the market” or “for sale”. Rather, commercially available means more that all the necessary productive inputs are at hand to switch. However, this availability is not enough on its own. It is not enough to say that the technology is proven and any necessary inputs are available, but one must also demonstrate that consumers find the alternative acceptable.²

Commercial Success as an Indicator of Validity

Economists also investigate and opine regarding patent validity. One factor affecting whether or not a patent is valid is whether or not the innovation was obvious. Generally, patents are only granted for innovations that are not obvious. The commercial success associated with the patent, is one point to be considered in making a determination of obviousness. If a patent product was a successful product, then it likely earned profits. However, it is important that the profits be attributable to the patent, perhaps the patented feature of the product – rather than some other unrelated factor or commercial advantage.

Trademarks and Consumer Surveys

One area in which economists work in IPR litigation outside of patents is that of allegedly infringing trade dress – where one firm’s trade dress is alleged to be so similar to another’s that it leads to consumers being confused and buying a different product than they intended to buy. Here, surveys can be used to gather economic data on consumer choices with respect to the relevant products, surveys that include controls for other factors that might also affect consumer choices. Using the data from such a survey, a measure can be made of the degree to which consumers intend to purchase one product and end up purchasing another based on the trade dress. Such a measurement can be informative both with respect to liability and a measure of the economic damages.

Conclusion

The increasingly varied use of economists in civil litigation relating to intellectual property rights in the United States may spread to Europe. While not widely used at the moment, Europe’s intellectual property rights disputes can undoubtedly involve the same complexity of markets and damages’ calculations. While the issues and contexts may vary in Europe as the situation develops, battles of expert opinion and analysis over the underlying economic issues seem unavoidable in the long run.

² *Grain Processing Corp. v. Am. Maize-Products Co.*, 185 F.3d 1341 (Fed. Cir. 1999).