

Part

The Facts and Relationships
That Influence Decisions
to Settle and Settlement Terms

Introduction 1

Private settlement of disputes is vital. The economy would quickly collapse if all legal disputes had to be resolved by decisions of judges and juries. The judicial system would quickly grind to a halt if all actions filed were decided by a trial or even a motion. Judge Charles B. Renfrew put the subject of settlement in proper perspective some years ago in a talk on settlement of antitrust actions.

One of the often overlooked and sometimes ignored facts of life in litigation is that the overwhelming number of cases are disposed of by various means prior to trial. . . . Neither lawyers nor indeed the courts have given sufficient thought to the various considerations central to the settlement process. For this reason it is particularly appropriate to direct attention to the settlement process as a means of disposing of antitrust cases. Too often, similar discussions have had as their only topic the various procedures utilized in preparing a case for trial and for actual trial techniques, thus overlooking the extraordinary importance of settlement.

. . .

Although there is an active debate within the judiciary about the propriety of judicial activism in bringing about settlements, in my judgment the stark reality of burgeoning case loads has now resolved the issue in favor of activism. . . . The rationale behind this approach to the judicial role in settlement is that the public has a vital interest in having the courts available for the function to which they are best suited—the orderly decision of controversies which the parties have been unable to settle by other means.¹

1. Charles B. Renfrew, *Negotiation and Judicial Scrutiny of Settlements in Civil and Criminal Antitrust Cases*, 70 F.R.D. 495, 495–97 (1976) (footnotes omitted).

A. Importance of Patent Settlements

The Patent Act provides that a patent grants its owner the right to exclude others from using or selling an invention, and that anyone who uses or sells an invention without the patent owner's authority infringes the patent. The Patent Act further provides for injunctions to prevent future infringement and damages to compensate for past infringement. Exclusive rights and injunctions exist to enable a patent owner to control who uses an invention and how they use it. Exclusive rights and injunctions also exist to require anyone who wishes to use a patented invention to buy the right to do so at prices and on terms the patent owner and the user agree are mutually advantageous. Under this system, and in an ideal world with no infringement, the companies that use inventions, the ways they are used, the amount of use, and the price for use are determined by private transactions, not by courts.

However, the world is not ideal, and all use of patented inventions does not occur as a result of transactions. For many reasons, use of patented inventions often takes place without the permission of patent owners. When patent owners and potential patent infringers become aware of a potential patent problem, they often disagree about whether a patent is valid or invalid and whether a particular product or service infringes the patent. They often disagree about the amount of damages for past infringement and whether an injunction will issue against future infringement. They may disagree about whether there is some defense to a claim of infringement, such as the existence of a license, an implied license, estoppel, exhaustion, patent misuse, and inequitable conduct. These disagreements give rise to legal disputes.

There are two basic ways to resolve patent disputes. One is by having a judge or jury decide the issues through litigation. Imagine for a moment that all patent disputes had to be resolved by litigation, and all actions filed were litigated to judgment. If litigation to the bitter end were the only way to resolve these disputes, the patent system probably could not function. The costs of resolving disputes in that way, both direct and indirect, would likely more than offset the gains from increased R&D investment. Fortunately, the federal courts are not the only mechanism for patent owners and potential patent infringers to resolve those issues.

The other way to resolve patent disputes is for patent owners and potential infringers to enter and enforce agreements with terms that reflect what the parties believe are the most likely or most sensible answers to those patent issues. Patent law permits settlement agreements and, indeed, should encourage them.

Which of these two basic ways to resolve patent disputes is more efficient? History has shown that patent owners and accused infringers believe settlement is far more efficient than litigation. Patent owners and accused infringers overwhelmingly resolve patent actions by settlement rather than decision by a judge or jury. For the last 20 years, 85 to 90% of patent infringement actions each year were resolved in the district courts without a decision by a judge or jury on the issues. Over that period, 87% of those actions were resolved without a decision on the merits. After a district court decision, another eight percent were settled without a decision on appeal. This means

the parties settled about 95% of patent actions. For every action litigated to the bitter end, the parties settled 19 actions. And this is merely the observable tip of the iceberg. For every dispute that resulted in litigation, many others were resolved without filing a complaint.

Patent owners and potential infringers find settlement far preferable to litigation. Why?

B. Advantages of Settlement

Private settlement of patent disputes has five main advantages over litigation.

Cost. The most apparent and therefore most discussed advantage is that the settlement process is less costly than the litigation process.

Time. The second most apparent advantage is that the settlement process takes less time than the litigation process, and time usually is very important.

Certainty. The third advantage is that the result or outcome for each party under a settlement agreement is certain, whereas the result or outcome for each party in litigation is uncertain. Assuming patent owners and accused infringers do not like risk, they are better off with settlement than litigation.

Better Results. The fourth advantage is that patent owners and potential infringers are able through settlement agreements to achieve results that are unavailable to the courts through decisions and orders. One common example is a settlement with a license permitting an accused infringer to use the invention in the future. The license may make both patent owner and infringer better off in the future than they would be with litigation resulting in a judgment with an injunction against future infringement. Future use of an invention by an accused infringer may generate larger revenue or lower costs than use of the invention by the patent owner or some other licensee. A settlement with a license may increase the value of the invention in the future and the profits available for the patent owner and infringer to divide. An injunction against future infringement may prevent these gains.

There is another aspect of the relative efficiency of settlement that is less apparent. Settlement permits the parties to operate in the future under agreements whose terms reflect legal uncertainty. With litigation to judgment, patents are an all-or-nothing game. The patent owner wins or the accused infringer wins. The patent is found valid or invalid. The accused infringer's activities are found to infringe or not infringe. With settlement, patents are not an all-or-nothing game. If a patent owner and an accused infringer believe there is about a 30% chance, a 50% chance, or a 70% chance that the patent satisfies the standards for a patent to issue or that the accused infringer's activities infringe the rights, they may adjust the pricing and other terms of their agreement to reflect those views. The price will be lower when there is a 30% chance that the patent is valid and has been infringed, higher when there is a 70% chance of validity and infringement, and somewhere in between when there is a 50% chance. This is something a court may not do.

In other words, a court may only declare that a patent owner receives all of the benefits of a patent or none of the benefits. A court may only declare that an accused infringer bears all of the costs of infringement or none of the costs of infringement. Settlement makes available all of the hundreds of possibilities between those two results. Settlement allows the parties to adjust the price for use of some invention to reflect the likelihood that it deserves a patent and that someone is using the invention that justifies a patent. Settlement allows the parties to adjust the price to reflect the likelihood that some defense to infringement liability exists or that certain remedies would be available. As importantly, settlement allows the parties to adjust the price to reflect the often inherent and unavoidable uncertainty of resolving these issues by litigation. A court can do none of these things. A court may only enter judgment in favor of the patent owner or accused infringer.

Better Decisions. The fifth advantage is that the settlement process is likely to provide “better decisions” on the underlying issues. The reason is that the people who make settlement decisions are more likely to have training, experience, and knowledge that better equips them to understand and decide patent issues. The people making settlement decisions about patent rights are often people who have done R&D and attempted to make inventions. They are likely to make more informed decisions about whether some invention would have been obvious to an ordinary person. They have often designed, built, and marketed products and understand how and why they work. These people are likely to better understand what invention is described and claimed in some patent and whether some product or process is employing the same invention. They often have operated businesses based on their understanding of the commercial value of a product using some technology and substitute products using alternative technologies. These people are likely to better appreciate the economic value of some invention and measure damages more accurately. They are more likely to understand the prior art and identify the respects in which some invention is different than the prior art, if any.

The people who make decisions about patent issues in the courts almost never have this background, experience, or knowledge. For this reason (and with all due respect to the many able and diligent federal judges and juries), the people who make settlement decisions are more likely to understand the facts underlying the patent issues than those who make decisions in the courts. Assuming those people also have an equally good understanding of the law on some issue and, perhaps more importantly, the purpose of the law on that issue, those people are more likely to make better decisions.

When the parties make a decision to settle, their truly held views are likely to have some influence on whether a settlement on some terms is acceptable, even though each understands that it is the likely views of a judge or a jury that ultimately matter. To the extent that a settlement ultimately reflects the truly held views of the parties, the ability of the parties to a settlement to better understand the facts underlying the issues under dispute means that decisions by the parties are likely to be better than decisions by a judge or jury.

It is also important that there often is no objectively right or wrong answer to a particular patent issue. If a patent issue is difficult for the people and companies with knowl-

edge, training, and experience in the subject area, the same issue will be equally, and probably more, difficult for those who decide such issues in the courts. Nothing magic happens when a judge or jury decides a patent issue. An issue that was difficult before a judge or jury decides is difficult after the decision. The decision may provide little or no information about the “right” answer. The only magic is legal. The decision is binding on the parties. If someone must make a difficult judgment or even guess about the “right” result on some issue, the people who make settlement decisions likely are better equipped to decide and are at least equally adept at guessing than those who make the same decisions in the courts. If that is correct, this is an advantage of settlement.

C. Approach and Tools for Settlement

Because settlement is important and has several advantages over litigation, the process and results of settlement should be as efficient as possible. That is the purpose of this book. This book describes an approach to settlement and provides ways to assist settlement that hopefully will lead to better settlement outcomes and less expensive, more timely settlement processes.

The overall settlement approach is based on the standard economic model of how people make settlement decisions. Most patent owners and accused infringers consider the potential economic effects when deciding whether to litigate or settle. This book is designed to help the parties with that aspect of the settlement decision and the process of negotiating a settlement. This book describes the facts and estimates that shape each party’s settlement decision, as well as how to translate those facts and estimates into dollar amounts in order to determine whether various types of settlement are in the economic interests of the parties.

This book has four parts. Part I describes the economic theory of patent settlements. The economic theory simply describes how people are likely to go about making the choice between litigation and settlement. The theory describes how perceptions of the commercial value of some invention, the value and cost of litigation, and the value and cost of various settlement options influence prospects for settlement and the terms of settlement.² Part II describes how to apply the theory in a particular situation. Part III describes the empirical data on how patent litigation works. Part IV describes features of the law important to settlement.

1. Economics of Settlement

Part I describes the standard model of settlement decisions, adapted to fit patent actions, and the settlement options most commonly used in the patent context. The model describes how a patent owner and accused infringer: (1) assess the commercial value of an invention and the expected value or cost of litigating to judgment and (2) compare the value of the invention and the value or cost of litigating to judgment to the value and cost of various settlement options. The model further describes how

2. If you do not like economics, the same concepts may be called the behavioral theory of settlement. If you do not like theory, the concepts may be called the business approach to settlement.

patent damages and injunctions influence the value and cost of litigating to judgment and how litigation costs influence the net value and cost of litigating. The model shows how the prospect of increased damages, attorneys' fees awards, and other common features of patent litigation affect settlement decisions and terms.

The basic model employs four basic settlement options. One important option includes a license for the future. Therefore, this book also describes the forces that influence decisions to grant and accept a license and how to identify a range of acceptable royalty payments for the future, given each party's view of its commercial and litigation options. This book describes how the prospects for licensing and payment are constrained by both the true commercial value of some patented invention and the value and cost of infringement litigation.

The basic model also explains how a party's aversion, indifference, or preference for risk influences the perceived value or cost of the option to litigate and, therefore, the prospects and terms of settlement. The risk of litigation involves uncertainty about who will win and lose as well as the amount of damages and the likelihood of a permanent injunction. Due to some unfortunate features of the law, the choice facing a patent owner is not always between settlement with a certain outcome and litigation with an uncertain outcome. Since the Supreme Court's decision in *Lear v. Adkins*, some forms of settlement do not eliminate future uncertainty about payments and litigation of patent issues. The basic model may be applied to deal with this added complexity.

The basic model shows the economics of settlement based on the parties' perceptions of the effects of a judgment or settlement on the relations between them. A patent rarely affects only the patent owner and one accused infringer. A patent owner's decision to litigate or settle one action or dispute is usually influenced by the owner's perception of the impact of one judgment, settlement, or license on its existing and future relations with other actual or potential infringers and actual or potential licensees. An accused infringer usually considers the same factors from a very different perspective. This book describes settlement decisions when these added third-party effects are at work.

2. Use in Practice

Part II explains how the basic model is applied to help make settlement decisions in particular situations. The model is applied separately and in different ways for three time periods because the expected value and cost of litigation are different and the parties' options are different during each period. The three time periods are: (1) the period prior to litigation and a settlement negotiation; (2) the period from negotiation to litigation remedies becoming effective; and (3) the period after judgment and remedies. Part II also describes how this model is used to show whether various agreements are in the economic interests of the parties. Part II describes how charts may be prepared to show whether the economic conditions for settlement are likely to be satisfied, the dollar magnitudes of the controlling factors from the perspectives of each party, and the financial gap preventing an agreement or the range of financial terms within which settlement is possible. Examples illustrate the effects of factors commonly important in a patent litigation context on settlement decisions. For example, some illustrate how contingent fee arrangements and so-called nonproducing patent owners influence settlement.

3. *Data on Patent Litigation*

Part III sets forth the data I developed on how patent litigation works. How frequently are patent actions resolved by trial, pretrial motion, or settlement? How long does it take for patent actions to be resolved by trial, motion, or settlement? When does settlement usually occur? Who wins and loses on trials and motions? Are patent owners as successful as often reported? Did the Court of Appeals for the Federal Circuit really make much difference? What are the damages? Are damages in patent actions as large as advertised and large enough to explain the significant number of actions the parties litigated rather than settled? Part III also sets forth data developed by others, including studies of the issues that lead to litigation and how successful patent owners and accused infringers are when litigating those issues. This data sometimes helps people form realistic expectations about patent litigation.

4. *Legal Issues and Settlement*

Part IV discusses the law that the parties involved in settlement must understand. The law governs the consequences of various ways of resolving patent disputes before litigation, the consequences of the ways litigation may be terminated, the circumstances in which potential infringers and licensees may commence declaratory judgment actions on patent issues (creating unneeded barriers to negotiations and agreements), the legality of settlement under antitrust law (such as the oft-misunderstood problem of reverse payments), and the legality of cooperation among patent owners, accused infringers, or potential licensees regarding litigation, settlement, and licensing. Part IV discusses these laws and ways to adapt settlement practices to the constraints of the law. The law often interferes in unproductive ways with settlement and licensing agreements. This part shows how the law could be changed to remove these obstacles to agreements—changes the patent reformers unfortunately ignore. Part IV also discusses the problems created by so-called RAND and FRAND obligations.

D. *Uses of the Approach and Tools*

Following are some ways to use the approach to settlement. This section puts the cart before the horse, describing the usefulness of the approach before explaining it. Some readers may wish to skip this section and come back to it later. Others may prefer to have some explanation about the benefits of the approach at the outset.

1. *Qualitative Analysis*

One way to use the approach is simply for patent owners, potential patent infringers, and their attorneys to understand the concepts and think about them when considering settlement, assessing settlement prospects, preparing for negotiations, negotiating settlement, and deciding whether to settle. Settlement of patent actions and disputes requires that the parties take action when confronted with complex legal and commercial facts, expectations, and uncertainty. The general approach helps deal with the complexities in a systematic way, identify the important facts more quickly, focus negotiations and settlement proposals on the economic interests of each party, identify any mutual gains from an agreement, and make better settlement decisions.

There are some actions that are highly unlikely to settle, mainly due to large, third-party effects. The approach will help identify those actions earlier and less expensively, which in turn will save time and money trying to settle actions where it is likely a waste of time or where time is better spent trying to devise ways to accommodate a party's interests in third-party effects.

2. Quantitative Analysis

Another way to use the approach is to apply it in a quantitative way—that is, by collecting the needed commercial and legal facts, making the needed estimates (because future events are important and always uncertain), and processing those numbers using the model. A patent owner could use the approach to identify the types of agreements and minimum payment terms for a settlement that would be preferable to litigation, given the owner's views of the commercial and legal situations. An accused infringer could apply it to identify the types of agreements and maximum payment terms for a settlement that would be preferable to litigation, given the infringer's views.

The minimum a patent owner would accept and the maximum an infringer would pay are sometimes called that party's reservation price, the price at which a party is indifferent between some agreement and litigation. Reservation prices will vary for different types of settlement agreements. A patent owner's and accused infringer's respective reservation price for a particular agreement is often based on its litigation option. Litigation is often an owner's or infringer's "best alternative to a negotiated agreement," or BATNA.³ This approach permits a party to define its BATNA in terms of dollars, whether the alternative is litigation or some other option.

3. Use in Negotiation

The approach could be used to help plan and conduct settlement negotiations.⁴

Develop Settlement Positions. A party could conduct the analysis to define its bottom line and select its settlement position or proposal.

Assess the Other Party's Interests. A party could also use the approach to estimate the other party's reservation price. This would help that party evaluate the ultimate likelihood of settlement and select the terms it would propose for settlement. Of course, a patent owner will never know with confidence an infringer's maximum terms and payment because the patent owner will not know the infringer's true view of the probability it would lose by litigating. An infringer will never know a patent owner's true minimum because the infringer will not know what the patent owner actually believes about its probability of winning. Each party will not know the other's expected litiga-

3. See R. H. MNOOKIN, S. R. PEPPET & A. S. TULUMELLO, *BEYOND WINNING, NEGOTIATING TO CREATE VALUE IN DEALS AND DISPUTES* Ch. 1, 7 (Harvard Press 2000).

4. See generally WAYNE P. BRAZEL, *EFFECTIVE APPROACHES TO SETTLEMENT: A HANDBOOK FOR LAWYERS AND JUDGES* (Prentice Hall Law & Business 1988); G. RICHARD SHELL, *BARGAINING FOR ADVANTAGE: NEGOTIATION STRATEGIES FOR REASONABLE PEOPLE* (2d ed., Penguin Books 2006). For a fascinating discussion of attorneys' views on settlement, see WAYNE P. BRAZEL, *SETTLING CIVIL SUITS: LITIGATOR'S VIEWS ABOUT APPROPRIATE ROLES AND EFFECTIVE TECHNIQUES FOR FEDERAL JUDGES* (American Bar Association 1985).

tion costs, its attitude toward risk, its true views on damages or an injunction, or its true views on other factors that influence price and other settlement terms.

However, it is an inherent feature of a negotiated settlement that each party acts based on its own views of the value or cost of litigation and other factors and its assessment of the truly held views of the other party on the same factors. During a negotiation, each party attempts to assess what the other party actually believes about the expected value or cost of the action and other factors and attempts to influence the views of the other.

In making its ultimate decision to settle, each party will decide whether the settlement makes it better off than the alternatives, given its own views of the alternatives. Each party is also likely to give thought to whether settlement makes the other party much better off given the other party's true views of the alternatives. In other words, each party is likely to assess whether the often significant gains from settlement have been divided roughly equally. Because it is highly likely that each party makes assumptions about the other party's views and acts on those assumptions, the approach does nothing unusual by making the other party's views part of the analysis, even though those views are not well known.

Assess the Other Party's Positions. A party could use the approach to assess the other party's settlement position or proposal. A party could compare the financial terms the other proposes with facts and estimates that are consistent with those terms. If the other party's proposal is consistent only with erroneous facts or unrealistic estimates, the approach could help demonstrate these unnecessary barriers to an agreement.

4. Cooperative, Joint Use of the Approach

A patent owner and an accused infringer could discuss whether both would apply the approach to evaluating settlement. This would help focus and obtain the information each party needs to assess settlement, reduce the likelihood of basic disagreements about the factors that should influence settlement and their significance, and help avoid the problems that arise when one party bases its settlement proposal on something other than economic results or sensible analysis of the options.

The approach would also help avoid the difficulties that arise when a negotiation is conducted by each side staking out a proposed settlement with little or no explanation of the basis for it and proceeding in a protracted series of steps in which each party moves or refuses to move from their positions until a point is reached with an agreement or no agreement. The approach deals explicitly with the interests and views of the parties that determine whether there is some agreement that leaves each party better off and define the range of financial terms within which an agreement is possible. In most situations, the approach will identify mutually advantageous agreements and a sensible distribution of the gains more quickly, cheaply, and accurately than a negotiation based purely on an iterative series of proposals by which each signals the other about its interests and beliefs.

5. Use in ADR Processes

The parties could use the approach in connection with mediation or some other dispute-resolution process.

Mediation. Mediation is used to explore settlement in many patent actions. Mediation is basically a private negotiation conducted with the help of a neutral person

who attempts to overcome barriers to an agreement. Some of these barriers are discussed briefly below.

The approach provides an outline of the information needed to evaluate settlement possibilities. This should help reduce the cost and time spent gathering information. More importantly, the approach provides a well-defined way for the mediator to evaluate the economic interests of each party, given each party's views of the facts and its estimates of the future, including its view of the litigation alternative. If agreeable to both parties, each party would provide its views of the facts and its estimates in confidence to the mediator with the understanding that the mediator would apply the approach to assess settlement prospects. If the mediator followed the approach, the parties would know in advance how the mediator would process the information provided and the nature of the results of the analysis. Such knowledge would make it more likely that the parties would cooperate in providing information and perhaps even make honest estimates of the likelihood of future events, most notably the probability the patent owner would win and the accused infringer would lose if the action is litigated.

The parties presumably would require that the mediator not reveal to one party the results of applying the approach using the facts and estimates provided by the other or indeed give any indication of those results. However, the mediator could advise the parties in a general way whether settlement is in their mutual economic interest, given their expressed views. The mediator could also identify the nature of the factors that appear to make settlement more likely and those tending to make it less likely. The mediator could identify the nature and magnitude of the changes in the views of the parties needed for an agreement.

Partial Arbitration. If agreeable to both parties, each party could provide to an arbitrator its views of the facts relating to the commercial value of some invention with and without licensing, the value and cost of damages, and the value and cost of an injunction. The arbitrator could provide a decision on those issues. The parties could negotiate the probability the patent owner would win and accused infringer lose, each party's attitude toward risk, third-party effects, and other factors. Settlement could be based on a combination of the factors decided by arbitration and the factors negotiated.

6. Use in Settlement Decisions

The analysis may be used to provide a basis for a business decision to accept or reject a settlement proposal. There are many legal and practical incentives for businesspeople to understand and sometimes justify their decisions about settling patent actions. The approach and analysis help with both.

7. Use in Managing Litigation

The analysis should help in managing litigation. The parties to patent disputes must make decisions on what the attorneys and others do during the course of a dispute. Those activities involve costs. The approach should help to determine the value provided by some additional litigation activities. How valuable to the owner is an activity that will increase the owner's probability of winning and the infringer's perceived probability of losing by some amount? Is the added value greater than the costs and, if so, by how much? By helping answer such questions, the analysis should help patent

owners and infringers identify the point of diminishing returns where additional litigation effort and cost is not justified by the additional increase in likelihood of winning or decrease in the probability of losing.

8. *Overcoming the Barriers to Negotiated Settlement*

The approach should help overcome some of the so-called barriers to a negotiated settlement.⁵

Positions Instead of Interests. A frequent barrier to settlement is that the parties spend a great deal of time describing and defending their bargaining positions and less time identifying and discussing their economic interests. The approach is not about bargaining positions and strategies. The approach is based on assessment of the parties' economic interests. The approach identifies and describes those interests in a way that permits the settlement process to work in the best interests of both parties.

Anchoring. When determining what a case is worth, the parties may rely too much on their prior experiences (even if limited or atypical) and information about situations that attracted widespread media coverage, such as large patent damages awards or settlements. These experiences and anecdotal information tend to have great importance and "anchor" a party's view of the proper result in the current case. The approach and analysis is focused entirely on the current case. Prior experiences and famous earlier cases play no role.

Fixed-Pie Bias. The approach helps overcome the so-called fixed-pie bias of attorneys and perhaps businesspeople involved in litigation. This is the assumption that the only issue is how much of the fixed value of a patent infringement claim the patent owner will capture and the infringer will pay. The approach requires identifying the economic interests of the parties that may be furthered by an agreement in ways they may not by litigation. The approach compels consideration of ways of cooperating in the future to increase the profits available from using some invention. In other words, the approach requires consideration of agreements that increase the size of the pie.

Fairness. The approach may help overcome the problems that arise when a party bases its decision to settle not only on whether settlement leaves that party better off, but also on the extent to which the settlement leaves the other party better off. The approach helps with elusive concerns about "fairness." For example, if there is a range of payments within which settlement is possible, a party may judge the desirability of settlement by its perception of what percentage of the range it captures and what percentage of the range is captured by the other. The approach tends to overcome concerns about fairness by specifying the manner in which that range is defined and where a particular settlement falls within the range for settlement, such as a 50-50 split of the gains or savings from settlement.

5. See Mnookin, et al., *supra* note 3, at Ch. 1, 3, 4, 9; R. Birke & C. R. Fox, *Psychological Principles and Negotiating Civil Settlements*, 4 HARV. NEGOT. L. REV. 1 (1999); K. ARROW, R. H. MNOOKIN, L. ROSS, A. TVERSKY & R. WILSON, *BARRIERS TO CONFLICT RESOLUTION* (Stanford Center on Conflict and Negotiation, W. W. Norton & Co. 1995); Robert H. Mnookin, *Why Negotiations Fail: An Exploration of Barriers to Resolution of Conflict*, 8 OHIO ST. J. ON DISP. RESOL. 235 (1993).

Negotiating Strategy. The approach may help solve the dilemma of whether a party should make the first settlement offer to attempt to fix the other's perception of the value or cost of the action or should make the second offer to attempt to define the bargaining range to advantage. If the approach is used to determine a bargaining range, it does not matter whether one party or the other makes the first offer. In other words, the bargaining range is set by the analysis and not by the positions taken by the parties. Negotiation strategy matters little to the extent that objectively determined factors matter, such as the commercial value of the invention, the amount of damages, the value and cost of an injunction, and the nature of third-party effects. The approach also helps each party assess the other party's reservation price, given various assumptions about the true view of the other about its probability of winning or losing.

Reactive Devaluation. The approach may help overcome the problem sometimes called reactive devaluation, namely, a party's inclination not to accept a proposal by an opposing party merely because the proposal originated with the opposing party. This approach is objective. Therefore, when the analysis indicates that some agreement is in the economic interests of the parties, it does not matter which party first points that out.

Risk. The approach also deals explicitly with the way the parties are likely to view risk. It provides a way to include in the analysis whether a party is averse to risk, risk neutral, or prefers risk. It also provides a way to deal with the possibility of so-called loss aversion, namely, the tendency toward a preference for risk when the choice is between a certain loss through settlement and an uncertain loss from litigation.

Agency Problem. The approach may help to deal with so-called principal-agent problems that arise when the interests of attorneys diverge from the interests of clients. This approach evaluates settlement based solely on analysis of the economic interests of the parties. The approach is premised on the view that the work done by attorneys in litigating an action is a cost, and settlement of some actions may be desirable primarily to save those costs. This approach also relies on the cooperation of attorneys on issues where the knowledge and expertise of attorneys is most valuable. When the approach is applied, the principal role of attorneys relates to legal issues, namely, the issues underlying a party's view of its probability of winning or losing, the legal component of damages, and, if there is an issue of whether an injunction would issue, the legal component of that problem. The remaining factors are assessed largely independent of the views of the attorneys. Hence, attorneys play a role to the extent their knowledge and expertise is valuable and play a lesser role where it is not. The interests of the attorneys in deciding whether to litigate or settle plays no part in the analysis, except when contingent fee arrangements exist.

The approach does not solve all the barriers to negotiated settlements. Even if the same analysis by both parties showed that there is a wide range of financial terms within which settlement is possible, an agreement is not inevitable. The parties must ultimately agree on some division of the gains and arrive at that agreement through negotiation. Patent owners and accused infringers will employ various negotiating tactics to try to capture the largest part of the gains. Those tactics may prevent an agreement even where one was possible.

The Decision to Settle Litigation Based on the Effects of a Judgment on the Patent Owner and the Accused Infringer

2

A. Basic Model of Settlement Decisions

If a patent infringement action is litigated and the patent owner wins, the owner obtains a judgment ordering the infringer to pay damages and, in most cases, cease infringing.¹ If the parties settle, the terms of settlement define the benefits the patent owner receives and costs the accused infringer bears. For the sake of brevity, a potential infringer or an accused infringer will be identified simply as an “infringer.” This term should not be understood to mean that there is no dispute or that there has been a decision.

Patent litigation usually involves uncertainty. A well-informed party rarely will believe that its probability of winning or losing a patent action is close to 100 percent or 0 percent. In other words, a party rarely will believe that, if it litigated the same action to judgment 10 times, it would win all 10 or lose all 10. The likelihood of winning or losing will be somewhere between those extremes. Uncertainty affects settlement in two ways. One is that a party will decide whether to settle by comparing the

1. This book is directed primarily to patent infringement actions. Patent owners often commence an infringement action and also complain to the United States International Trade Commission (ITC) that infringing importation of products into the United States is an act of unfair competition under section 337 of the Tariff Act of 1930. If the ITC initiates an enforcement proceeding, the patent owner and infringer may use the same general approach to evaluate settlement of the ITC action with its different remedies.

B. Expected Value and Cost of Litigation

At first approximation, the patent owner's expected value of an action, $EV_{lit,owner}$, is the owner's estimate of the probability it will win, $P_{w,owner}$, times the value of winning, $V_{w,owner}$. The expected cost of an action to an infringer, $E_{Clit,inf}$, is the infringer's estimate of the probability it will lose, $Pl_{,inf}$, times the cost of losing, $Cl_{,inf}$. Settlement is likely only if:

$$(2) \quad P_{w,owner} \times V_{w,owner} < S < Pl_{,inf} \times Cl_{,inf},$$

where:

$P_{w,owner}$ is the owner's estimate of the probability it will win;

$V_{w,owner}$ is the owner's estimate of the value of winning;

$Pl_{,inf}$ is the infringer's estimate of the probability it will lose; and

$Cl_{,inf}$ is the infringer's estimate of the cost if it loses.

The patent owner's expected value of winning one action, $V_{w,owner}$, is the sum of the value of an injunction against this infringer, V_{inj} , plus the value of damages, V_{dam} . The infringer's expected cost of losing an action, $Cl_{,inf}$, is the cost of an injunction, C_{inj} , plus the cost of damages, C_{dam} . Therefore, an action is likely to be settled if:

$$(3) \quad P_{w,owner} \times (V_{inj} + V_{dam}) < S < Pl_{,inf} \times (C_{inj} + C_{dam}),$$

where:

V_{inj} is the owner's estimate of the value of an injunction against the infringer;

V_{dam} is the owner's estimate of the value of damages;

C_{inj} is the infringer's estimate of the cost of an injunction; and

C_{dam} is the infringer's estimate of the cost of damages.

C. Impact of Litigation Costs

Each party will incur costs to litigate the action if there is no settlement, LC. The costs of patent litigation include the costs of related activities, such as requests for reexamination. Litigation costs are payments to attorneys, experts, consultants, graphic designers, investigators, and others who provide services to support litigation. There are other types of costs a company bears when engaged in litigation. These other costs may exceed the direct costs of attorneys and litigation expenses. Other costs of patent litigation are: (1) the lost time of company employees devoted to litigation instead of more productive activities; (2) the risk that a party's technical or business information not known to the other party may be revealed and, contrary to protective orders, used by the other party in some adverse manner; and (3) the risk an infringement defendant's customers may stop or reduce purchases due to the mere existence of the litigation and the threat it poses to the defendant's continued ability to supply or to a customer's perception of its potential infringement liability as a product user.

Each party devotes time and money to litigation that it could have used in other ways. For settlement purposes, each party should regard its litigation costs as the direct

where:

SCowner is the patent owner's transaction costs to settle the action; and

SCinf is the infringer's transaction costs to settle the action.

An equivalent formulation of this condition is:

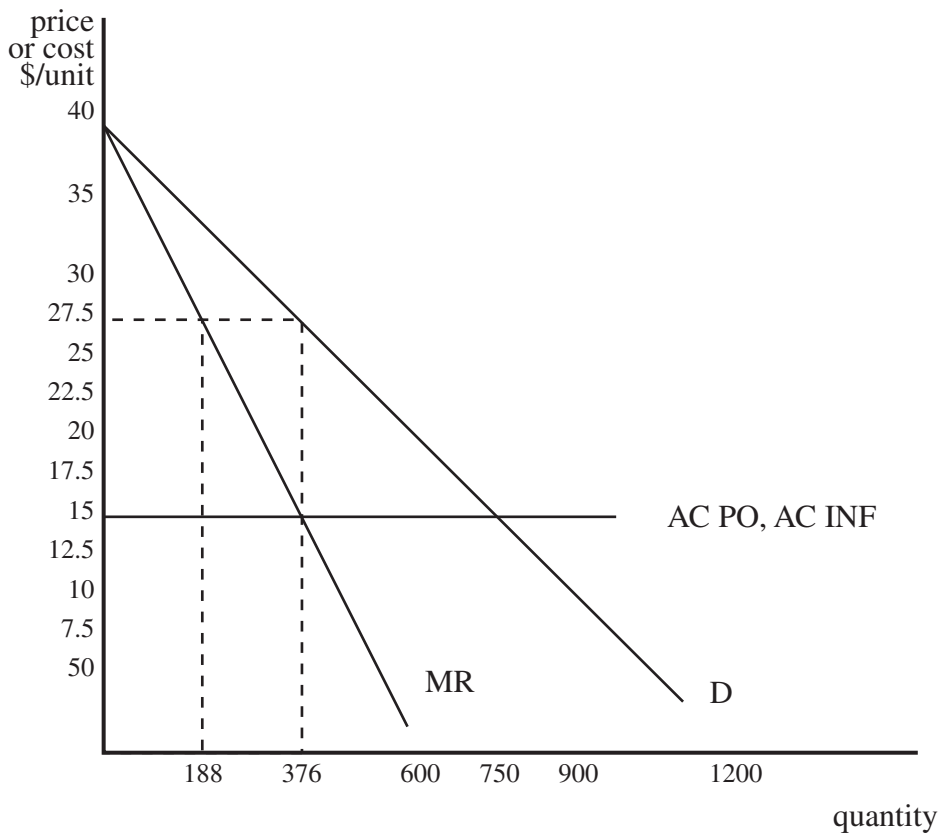
$$(5a) \quad P_{w,owner} \times (V_{inj} + V_{dam}) - LC_{owner} + SC_{owner} < S < P_{l,inf} \times (C_{inj} + C_{dam}) + LC_{inf} - SC_{inf}.$$

E. Simple Example

Figure 2.1 is an example of a market in which a patent owner and an infringer are the only sellers, are equally efficient, and sell exactly the same product at the price that maximizes collective profits—the one situation where patent law on injunctions and damages leads to a relatively predictable and sensible result.

Assume a patent owner and an infringer each sell a product consumers regard as equally valuable. The curve D shows the annual demand for that product—the quantity consumers would buy at the prices shown on the vertical axis. If the patent is as broad as

Figure 2.1



the patent owner asserts, the infringer could sell nothing to those customers without using the invention. The average total cost per unit of producing and selling, AC, for the patent owner and the infringer is the same, \$15 per unit. If there were no infringement, and the patent owner sold at a single price to all consumers, the additional or “marginal revenue” the patent owner would earn by selling an additional unit is shown as MR. Marginal revenue is less than average revenue because selling additional units requires a price reduction and this lower price applies to the units that could have been sold at a higher price. If there were no infringement, the patent owner would produce at the most profitable quantity, 376,000 units, and sell at \$27.50 per unit. This is the quantity at which the cost of producing and selling one additional unit, \$15, equals the marginal revenue from that sale, also \$15. The infringer also sells at \$27.50 per unit. Each captures half the customers. Each sells 188,000 units. If the patent owner made the sales lost to the infringer, the patent owner could produce the additional 188,000 units at \$12.50 per unit.

Suppose the patent owner commences an action after the infringer has been selling for five years. The patent owner and infringer discuss settlement immediately after a complaint is filed. Each believes it would take five years to finally litigate the action. After those five years, the patent would have five years to expiration. Assume each is able to litigate to judgment at no cost. Each is able to negotiate settlement without cost. The patent owner believes it has an 80% chance of winning and that, if it wins, it will be awarded lost-profits damages and an injunction. The infringer believes the patent owner has only a 60% chance of winning and that lost-profits damages and an injunction will follow if the patent owner wins.

Will this action be settled? Ignoring prejudgment interest, this is the situation (numbers are thousands of dollars). For purposes of this example, I have treated the value of an injunction to the patent owner and its cost to the infringer over the remaining five years of the patent as the net profits gained or lost with costs including fixed costs (\$11,750). Damages for the five-year periods before litigation and during litigation (\$14,100 each) are larger because they are based on patent owner incremental costs.

$$\begin{aligned}
 (5) \quad & P_{w,owner} \times (V_{inj} + V_{dam}) - L_{Cowner} < S < P_{l,inf} \times (C_{inj} + C_{dam}) + \\
 & L_{Cinf} \\
 & .80 \times (\$11,750 + \$28,200) - \$0 < S < .60 (\$11,750 + \$28,200) + \$0 \\
 & \$31,960 < S < \$23,970
 \end{aligned}$$

Settlement is unlikely because the patent owner believes there is a greater chance it will win (80%) than the infringer believes it will lose (60%). The gap preventing settlement is \$7,989. With no litigation costs, settlement will occur only if the infringer believes it has a greater chance of losing (such as 80%) than the patent owner thinks it has of winning (such as 60%).

Another way to assess settlement prospects is to look at each party’s expected value and cost of litigation given the patent owner’s possible views on the probability it would win and the infringer’s possible views on the probability it would lose. Chart 2.1 shows for each probability of winning the patent owner’s corresponding expected value of litigation on the bottom axis and the infringer’s expected cost of litigation along the top.

The patent owner’s expected value of litigation and the infringer’s expected cost are straight lines. These lines are identical because each views the value and cost of litigation to be the same.

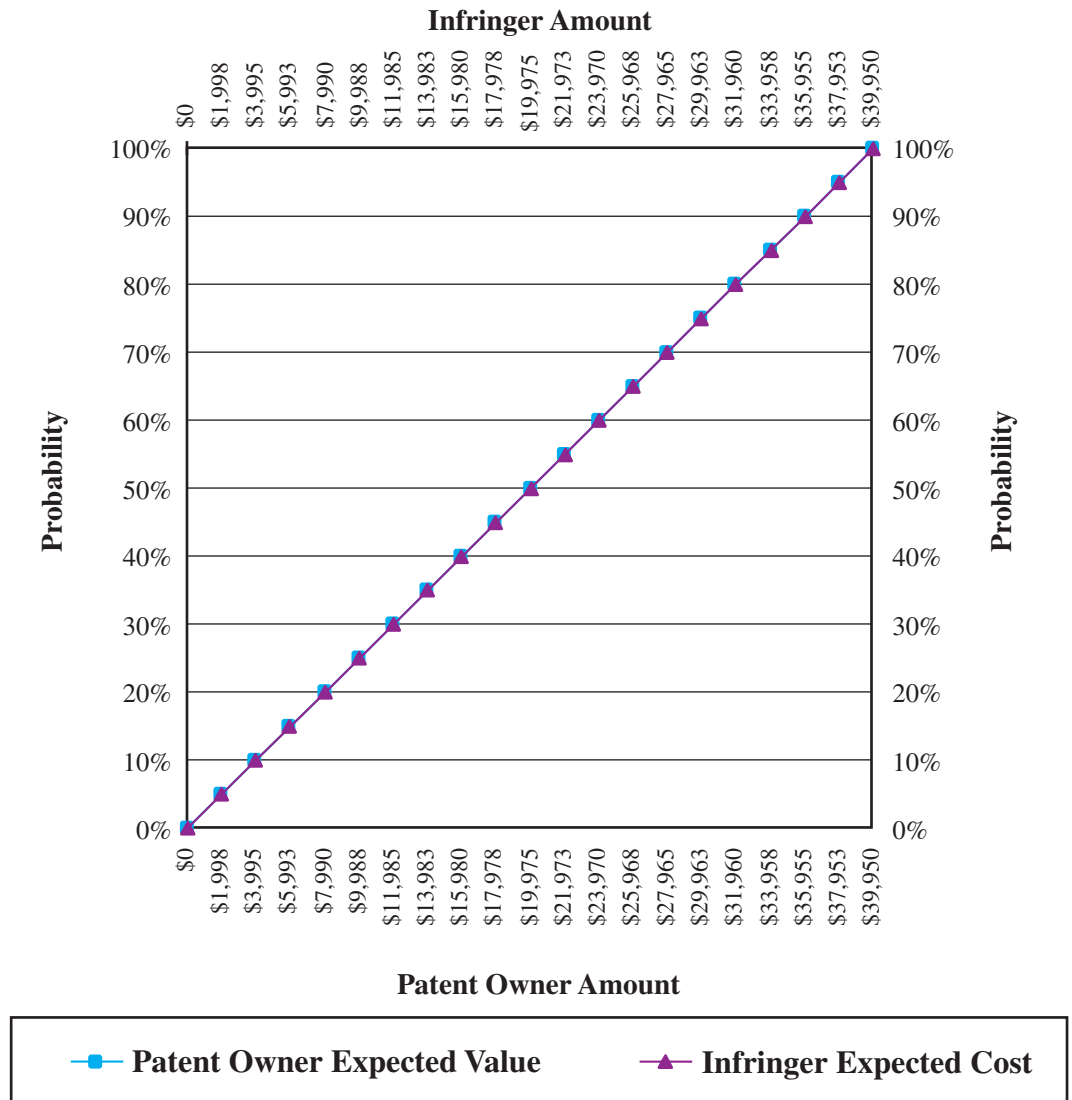
Suppose instead that each party expects litigation costs of \$4,000 (numbers are again in the thousands of dollars). Ignoring prejudgment interest, these are the prospects for settlement:

$$(5) \quad Pw,owner \times (Vinj + Vdam) - LCowner < S < Pl,inf \times (Cinj + Cdam) + LCinf$$

$$.80 \times (\$11,750 + \$28,200) - \$4,000 < S < .60 (\$11,750 + \$28,200) + \$4,000$$

$$\$27,960 < S < \$27,970$$

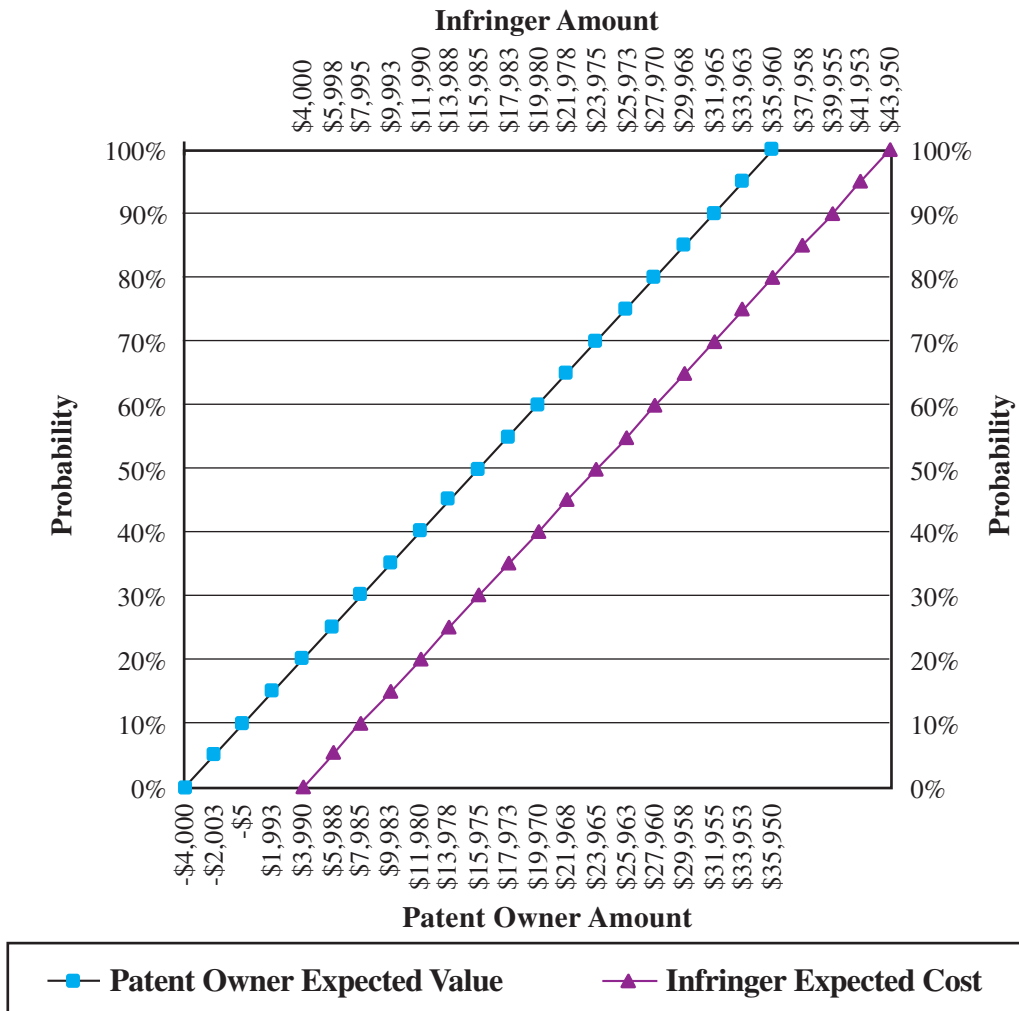
Chart 2.1
Expected Value and Cost of Litigation



Settlement is now possible, although the settlement range is razor thin. Combined litigation costs of \$8 million converted an action that would not be settled into one that might. This example is not unusual. In litigated actions during the period from 2000 to 2007, the average (or mean) award was \$26 million, and the median award was \$3 million.⁴ In this example, damages were \$28 million. Even though the patent owner believed it had a very high probability of winning, and the infringer also thought the patent owner was likely to win, settlement would make sense if the parties jointly expected litigation costs somewhat larger than \$8 million.

With \$4 million in litigation costs for each party, Chart 2.2 shows the patent owner's expected value of litigation (and minimum settlement amount) and the infringer's expected cost of litigation (and maximum settlement amount) for each probability of winning (for the patent owner) and losing (for the infringer).

Chart 2.2
Expected Value and Cost of Litigation



4. Courtesy of Matthew Lynde, Cornerstone Research, San Francisco (based on a study of data available through the Stanford IP Clearinghouse).

For each patent owner estimate of its probability of winning, the patent owner will settle for any amount larger than the corresponding point on its expected value line. These amounts are shown on the bottom axis. If the patent owner believed it would survive summary judgment and had a 60% chance of winning at trial, the owner would settle for any amount greater than \$19,970. Notice that the action has positive value for the patent owner only if it believes it has better than a 10% chance of winning. For each infringer's estimate of its probability of losing, the infringer will settle for any amount less than the corresponding point on its expected cost line. These amounts are shown on the top axis. The patent owner and infringer amounts are aligned only approximately. If the infringer believed it would not win on summary judgment and had a 60% chance of losing at trial, the infringer would settle for any amount less than \$27,970. The combined litigation costs of \$8 million make settlement advantageous.

F. Important Aspects of the Basic Model of Settlement in Patent Actions

1. *Differences in Probability Estimates Are Highly Likely*

Ignoring litigation costs and factors introduced later (mainly risk and third-party effects), an action will be litigated rather than settled only where the parties have significant differences in their estimates of the probabilities of winning and losing, or the value of winning and cost of losing.⁵ A patent owner and an infringer commonly have different and honestly held views of the probability of winning and losing. This is why a great deal of time in settlement negotiations is devoted to each party's views of its probability of winning or losing, and only some time to each party's views on the value and cost of remedies.

The parties' perceptions of the overall probability of winning and losing reflect their expectations about the probabilities that they will win or lose on particular issues in an action. There are many potential decisive issues that may be litigated in an infringement action. In order for judgment to be entered for a patent owner, the court or jury must find the patent valid (or as some courts say, "not invalid"), infringed, and, if other defenses are raised, no defense exists. There are about eight commonly litigated reasons why a patent may be invalid. Infringement depends on what activities an infringer carried out and whether the products and processes involved employed the patented invention. Whether a product or process employed a patented invention requires consideration of four separate issues. There are several defenses to infringement, including patent misuse, fraud during prosecution, inequitable conduct during prosecution, estoppel, license, implied license, and exhaustion.

The large number of potential issues poses a problem for settlement. Each party's estimate of the ultimate probability of winning or losing depends on its views on which issues will be important. If the parties disagree on what issues ultimately are important, they are highly likely to disagree on the overall chance of winning and losing. This means that probability estimates are likely to diverge until the parties have identified a common set of dispositive issues to be litigated.

5. When risk and third-party effects are considered, this will change. See Chptr 2 § G., Chapter 4, and Chapter 5.

Even if the parties agree on what issues are important, predicting the outcome of litigation on many and perhaps most patent issues is inherently difficult. The facts, the law, and the litigation process are such that only a rare patent action would be decided the same way if litigated 10 times. The law governing many commonly litigated issues is so general, and the facts that may be considered are so varied, that even the most thorough and skilled analysis leaves significant uncertainty. Such issues include the on-sale bar, the public use bar, nonobviousness, enablement, indefiniteness, infringement by the doctrine of equivalents, infringement of means-plus-function claims, inducement of infringement, inequitable conduct, some aspects of lost-profits damages, and almost all aspects of so-called reasonable royalty damages. Other issues may be predicted with more certainty, such as novelty, activities that directly infringe or contributorily infringe, and products and processes that literally infringe. However, the reported cases show that decisions by judges and juries even on these issues are not possible to predict with certainty.

2. *Settlement Prospects Depend on Differences in Probability Estimates and Estimates of the Value and Cost of Judgment, Settlement Payments on Absolute Probabilities and Amounts*

Notice that use of the basic model means the likelihood of settlement depends on the direction and size of the differences between the parties' estimates of the probabilities of winning and losing and their estimates of the value and cost of the judgment, not the absolute probabilities, values, and costs. The absolute probabilities, values, and costs affect the settlement payment, S , not the likelihood of settlement.⁶ For example, the basic model means that, assuming value and cost are equal, a case in which a patent owner believes it has a 70% likelihood of winning and the infringer believes it has a 90% chance of losing has the same likelihood of settlement as a case in which the patent owner believes it has a 10% chance of winning and the infringer believes it has a 30% chance of losing. Given the same assumption, we should not expect cases in which both parties believe the patent owner has a better chance of winning than losing to be settled with greater frequency than cases in which both parties believe the patent owner has a worse chance of winning than losing.

3. *Likelihood of Differences Is Probably Related to Absolute Probabilities*

Even ignoring litigation costs and other factors, however, there is a good reason to believe that the absolute magnitude of the parties' estimates of the probabilities will strongly influence the likelihood of settlement. Even where the parties are capable and objective, actions will tend to be litigated where it is difficult for the parties to make confident predictions about the likely result. It is likely to be more difficult for the parties to predict the probabilities of winning and losing when the probabilities are closer to 50% than when they are closer to 90 or 10%. For that reason, the parties are more likely to disagree when the issues are close, and the settlement process is less likely to filter out actions as the

6. Again, when litigation costs, risk, and third-party effects are considered, absolute probabilities and amounts may also affect the likelihood of settlement.