

WHO WINS PATENT INFRINGEMENT CASES?

*Paul M. Janicke & LiLan Ren**

I. INTRODUCTION3

 A. *Constructing the Database*7

 B. *Summary of the Observed Events*8

 1. Patent-Owner Winners and Accused-Infringer
 Winners.....8

 2. Limitations of the Data9

II. RESULTS OF MULTIVARIATE REGRESSION ANALYSIS 11

 A. *Regression with Patentee as Winner* 12

 1. Corporate Status and Income..... 12

 2. Existence of a Jury Verdict 14

 3. Type of Law Firm..... 16

 B. *Regression with Accused Infringer as Winner* 17

 1. Corporate Status and Income..... 17

 2. Existence of a Jury Verdict 17

 3. Type of Law Firm..... 18

 C. *Insufficient Data on Effect of Technology Type* 18

 D. *Some Weaknesses of the Methodology* 18

III. A CLOSER LOOK AT INDIVIDUAL FACTORS 19

 A. *Technology Differences*..... 19

 B. *Factors Related to the Parties* 21

 1. Individual Patent Owner or Corporate Patent
 Owner..... 21

* © 2005. Paul M. Janicke, HIPLA Professor of Law and Co-director, Institute for Intellectual Property & Information Law, University of Houston Law Center; LiLan Ren, J.D., 2005, University of Houston Law Center, associate, Weil, Gotshal & Manges (Houston office). The views expressed herein are our own and not those of any other entity. However, we are most appreciative of the extensive and highly valuable research assistance of Hal Borland, University of Houston Law Center, J.D., class of 2006. We are also indebted to John Allison, Polk Wagner, Rochelle Dreyfuss, Kimberly Moore, and Jack Goldstein for reviewing earlier drafts and providing valuable comments. Finally, we thank the *AIPLA Quarterly Journal* staff for the many improvements made to the manuscript during the editing process.

2.	Foreign Plaintiffs or U.S. Plaintiffs	22
3.	Relative Financial Strengths	25
C.	<i>Form Differences</i>	28
1.	Different appellate Judges	28
a.	Authoring Judges	28
b.	Inclusion of Joining, Concurring and Dissenting Votes	30
2.	Different Feeder Courts.....	32
3.	The Effect of Jury Trials.....	34
4.	Home Court Advantage?.....	34
D.	<i>Possible Effects of Counsel Differences</i>	35
1.	General Attorney or Patent Attorney	35
2.	Years of Experience of Lead Counsel	36
VI.	SOME FINAL OBSERVATIONS	38

LIST OF TABLES

1.	Table 1. Win Rates.....	8
2.	Table 2. Patentees' Comparative Odds of Winning.....	14
3.	Table 3. Patentees' Chances of Winning on Appeal	16
4.	Table 4. Law Firms in Dispositive Cases	16
5.	Table 5. Patentee's Income in Accused Infringer Victories	17
6.	Table 6. Accused Infringer's Chances of Winning on Appeal	18
7.	Table 7. Financial Strengths – Overall Database.....	25
8.	Table 8. Grouped Financial Strengths – Overall Database.....	25
9.	Table 9. Finance and Patentee Victories	26
10.	Table 10. Finance and Accused Infringer Victories.....	26
11.	Table 11. Results of Authoring Judge	29
12.	Table 12. Results Based on Judge's Authoring and Voting Combined.....	31
13.	Table 13. High-Volume Feeder Courts.....	32
14.	Table 14. Jury Cases on Appeal	34
15.	Table 15. Type of Lead Counsel on Appeal	35
16.	Table 16. Experience of Lead Counsel.....	37

LIST OF CHARTS

1.	Chart 1. Percentage of Dispositive Cases won by Plaintiffs in Various Technologies	20
----	---	----

I. INTRODUCTION

For a number of years, accused patent infringers have been winning patent infringement suits at a rate of three to one. While patent owners win slightly more than half the cases that proceed to trial, they are losing more cases overall because most end in summary judgments of noninfringement. We investigated who the winners and losers have been and herein attempt to assign reasons for their success or lack thereof.

Numerous studies in recent years have focused attention on particular aspects of patent infringement litigation in the United States. These include articles addressing court results on the issues involved in patent validity,¹ appellate handling of questions of patent claim interpretation,² district court results in cases in which the judgment was arrived at by trial,³ and the judicial philosophy of Federal Circuit judges.⁴ Some research services analyze cases on an issue-by-issue basis.⁵ No one, however, seems to have analyzed the results in

-
- ¹ See, e.g., John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185 (1998); Donald R. Dunner et al., *A Statistical Look at the Federal Circuit's Patent Decisions: 1982-1994*, 5 FED. CIR. B.J. 151 (1995).
 - ² See Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075 (2001).
 - ³ See Kimberly A. Moore, *Judges, Juries, and Patent Cases – An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365 (2000).
 - ⁴ See R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105, 1163-69 (2004) (comparing the voting patterns of Federal Circuit judges in cases in which there were written opinions on claim-interpretation issues). The patent validity aspects of Federal Circuit voting patterns have been studied by Allison and Lemley, who report that the results defy easy categorization. John R. Allison & Mark A. Lemley, *How Federal Circuit Judges Vote in Patent Validity Cases*, 27 FLA. ST. U. L. REV. 745, 746 (2000). Their study did not include Rule 36 affirmances or decisions on issues other than validity.
 - ⁵ See, e.g., INST. FOR INTELLECTUAL PROP. & INFO. LAW, UNIV. OF HOUSTON LAW CTR., PATSTATS: U.S. PATENT LITIGATION STATISTICS, DECISIONS FOR 2003 (Jeffrey Johnson et al. eds., 2003), <http://www.patstats.org/2003.html>, which reports patent litigation results segregated by the particular issues involved. Multiple decided issues in a given case lead to multiple entries in this service. The service does not allow the user to assemble the results from a given case to see whether the patent owner prevailed on all the issues necessary to win the case.

terms of who ultimately “wins” patent litigations, meaning a judgment in favor of a particular party at the Federal Circuit Court of Appeals, for the full population of contested judgments. We undertook to fill that void by analyzing the dispositive decisions of that court over the three-year period 2002-04. By “dispositive” we mean a case in which, as it leaves the Federal Circuit, at least one claim of one patent is finally adjudicated to have been infringed and not invalid or unenforceable⁶ (i.e., a win for the patent owner), or in which it has been finally determined that no claim has these characteristics (a win for the accused infringer). We included all dispositive decisions of the Federal Circuit, whether by precedential opinion, nonprecedential opinion, or *per curiam* affirmance without opinion under the court’s Rule 36⁷

There were 262 such cases. Most arrived at the Federal Circuit by way of summary judgment. We collected data on the following factors in these dispositive cases:

- Which side won in the final appellate judgment;
- Technology area involved;
- Individual patent owner or corporate patent owner;
- Income level of each party;
- Foreign or U.S. party;
- Identity of appellate judge authoring opinion;
- Identities of appellate judges on panel;
- District courts of origin;
- “Home court” situations;
- Effect of jury verdicts;
- Lead counsel type (general attorney or patent attorney);
- Lead counsel firm type (IP boutique or general); and

⁶ Unenforceability can result from inequitable conduct before the United States Patent and Trademark Office (“USPTO”) or from patent misuse. *See, e.g., Hoffman-La Roche, Inc. v. Promega Corp.*, 323 F.3d 1354, 1372, 66 U.S.P.Q.2d (BNA) 1385, 1398 (Fed. Cir. 2003) (breach of duty of candor to the USPTO by material misrepresentations or omissions may render patent unenforceable); *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1427, 43 U.S.P.Q.2d (BNA) 1896, 1902-03 (Fed. Cir. 1997) (misuse of patent renders the patent unenforceable until the misuse is purged).

⁷ Federal Circuit Rule 36 provides that the court may enter a judgment of affirmance without opinion under any of various conditions, most notably that the judgment appealed from was based on findings that are not clearly erroneous or was entered without an error of law, if “an opinion would have no precedential value.” Fed. Cir. R. 36.

- Years of experience of lead counsel.

We analyzed each of the above factors individually and also ran a multivariate regression analysis that included all of them.⁸

We found, first of all, that about 25% of the 262 dispositive cases were won by the patent owner (according to our definition of winning) and the other 75% by the accused infringer.⁹ This was not surprising in light of previous writers' conclusions that about 45% of litigated patents are held invalid,¹⁰ and additional statistics showing that the great majority of determinations on the infringement issue are against the patent owner and in favor of the accused

⁸ Among other statistical results, a multivariate regression analysis tests for whether variables independently correlate to the final response.

⁹ We use "patent owner" (or "patentee") and "accused infringer" rather than "plaintiff" and "defendant," to avoid confusion where the accused infringer is plaintiff in an action for declaratory judgment of invalidity, noninfringement, or unenforceability.

¹⁰ Allison & Lemley, *supra* note 1, at 205. The authors analyzed data on Federal Circuit patent validity rulings during 1989-96 in cases in which the court provided written opinions, concluding that the court had upheld validity in 54% of the cases and found invalidity in 46%. *Id.* Dunner et al. studied Federal Circuit validity rulings on a statutory section-by-section basis for the period 1982-94. Dunner et al., *supra* note 1, at 153-55. They concluded, for example, that the court had ruled in favor of validity under 35 U.S.C. §§ 102 and 103, 58% of the time. *Id.* at 154-55.

infringer.¹¹ We then undertook to profile the winning and losing parties in each case, looking at factors such as annual revenue of the company, the number of lawyers in the lead law firm, years of experience of the winning and losing lawyers, the district in which the case arose, home state of the winner and loser, the general technology involved, and many other factors. We deliberately omitted what many might consider the most important variable, legal strength of the parties' respective positions, in order to look at the other factors apart from any subjective perceptions of the factual and legal merits of the parties' positions. Put another way, we assumed all parties were equally favored by the facts and the law. We wanted to see what other factors might be at work, either motivating the parties not to settle or possibly influencing the outcomes in more subtle ways.

Choosing as our population only dispositive cases is, however, not without difficulties. Many remanded cases contain important pronouncements of law. Such cases tend to settle quickly after remand, so that in practical effect the rulings are dispositive. We make no claim that our particular population of cases represents the workings of the patent system at large or even patent litigation generally. On the positive side, we did no sampling within our population of cases; the population is complete and therefore, within its particular confines, cannot be considered skewed in any way.

¹¹ Patstats reports that most rulings on the infringement issue by all courts, at both the district and Federal Circuit levels, were against the patent owner for at least the past five years. For example, in 2003, accused infringers prevailed in 155 literal infringement decisions and patentees in fifty-three, while doctrine of equivalents rulings were of a similar ratio, seventy-one to nineteen. INST. FOR INTELLECTUAL PROP. & INFO. LAW, *supra* note 5; *see also* Gauri Prakash-Canjels, *Trends in Patent Cases: 1990-2000*, 41 IDEA 283, 292 (2001) (showing that patentees prevailed in 27%-31% of the judicially decided cases during the period 1995-2000, while in the period 1991-95, the figure was somewhat higher, at 39%-41%). The marked decrease was likely a result of the decision in *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372, 38 U.S.P.Q.2d (BNA) 1461, 1463 (1996), *aff'g* 52 F.3d 967, 34 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 1995) (upholding lower court finding that patent claim construction was a question of law entirely within the province of the court, and thus not a triable issue of fact). As will be detailed herein, trials represent a steadily declining percentage of patent adjudications—currently under 25% of contested decisions—with summary judgment being the prevalent mode of judicial disposition.

A. *Constructing the Database*

We initially collected all patent decisions in appeals from the district courts, precedential and non-precedential opinions of the Federal Circuit, as well as those cases decided without opinion under Federal Circuit Rule 36. We then screened out those cases that involved remands on issues involving the merits (hereinafter “merits remands”), as these were not dispositive and thus had no “winning” or “losing” party yet. Most of the patent decisions of the Federal Circuit were merits remands and hence outside the scope of our study.

We retained in the pool those decisions in which it could be determined from the opinion or, in the case of summary affirmances, from inspection of the appellate file, that a final decision had been reached in favor of the patentee on at least one claim of at least one patent, or that a final decision had been reached in favor of the accused infringer (holding that that the patent claim was not valid, not infringed, or not enforceable).¹² We identified a population of 262 cases fitting these criteria, an average of eighty-seven per year.¹³ We have made available online a table listing these cases and their citations.¹⁴ Nearly all of these

¹² These issues are often referred to as “the merits,” to distinguish them from ancillary questions like damages, attorney’s fees, jurisdiction, or venue. Often one or the other of these merits subjects is not raised in a given case, meaning that the point is in effect conceded. For example, a defendant may elect to litigate the infringement question while not challenging validity of the claim. *See, e.g.,* Poly-America, L.P. v. GSE Lining Tech., 383 F.3d 1303, 1306, 72 U.S.P.Q.2d (BNA) 1685, 1687 (Fed. Cir. 2004) (litigant conceded infringement and proceeded to trial on invalidity and other points); Intel Corp. v. United States Int’l Trade Comm’n, 946 F.2d 821, 829 n.13, 20 U.S.P.Q.2d (BNA) 1161, 1168 n.13 (Fed. Cir. 1991) (litigant did not challenge validity but argued noninfringement). Such cases would be dispositive in our lexicon.

¹³ We did not consider design or plant patents, but only utility patents. We did not consider interferences, inventorship disputes, or other actions not in the nature of patent infringement or the mirror-image declaratory judgment cases. We thus did not include Federal Circuit appeals from the USPTO. We did, however, include infringement suits against the United States originating in the Court of Federal Claims, as well as cases appealed from the International Trade Commission. These last two categories (actions for compensation for government use of patented subject matter or in the nature of unfair competition in the importation of products) are sufficiently like patent infringement suits to qualify for treatment here.

¹⁴ See <http://www.law.uh.edu/faculty/pjanicke/database.page.html>.

dispositive rulings are affirmances (242), with only a small number of reversals (twenty). This is because reversals usually lead to merits remands, the most numerous of all dispositions of patent cases by the Federal Circuit, and not to dispositive cases that would be counted in our study.

We identified the main winning party and the main losing party in each of the 262 cases. In multiple-plaintiff or multiple-defendant cases, we chose as the main party the one whose lawyer signed the brief and argued the case in the Federal Circuit.

In those cases in which the Federal Circuit decision was by way of summary affirmance without opinion under the court's Rule 36, we learned the nature of the issues on appeal by reviewing reports on prior inspection of the appellant's brief at the clerk's office. These prior inspections were done by editors of the Patstats Internet service. In cases in which the court rendered an opinion, either precedential or non-precedential, we normally learned the nature of the issues and the disposition from the court's opinion, and in a few ambiguous situations by inspecting the parties' briefs online through Westlaw.

B. Summary of the Observed Events

1. Patent-Owner Winners and Accused-Infringer Winners

Our threshold question was: As between patent owners and accused infringers, who wins in dispositive litigation that has proceeded through the Court of Appeals for the Federal Circuit? The generalized answer is given in the table below:

Table 1. Win Rates

Year	Dispositive Cases	# Won by Patent Owner	% Won by Patent Owner
2002	71	20	28.2%
2003	101	25	24.8%
2004	90	19	21.1%
All 3 years	262	64	24.4%

Since the patent owner must prevail on both the infringement and validity/enforceability fronts to win the case, it should not be too surprising that patentee victories are relatively infrequent. Moreover, patentees usually have to

proceed through trial to obtain judgments in their favor,¹⁵ whereas accused infringers more often win by summary judgment. Trial-based results therefore represent only a minority of the cases, and a segment in which patent owners do comparatively much better. Trial-based results actually favor patentees by a small majority.¹⁶ When one counts in the far larger group of summary judgment dispositions, the results are strongly the other way.

2. Limitations of the Data

As mentioned above, to maintain our neutrality on the merits, our study intentionally ignored the strength or “correctness” of the parties’ respective positions on the facts or the law. Our results therefore need to be viewed in that context. We considered attempting to assess overall wins and losses in terms of their commercial significance rather than in terms of one valid, enforceable, and infringed claim, but the evaluations would have been heavily subjective. Without substantial private financial data, one cannot say that if three of four patents in the suit were lost, the case on balance was lost by the patentee as an

¹⁵ There is a considerable literature on issues relating to trials in patent cases. See, e.g., Moore, *supra* note 3, at 383-94; Arti K. Rai, *Specialized Trial Courts: Concentrating Expertise on Fact*, 17 BERKELEY TECH. L.J. 877 (2002); Phillippe Signore, *On the Role of Juries in Patent Litigation (Part I)*, 83 J. PAT. & TRADEMARK OFF. SOC’Y 791 (2001); John Pegram, *Should There Be a U.S. Trial Court with a Specialization in Patent Litigation?*, 82 J. PAT. & TRADEMARK OFF. SOC’Y. 791 (2000). Patent litigation statistics are privately reported by LegalMetric (www.legalmetric.com/judgereport), which counts judgments in a district court, including those reached by consent and those obtained by default. In our methodology we would not count either type of judgment as a contested disposition.

¹⁶ Professor Moore looked at the slice of patent litigation represented by trials – 1209 cases over sixteen years. She concluded that patentees had an overall win rate of 58% in district court trials. Moore, *supra* note 3, at 385. They had a win rate before juries of 68% if the patentee initiated the action, but 38% if the accused infringer initiated the action by way of suit for declaratory judgment. *Id.* at 368. In bench trials patentees had a win rate of 51%. *Id.* at 386, Table 2. At one time trials were the disposition method of choice in patent cases. As shown, however, by Professor Moore’s data for 1999, *Id.* at 384, and also by ours, trials now account for 3% to 4% of dispositions. In 2004, 3.6% of cases reached trial. See OFFICE OF JS. PROGRAMS, ADMIN. OFFICE OF THE U.S. COURTS, STATISTICAL TABLES FOR THE FEDERAL JUDICIARY (2004), available at <http://www.uscourts.gov/judiciary2004/decontents.html> [hereinafter STATISTICAL TABLES 2004]. Summary judgments are a much more common disposition tool in contested cases, as found in our sample.

economic matter. Nor can it be said that if fifteen claims are not infringed but one claim is infringed, the result is an overall commercial win for the accused infringer. That kind of judgment would require knowledge of market details, design-around feasibility, available license terms, and a host of other information points that are not available to researchers. The reader should therefore recognize that the one-claim approach can be misleading as a signal of whether the side designated here as “winning” in fact achieved any significant market advantage.

In addition, we did not include cases that were finally resolved at the trial-court level and not appealed, nor did we attempt to assess “good” settlements achieved by patent owners or accused infringers. One should recognize that of the roughly 3,000 patent infringement suits filed each year in the United States,¹⁷ most are settled. Only about 650 per year are resolved by a contested district court ruling,¹⁸ and the great majority of those by summary judgment rather than by trial.¹⁹

Of the approximately 500 patent appeals currently lodged per year at the Federal Circuit,²⁰ about 200 are actually decided by the judges, in one of three modes of decision: precedential opinion (about ninety-five per year in the three-

¹⁷ STATISTICAL TABLES 2004, *supra* note 16, at Table C-2 (2,973 patent cases filed in the district courts during 2004).

¹⁸ The federal statistical tables are inconclusive on this subject, reporting only that 2,279 patent cases were disposed of by “judicial action,” a phrase that includes many dismissals by joint motion in settled cases. A closer approximation is obtained by observing that the volume of patent appeals to the Federal Circuit is running at about 500 cases per year. *See* STATISTICAL TABLES 2004, *supra* note 16, at Table B-8 (486 appeals from the district courts in 2004). Virtually all of these are patent cases. Allowing for some judgments that were unappealed (typically due to settlement by license after the district court decision), we estimate about 650 truly contested district court patent case decisions each year.

¹⁹ While the number of patent cases filed in the courts has increased from about 1,200 to nearly 3,000 as of 2000, Gauri Prakash-Canjels, Trends in Patent Cases: 1990-2000, 41 IDEA 284 (2001), the number of patent trials commenced in the U.S. has been fairly constant at around eighty-five to 105. *See, e.g.*, STATISTICAL TABLES 2004, *supra* note 16, at Table C-4 (100 patent trials were commenced in 2004, sixty-nine of them to juries); Moore, *supra* note 3, at 384 (eighty-six patent trials in 1991). Summary judgment is increasingly the disposition tool of choice in patent cases.

²⁰ *See, e.g.*, STATISTICAL TABLES 2004, *supra* note 16, at Table B-8 (486 appeals).

year period of the study), nonprecedential opinion (eighty per year), or Rule 36 per curiam affirmance without opinion (twenty-five per year).²¹ By looking only at dispositive rulings in appealed cases and ignoring the larger number of remanded cases, our study intentionally selected against many patent disputes that had matured to the point of an important appellate ruling, arguably including some cases in which the patent law in action would best be assessed. Similarly, we did not include unappealed district court determinations on the merits, even though such rulings are in a judicial sense dispositive and could be commercially important.

Finally, for statistical analysis purposes our population sometimes had only a small number of cases recorded in a particular category, such as wins by patentees in non-pharmaceutical chemistry cases (eleven over the three-year period), or dispositive opinions by Judge Dyk (eleven) or Judge Bryson (nine). These categories involve a sample that is too small for meaningful statistical comparisons or conclusions.

II. RESULTS OF MULTIVARIATE REGRESSION ANALYSIS

We built a multivariate regression model using SAS statistical software to determine which factors have a statistically significant correlation to the outcome and how these factors influence the outcome. We chose the following factors to model the regression: home state, entity nature (corporate or individual), financial strength, parties' nationality, type of technology involved, existence of a jury verdict, appellate decision, authoring judge, type of law firm involved on each side (general or IP boutique), type of lead attorney as patent or general lawyer, and length of time being admitted to practice law for both lead attorneys. Different factors might have been at play when patentees won

²¹ According to the Administrative Office of U.S. Courts, the Federal Circuit currently disposes of some 355 district court cases (nearly all patent appeals) each year by what is referred to as "terminations by judges." STATISTICAL TABLES 2004, *supra* note 16, at Table B-8. The hand-counting and individual case study that went into our database shows that only about 200 cases were disposed of by the judges in precedential opinion, nonprecedential opinion, or per curiam affirmance under Rule 36. If the Administrative Office figure is correct, something on the order of 155 appeals are disposed of in some other manner than "decisions" by judges. These other actions could include dismissals of appeals on motion, failure to file a brief, lack of appellate jurisdiction, or similar grounds. It is also possible that a number of settled cases have worked their way into the Administrative Office's published figure, such as cases that were dismissed by joint motion of the parties and thus involved no serious effort on the court's part.

compared to when accused infringers won; to account for this we looked at the two subpopulations separately.

Out of all the factors included in the regression model, we found that only three are statistically significant to the outcome of the case: patentee financial strength, jury verdict, and the type of law firm chosen by the winning side. The type of technology in the patent was marginally significant.²²

A. *Regression with Patentee as Winner*

Where patentees prevailed, our regression analysis shows that patentee's corporate status and financial strength, existence of a jury verdict below, and the patentee's choice of law firm are statistically significant factors relating to the ultimate result in the Federal Circuit, while the type of technology had a marginal correlation to results in terms of which side won. Statistically significant correlations, however, do not indicate causation of the ultimate result. The result may be caused by a factor outside of our study.

Although there were some interesting findings at the observed events level, we found that the following factors did not have statistically significant correlations to dispositive case results: nationality, home court advantage, district that rendered the judgment below, identities of appellate judges hearing the case, and use of general lawyer vs. patent attorney as lead counsel on appeal. Again, these factors may in fact have been important drivers of particular dispositive cases or of the overall direction of doctrinal patent law in remanded cases, or they may have had other significant effects, but we did not see a result-correlation in our population.

1. *Corporate Status and Income*

We collected the most recent annual revenue figures from Securities and Exchange Commission reports for publicly traded companies, and from other published business reports for privately held entities. Where a litigant company was a subsidiary of a larger entity, we used the revenue of the parent, partially because that was usually the only figure available and partially because the parent would likely have approved these litigation efforts and may even have applied its own funds to defray litigation costs.

²² The software used would not converge with the small numbers and numerous groups of technologies we chose to track.

After collecting and recording the revenue data for the lead litigants²³ on each side of each case in our dataset, we divided the data into four levels. Level 1 is for those entities of lowest income, \$0-\$1 million. This would almost certainly include all individual plaintiffs²⁴ and some corporate ones being represented by contingent-fee counsel.

Level 2 is for those firms with revenues over \$1 million and up to \$100 million. Such entities would find patent litigation a very large drain on resources. Level 3 represents companies with annual incomes over \$100 million and up to \$1 billion. Level 4 is for firms with over \$1 billion in revenue. Levels 3 and 4 are for corporations who would have more freedom in their decisions to litigate rather than join the great majority of patent litigants who settle their cases by agreeing to license terms. In a few instances we were not able to find reliable income data, so the results presented here do not quite represent the full database of 262 cases.

The table below shows in part how the patentee's financial strength correlated to the outcome of a case. The "Estimate Odds Ratio" shows that, for example, all other factors being equal, the odds of a level 1 corporate patentee winning were 4.44 times more than an individual patentee.²⁵ As we shall see in Part III, financial strength as between corporate adversaries also correlated to litigation success in the individual factor analysis.

²³ The lead litigant is typically the first party cited in the case name on Westlaw.

²⁴ Since incomes of individuals are rarely published, we assumed that any individual patent owner appearing in our database had an income in level 1.

²⁵ The odds ratio of 4.44 is the best estimate; for 95% certainty corporate patentee's odds are between 0.564 and 35.0 times the odds of an individual patentee. The large range of odds ratios is a reflection of a high confidence limit imposed (95%) and the limited quantity of data available.

Table 2. Patentees' Comparative Odds of Winning

Patentee Status	Estimate Odds Ratio	95% Confidence Limits of Odds Ratio
Level 1 corporate patentee compared to individual patentee	4.44	0.564, 35.0
Level 2 corporate patentee compared to individual patentee	4.62	0.976, 21.9
Level 3 corporate patentee compared to individual patentee	2.97	0.452, 19.6
Level 4 corporate patentee compared to individual patentee	9.16	2.03, 41.3

The finding that financial strength is significant when considered alone and also when considered in a regression with the other factors shows that patentee financial strength is a strong factor correlating to the outcome of the case.

2. Existence of a Jury Verdict

On average, only ninety-five patent trials commence each year nationwide,²⁶ a number that has been nearly constant over the past fifteen years.²⁷ Of those ninety-five trials per year, about sixty-five are now jury trials

²⁶ See, e.g., STATISTICAL TABLES 2004, *supra* note 16, at Table C-4. The ongoing work of the Administrative Office of U.S. Courts, published at <http://www.uscourts.gov/library.html>, is the most authoritative source for district court civil dispositions by type of case. Unfortunately, while it reports on trials commenced, it does not report on trials completed.

²⁷ Note that the number is significantly down from the late 1960s. In the period 1968-70, patent case filings per year averaged 923 – less than one-third of what they are now – and patent trials per year averaged 127. See *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 336, 169 U.S.P.Q. (BNA) 513, 522 (1971). The trial rate in those times was thus 13.8%, compared to about 3.5% today. See STATISTICAL TABLES 2004, *supra* note 16, at Table C-4.

and the remainder bench trials to district judges or magistrate judges.²⁸ As found in our study, most judgments in patent cases are summary judgments, where no verdict exists. Appeals from judgments based on jury verdicts constitute only about 14% of the total patent appeals lodged, and a similar percentage of cases in the dispositive group.

All other things being equal, if a patentee appeared in the Federal Circuit with a jury verdict in its favor (i.e., as appellee), it had thirty-seven times better odds to win on appeal than it had in all cases, regardless of victor, where the judgment below involved no verdict. That is mainly due to the fact that this small subpopulation of jury verdict cases inherently excludes summary judgments; these are the relatively few cases that actually got past pretrial dispositive motions and went to trial on the merits. The subpopulation is accordingly highly favorable to patentees. Where there was a jury verdict for the accused infringer, a patentee's odds of winning on appeal (this time as appellant) were 0.404 times those of a patentee appealing a non-jury-verdict-based judgment. This reflects the fact that a patentee has a more difficult time getting a favorable dispositive result in the court of appeals by overturning a jury verdict than by overturning other types of judgments. These results are collected in the following table.

²⁸ For the 2004 figures, see STATISTICAL TABLES 2004, *supra* note 16, at Table C-4 (sixty-nine jury patent trials and thirty-one bench patent trials in 2004). The corresponding numbers given by Professor Moore indicate, for example, that in 1998 there were sixty-two jury trials out of 103 total patent trials (i.e., 41 bench trials); in 1992, there were fifty-two jury trials and thirty-eight bench patent trials. See Moore, *supra* note 3, at 384. The years with the greatest number of patent trials commenced were 1997 and 1998, each with 103 trials. *Id.*

Table 3. Patentees' Chances of Winning on Appeal

Where judgment below was based on:	Estimate Odds Ratio	95% Confidence Limits of Odds Ratio
Jury verdict for patentee compared to non-verdict judgment for patentee	* 1	* N.A.
Jury verdict for accused infringer compared to all non-verdict-based judgments	0.404	0.047, 3.50

* Calculation indefinite due to very small denominator

3. Type of Law Firm

We studied whether the type of law firm (general firm or IP boutique) engaged as the lead firm by one side or the other might have made a difference in the outcomes. The observed events data in that regard were:²⁹

Table 4. Law Firms in Dispositive Cases

	Representing Patentees: won/lost	Representing Accused Infringers: won/lost
IP Boutiques	17/93	74/19
General Firms	42/83	120/35

General firms had a better record representing patentees, and IP boutiques had a slightly better record in representing accused infringers. Our multivariate regression indicates that the type of firm – not characteristics of the particular lawyer who is doing the appellate work – significantly correlated to which party ultimately won. We are hard pressed to explain why it should matter what kind of firm the winning lawyer is affiliated with, when, as will be seen in Part III, there was no statistical importance to whether the lead winning attorney was a patent lawyer or a general lawyer.

Our regression study for the patentee as winner shows that all other factors being equal, a patentee had a lower chance of winning on appeal when the patentee's law firm was an IP boutique firm than when the patentee used a general law firm (where the odds ratio is 0.358:1 and the confidence level is 95% between 0.136 and 0.945). The regression model also indicates that there may have been an interaction effect between the existence of a jury verdict below and

²⁹ The numbers are incomplete in that we could not find information on type of firm for every case, especially on the losing side.

the type of firm on the winning side. An interaction effect means that the collective effect of two or more factors is stronger than the sum of the two factors, i.e., the effect is non-linear.

B. Regression with Accused Infringer as Winner

Now we look at three factors seeming to contribute to the outcomes of those cases in which accused infringers were the appellate winners, about three-fourths of the total.

1. Corporate Status and Income

The table below shows the relative success of accused infringers in relation to the patentee's corporate status and financial strength.³⁰ A level 4 corporate patentee (over \$1 billion in annual revenue) has by far the lowest chance of losing the case – only 0.109 times the chance of an individual patentee's losing.

Table 5. Patentee's Income in Accused Infringer Victories

Patentee Income Level (where accused infringer wins)	Estimate Odds Ratio	95% Confidence Limits of Odds Ratio
Level 1 corporate patentee compared to individual patentee	0.225	0.029, 1.77
Level 2 patentee compared to individual patentee	0.216	0.046, 1.02
Level 3 patentee compared to individual patentee	0.336	0.0511, 2.21
Level 4 patentee compared to individual patentee	0.109	0.024, 0.492

2. Existence of a Jury Verdict

As we did for cases in which patentees won, we now look at how the presence of a jury verdict below correlated to the outcome of cases in which accused infringers won on appeal. All other factors being equal, if an accused

³⁰ The figures here are the reciprocals of the patentees' winning odds given *supra* Table 2 for cases in which patentees win. The "estimate odds ratio" shows that, for example, all other factors being equal, the odds of a level 1 corporate patentee losing are 0.225 times that of an individual patentee. The odds ratio of 0.225 is the best estimate with the range of the odds ratio going from 0.0285 to 1.77 (with a 95% certainty).

infringer with a favorable jury verdict at trial below then became an appellee in the Federal Circuit, its chance of winning on appeal was 2.48 times what it would have been if there were no verdict in the case. Similarly, where there was a jury verdict below for the patentee, the accused infringer's chance of winning as appellant was only 0.027 times what it would be in a no-verdict case.

Table 6. Accused Infringer's Chances of Winning on Appeal

Judgment Below Was Based On	Estimate Odds Ratio	95% Confidence Limits of Odds Ratio
Jury verdict for patentee compared to no verdict	0.027	(0.008, 0.087)
Jury verdict for accused infringer compared to no verdict	2.48	(0.285, 21.5)

3. Type of Law Firm

Finally, our regression study for the accused infringer as winner shows that all other factors being equal, an accused infringer had a higher chance of winning on appeal when it engaged an IP boutique firm than when it used a general law firm; the odds ratio was 2.79:1 (95% confidence level 1.06 to 7.38). The same mystery that was noted regarding the type of law firm appears here. Why should accused infringers do better with IP boutique firms and patentees with general firms, when the lead lawyers' characteristics in this regard make no difference? Again, no answer is immediately apparent.

C. *Insufficient Data on Effect of Technology Type*

As mentioned earlier, area of technology showed as a marginal factor in the multivariate regression. For all the data used for the regression, we have approximately 100 cases for mechanical patents, but only ten cases for chemical (non-pharmaceutical) patents, nineteen cases for manufacturing methods patents, twenty-two cases for biotech patents, and only one for business method patent. The relative imbalance of these data affects the regression model, and we had to leave the type of technology out in order to stabilize the regression model.

D. *Some Weaknesses of the Methodology*

In our study we had two values for each factor. For example, for a case in which the patentee won, we had a value for the patentee's financial strength and a value for the accused infringer's financial strength. In other words, for any single x , we had two values for the x , and our regression had to account for two inputs to a single x in calculating the final response y , *i.e.*, who the ultimate

winner is. Because of the unique binary dual input nature of our data, we had to run two regression models, one for patentee wins and one for accused infringer wins. This means that all of our data are based on comparing the cases in which patentees won and cases in which accused infringers won.

While three years worth of data seem plentiful, it was the minimal amount of data to run a meaningful regression model. Another weakness with analyzing historical data is that we are only able to report the factors we accounted for and their correlation with the ultimate outcome. Without a study with controlled variables, we cannot ascertain whether those factors were the definite causation of the ultimate outcomes. Indeed, we have been assuming that the strength of the parties' positions with respect to the facts and law were equal in all cases and therefore did not influence outcomes. In reality that assumption of course does not hold, as each party's evidence and arguments have different strengths under doctrinal patent and procedural law; these could, and traditionally should, be controlling factors. Had this been a controlled study – impractical in the legal field for various reasons – the regression model would have required fewer data points, and we could have tested for interaction and causation with a better focus. This model approximates a pattern in an uncontrolled population, and the regression model enabled us to point to statistically significant factors in a pool of cases that are more random than controlled.

III. A CLOSER LOOK AT INDIVIDUAL FACTORS

We now move from multivariate regression to regression studies of several individual factors considered alone, i.e., without regard to how other factors may interact with the one under study.

A. *Technology Differences*

Observed as a single factor, win rates varied to some extent with the main technology involved in the case. Unfortunately, dividing our limited population into nine separate technologies reduced the number of data points in most of them to numbers that are not statistically meaningful. The next table

shows the results for nine technical fields,³¹ from the lowest success rate to the highest.

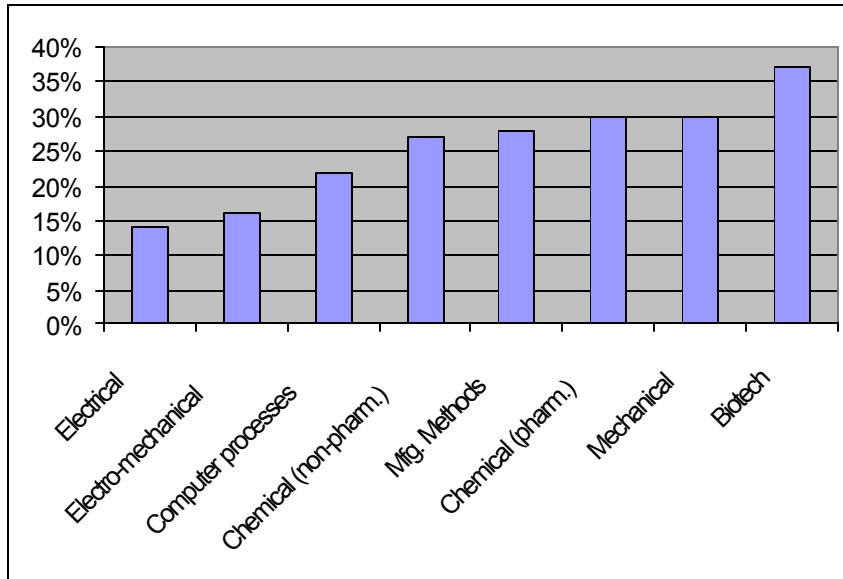


Chart 1

Percentage of Dispositive Cases Won by Plaintiffs in Various Technologies

A typical patentee had only a 14% chance of winning an electrical case but a 37% percent chance if the case involved biotech subject matter.³² The

³¹ The selection was largely arbitrary, based on perceived interest among commentators and the profession. Other commentators have looked at this phenomenon. See, e.g., Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155, 1156 (2002) (concluding that the patent system, while technology-neutral in theory, is technology-specific in application); Amir A. Naini, *Convergent Technologies and Divergent Patent Validity Doctrines: Obviousness and Disclosure Analyses in Software and Biotechnology*, 86 J. PAT. & TRADEMARK OFF. SOC'Y 541, 544-63 (2004) (discussing differences in validity standards for biotechnology and software patents).

³² Some of the areas involved few dispositive cases in the period under consideration, and the results are statistically weak for that reason. The underlying data are: electrical (4 patentee wins out of 28 cases); electro-mechanical (5 of 31); computer processes (5 of 23); non-pharmaceutical chemistry (3 of 11); manufacturing methods (5 of 18); pharmaceutical chemistry (8 of 27); mechanical (30 of 100); and biotech (7 of 19).

possible reasons for the disparities are unclear. Mechanical cases, for example, are by far the largest group, with one hundred dispositive cases represented. The relatively high success rate of 30% for those cases is puzzling in view of the much lower rates for electrical and electro-mechanical technologies.³³

One might perhaps explain the high 37% success rate for biotech patent owners on the grounds that the cases are more interesting as parts of a new technology and more suggestive of human health benefits than older, more staid technologies that might be seen as merely industrial improvements lacking any direct human dimension. Overall, there was no statistical correlation between the types of patents involved and the winning party.³⁴

B. Factors Related to the Parties

1. Individual Patent Owner or Corporate Patent Owner

Individual persons were the patentees in fifty cases in the dispositive case population.³⁵ These individuals won, under our definition, six of those cases, for a win rate of 12%. This is far lower than the overall patentee win rate of 24.4%, and it suggests that individual plaintiffs had only half as good a chance as corporations to win patent infringement suits. Our binary logistic regression

³³ It is also surprising that the mechanical cases won by patentees comprise nearly half (thirty out of sixty-five) the patentee wins in the entire dispositive population.

³⁴ Null hypothesis: The technology involved in a patent has no impact on the ultimate winner. A chi-square test shows a P-value of 0.371, which means we may not reject the null hypothesis. See DAVID S. MOORE, *THE BASIC PRACTICE OF STATISTICS* 327 (2d ed. 2000) (“A test of significance [such as a chi-square test] assesses the evidence against the null hypothesis giving a probability, the P-value.”). A P-value less than or equal to 0.05 is considered significant in the scientific community.

³⁵ In some cases both corporate and individual plaintiffs appeared. We identified the plaintiff identified as “lead” for our purposes by the signatures on the appellate briefs. It is certainly possible that corporate exclusive licensees, as co-plaintiffs, financed and largely controlled the litigation.

test shows that an individual patentee may have had as low as a 30% chance of winning compared to a corporate patentee.³⁶

Corporations were the patentees in 214 of the cases and prevailed in fifty-seven of them, for a success rate of 26.9%. Whether the patentee is an individual or corporation is statistically significant in correlating to the outcome of the case: Corporate patentees had better results.³⁷

2. Foreign Plaintiffs or U.S. Plaintiffs

A number of previous writers have investigated the possible effects of a patentee being a foreign corporation, especially when the accused infringers are U.S. entities, and have found little difference in litigations results.³⁸ Our results confirmed what others have found. As patent owners, foreign companies appeared in forty-eight cases and won thirteen of them, for a win rate of 27%, slightly higher than the overall win rate for patentees. As accused infringers defending against patentees' claims, the foreign companies appeared in sixty-eight cases and won fifty-three of them, a 78% win rate, again slightly higher than the overall win rate for the total population of accused infringers in our study.

³⁶ A binary logistic regression comparing individual and corporate patentees with the event of patentee being the winner shows an odds ratio of 0.3 (95% confidence level between 0.11 and 0.78), which means that on average, an individual patentee claimant has a 30% chance of winning compared to a corporate patentee claimant. This factor is also a part of our full-population regression analysis.

³⁷ Null hypothesis: Whether the patentee is an individual or corporation has no impact on the ultimate winner of the case. P-value is 0.06, or a 6% chance that individual patentee plaintiff and corporate patentee plaintiff have equal impact on the outcome of the case. A P-value of 0.06 shows that there is a slight statistically significant difference and the null hypothesis should be rejected.

³⁸ See, Kimberly P. Moore, *Xenophobia in American Courts*, 97 NW. U. L. REV. 1497 (2003). Based on a twelve-year district court data set, Professor Moore found that foreign entities prevailed in 56% of their cases in which their adversaries were domestic. *Id.* at 1509. This included summary judgment decisions by judges, as well as bench trials. She also concluded that foreign entities lost most of their patent jury trials when the adversaries were domestic. *Id.*; see also Allison & Lemley, *supra* note 1, at 225, concluding that for reported appellate validity decisions, foreign entities' patents were found valid 58.5% of the time, and domestic entities' patents 53.5%.

Four of the winning foreign patentees were German entities, with the remainder distributed among nationalities producing only one or two cases.³⁹ Of the thirty-five foreign patentees that lost their cases, the largest number (eight) were from Canada, with four each from Great Britain and Switzerland, three each from Germany and Australia, and the rest scattered among eight other countries.⁴⁰

As parties successfully defending against charges of infringement, foreign companies also were well represented. They appeared in largest numbers from Japan with sixteen successful defenses, Canada with six and Sweden five, plus a sprinkling of others.⁴¹ Foreign defendants that lost their cases came from Canada (three), Bermuda (two) and Australia (two), with one each from several other countries.⁴² Of particular interest in this regard is that: (i) Japanese companies defending against charges of infringement won *all* of their dispositive cases in the period of our study; and (ii) *no* Japanese companies appeared as patentees, either winning or losing, in our population.⁴³ A chi-square test on the nationality factor, however, showed that the nationality of the patentee has no statistically significant correlation to the ultimate outcome of the

³⁹ These are: Great Britain (two), Sweden (two), Switzerland (two), and one each from Taiwan, France, and Finland.

⁴⁰ France (two), Israel (two), and one each from Italy, Denmark, Netherlands, South Africa, and Taiwan. Three were unidentifiable.

⁴¹ Germany (four), Great Britain (four), Switzerland (three), Netherlands (two), Norway (one), Spain (one), Taiwan (one), France (one), Korea (one). Eight were unidentifiable. Note that while we have sufficient data to compare U.S. corporations against foreign corporations, we do not have enough data points to calculate the impact of each individual foreign country.

⁴² Great Britain, Israel, Italy, Netherlands, and Spain. Three were unidentifiable.

⁴³ A regression analysis on a per-country basis is impractical because there are insufficient data for each country. Moreover, because there is zero losing case data for Japanese companies, a multivariate regression analysis is meaningless.

case.⁴⁴ A binary logistic regression test also shows that whether the accused infringer is foreign or domestic does not have a significant impact on the end result.⁴⁵

One can only speculate as to the reasons underlying the apparent negation of the traditional feeling among foreign companies that they will not be treated equally to U.S. companies in American patent litigation. Several possibilities come to mind. First, in this study we are looking only at dispositive cases, i.e., the minority of cases that have proceeded all the way through a district court judgment and an appeal at the Federal Circuit without having been settled. It is possible that foreign entities are less sanguine about the benefits of “hanging in” rather than reaching settlement accords with their adversaries. We do not have any statistics on the settlement rates specifically for foreign litigants in U.S. patent cases. That rate may well be higher than the overall settlement rate of about 83%.⁴⁶ Second, the side that the entity is on makes a difference. In order to win as patentee, a trial is usually needed, setting the stage for supposed prejudices to come to the fore. By contrast, for an accused infringer, winning by summary judgment is the most likely outcome, a process that is probably less

⁴⁴ Before the regression analysis, we used a chi-square test to analyze whether there is any statistical difference in outcome between U.S. and foreign corporations. A P-value of 0.6 shows that the variation in outcome with respect to nationality of the parties is due to random chance and not a specific common factor. The regression model confirms that the nationalities of the parties are not statistically significant factors in calculating the outcome.

⁴⁵ Null hypothesis: Whether a defendant is a U.S.-owned or a foreign corporation has no impact on the ultimate winner of the case. A binary logistic regression test shows a P-value of 0.7, which indicates that we have no statistical basis to reject the null hypothesis.

⁴⁶ According to the annual reports of the Administrative Office of U.S. Courts, there were roughly 2,000 patent actions filed in the district courts during each year of the period under study. As mentioned earlier, some 600 of these cases are decided in a contested manner each year, mostly by summary judgment, leaving around 1,400 that are believed to have been settled, or 70% of the number filed. A significant percentage of the cases appealed are also settled, as revealed by the disparity between the number of patent appeals filed – 450 per year in the period in question – and the 200 or so truly disposed of by judicial action. Adding the remaining 250 cases to the settled category generates an overall settlement rate of 1,650 out of the 2,000 cases initially filed, or about 83%.

prone to such emotional biases. Accordingly, patentees are more likely to be concerned about being treated unfairly.

3. Relative Financial Strengths

Financial strength was assessed by income, categorized into four levels⁴⁷ as outlined earlier. The results are summarized in the following two tables and discussion.

Table 7. Financial Strengths – Overall Database

	Level 1	Level 2	Level 3	Level 4
Ps	68	69	28	68
AIs	7	80	42	105

Patent owners were generally poorer than accused infringers. This is perhaps difficult to see in the above table, where, because of the breakpoints we somewhat arbitrarily chose, level 3 firms are less numerous than level 2 firms, both for patent owners (“Ps”) and for accused infringers (“AIs”). The wealth population is more easily seen by grouping the two lower and two higher income levels together, as follows:

Table 8. Grouped Financial Strengths – Overall Database

	Levels 1-2	Levels 3-4
Ps	137	96
AIs	87	147

A significant symmetry exists here. Patentees were largely in the two lower income levels, and accused infringers were largely in the upper two levels. This means that in most patent litigations that go all the way through judgment and appeal, the patent owner was typically a poorer company or individual making an infringement claim against a wealthier company.

We will now look at win rates to see if there is any correlation to wealth. First, consider the cases in which the patentee was the ultimate winner. Here both sides tended to be in the wealthier categories, with revenues over \$1 billion, which is by far the largest class. This would be expected in light of the fact that wealthy firms make up most of the litigant population on both sides. In the far

⁴⁷ The four levels are: Level 1 (\$0 up to \$1 million), level 2 (over \$1 million and up to \$100 million), level 3 (over \$100 million and up to \$1 billion), and level 4 (over \$1 billion).

more numerous cases in which the accused infringers prevailed, they also tended to be wealthier than their losing adversaries.⁴⁸ There is a large dominance of winning accused-infringer firms that have revenues in excess of \$1 billion per year.⁴⁹ One would have to conclude that it is fairly difficult for patent owners, of whatever income level, to defeat such entities.

We now look at the subpopulation of patentee victories and the subpopulation of accused infringer victories, both as a function of financial strength. First we consider the patentee victories versus the financial strength levels of their adversaries:

Table 9. Finance and Patentee Victories⁵⁰

Equal financial levels: 22
Patentee 1 level stronger: 5
Patentee 2 or more levels stronger: 6
Patentee 1 level weaker: 12
Patentee 2 or more levels weaker: 6

Patentees who prevailed were often of the same roughly measured financial strength as their accused-infringer adversaries. Where they are not equal, however, the financial weight is toward the accused infringers.

Table 10. Finance and Accused Infringer Victories⁵¹

Equal financial levels: 62
Accused infringer 1 level stronger: 31
Accused infringer 2 or more levels stronger: 55
Accused infringer 1 level weaker: 19
Accused infringer 2 or more levels weaker: 14

⁴⁸ They win by a ratio significantly higher than the 3:2 ratio of wealthier AIs to poorer patentees in the overall population.

⁴⁹ Recall that we saw earlier that twenty-five accused-infringer companies with revenues over \$1 billion lost their cases during the three-year period under study, 2002-04, whereas 169 of them won.

⁵⁰ The number of cases for which financial data was available was less than the total number of victories in the database.

⁵¹ Again, financial data were not available for all parties in the database.

In this list of accused infringer wins, we likewise see a large group of cases, sixty-two, in which the parties were roughly evenly matched in terms of financial strength. But where they are mismatched, the accused infringers are much more often stronger, eighty-six cases, than weaker, twenty-nine cases. Nevertheless, unlike the result of the multivariate regression, as a single factor looked at alone, the results here were not statistically significant in correlating wealth to victories.⁵² This, combined with the results from the multivariate study, shows that the factor of financial strength correlates to the outcome of the case non-linearly.

We also asked whether the particular financial strength of level 4 (more than \$1 billion in annual revenue) is statistically significant to the outcome of the case. To study this, we compiled a table in which the financial strengths of both parties are figured into the ultimate outcome. The P-value of the chi-square test was 0.44, which indicates the level 4 pairings are likewise not statistically significant when correlated to the outcome of the cases.⁵³ Again, this does not mean financial strength is not a statistically significant factor; rather, this analysis and the multivariate analysis show that financial strength has an interaction effect with one or more factors in the study, which is only shown by the multivariate analysis.

⁵² Null hypothesis: Relative financial strength does not impact the outcome of the case. A chi-square test shows a P-value of 0.1 which means the null hypothesis may not be rejected.

⁵³ Null hypothesis: The pairing of plaintiff and defendant based on relative financial strength does not impact who wins these cases. A P-value of 0.44 indicates that the null hypothesis may not be rejected.

C. *Fora Differences*

1. Different Appellate Judges⁵⁴

a. Authoring Judges

Sorting the dispositive cases over the three-year period by the judge who authored the majority opinion, we find the usual percentage spread of victories for patent owners. As the tables below show, the spread ranges from 57% under the pen of Judge Schall down to 0% written by Judge Bryson. Both tables are based on a very small number of authored dispositive cases – seven for Judge Schall and eight for Judge Bryson. These figures, however, do not mean that Judge Bryson did not author any opinions favorable to a patent owner during 2002-04. He may well have authored precedential or non-precedential merits remands in favor of patentees, possibly in a manner that ended up resolving the case favorably to them, and may have been a main instigator member in some of the sixteen panels that issued unsigned summary affirmances in favor of patent owners. Similarly, it would be wrong to conclude based on our data that Judge Schall is more “pro-patent” than others. The data include only the small number of dispositive opinions bearing his name.

⁵⁴ Wagner and Petherbridge have studied the voting patterns of Federal Circuit judges in cases with written opinions on claim-interpretation issues. *See generally* Wagner & Petherbridge, *supra* note 4. As previously noted, the patent validity aspects of Federal Circuit voting patterns have been studied by Allison and Lemley, who report that the results defy easy compartmentalizing. *See generally* Allison & Lemley, *supra* note 4 (reporting that the results defy easy categorization). Their database did not include Rule 36 affirmances or decisions on issues other than validity.

Table 11. Results by Authoring Judge

Authoring Judge	# For Patentee	# For Accused Infringer	% for Patentee
Schall	4	3	57.1
Newman	5	7	41.6
Rader	10	14	41.6
Clevenger	6	9	40
Mayer	1	2	33.3
Michel	4	8	33.3
Linn	6	14	30
Gajarsa	3	12	20
Per Curiam (incl. Rule 36)	16	73	17.9
Lourie	4	21	16
Prost	2	11	15.4
Dyk	1	10	9.1
Bryson	0	8	0

To organize the raw event data, we assigned color bands to the various authorships: dark grey for judges whose precedential and nonprecedential opinions were in favor of the patent owner significantly more often than the overall average of 24.4%; white for judges whose proportion of opinions for the patent owner were somewhat higher than the average; and light gray for judges whose opinions were below the overall average win rate of patentees. We included a “per curiam” category in order to pick up short opinions so labeled by the panels and to include summary affirmances under Rule 36, even though both of these categories have no single identifiable author.

For authored, dispositive opinions, both precedential and non-precedential, the judges banded in dark grey in the table more often held patent claims infringed and not invalid, affirming district judges who so found, than judges in the other bands. The judges in the white middle band might be thought of as moderate in the frequency with which they have ruled dispositively for one side or the other. The light grey lower band possibly represents a judicial philosophy more strict in constraining patentees in the enforcement of their patents. In addition to Judge Lourie, this band includes four relative newcomers to the court: Bryson, Gajarsa, Dyk, and Prost. It also includes the amorphous “per curiam” authorship, which does not identify any single judge as an author. This group, drawing its judges from all the bands, should have shown about average results – a 24.4% win rate for patentees. The

lower observed win-rate figure may signal that patents viewed as less meritorious tend more often to be adjudicated *per curiam*.

A chi-square test comparing individual authoring judges shows a P-value of 0.1, which is not statistically significant and thus does not allow rejection of the null hypothesis that the identity of authoring judges on the court does not affect who is the ultimate winner. For authoring judges viewed in the three color bands, however, the P-value of the chi-square test is 0.001, and therefore our null hypothesis that the identity of the authoring judges had no impact on the outcome of the case is rejected. In other words, among the three bands of opinion-authoring judges, there was at least one group that is making decisions in a statistically different way. This confirms that the combined effect of authoring judges having similar judicial philosophies has a discernible impact on the outcome of the cases.⁵⁵

Interestingly, Rule 36 summary affirmances played a substantial role, accounting for eighty-nine decisions, far more than the dispositive-case authoring output of any individual judge. With only an 18% win rate for patentees, these summary affirmances were significant in pulling the overall win rate of patent owners in the court down to 24.4%.

b. Inclusion of Joining, Concurring, and Dissenting Votes

We now consider, in addition to authorships, how various judges voted to join, concur, or dissent in dispositive cases. In other words, we will add how the judge viewed various cases as either author or voter, and combine the two numbers.

⁵⁵ Wagner & Petherbridge, *supra* note 4, evaluated claim-interpretation opinions by the judicial philosophy involved, ranging from strongly holistic (absence of rigid rules of law) to strongly procedural (legal analysis proceeds by relatively fixed rules). The strongest holistic judges we re identified as Newman, Lourie, and Bryson. In our study, which looked at who won dispositive cases, these three did not rank near each other. Judge Newman was in our dark grey authoring band (most often for patentee), and Judges Lourie and Bryson were in our light grey authoring band (most often for accused infringer). Wagner and Petherbridge's procedural judges were Clevenger, Linn, and Dyk, who in our study were in three different bands. This seems to suggest that judges who seem to decide similarly in one aspect perhaps function quite dissimilarly in other respects.

Table 12. Results Based on Judge's Authoring and Voting Combined

Authoring or Voting Judge	# for Patentee	# for Accused Infringer	% for Patentee
Newman	22	41	34.9
Prost	18	46	28.1
Schall	14	37	27.5
Linn	15	42	26.3
Dyk	12	38	24
Rader	16	54	22.8
Gajarsa	15	53	22.1
Michel	14	51	21.5
Mayer	11	45	19.6
Clevenger	10	45	18.2
Per Curiam (incl. Rule 36)	16	73	17.9
Lourie	10	44	18.5
Bryson	6	57	9.5

With the added data on how judges voted, a chi-square test is more reliable than only considering authorships. Note that the occupants of the various bands have changed with the added data. A P-value of 0.165 here shows that we may not reject the null hypothesis that the identity of a single voting judge makes no difference to the outcome. The P-value is 0.002, however, for the three grouped bands of voting or authoring judges, indicating a statistical difference among the groups. Once again, this tends to confirm that collectively judges with similar philosophies may be a statistically significant factor in the outcome of the case.

One may speculate about whether the mode of decision as being precedential, non-precedential, or Rule 36 summary affirmance makes a difference in the outcome statistics. We saw no indication that it did so in terms of win-lose odds. Certain types of cases, however, seem more prone to handling by one of the three appellate disposal mechanisms. Individual patentees represent 19% of the population under study,⁵⁶ yet they are underrepresented at 9% of the precedential decisions⁵⁷ and overrepresented at 30% in the

⁵⁶ Fifty out of 262 cases in the three-year period.

⁵⁷ Ten out of 110 precedential opinions.

nonprecedential ones.⁵⁸ In Rule 36 cases, they are represented nearly proportionately to their numbers, at 21%.⁵⁹

2. Different Feeder Courts

Do the won-and-lost results in patent litigations depend to any extent on the district from which the case arrived at the Federal Circuit? As mentioned earlier, nearly all of the dispositive patent cases – 242 out of 262 – coming out of the Federal Circuit in the three-year period in question were affirmances. We may therefore put our question this way: Are some districts more likely than others to produce a dispositive appellate affirmance for one side or the other?

There were only seven districts that generated ten or more dispositive appellate cases each in the 2002-04 appellate results. These are shown in the table below in the order of largest providers of dispositive cases. Recall that the overall win rate for patentees in our study was 24.4 percent.

Table 13. High-Volume Feeder Courts

District	Patentee Wins on Appeal	Accused Infringer Wins on Appeal	Patentees' Win Ratio (%)
Delaware	6	16	27.3
N. Cal.	1	16	5.9
N. Ill.	3	13	18.8
C. Cal.	5	10	33.3
Mass.	1	11	8.3
S. NY	1	9	10.0
Totals	17	75	18.5

Of these high-volume districts, only in Central California and in Delaware (and then only slightly) did patent owners have better success than the

⁵⁸ Twenty-six out of eighty-six cases.

⁵⁹ Fourteen out of sixty-six cases.

dataset average.⁶⁰ This means the patentee win rate coming from smaller feeders was generally higher than the rate in these large feeder districts.⁶¹

The numbers of cases involved here are too small for meaningful statistical analysis. Judging from the data from the entire three-year population, in terms of dispositive results in patent-busy districts, a patent owner's best chance of prevailing during the years in question, assuming all other factors were equal, appears to have been by litigating in Eastern, Northern, or Southern Texas, in Southern California, in Eastern Michigan, or in Colorado.⁶² However, the nondispositive results – twice as many in overall number, yet not included in our study – might represent more commercially significant victories, even though not fully dispositive of an infringement claim.

⁶⁰ Null hypothesis: There is no difference in the end result between cases from the six feeder courts. A chi-square test results in a P-value of 0.26, which indicates that there is no significant correlation between feeder courts and the end result. We have, however, a less than ideal number of cases to run a stable chi-square test.

⁶¹ We looked for districts with both substantial patent output and significantly higher win rates in the Federal Circuit, and identified only six, three of which are in Texas. The Eastern District of Texas, the source of nine dispositive appellate rulings, produced three patentee wins and six accused infringer wins, or a 33% win rate. The Northern and Southern Districts of Texas and the Eastern District of Michigan each produced eight dispositive appeals, three for the patentee and five for the accused infringer, for a win rate of 38%. The District of Colorado supplied seven cases in the three-year period, four of which were for the patentee and were affirmed on appeal, and the other three going to the accused infringer and likewise affirmed on appeal, or a patentee win rate of 57%. All courts other than those mentioned produced fewer than seven cases destined for dispositive appeal during the period of our study.

⁶² The dispositive win rate in less busy districts is often higher mathematically, but such cases are too few in number to lead to a statistically meaningful finding. For example, the dispositive-case win rate coming from Eastern Louisiana was 100%, but this represents only two cases over the three-year period.

3. The Effect of Jury Trials

Much has been written in recent years on the supposed impact of increased use of juries in patent cases.⁶³ We undertook to look at that parameter separately. First, however, some context is necessary.

As discussed earlier, jury verdicts or bench trials form the bases for only about one-fourth of appealed district court judgments in patent cases, the remainder being by summary judgment and in a few instances by other motion-generated dismissals, such as for lack of personal jurisdiction. We found that patentees won just over half of the cases in which there had been jury trials, winning thirty-five out of sixty-five of the cases, as shown in the following table:

Table 14. Jury Cases on Appeal

# of P appellate wins in accord with a jury verdict	31
# of P appellate wins by negation of jury verdict	4
# of AI appellate wins in accord with a jury verdict	21
# of AI appellate wins by negation of jury verdict	9

As seen here, accused infringers often won jury verdicts as well, although not to the same extent as patent owners. Thus, in the relatively small segment of patent litigation outcomes that are based on jury findings, patentees have the edge.⁶⁴

4. Home Court Advantage?

Does a patentee do better when litigating in its home state than elsewhere? If we lump individual and corporate patentees together, the answer is only slightly. We took as corporate "home" the state in which the executive offices were located. Patentees won twenty-seven of their victories in home courts, but they also lost seventy cases in their home courts. The win rate in

⁶³ See, e.g., Albert W. Preston, Jr. & Diane B. Elderkin, *Malta v. Schulmerich: The Federal Circuit at a Crossroads in Its Search to Harmonize Substantive Patent Law with Jury Trial Procedure and Review*, 20 AIPLA Q.J. 49 (1992).

⁶⁴ Professor Kimberly Moore has calculated that patentees win sixty-eight percent of patent jury trials. See Moore, *supra* note 3, at 386.

home courts was 27.8%, slightly better than the overall dispositive-case patentee win rate of 24.4%.

If we look only at individual patentees, the story is much the same. Individual patentees won four victories at home but lost twenty-four, a home win rate of just over 14%. As mentioned earlier, the overall win rate for individual patentees was 12%. In other words, they do slightly better at home than they do overall. Statistically, home state for the patentee or accused infringer is not a significant factor in the outcome of the case.⁶⁵

D. Possible Effects of Counsel Differences

1. General Attorney or Patent Attorney

Some authors have speculated regarding the best kind of counsel to engage for patent litigation – large firm or small, general firm or IP boutique.⁶⁶ For the dispositive-case population of our study, we have concluded there is little correlation between win odds and type of lead lawyer. The results are summarized in the following table.⁶⁷

Table 15. Type of Lead Counsel on Appeal

	Won/Lost	% Won
General Lawyer	105/104	50.2
Patent Lawyer	153/154	49.8

These results should be viewed with caution, because we gathered only listings for appellate counsel, not for representation below in *Markman* hearings, summary judgment proceedings, or trials. Many parties, especially those who have lost below, change counsel for the appeal. The lead lawyer on the appeal may therefore be a general lawyer when the lead below was a patent attorney, or

⁶⁵ Null hypothesis: Whether the patentee (or accused infringer) is in its home state has no impact on the outcome of the case. P-value for patentee home state is 0.6 and 0.63 for accused infringers, indicating that we may not reject the null hypothesis.

⁶⁶ See, e.g., From the Editor, INTELL. PROP. TODAY, June 1994, at 2.

⁶⁷ The numbers do not equal the entire database (two times 262 cases) because there was no data for some counsel. The great majority of representations, however, are included here.

vice versa.⁶⁸ The data presented here do not account for such shifts in representation.

The table appears to indicate that registered patent attorneys as counsel have a larger share of the total lead representations in the Federal Circuit than do general attorneys, 307 to 209, and that the win rates for each type are very nearly the same, within one percentage point of each other. Unlike the type of law firm engaged, whether the lead attorney is a patent attorney has no statistically significant impact on the end result (P-value = 0.6 and 0.2 for winning and losing attorneys respectively).⁶⁹

2. Years of Experience of Lead Counsel

We next looked at the so-called “grayness” factor, namely, how long the lead counsel in dispositive cases had been in practice. It is widely assumed that more senior lawyers have a better chance of winning, because of either better appellate skills or more mundane factors such as sympathy from judges of a similar age. How valid that proposition is remains debatable. Nevertheless, we found both winning and losing companies engaging mainly older lawyers to handle their Federal Circuit appeals in cases that later proved dispositive. The table below shows these results for all the dispositive cases in which we could find such data. Absence of available data on a number of the losing lead counsel and a few winning counsel explains why the total number of winners is larger than the total number of counsel who did not prevail. In our overall population of 262 cases, we were able to find the information for 254 winning lead counsel and 233 losing lead counsel.

⁶⁸ We considered gathering statistics on district court lead representations. We found that parties often change d counsel at several important junctures in the district court proceedings, such as the eve of trial or just after an adverse verdict. We had to abandon the effort.

⁶⁹ Null hypothesis: Whether an attorney is a patent attorney has no impact on the end result of the case. Because both P-values are greater than 0.05, we cannot reject our null hypothesis.

Table 16. Experience of Lead Counsel

Year	0-10 Yrs (Winning/ Losing)	11-15 Yrs (Winning/ Losing)	16-20 Yrs (Winning/ Losing)	21+ yrs (Winning/ Losing)
2002	4/0	7/5	11/8	49/49
2003	6/3	6/6	17/18	69/65
2004	2/4	10/11	12/13	61/51
Totals	12/7	23/22	40/39	179/165

Several observations can be made. The first concerns the relative dearth of “young” lawyers as lead counsel in these cases. This would be expected in civil litigation generally, especially in complex or high-stakes cases, both of which are what patent appeals tend to be. About two-thirds of the winning lawyers had more than twenty years of practice experience. As mentioned earlier, our database is of dispositive cases, nearly all of which are affirmances.⁷⁰ Accordingly, the losing parties in these cases were nearly all appellants. The appellant’s task on appeal is of course much greater – having to persuade the court of error committed below – and the chance of losing on appeal is inherently greater for appellants. Recognizing this, appellant companies likely were even more motivated than appellees to choose older and more experienced lead counsel. This tends to be borne out at the other end of the experience spectrum. In those few cases in which lead counsel had ten or fewer years of experience, twelve represented winning appellees and seven losing appellants.

The second observation is that the experience level of counsel – at least as measured in years of practice – does not correlate well with winning or losing. Both sides tend to choose older counsel, as seen above. In a given case one prevails and the other does not. We looked specifically for cases in which the experience level did not fit this pattern, i.e., where there were significant differences in the experience years between the two sides’ lead lawyers. To equalize the chore involved for the lawyers that were compared, we selected the subpopulation of eighteen reversal decisions (which are harder to get) in which the victor was the appellant. In eight cases the successful appellant’s counsel had more years of experience than the appellee’s counsel, in another eight fewer years experience, and in two they were the same. Further data collection is necessary to deal effectively with this factor. From our database it is difficult to

⁷⁰ Reversals occurred in only twenty out of the 262 dispositive cases in our study.

draw any conclusions about experience level playing a role in winning or losing patent litigations. It is clear, however, that clients generally prefer “grayness.”⁷¹

IV. SOME FINAL OBSERVATIONS

The Federal Circuit has often been accused of having a pro-patent leaning.⁷² There is nothing in our findings that would support that view. Patentees lose most of the cases before the court, and, for the most part, the court affirms negative judgments of the district courts in dispositive cases.

There is no reason to think that a properly balanced judicial institution (whatever that may mean) should decide cases on a fifty-fifty basis. To reach that conclusion would first require independently assessing the individual merits of the case pool brought before the court and deciding how the various cases ought to turn out, and then comparing how the court in fact disposed of them.⁷³ The “numbers” alone cannot perform that function. The weight of the evidence and the strength of legal arguments can and do vary from case to case. Moreover, patent disputes are frequently highly emotionally charged, and we have no basis for believing that litigants in patent cases act rationally in assessing

⁷¹ A two sample t-test comparing the length of admittance of the two groups of attorneys shows a P-value of 0.11, indicating that there is no statistically significant difference between the two seniority groups. The estimated difference between practice years of the winning attorneys and the losing ones is between -3.201 to 0.363 years (assuming a 95% confidence level).

⁷² Mark D. Janis, *Reforming Patent Validity Litigation: The “Dubious Preponderance,”* 19 BERKELEY TECH. L.J. 923, 928 (2004) (mentioning that it is “generally received wisdom” that the Federal Circuit adopted a pro-patent bias early in its tenure); Allan N. Litmann, *Restoring the Balance of Our Patent System*, 37 IDEA 545, 552-70 (1996-1997) (taking the view that the Federal Circuit has a pro-patent bias). One of the earliest scholars to speculate about possible pro-patent attitudes of the Federal Circuit was Professor Rochelle Cooper Dreyfuss. See Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 26 (1989).

⁷³ Priest and Klein argued that under some circumstances the results should approach fifty-fifty. See George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1, 17-30 (1984). The circumstances included some that seemingly do not apply to most modern patent litigations, viz., that the parties are risk-neutral (reality favors patent owners here), and that the parties think in roughly the same way in how they value money damages and injunctions (accused infringers probably put a higher value on fear of the injunction and a lower value on paying damages than patentees do).

the strength of their claims or defenses. Under these real conditions, a conscientious judge with strong pro-patent sympathies might, in view of the evidence and issues brought forward, decide most cases for the accused infringer, while another conscientious judge, hypothetically one with a philosophical hostility to the patent system, might still end up deciding for the patent owner in most cases. Therefore, it is not possible to characterize the court on the basis of the percentage of decisions going one way or the other. If we did have to do that, however, we would have to say the court was either hostile to or at least suspicious of patents and their owners.

The reasons behind the wide margin of three to one for decisions against patent owners are unclear, yet the result is relatively constant during the three years of the study and is consistent with other scholarship in the field.⁷⁴ We are inclined to believe that patentees are too often “pushing the envelope” in quests

⁷⁴ For example, the Internet service Patstats indicates that most accused infringers strongly prevailed on the infringement question – both literal infringement and under the doctrine of equivalents – during the period in question. For 2004, accused infringers prevailed in eighty-three literal infringement decisions and patentees in forty-four. Doctrine-of-equivalents rulings showed a higher disparity, forty-six to ten. See INST. FOR INTELLECTUAL PROP. & INFO. LAW, UNIV. OF HOUSTON LAW CTR., PATSTATS: U.S. PATENT LITIGATION STATISTICS, DECISIONS FOR 2004, <http://www.patstats.org/2004.html> (last visited Nov. 5, 2005). For 2003 the results on literal infringement favored the accused infringer, by 155 to fifty-three, as did the results on doctrine of equivalents infringement, seventy-one to nineteen. See INST. FOR INTELLECTUAL PROP. & INFO. LAW, *supra* note 5. Professor Moore’s studies on district court results in patent litigation lists “win rates” by district, concluding patentees win 58% of the cases. See Kimberly A. Moore, *Forum Shopping In Patent Cases: Does Geographic Choice Affect Innovation?*, 79 N.C. L. REV. 889, 916-17 (2001). Her dataset, however, is only for cases that reached trial (1409 cases over sixteen years), and hence does not include the much larger number of summary judgments entered and appealed.

for financial return on their investment in patents.⁷⁵ They overvalue their patents and assign an unrealistic scope to the language of the patent claims, driven perhaps by what they thought the claims ought to have said.

Another possible reason for the low number of patentee victories is that in order to win a judgment a patent owner must not only prove infringement of at least one claim of the involved patent, but must also defeat every validity attack on that patent claim and every charge of inequitable conduct before the United States Patent and Trademark Office ("USPTO"). If it fails on any of these points, the accused infringer wins. Proving infringement is an increasingly uncertain endeavor at present, due to the complexities of interpreting the proper scope to be accorded various words of the claim.⁷⁶ Direct "knock-off" type infringement is fairly rare, leaving claim scope as the central issue in most patent litigation today. The patentee tends to assign a broader meaning to the claim terms than it might have consciously thought about when the patent was being drafted and prosecuted to issuance.

⁷⁵ This investment is increasingly costly. The median cost for preparing and filing a patent application of minimal complexity was \$5,504, with more complex applications running between \$8,000 and \$10,000 depending on the area of technology involved, and that is just for the United States. AM. INTELLECTUAL PROP. LAW ASS'N, REPORT OF THE ECONOMIC SURVEY 87-89 (2003). For filings in the European Patent Office and Japan, additional filing and prosecution costs are involved. To those must be added prosecution costs, issue fees, and maintenance fees. Multinational patent coverage today costs at least \$100,000 per invention, and that figure is conservative. *See, e.g.,* William S. Thompson, *Reforming the Patent System for the 21st Century*, 21 AIPLA Q.J. 171, 177 n.2 (1993) (relating the experience of one company for which a single patenting in ten countries involved costs approaching \$250,000); Jim Ewing, *Patent Procurement: Robbing Peter to Pay Paul*, INTEL. PROP. TODAY, Nov. 2003, at 32 (explaining how a relatively simple patent filing ends up costing over \$110,000 for coverage in seven major industrial countries); Gerald J. Mossinghoff & Vivian S. Kuo, *World Patent System Circa 20XX, A.D.*, 80 J. PAT. & TRADEMARK OFF. SOC'Y 523, 524 (1998) (noting that the cost of securing and maintaining a comprehensive worldwide patent is within the range of \$750,000 to \$1,000,000).

⁷⁶ The Federal Circuit recently took en banc the main questions of methodology in interpreting patent claim language. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 75 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 2005). The court sought to provide guidance on the sequence and weight to be given to various traditional tools for carrying out this chore, including the patent specification, its USPTO file history, regular language dictionaries, and technical dictionaries.

On the validity front, much of the relevant prior art or literature is difficult to find, sometimes made so by law. Consider, for example, attempting to search recently filed patent applications of others, a fruitful source of pertinent prior literature. Until the sought-after applications are on file for eighteen months, they are held in secrecy by the USPTO⁷⁷ and cannot be seen by interested outsiders. Another example: Offers for sale are often highly secret, yet any such offer starts a one-year clock running against filing, not only by the offeror entity but by anyone else as well.⁷⁸ Thus, even with diligent search attempts, the most relevant prior literature lies hidden from the patent applicant, her counsel, and patent examiners, only to appear later after being dredged up by a highly motivated defendant in an infringement lawsuit. By that time the patentee tells itself it has invested too much to give up, and the case proceeds to a negative judgment.

These conditions hardly favor patent owners, and it is not surprising that they fail in most of their litigation attempts. A conspicuous exception in our study is Japanese companies. As patent owners they appeared in no dispositive cases in our three-year study. As accused infringers they appeared in sixteen and prevailed in all of them. Perhaps this suggests a level of caution on the part

⁷⁷ 35 U.S.C. § 122 (2003) provides in part:

“(a) Confidentiality. Except as provided in subsection (b), applications for patents shall be kept in confidence by the Patent and Trademark Office and no information concerning the same given without authority of the applicant or owner unless necessary to carry out the provisions of an Act of Congress or in such special circumstances as may be determined by the Director.

“(b) Publication.

“(1) In general.

“(A) Subject to paragraph (2), each application for a patent shall be published, in accordance with procedures determined by the Director, promptly after the expiration of a period of 18 months from the earliest filing date for which a benefit is sought under this title. At the request of the applicant, an application may be published earlier than the end of such 18-month period.”

⁷⁸ 35 U.S.C. § 102 (2003) provides in part: “A person shall be entitled to a patent unless . . . (b) the invention was . . . on sale in this country, more than one year prior to the date of the application for patent in the United States”

of Japanese managements about the entire field of U.S. patent litigation that other entities do not share.

Another important factor in explaining why patent owners usually lose is the general loosening of summary judgment standards for civil litigation in recent years,⁷⁹ and the recognition by many courts that patent cases in particular usually present relatively few fact issues to be tried. The contents of the patent and its file history, and the teachings of the prior literature affecting validity, are normally known from discovery and research efforts before trial, as are the design and functions of the accused infringing products or processes. While a few issues – such as willfulness of infringement, the intent prong of inequitable conduct before the USPTO, and the determination of damages – could be triable, these points matter only if the claims have not been proved invalid and if infringement has been made out. Usually the case does not get that far because summary judgment is granted, typically in favor of the accused infringer.

As set out above, accused infringers are usually wealthier than patent owners. This is perhaps to be expected, as plaintiff patentees are more motivated to pursue litigation remedies or royalty-bearing license settlements from well-to-do companies than from companies with less ability to pay. Many patentees are individuals, whereas none of the accused infringers were. The wealth disparity very likely helps accused infringers to prevail by putting more effort into the case than the patent owners on average do.

Foreign-owned companies achieved results no less favorable than domestic companies. Two possible explanations come to mind for this. First, although such bias perceptions are longstanding, there is no firm evidence that such biases exist. Second, foreign entities believe there is a bias against them, and are often otherwise uncomfortable with American civil litigation practice and expense. These factors lead them to settle more cases, so that the ones that proceed to dispositive judgment are carefully chosen to be strong ones for their positions.

⁷⁹ This loosening is usually attributed to the Supreme Court's re-articulation of the legal standards in three 1986 cases: *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 595 (1986); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 254 (1986); and *Celotex Corp. v. Catrett*, 477 U.S. 317, 325 (1986). These cases emphasized that trials were needed only in cases in which the pretrial evidence indicated a reasonable trier of fact could decide an issue either way. In all other cases, summary judgment, full or partial, was appropriate.

Home court advantage is often exaggerated and may skew the case assessments of patentees as plaintiffs. Plaintiffs and their lawyers often believe they will have an advantage in being local, relative to the judge or jury. Accents, colloquial figures of speech, and local names and places mentioned in testimony are thought to be helpful to local parties. As set out here, however, we found only about a 3 percentage-point improvement – from 24.4% to 27.8% – for a patentee litigating in the state of its principal offices versus elsewhere. Given that most contested judgments in patent cases in the district courts are summary judgments rather than judgments following a trial, there is not much opportunity for local flavors to permeate patent cases.